Interconnection Service Agreement

Between

Niagara Mohawk Power Corporation

And

Cedars Rapids Transmission Company Limited

September 17th, 2004

TABLE OF CONTENTS

THIS INTERCONNECTION SERVICE AGREEMENT made this 17th day of September, 2004

BETWEEN:

NIAGARA MOHAWK POWER CORPORATION, a corporation incorporated under the laws of the State of New York, United States of America (hereinafter referred to as "Niagara Mohawk"), being a wholly owned subsidiary of National Grid USA Inc. ;

- and -

CEDARS RAPIDS TRANSMISSION COMPANY LIMITED, a corporation legally constituted under the laws of Canada (hereinafter referred to "CRT"), being a wholly owned subsidiary of Hydro-Quebec;

WHEREAS CRT owns and operates an electric *Transmission System* in the province of Quebec and Ontario and is responsible for the operation and maintenance of the electric *Transmission System* it owns and operates;

WHEREAS Niagara Mohawk owns and operates an electric *Transmission System* in the state of New York and is responsible for the operation and maintenance of the electric *Transmission System* it owns and operates;

WHEREAS Hydro-Quebec and Niagara Mohawk entered into an Interconnection Agreement dated February 23, 1982, as amended on December 1, 1985, to permit the interconnection and coordinated operation of their respective *Transmission Systems* (the "1982 Agreement");

WHEREAS Hydro-Quebec and Niagara Mohawk have agreed to terminate the 1982 Agreement;

WHEREAS CRT and Niagara Mohawk (each individually a "*Party*" or collectively, the "*Parties*"), desire to continue, through a new agreement, with an electrical interconnection for coordinated interconnected operation to the on-going mutual benefit of the *Parties*;

WHEREAS CRT and Niagara Mohawk recognize the need to develop, administer and implement practices and procedures relating to connection, maintenance and operation of the interconnection that will be managed and approved by a committee formed under this Agreement;

WHEREAS in accordance with the appropriate regulations and rules in effect from time to time and applicable to one or both of the *Parties*, the *Parties* wish to enter into this *Agreement* and to describe the terms and conditions applicable to the operation of the *Interconnection Facilities* and the interconnection of each *Party's Transmission System* to the other's.

NOW THEREFORE in consideration of the foregoing, and the mutual covenants, agreements, terms and conditions herein contained, the *Parties* intending to be legally bound hereby agree as follows:

ARTICLE I: GENERAL

1.1 Each of the *Parties* hereto confirms the truth and accuracy of the recitals and agrees that the recitals form part of this *Agreement*.

1.2 This *Agreement* constitutes the entire agreement between the *Parties* with respect to the *Interconnection Facilities* and supersedes all prior oral or written representations and agreements

concerning the subject matter of this *Agreement*, including but not limited to the 1982 Agreement. In the event that any terms and conditions specified in Schedules hereto are incompatible with those of this *Agreement*, the terms and conditions of this *Agreement* shall have priority.

1.3 Unless otherwise specified, references in this *Agreement* to Sections or Articles are to sections and articles of this *Agreement*. Any reference in this *Agreement* to any statute or any section thereof will be deemed, unless otherwise expressly stated, to be a reference to such statute or section as amended, restated or re-enacted from time to time. The division of this *Agreement* into Articles and Sections is for convenience only, and shall not affect the interpretation of this *Agreement*. Unless the context requires otherwise, words importing the singular include the plural and vice versa and words importing gender include all genders. Where the word "including" or "includes" is used in this *Agreement* it means "including (or includes) without limitation."

1.4 Neither this *Agreement* or any provision hereof is intended to confer upon any person other than the Parties hereto any rights, obligations or remedies hereunder.

1.5 This *Agreement* shall be binding upon and enure to the benefit of the *Parties*, and extend to their successors and assigns.

1.6 Any Article or Section of this *Agreement* or any other provision of this *Agreement* which is, or becomes, illegal, invalid or unenforceable shall be severed from this *Agreement*, and shall be ineffective to the extent of such illegality, invalidity or unenforceability, and shall not affect or impair the remaining provisions hereof

1.7 The *Parties* hereby agree to be bound by all regulatory requirements, codes, statutes and laws applicable to their respective jurisdictions which are hereby incorporated by reference into, and form part of this *Agreement*.

1.8 If any *Regulatory Authority* having jurisdiction (or any successor boards or agencies), a court of competent jurisdiction or other governmental entity with the appropriate jurisdiction (collectively, the "Regulatory Bodies") issues a rule, regulation, law or order that has the effect of cancelling, changing or superseding any term or provision of this *Agreement* (the "Regulatory Requirement"), then this *Agreement* will be deemed modified to the extent necessary to comply with the *Regulatory Requirement*.

1.9 Notwithstanding the foregoing, if the *Regulatory Authority* materially modifies the terms and conditions of this *Agreement* and such modification(s) materially affect the benefits flowing to one or both of the *Parties*, as determined by either of the *Parties* within twenty (20) *Business Days* of the receipt of the *Agreement* as materially modified, the *Parties* agree to attempt in good faith to negotiate an amendment or amendments to this *Agreement* or take other appropriate action(s) so as to put each *Party* in effectively the same position in which the *Parties* would have been had such modification not been made. In the event that, within sixty (60) days or some other time period mutually agreed upon by the *Parties* after such modification has been made, the *Parties* are unable to reach *Agreement* as to what, if any, amendments are necessary and fail to take other appropriate action to put each Party in effectively the same position in which the *Parties* would have been had such modification not been made, then either *Party* shall have the right to unilaterally terminate this *Agreement* forthwith, as per Section 7.2.

1.10 Nothing in this *Agreement* shall be construed as affecting in any way the rights of either *Party* to unilaterally make application to any one or more of the *Regulatory Bodies* having jurisdiction over that *Party* for a change in rates, terms and conditions, charges, classifications of service, rule or regulation.

1.11 Except as otherwise provided herein, no modification or supplement to this *Agreement* shall be valid or binding unless set out in writing and executed by the *Parties* with the same degree of formality as the execution of this *Agreement*.

ARTICLE II: NOTICES

2.1 Any written notice required by this Agreement shall be deemed properly given and delivered if either sent by email, registered mail or delivered to the other Party's representative at the address specified in Schedule A-1.

2.2 Notices shall be deemed to have been received:

(a) On the date indicated on the delivery receipt if sent by registered mail;

(b) On the date indicated on the transmission slip if sent by courier if delivered during normal business hours. If not delivered during normal business hours, delivery shall be deemed to have occurred on the next Business Day;

(c) On the date indicated on the automatic receipt if sent by email if delivered during normal business hours. If not delivered during normal business hours, or if no automatic receipt is available, delivery shall be deemed to have occurred on the next Business Day.

2.3 The designation of the person to be so notified or the coordinates of such person may be changed at any time by either Party by written notice to the other Party.

ARTICLE III: ASSIGNMENT

3.1 Either *Party* may assign this *Agreement* upon obtaining the consent of the other *Party*, which consent shall not be unreasonably delayed or withheld. Notwithstanding the foregoing, either *Party* may, upon providing written notice to the other *Party,* assign this *Agreement* without the other *Party*'s consent, where such assignment is to an affiliate as defined by Canada Business Corporations Act for CRT or the New York State Public Service Laws, Section 110 for Niagara Mohawk. This *Agreement* shall extend to, be binding upon and enure to the benefit of the said assigns and their respective successors.

ARTICLE IV: GOVERNING LAW

4.1 The *Agreement* shall be interpreted under and governed by the law of the State of New York, United States of America without regard to its law on conflict of laws.

ARTICLE V: DEFINITIONS

5.1 The following terms, wherever used in this *Agreement*, shall have the following meanings and are equally applicable to both the singular and plural form:

"Agent" means a *Qualified* person duly authorized by a *Party* to perform specific activities or actions on behalf of that *Party* .

"Agreement" means this *Agreement*, the Schedules and all amendments made hereto by written agreement between the *Parties* in accordance with the terms of this *Agreement*.

"Applicable Legal Requirements" means all applicable federal, provincial, state and local laws, ordinances, rules and regulations, and all orders, directives and other requirements of any federal, provincial, state or local governmental, regulatory, or administrative agency, commission, body, court of competent jurisdiction or other authority exercising jurisdiction over the *Parties* or their respective facilities. *Applicable Legal Requirements* includes rules, regulations, orders, directives and other requirements of the NYISO, a *Regulatory Authority* having jurisdiction or their successors.

"Asset Owners' Committee" means a committee comprised of a primary and alternate member designated by each *Party* and given the authority to act on behalf of their respective companies to carry out the duties of the *Asset Owners' Committee* as described in Article VIII of this Agreement.

"Business Day" means a day other than a Saturday, a Sunday or a public holiday in the Province of Quebec or the State of New York.

"Common Operating Instructions" means the operating procedures, steps, and instructions for the operation of the *Interconnection Facilities*, under normal and *Outage* conditions, as provided in Schedule "B" of this *Agreement*, and as established and amended from time to time by the *Asset Owners' Committee* in accordance with Section 8.2 of this *Agreement*.

"Confidential Information" means:

(a) all information disclosed by a *Party* to the other *Party* under this *Agreement* or in negotiating this *Agreement* which is designated as confidential by the *Party* disclosing the information; and

(b) all interpretative reports or other data generated by a *Party* that are based in whole or in part on information that is made *Confidential Information* by clause (a) of this definition.

"Controlling Authority" is Hydro-Quebec TransEnergie for matters pertaining to or arising in the Province of Quebec, Canada, or the New York Independent System Operator, Inc. for matters pertaining to or arising in the state of New York, United States, as may be relevant under this *Agreement*.

"Effective Date" means the date at which this *Agreement* comes into effect, being the date first written above.

"Electric or Electricity System(s)" means, as applicable, the electricity transmission systems owned and operated by CRT in the Provinces of Quebec and Ontario, Canada; and the electricity transmission and distribution system owned and operated by Niagara Mohawk in the State of New York.

"Emergency" means any abnormal system condition that requires remedial action to:

(a) prevent or limit loss of *Transmission Equipment* and/or generation facilities that adversely affects the reliability of the *Electric Systems*;

(b) protect the integrity of *Transmission Equipment*;

(c) ensure worker and public safety; or

(d) protect the environment.

For the purpose of this *Agreement*, CRT has control over items (a) through (d). In New York, Niagara Mohawk, as an electric transmission asset owner, has control over items (b), (c) and (d) of this definition and the NYISO has control over item (a).

"End of Life" means the state where:

1. (a) the original in-service capabilities of equipment have been (or are expected to be) substantially diminished, and

   (b) the cost of restoring or purchasing equipment to achieve the original in-service capabilities exceeds the cost of other viable alternatives, or;

2. new physical requirements exceed the original inservice capabilities of the equipment.

"Energy Data Services Agreement" means the agreement executed between Niagara Mohawk and CRT, herein attached as Schedule "D".

"Extraordinary Maintenance" means an unexpected activity or activities required to be performed in response to unforeseen circumstances which include but are not limited to:

(a) Force Majeure;

(b) manufacturer's defect;

(c) work other than *Routine Maintenance*;

(d) failures due to system configuration(s) imposed by a *Reliability Authority* or

(e) *End of Life*.

For clarity, *Extraordinary Maintenance* does not include:

(a) damage that resulted from negligent operating, maintenance or construction practices;

(b) failure to ensure physical security of the site (breach of security, e.g.

trespassing/vandalism); and

(c) unit retrofit to increase life expectancy unless agreed by both *Parties*.

"Federal Energy Regulatory Commission" or "FERC" means the United States of America's Federal Energy Regulatory Commission, or any successor organization.

"Force Majeure Event" means any event or circumstance, or combination of events or circumstances, that with respect to the *Party* claiming *Force Majeure*:

(a) that is beyond the reasonable control of the *Party* ;

(b) that adversely affects the performance by the *Party* of its obligations under this *Agreement*; and

(c) the adverse effects of such *Force Majeure Event* could not have been foreseen or prevented, overcome, remedied or mitigated in whole or in part by the *Party* through the exercise of diligence and reasonable care and includes, but is not limited to, acts of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, civil disobedience or disturbances, vandalism or acts of terrorism, extreme weather conditions, strikes lockouts, restrictive work practices or other labour disturbances, unlawful arrests or restraints by government or governmental, administrative or regulatory agencies or authorities unless such restraints are the result of willful act or negligence by the *Party* claiming *Force Majeure*.

"Forced Outage" means an unscheduled *Outage* due to the actual or potential failure of *Transmission Equipment*.

"Good Utility Practice" means any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry in North America during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgement in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. *Good Utility Practice* is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in North America.

"Inadvertent Transfers" means the differences between the actual energy delivered and measured as per Section 12.3 of this *Agreement* and the net energy programmed to be delivered by the *Parties* on given *Interconnection Facilities* during a given time interval.

"Interconnection Facilities" means (i) those electric transmission facilities owned, operated, and under the exclusive right to use by CRT that extend from the Les Cedres substation located in the municipality of St. Joseph de Soulange, Vaudreuil, Soulanges County, Province of Quebec, Canada, to and including the line side of the *Point(s)-of-Interconnection* with Niagara Mohawk's *Transmission System*; and (ii) those certain electric transmission facilities owned and operated by Niagara Mohawk from and including the jaw side of the *Point(s)-of-Interconnection* at Niagara Mohawk's Dennison Substation, all as more fully described and depicted in Schedule "A."

"Point(s)-of- Interconnection" means those points of connection between the *Interconnection Facilities* and Niagara Mohawk's *Transmission System* at its Dennison substation located in the Town of Massena, State of New York, United States, as more fully described and depicted in Schedule "A."

"Isolated" is as defined in Schedule "B" of this *Agreement*.

"Maintenance" means, but is not limited to, routine maintenance, troubleshooting, repairs, approved changes, and such other modifications as may be required for the safe and efficient operation of the *Transmission Equipment*. For greater certainty, *Maintenance* includes *Extraordinary Maintenance*.

"Metering Equipment" means the voltage transformers, current transformers, meters, connecting wiring and recorders used to measure any reactive power and active power, with associated time tagging and any other quantity that is reasonably required by either *Party* for reliability reasons or billing reasons.

"NEB" means the National Energy Board of Canada or any successor organization.

"NERC" means the North American Electric Reliability Council or any successor organization.

"NYSRC" means the New York State Reliability Council or any successor organization.

"New York ISO or NYISO" means the New York Independent System Operator or any successor of this organization. "NPCC" means the Northeast Power Coordinating Council or any successor organization.

"Operating Orders" are orders issued by a *Controlling Authority* to facilitate the removal from service or the restoration into service of *Transmission Equipment* or to establish the necessary conditions for *Work Protection.*

"Outage" means the removal of *Transmission Equipment* from service, unavailability of *Transmission Equipment* connection or temporary de-rating, restriction of use, or reduction in performance of *Transmission Equipment* for any reason including, but not limited to, permitting the inspection, testing, *Maintenance* or repair of *Transmission Equipment*.

"Planned Outage" means an *Outage* that is planned, scheduled and intentional by a *Party* at a preselected time, usually for construction, preventive *Maintenance* or repair, in coordination with the appropriate Controlling Authorities, as may be required.

"Promptly" means performed in an expeditious manner and without undue delay, using due diligence, and with the intent of completing the required act or task as quickly as practicable.

"Protections or Protection" means *Transmission Equipment* designed to detect and *Isolate* failed or faulted elements, as provided in Schedule "B."

"Qualified" means assessed by a *Party* in personal competency, familiarity with and knowledge of all applicable rules, regulations, guidelines, policies, codes, procedures, apparatus and *Transmission Equipment*, and dangers with respect to work and operation.

"*Regulatory Authority*" means the local, state or provincial, federal or national, regulatory agency, department or other authority having jurisdiction over the facilities or operations of either *Party* to this *Agreement*. For Niagara Mohawk, this includes, without limitation, the United States Department of Energy, the FERC, the New York State Public Service Commission, and certain local agencies, departments or authorities. For CRT, this is limited to the NEB.

"Reliability Authority" means the NERC, NPCC, and the NYSRC.

"Routine Maintenance" means work performed on a regular basis including without limitation:

(a) routine scheduled oil analysis;

(b) routine scheduled oil processing;

(c) routine scheduled inspections and checks including but not limited to visual and infra-red visual inspection;

(d) routine scheduled function and diagnostic tests;

(e) normal preventive cosmetic maintenance, corrosion touch up paint and corrective actions;

(f) minor oil leakage repairs;

(g) alarm/protection system checks; and

(h) minor ancillary equipment/component repair/replacement

"Security Limits" means the operating electricity system voltage limits, stability limits and thermal ratings of the electricity system that restrict its operation.

"Site" means the premises and the buildings on, in or around which *Transmission Equipment* is located.

"Transmission Equipment" means any structures, transmission lines or cables, transformers, breakers, disconnect switches, buses, or any other equipment necessary for the purpose of conveying electricity; and their related voltage/current transformers, *Protection* systems, telecommunications systems, or any other auxiliary equipment.

"Transmission System" means a system for transmitting electricity and includes any structures, *Transmission Equipment* or other things used for that purpose.

ARTICLE VI: SCOPE OF AGREEMENT

6.1 Scope

This *Agreement* provides the basis for operating and maintaining the *Interconnection Facilities*. Specifically, it describes:

(a) the requirements for the safe operation, switching, notification of any actions in the *Interconnection Facilities* and response to *Emergencies*;

(b) the circumstances under which the *Interconnection Facilities*, in whole or in part, can be disconnected and the remedial actions required in order to permit the restoration of the operation of the *Interconnection Facilities* so disconnected; and

(c) the *Transmission Equipment* comprising the *Interconnection Facilities* and how it shall be operated for the mutual advantage of both *Parties*.

6.1.2 Notwithstanding anything in this *Agreement* to the contrary, the *Parties* recognize that:

(a) the NYISO directs the operation of the Niagara Mohawk's high voltage *Transmission System*. Nothing in this *Agreement* shall be construed as requiring Niagara Mohawk to act

(or refrain from acting) contrary to the rules, regulations or directives of the NYISO, NERC, NYSRC or any Regulatory Authority having jurisdiction; and

(b) Hydro-Quebec TransEnergie directs the operation of the CRT *Transmission System*. Nothing in this *Agreement* shall be construed as requiring CRT to act (or refrain from acting) contrary to the rules, regulations or directives of Hydro-Quebec TransEnergie or any Regulatory Authority having jurisdiction.

ARTICLE VII: TERM

7.1 Effective Date and Term

This *Agreement* shall take effect as of the *Effective Date* and shall continue in full force and effect until terminated in accordance with this Article VII.

7.2 Termination

7.2.1 This *Agreement* may be terminated at any time by mutual agreement. It may also be terminated upon at least one year prior notice in writing given by either *Party* to the other *Party,* provided that such unilateral termination shall not prejudice any outstanding obligations entered into under this *Agreement* that have accrued as of the date of termination. Without limiting the generality of the foregoing, the liability provisions of Article XIV of this Agreement, the confidentiality provisions of Article XVIII of this Agreement and the obligations to pay monies owed prior to termination of Article VII of this Agreement shall survive termination.

7.2.2 Neither *Party* may terminate this *Agreement* other than in accordance with the provisions providing for such termination set out in this *Agreement*.

7.2.3 If a Party becomes bankrupt or insolvent or ceases to carry on business, the other Party shall be entitled, at its option, to avail itself of any or all of the following remidies, all of which shall be cumulative and not exclusive: (i) subject to applicable regulatory requirements, terminate this *Agreement*; (ii) require the bankrupt *Party* to make any payment, or perform or comply with any provision that it is obligated to pay, perform or comply with under this *Agreement*; and/or (iii) obtain such specific performance and/or an injunction to prevent breaches of the *Agreement* and to enforce specifically the terms and conditions thereof.

7.3 Upon termination of this *Agreement*, both *Parties* may disconnect its respective *Points-of-Interconnection* with the *Interconnection Facilities* and shall be entitled to de-commission and remove any of their respective *Transmission Equipment* associated with the *Interconnection Facilities* and their respective *Point(s)-of-Interconnection*.

7.4 When a non-defaulting *Party* has terminated the *Agreement* under Article XVI, the nondefaulting *Party* may disconnect its respective *Point(s)-of-Interconnection* and shall be entitled to decommission and remove any of its respective *Transmission Equipment* associated with the *Interconnection Facilities* and their respective *Point(s)-of-Interconnection*.

7.5 If this *Agreement* is terminated under this Article VII or Article XVI, then, upon termination, this *Agreement* will, subject to Sections 7.6 and 16.4, be of no further force and effect.

7.6 The termination of this *Agreement* shall not affect any rights or obligations of either *Party* that may have accrued before termination, nor affect either *Party*'s rights or obligations under this *Agreement* which are meant to continue in full force notwithstanding the termination of this *Agreement* (such as, but not limited to the liability provisions in Article XIV).

ARTICLE VIII: ASSET OWNERS' COMMITTEE

8.1 Each *Party* shall assign, within 30 days of the *Effective Date*, a primary member and an alternate member to an *Asset Owners' Committee* with the authority to act on their behalf with respect to actions or decisions taken by the *Asset Owners' Committee*. The members of the *Asset Owners' Committee* shall meet from time to time to review issues of interest to the *Parties* in relation to the *Interconnection Facilities*. Among other items, the *Asset Owners' Committee* shall review and address:

(a) *Interconnection Facilities*' utilization policies and principles;

(b) deficiencies identified in the operation of the *Interconnection Facilities*;

(c) opportunities to improve the operation of the *Interconnection Facilities* within the responsibilities of the *Parties* under this *Agreement*;

(d) *Transmission Equipment* ratings and operating restrictions;

(e) the *Outage* planning process used by the *Parties* and *Planned Outages*;

(f) plans for changes on or to CRT's and Niagara Mowawk's *Transmission System* and/or *Transmission Equipment* that may affect the operation of the *Interconnection Facilities*;

(g) proposed upgrades or modifications to the Protections, control or communications facilities for the Interconnection Facilities;

(h) the adoption of policies and standards to be applied by both *Parties* in the operation of the *Interconnection Facilities*;

(j) incidents affecting the operation or performance of the Interconnection Facilities; proposals and recommendation of revisions to this *Agreement*;

(k) development and maintenance of *Common Operating Instructions* (Schedule "B" of this *Agreement*); and

(l) any proposed new connection or any proposed modification to existing connections to either *Party*'s *Transmission System* that may affect the *Interconnection Facilities* which either *Party* wants the *Asset Owners' Committee* to discuss.

(m) the impact on the *Interconnection Facilities* of activities by system operators, regulatory bodies and councils, including but not limited to the NERC, the NYISO, and any Regulatory Authority having jurisdiction.

8.2 The Assets Owners' Committee shall have the authority to:

(a) approve and release changes to any or all of the Schedules in this *Agreement* as required

from time to time to reflect changes in the operation of the *Interconnection Facilities*;

(b) write, approve and release new schedules to be part of this *Agreement* as required from time to time;

(c) determine and revise acceptable remedial actions consistent with the terms of this *Agreement* required to ensure the acceptable operation and performance of the *Interconnection Facilities*;

(d) address issues including, but not limited to deficiencies associated with the *Protection*, *Isolation*, or control equipment for the *Interconnection Facilities* that impacts the operation of the *Electricity Systems*; and

(e) establish such other committees, subcommittees, task forces, working groups or other bodies, as it deems appropriate for purposes of administering this *Agreement*.

(f) identify measures and technologies to be applied to minimize the risk of failure of *Transmission Equipment* subject to cost sharing arrangements under this *Agreement*;

(g) monitor *Maintenance* procedures on *Transmission Equipment* subject to cost sharing arrangements under this *Agreement* to ensure that *Good Utility Practice* is followed in the operation and maintenance of such equipment;

(h) resolve any disputed matters submitted to the *Asset Owners' Committee* in accordance with the dispute resolution process described in Article XVIII of this *Agreement*;

(i) negotiate alternatives to the cost sharing arrangements under this *Agreement*, subject to approvals as may be required by appropriate *Regulatory Authorities*;

(j) write, approve and release all matters related to the metering, accounting and billing. Starting on the *Effective Date* and until amended, restated, replaced or terminated by the *Asset Owners' Committee*, the *Parties* have developed a metering protocol described on Schedule C;

(k) negotiate such other *Agreement*s or arrangements, subject as necessary to review and approval by appropriate *Regulatory Authorities*, that may be necessary to effectuate transmission transactions between the *Parties*.

8.3 Decisions

All decisions of the *Asset Owners' Committee* shall be unanimous and are binding on both *Parties*. More specifically, the decisions may be unanimously affirmative or negative. However, a deadlock between the members of the *Asset Owners' Committee* shall be interpreted as a negative decision. Furthermore, all decisions of the *Asset Owners' Committee* shall be final and shall not be subject to review in arbitration or otherwise; provided, however, if any decision of the *Asset Owners' Committee* requires modification of this *Agreement*, such modification of this *Agreement* shall be subject to approval by the appropriate *Regulatory Authorities*

8.4 Expenses

Each *Party* shall pay the expenses of its own member on the *Asset Owners' Committee*. Any expenses jointly incurred in the context of the activities of the *Asset Owners' Committee*, pertaining to the *Interconnection Facilities* shall be shared equally by the *Parties* or in such other proportion as may be agreed upon by the *Asset Owners' Committee*.

ARTICLE IX: OBLIGATIONS

9.1 General

9.1.1 Except as specifically provided herein, each *Party* shall bear its own costs of compliance with this *Agreement*. These include, but are not limited to, costs associated with the operation, inspection, modifications and *Maintenance* of their respective *Interconnection Facilities* including associated Protection, control, and communication equipment, in the manner described in this *Agreement*

9.1.2 The cost of changes to the *Interconnection Facilities*, including the costs related to *Protection* control and communication equipment, requested by one *Party* and benefiting only that *Party*, shall be borne by the requesting *Party*.

9.13 Each *Party* shall follow *Good Utility Practice* in (a) the selection of; inspection of and *Maintenance* of the *Interconnection Facilities*, (b) undertaking repairs required to correct any deficiencies, and (c) performing its obligations under this *Agreement*.

9.1.4 Each *Party* shall make reasonable attempts to accommodate the other *Party*'s interests when planning changes to the *Interconnection Facilities*.

9.1.5 Each *Party* shall ensure that their respective staff, including operations, *Maintenance* and protection and control personnel, etc., are *Qualified* as having sufficient knowledge of the *Transmission Equipment*, policies and procedures described in this *Agreement* and that this knowledge will be monitored and applied.

9.1.6 To the extent removal of *Transmission Equipment* is required, each *Party* shall remove *Transmission Equipment* or *Interconnection Facilities* from service in accordance with *Applicable Legal Requirements* and such *Party'*s reporting and scheduling obligations described in this *Agreement*. Additionally, *Transmission Equipment* or *Interconnection Facilities* shall be removed from service, in accordance with *Applicable Legal Requirements*, to prevent damage to either *Party'*s *Transmission Equipment* or *Interconnection Facilities*, or to protect the safety of employees, the public or the environment. If any *Transmission Equipment* or *Interconnection Facilities* are removed for these reasons, the removing *Party* shall Promptly notify the other *Party's Controlling Authority*.

9.1.7 The *Parties* shall cooperate to establish *Transmission Equipment* ratings, in monitoring power flows and providing *Transmission Equipment* status information to the other *Party* for their respective *Transmission Equipment* or *Interconnection Facilities*.

9.1.8 The *Parties* agree that *Transmission Equipment* in the *Interconnection Facilities* shall be operated within continuous ratings for normal conditions and within post contingency ratings immediately after the occurrence of a contingency event affecting the *Interconnection Facilities*. Operation of *Transmission Equipment* beyond postcontingency ratings shall be at the owner's discretion.

9.1.9 The operating modes of the *Interconnection Facilities* during normal conditions are detailed in the *Common Operating Instructions* listed in Schedule "B" of this *Agreement*.

9.1.10 The operating procedures, constraints and conditions for a post-contingency operating mode are described in the *Common Operating Instructions* listed in Schedule "B" of this Agreement.

9.1.11 Changes to the operating modes of the *Interconnection Facilities*, as required from time to time, shall be made at the request of a *Controlling Authority*. The switching of operations from one

operating mode to another shall be made through mutual agreement between the appropriate *Controlling Authority* through the *Parties* in accordance with the communication diagram shown in Section 6.4 of Schedule "B" of this *Agreement*.

9.1.12 Each *Party* shall be responsible for the operation, *Maintenance* and repair of the *Transmission Equipment* or *Interconnection Facilities* owned or under exclusive rights of use by it.

9.1.13 A determination of the need for *Extraordinary Maintenance* or repair, the estimated costs, and the scope of work therefor shall be agreed to by the *Asset Owners' Committee* in advance, unless an *Emergency* makes the work necessary before review and concurrence of the *Asset Owners' Committee* can be obtained. In such case, the *Party* performing the *Extraordinary Maintenance* or repair work shall notify the other *Party* as soon as is practicable of the scope of the work and the reasons *Extraordinary Maintenance* or repair work is necessary. The shared costs of *Extraordinary Maintenance* or repair shall include not only costs of the *Extraordinary Maintenance* or repair but also any associated expense for removal (if necessary), transportation and re-installation. Cost estimates shall identify direct, indirect and overhead costs and applicable taxes.

9.1.14 In order to ensure the safe, efficient and effective operation of the *Interconnection Facilities*, Niagara Mohawk and CRT hereby agree to disclose operating data and other relevant information that may affect the operations of the *Interconnection Facilities*.

9.1.15 Neither *Party* shall make changes that would reasonably be expected to affect the *Interconnection Facilities* or *Transmission Equipment*, without advising the other *Party*'s *Asset Owners' Committee* members in writing.

9.2 Protections

The *Parties* shall cooperate in determining and establishing *Protection* settings to preserve the integrity of their assets and security of their *Transmission System*. This cooperation may include submission to the other *Party* of relevant electrical drawings and proposed settings of the *Protections* associated with the *Interconnection Facilities*, for their review and approval prior to their implementation.

9.3 Emergency Preparedness

9.3.1 Each *Party* shall develop and submit to the other *Party Emergency* response procedures, including reporting instructions and *Emergency* contacts.

9.3.2 The operating procedures, constraints and conditions for an *Emergency* operating mode are described in Schedule "B" of this *Agreement*.

ARTICLE X: EXCHANGE OF INFORMATION

10.1 Subject to Article XVII (Confidential Information), each Party shall, upon the request of the Asset Owners' Committee, supply Promptly to the other Party any and all documents or information required, so as to enable the Asset Owners' Committee to perform its duties and for the Parties to fulfill their obligations under this Agreement, provided, however that a Party shall not be obligated to supply to the other Party any documents or information if it deems, acting reasonably, that the confidentiality of the said documents or information is not properly protected by the provisions of Article XVII.

ARTICLE XI: PLANNING FOR NEW OR MODIFIED CONNECTION FACILITIES

11.1 Each *Party* shall provide written notice to the other *Party*'s *Asset Owners' Committee* member of proposed new or modified connection facilities (generation, load and/or transmission) that may affect the other *Party*'s *Transmission System*. Notice shall be given as soon as a formal application by a third party has been submitted to the respective *Regulatory Authority*, as the case may be, or as soon as the *Party* is aware of such formal application. In providing such notice to the other *Party,* the *Parties* shall obtain any required authorization to disclose information that might be deemed confidential or proprietary.

11.2 The *Parties* agree to cooperate in the undertaking of studies to assess the impact that proposed new or modified connection facilities might have on the other *Party*'s *Transmission System*. The responsibility and criteria for conducting such studies and the cost for such studies shall be agreed upon by the *Asset Owners' Committee*.

11.3 Each *Party* shall determine the cost of modifications, enhancements and reinforcements on the *Party* 's *Transmission Equipment* required to accommodate new or modified connection facilities in the other *Party*'s *Transmission System*. Such modifications, enhancements and reinforcements shall include but are not limited to the following:

(a) protective relay and control facilities, and associated telecommunications attributed to the project;

(b) modifying existing connection lines attributed to the project;

(c) breakers attributed to the project;

(d) disconnect switches; and

(e) bus sections at the terminal stations in the network pool attributed to the project.

11.4 The following factors shall be considered in calculating the costs applicable to Section 11.3:

(a) advancement costs of replacing existing facilities before the end of their useful life; and

(b) the cost of upgrading the *Transmission Equipment* to the next practical rating, including, but not limited to, removal and decommissioning cost less any salvage value of the removed facilities.

11.5 Each *Party* shall provide written notice to the other *Party*'s *Asset Owners' Committee* member when a connection/construction agreement has been signed and/or regulatory approval has been granted for the proposed new or modified connection facilities that may affect the other *Party*'s *Transmission System*.

ARTICLE XII: OPERATIONAL REQUIREMENTS OF THE INTERCONNECTION FACILITIES

12.1 Operating Requirements

12.1.1 The operational requirements of the *Interconnection Facilities* are described in Schedule "B" of this *Agreement*.

12.1.2 The *Parties* agree to comply with their obligations regarding operational requirements, reporting standards, and communications protocol as detailed in Schedule "B".

12.1.3 Each *Party* shall endeavour to maintain an ongoing interchange of information about operation (including *Planned Outages*, unplanned outages and *Forced Outages*, system tests, etc.) which could reflect into, or be of significance to, either *Party* 's *Transmission System* prior to the actual operation when appropriate.

12.1.4 *Controlling Authorities* involved in the operation of the *Interconnection Facilities* are defined in Section V of this *Agreement*.

12.1.5 A list of important business telephone numbers for operational matters related to to this *Agreement* are included in Schedule "B" of this *Agreement*. Contact information for notices and business matters related to this *Agreement* are listed in Article II of this *Agreement*.

12.1.6 The Communication path for the operation of the *Interconnection Facilities* under normal and *Emergency* conditions is included in Schedule "B" of this *Agreement*.

12.1.7 Schedule "B" summarizes the approved operating terminology and their meanings to be used in communication between *Controlling Authorities*.

12.2 Common Operating Instructions

12.2.1 The *Asset Owners' Committee* will issue and maintain *Common Operating Instructions*, as found in Schedule "B" of this *Agreement*, for the operation and *Maintenance* of the *Interconnection Facilities*. Each *Party* shall deliver the *Common Operating Instructions* and any future amendments thereto to their respective operating staff.

12.2.2 *Other Common Operating Instructions* may be issued under *Agreement*s between either *Party* and *Reliability Authorities* for the operation of the *Interconnection Facilities*.

12.2.3 The *Asset Owners' Committee* shall act *Promptly* to resolve the conflict or discrepancy with the respective *Reliability Authorities*.

12.3 Metering

12.3.1 Obligation to Provide Metering

Metering Equipment shall be installed as required to provide to both *Parties* electric power quantities, equipment loading and status to enable monitoring of security limits compliance and control of *Inadvertent Transfers*. Each *Party* shall provide specifications of its *Metering Equipment* to the other *Party* as per Schedule C of this *Agreement*. The cost allocation between the *Parties* for the provision of such *Metering Equipment* shall be determined by the *Asset Owners' Committee*.

12.3.2 Metering Points

The physical locations of *Metering Equipment* installations are determined by written agreement of the *Asset Owners' Committee*. When required, compensation from metering points to transfer points shall be determined by the *Asset Owners' Committee*.

12.3.3 Standards for Metering Equipment

Metering Equipment will be designed, verified, sealed and maintained in accordance with the standards of Schedule C of this *Agreement*. *Metering Equipment* not meeting the standards will be replaced with *Metering Equipment* meeting those standards in accordance with each *Party's* replacement schedule.

12.3.4 Procedures for *Metering Equipment* Malfunction

When *Metering Equipment* is out of service, has failed or malfunctioned or is deemed inaccurate, metering during the period of outage, failure, malfunction or inaccuracy shall be determined, if required, by decision of the *Asset Owners' Committee*, from other *Metering Equipment*, if available, or, if not available, shall be estimated and agreed to by the *Asset Owners' Committee*.

Remedial work on *Metering Equipment* will be completed at a schedule mutually agreed to by the *Asset Owners' Committee*.

ARTICLE XIII: LIABILITY

13.1 Liability Between the Parties

13.1.1 A *Party* shall be responsible for, indemnify and hold harmless the other *Party* (the "Other *Party* ") for any claims, liability, losses or damages (a "Claim") sustained by the Other *Party* if the Claim is connected with, or arises from, a willful breach of this *Agreement* by the *Party* or the gross negligence of the *Party* in meeting its obligations under this *Agreement*, except in the case of negligence on the part of the *Other Party*.

13.1.2 The *Other Party* shall make a good faith effort to recover all Claims from its insurers under applicable insurance policies so as to reduce the amount of the Claim. The amount of any Claim shall be reduced (i) to the extent the *Other Party* receives any insurance proceeds with respect to the Claim and (ii) to take into account any net tax benefit recognized by the *Other Party* arising from the recognition of the Claim and any payment actually received with respect to a Claim.

13.13 Any Claim will be asserted by the *Other Party* giving the *Party* reasonably prompt written notice thereof, stating the nature of the Claim in reasonable detail and indicating the estimated amount, if practicable, but in any event not later than ten (10) calendar days after the *Other Party* becomes aware of the Claim, and the *Party* will have a period of thirty (30) calendar days within which to respond to the Claim. If the *Party* does not respond within such thirty (30) calendar day period, the *Party* will be deemed to have accepted such claim. If the *Party* rejects such claim, the *Other Party* will be free to seek enforcement of its rights to indemnification under this *Agreement*.

13.1.4 If the amount of any Claim, at any time subsequent to the making of an indemnity payment in respect thereof, is reduced by recovery, settlement or otherwise under or pursuant to any insurance coverage, or pursuant to any claim, recovery, settlement or payment by or against any other entity, the amount of such reduction, less any costs, expenses or premiums incurred in connection therewith (together with interest thereon from the date of payment thereof at the prime rate then in effect), will promptly be repaid by the *Other Party* to the *Party* .

13.1.5 Notwithstanding the foregoing, in no event shall the *Party* be responsible for, be liable to indemnify and hold harmless the *Other Party* from any indirect or special damages, or losses that are incidental or consequential, including without limitation punitive damages or any loss of profit, loss of contract, loss of opportunity or loss of goodwill.

13.2 Liability Towards Third Parties

13.2.1 A *Party* shall indemnify and hold harmless the *Other Party* for any claims, liability, losses or damages sustained by a third party (a "Third Party Claim") to the extent that the *Third Party Claim* is connected with, or arises from a willful breach of this *Agreement* by the *Party,* except in cases of negligence on the part of the *Other Party* .

13.2.2 Any third party having a *Third Party Claim* under these indemnification provisions shall make a good faith effort to recover all losses, damages, costs and expenses from its insurers under applicable insurance policies so as to reduce the amount of any loss. The amount of any loss shall be reduced (i) to the extent that third party receives any insurance proceeds with respect to the loss and (ii) to take into account any net Tax benefit recognized by the third party arising from the recognition of the loss and any payment actually received with respect to a loss.

13.2.3 If the *Other Party* receives notice of the assertion of any Third *Party* Claim with respect to which indemnification is to be sought from the *Party*, the *Other Party* will give the *Party* reasonably prompt written notice thereof but in any event not later than ten (10) calendar days after the *Other Party's* receipt of notice of such *Third Party Claim*. Such notice shall describe the nature of the *Third Party Claim* in reasonable detail and will indicate the estimated amount, if practicable, of the loss that has been or may be sustained. The *Party* will have the right to participate in or, by giving written notice to the *Other Party*, to elect to assume the defense of any *Third Party Claim* at its own expense and by its own counsel, and the *Other Party* will cooperate in good faith in such defense at its own expense.

13.2.3 If the amount of any *Third Party Claim*, at any time subsequent to the making of an indemnity payment in respect thereof, is reduced by recovery, settlement or otherwise under or pursuant to any insurance coverage, or pursuant to any claim, recovery, settlement or payment by or against any other entity, the amount of such reduction, less any costs, expenses or premiums incurred in connection therewith (together with interest thereon from the date of payment thereof at the prime rate then in effect), will promptly be repaid by the third party to the *Party*.

13.2.4 Notwithstanding the foregoing, in no event shall the *Party* be liable to indemnify and hold harmless the *Other Party* from any indirect or special damages, or losses that are incidental or consequential including without limitation punitive damages or any loss of profit, loss of contract, loss of opportunity or loss of goodwill in respect of a *Third Party Claim*

ARTICLE XIV: FORCE MAJEURE

14.1 Force Majeure

14.1.1 Each *Party* hereto shall use all due diligence to perform its obligations under this *Agreement* but conditions may arise which prevent or delay performance by a *Party* because of *Force Majeure*. If a *Party* is rendered unable to fulfill any obligations by reason of causes of *Force Majeure*, it shall be excused from performing to the extent it is prevented or delayed from so doing, but shall exercise due diligence to correct such inability with all reasonable dispatch, and shall not be liable for injury, damage or loss resulting from such inability. However, settlement of strikes, lockouts and labour disturbances shall be wholly within the discretion of the *Party* having the difficulty.

14.2 Notice of Force Majeure

14.2.1 If there is a *Force Majeure* event affecting a *Party's* ability to perform its obligations under this *Agreement*, the affected *Party* will use reasonable efforts to notify the other *Party Promptly* after

becoming aware of the event of *Force Majeure*. As soon as practicable and to the best of its knowledge, the *Party* experiencing a *Force Majeure* event shall provide the reasons why it believes the occurrence

constitutes a *Force Majeure*, identify the nature of the event, its expected duration, and the particulars of the obligations affected by the event, and furnish to the other *Party* reports at reasonable intervals during the continuance of the *Force Majeure* event.

ARTICLE XV: DEFAULT

15.1 If either *Party* fails to or neglects at any time to fully perform, observe and comply with all the terms, conditions and covenants herein, then the non-defaulting *Party* shall as soon as practicable, notify the defaulting *Party* in writing of such default and the defaulting *Party* shall correct such default to the satisfaction of the non-defaulting *Party* within thirty (30) days of the issuance of such notice or sooner in the case of an *Emergency*, as may be determined by the non-defaulting *Party* or within a longer time period if agreeable to the non-defaulting *Party*, failing which the non-defaulting *Party* may forthwith terminate this *Agreement* and the rights and privileges herein granted.

15.2 The rights and remedies of the *Parties* in this *Agreement* are not intended to be exclusive but rather are cumulative and are in addition to any other right or remedy otherwise available to the *Parties* at law or in equity. Either *Party* may exercise one or more of its rights and remedies from time to time, independently or in combination, without prejudice to any other right or remedy that either *Party* may have exercised. This subsection shall not operate to void the application of Article XVIII of this *Agreement* to any dispute arising between the *Parties*.

15.3 If any of the remedies provided for and chosen by a non-defaulting *Party* are found to be unenforceable, the non-defaulting *Party* may exercise any other right or remedy available to it at law.

ARTICLE XVI: CONFIDENTIAL INFORMATION

16.1 General

All *Confidential Information* shall at all times be treated as confidential, and shall be prepared, given, and used in good faith. The *Parties* shall use the *Confidential Information* only for the requirements of the work performed under being or activities contemplated by the *Agreement* (including but not limited to, planning or operating the Parties' Interconection Facilities or Transmission Systems) and not for any other purpose, and, except to the extent expressly permitted by this *Agreement*, shall not disclose it to any third party directly or indirectly, without the prior written consent of the *Party* that provided the *Confidential Information* (the "*Disclosing Party")*, and in such events the third party must agree to use the *Confidential Information* solely for the requirements of the work or activities as specified. *Confidential Information* shall not be used for any commercial purpose of any kind whatsoever other than contemplated herein. Anything in this *Agreement* to the contrary notwithstanding, each *Receiving Party,* as defined below, may disclose *Confidential Information* to its affiliates and its affiliates' officers, directors, employees, counsel, and representatives ("*Representatives*") to the extent (i) each such person has a need to know such *Confidential Information* for the purposes of this *Agreement*, and (ii) such disclosure does not constitute a violation of any *Applicable Legal Requirement*. The *Receiving Party* shall be responsible for any breaches of this Article XVII to the extent caused by its *Representatives*.

16.2 Exclusions

"*Confidential Information*" does not include:

(a) information that is in the public domain, provided that specific items of information shall not be considered to be in the public domain merely because more general information is

in the public domain and provided that the information is not in the public domain as a result of a breach of

this *Agreement* by the *Disclosing Party* or a person to whom the *Disclosing Party* has disclosed the information;

(b) information that is, at the time of the disclosure, in the possession of the recipient (the "*Receiving Party* "), provided that it was lawfully obtained either from the *Disclosing Party* or from sources who did not acquire it directly or indirectly from the *Disclosing Party* under an obligation of confidence; and

(c) information that is developed by *Receiving Party* or its affiliates independently of any *Confidential Information* disclosed to it under this *Agreement* (as evidenced by written documentation).

16.3 Exceptions

Each *Party* shall keep *Confidential Information* confidential except:

(a) as may be necessary in an *Emergency*;

(b) to the extent required by *Applicable Legal Requirements*;

(c) to the extent that either *Party* may be required to disclose same to enable it to fulfill its obligations to any *Reliability Authority*.

(d) For the avoidance of doubt, anything in this *Agreement* to the contrary, the *Receiving Party* and/or its *Representative* may disclose *Confidential Information* disclosed hereunder to the extent required by any *Applicable Legal Requirement* or securities exchange requirement.

16.4 Disclosure

In the event the *Receiving Party* is required to disclose *Confidential Information* of the *Disclosing Party,* the *Receiving Party* shall *Promptly* notify the *Disclosing Party* prior to disclosing the *Confidential Information*, to the extent practicable, so that the *Disclosing Party* may seek an appropriate protective order or other appropriate protection and/or waive the *Receiving Party's* compliance with this *Agreement*. Unless the *Disclosing Party* agrees that all *Confidential Information* may be disclosed, the *Receiving Party* shall furnish only that portion of the *Confidential Information* which it is legally required to disclose, and will exercise all reasonable efforts to obtain reliable assurance that confidential treatment will be accorded the *Confidential Information*.

16.5 Co-operation

The *Parties* shall make any information required to be provided or communicated under the terms of this *Agreement* available to each other in a reasonably timely and cooperative manner.

16.6 Disclosure to Regulatory Agencies

Notwithstanding anything in this Article XVII to the contrary, if the *FERC* or its staff, during the course of an investigation or otherwise, requests information from Niagara Mohawk that is otherwise *Confidential Information* required to be maintained in confidence pursuant to this *Agreement*, Niagara

Mohawk shall provide the requested information to the FERC or its staff within the time provided for in the request for information. In providing the information to *FERC* or its staff, Niagara Mohawk may, consistent with 18 C.F.R. § 388.112, request that the information be treated as confidential and non-public by the *FERC* and its staff, and that the information be withheld from public disclosure. Niagara Mohawk shall notify CRT when Niagara Mohawk is notified by *FERC* or its staff that a request for disclosure of, or decision to disclose, *Confidential Information* has been received, at which time either of the *Parties* may respond before such *Confidential Information* would be made public, pursuant to 18 C.F.R. § 388.112.

16.7 Duration of Survival

The confidentiality provisions of this Article XVII will continue and survive termination of this *Agreement* for a period of seven (7) years following termination.

ARTICLE XVII: DISPUTE RESOLUTION

17.1 Role of Asset Owners' Committee

All disputes shall first be submitted for resolution to the *Asset Owners' Committee*. Any dispute submitted for resolution to the *Asset Owners' Committee* which is not resolved by the *Asset Owners' Committee* within five (5) *Business Day*s following submission of the dispute to the *Asset Owners' Committee*, shall be submitted to the designated corporate officer(s) of each for resolution by good faith negotiations.

17.2 Failing resolution of the dispute by the corporate officers pursuant to Section 18.1 within twenty (20) *Business Day*s following submission of the dispute to them, the dispute shall be submitted to final and binding arbitration to be conducted in either Montreal, Quebec, Canada or Albany, New York, United States, the claiming *Party* having absolute discretion over the location where the arbitration shall take place, in accordance with this *Agreement*. In as far as the arbitration is concerned, the *Parties* agree to be bind by the rules of the Commercial Arbitration Rules of the American Arbitration Association ("AAA Rules"), subject to the following.

17.3 Appointment of Arbitrators: The *Parties* shall meet within ten (10) *Business Day*s of the decision by one of the *Party* to submit the dispute to arbitration to attempt to agree on an arbitrator *Qualified* by experience, education and training to arbitrate the dispute. If the *Parties* fail to meet, or otherwise are unable to agree on the selection of a single arbitrator within those ten Business Days, each *Party* will select one arbitrator. The two arbitrators so selected shall, within ten *Business Day*s following their selection, jointly appoint a third arbitrator to be the sole arbitrator, after which appointment the role of the first two arbitrators shall end. If the two arbitrators selected by the *Parties* are unable to agree on the selection of the third arbitrator within ten *Business Day*s following their selection, those two arbitrators may apply to a court of' competent jurisdiction to appoint the sole arbitrator within ten *Business Day*s following the request. Each arbitrator must be Qualified by education, training and experience to pass upon the particular matter to be decided and shall have no relationship, direct or indirect, with either of the *Parties*.

17.4 The arbitrator(s) will be instructed that time is of the essence in the arbitration proceeding. The arbitrator shall proceed as soon as is practicable to hear and determine the dispute, and shall be directed by the *Parties* to provide a written decision resolving the dispute within 60 days following his or her appointment or such other date as may be agreed in writing by the *Parties*. The *Parties* shall provide such assistance and information as may be reasonably necessary to enable the arbitrator to determine the dispute. Any decision of the arbitrator will be in writing and will be final and binding upon the *Parties*, with no

right of appeal from it and subject to Section 18.7 below, shall deal with the question of costs of arbitration and all related matters.

17.5 Judgement upon any award of the arbitrator as the case may be, may be entered in any court having jurisdiction or application may be made to the applicable court for a judicial recognition of the award or an order of enforcement, as the case may be.

17.6 Notwithstanding anything to the contrary in the AAA Rules, the arbitration shall proceed with the following rules: (i) with respect to evidence, conformity to legal rules shall be necessary at all times, (ii) with respect to the conduct of proceeding, the arbitrator must act in a way to expedite the resolution of the dispute, but in absolute respect of the rule of law, and (iii) the arbitrator shall seek the counsel of law expert(s) to resolve any question of law he or she feels unable to resolve, in the presence of the Parties whom shall be authorized to make appropriate representations.

17.7 Costs and the Award

17.7.1 Each *Party* shall bear its own legal and other costs, including the fees of its legal counsel and the expenses of its witnesses. The fees and expenses of the Arbitrator(s), including the expenses relating to the rental of premises for the hearing, the cost of stenographers and, as the case may be, of interpreters, shall be shared equally between the *Parties*.

17.7.2 The Arbitrator(s) shall have jurisdiction to direct the payment of interest in respect of any award at such rates and from and to such dates as are determined by the Arbitrator(s) to be appropriate.

17.8 Confidentiality

Unless the *Parties* agree otherwise in writing, the *Parties* undertake to keep confidential all awards to be rendered in any arbitration, together with all materials in the proceedings created for the purpose of the arbitration and all other documents produced by another *Party* in the proceedings not otherwise in the public domain, save to the extent that disclosure may be required by a *Party* by legal duty, to protect or pursue a legal right or to enforce or challenge an award in bona fide legal proceedings before a court of law or other judicial authority. By accepting to serve as Arbitrator(s), the Arbitrator(s) likewise undertakes to respect the confidentiality of the arbitration. It is understood that the Arbitrator(s) shall not publish any award or any part of an award without the express prior written consent of all *Parties*.

17.9 Performance During Dispute Resolution

While any dispute (other than a dispute that a *Party* has reasonable grounds for alleging is a fundamental breach of this *Agreement*) is being resolved, the *Parties* shall continue to perform all obligations under this *Agreement* with due diligence and continue to comply with all terms of this *Agreement*.

IN WITNESS WHEREOF, the *Parties* hereto have caused this *Agreement* to be executed in duplicate attested by the signatures of their duly authorized offices, as of the day and year first written above. I have the authority to bind Niagara Mohawk Power Corporation.

Herbert Schrayshuen
Vice-President Transmission Commercial Services

National Grid USA for: Niagara Mohawk Power Corporation
I have the authority to bind Cedars Rapids Transmission Company Limited.

Sylvain Clemont

General Manager

Cedars Rapids Transmission Company Limited

SCHEDULE A

The *Interconnection Facilities* and the related *Points-of-Interconnection* and the *Metering Points* between CRT and Niagara Mohawk are described in this Schedule A.

1.0 Description of *Interconnection Facilities*

The *Interconnection Facilities* are comprised of certain electric transmission facilities, owned, operated and/or under exclusive rights of use by CRT and Niagara Mohawk, more specifically as follows:
(a) those electric transmission facilities owned, operated, and under the exclusive right to use by CRT, including the two 120 kV transmission lines, CD-l/CD-2 and CD-11/CD-22, and associated *Transmission Equipment*, that connect the Les Cedres substation of Hydro Quebec, located in the municipality of StJoseph de Soulange, Vaudreuil, Soulanges County, Province of Quebec, Canada, with Niagara Mohawk's *Transmission System* at the Dennison substation owned by Niagara Mohawk, located in the Town of Massena, St. Lawrence County, State of New York, United States as depicted in Exhibit 1; (b) those electric transmission facilities owned and operated by Niagara Mohawk and associated *Transmission Equipment* located within Niagara Mohawk's Dennison Substation that connect Niagara Mohawk's *Transmission System* with the two 120 kV transmission lines, CD-1/CD-2.

Interconnection Facilities shall include such additional equipment and facilities for metering, telemetering, relaying, load control, communications and such other purposes as may be deemed necessary by the *Parties* to effect adequate and satisfactory operation of the *Interconnection Facilities*.

2.0 *Points-of-Interconnection*

The *Points-of-Interconnection* are the two disconnect switches (numbers 13 and 23) located within Niagara Mohawk's Dennison Substation that connect lines CD-1/CD-2 with Niagara Mohawk's *Transmission System* at its Dennison Substation, located in the Town of Massena, St. Lawrence County, New York, United States as depicted in Exhibit 1. CRT owns, operates and has an exclusive right to use *Transmission Equipment* up to and including the line side of the two switches comprising the Points-of-Interconnection. Niagara Mohawk owns and operates the *Transmission Equipment* from and including the jaw side of the two switches comprising the *Points-of-Interconnection*.

3.0 *Metering Points*

The *Metering Points* for power and energy delivered along the *Interconnection Facilities* are at the Dennison substation, located in the Town of Massena, St. Lawrence County, New York, United States.

Schedule A-1
Representatives

I. NiMo Representative

Title	:	Senior Account Manager
Address	:	300 Erie Blvd West, A-4 Syracuse, NY 13202
Telephone	:	(315) 428-6464
Email	:	Kevin.Reardon@nationalgrid.com

II. CRT Representative

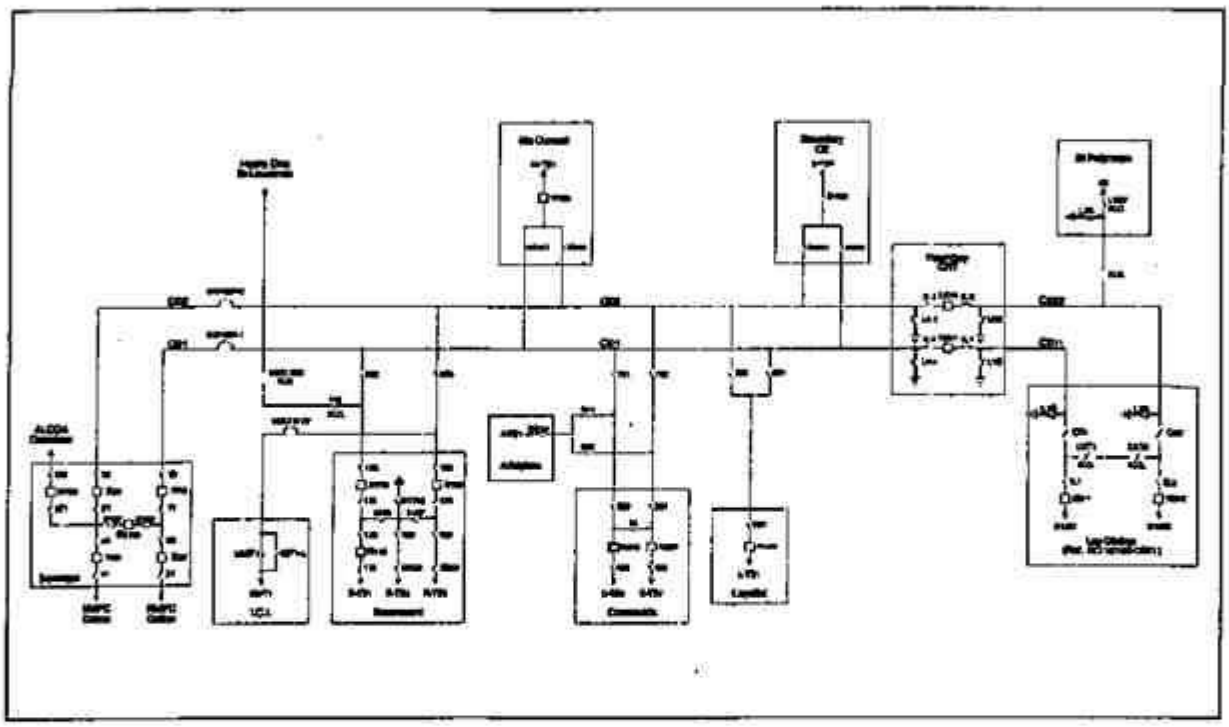
Title	:	General Director
Address	:	900, Rue Principale Rivière-Beaudette (Québec) J0P 1R0
Telephone	:	(450) 269-3461
Email	:	ADMIN@CEDARSRAPIDS.CA and EXPLOITATION@CEDARSRAPIDS.CA

Schedule A

Exhibit 1

Interconnection Facilities

One-Line Diagram



SCHEDULE B

GEN-C-081

INSTRUCTION COMMUNE À

COMMON OPERATING INSTRUCTIONS FOR

NIAGARA MOHAWK POWER CORPORATION
a National Grid Company,
CORNWALL ELECTRIC a Fortis Ontario Company,
HYDRO-QUÉBEC TRANSÉNERGIE,
SOCIÉTÉ DE TRANSMISSION ÉLECTRIQUE DE CEDARS RAPIDS LTÉE

POUR L'EXPLOITATION DES LIGNES À 120 kV

FOR 120 kV INTERCONNECTION LINES

CD11, CD22 LES CÈDRES – Boundary (CRT)
CD1, CD2 Boundary (CRT) - DENNISON

En vigueur le 13 avril 2004

Effective April 13, 2004

TABLE DES MATIÈRES / INDEX

ANNEXES		APPENDICES
Schéma d'interconnexion Lignes CD1/CD11 et CD2/CD22 Centrale Les Cèdres (HQ 15102-0001)	"A"	One-Line Diagram Lines CD1/CD11 and CD2/CD22 Les Cèdres GS (HQ 15102-0001)
Description des lignes, des disjoncteurs et des sectionneurs	"B"	Lines and Switchgear Data
Protection Schémas de protection: (L1) CD11 #SLS-15102-6131 (L2) CD22 #SLS-15102-6132	"C"	Protection Protection Diagrams: (L1) CD11 #SLS-15102-6131 (L2) CD22 #SLS-15102-6132
Numéros de téléphone importants	"D"	Business Telephone Numbers
Schéma de Communication	"E"	Communication Diagram

GÉNÉRALITÉS

Le présent document signé par HYDRO-QUÉBEC TRANSÉNERGIE (HQ), CORNWALL ELECTRIC, une compagnie de Fortis Ontario (CE), NIAGARA MOHAWK POWER CORPORATION, une compagnie de National Grid (NIMPC) et la SOCIÉTÉ DE TRANSMISSION ÉLECTRIQUE DE CEDARS RAPIDS LTÉE (CRT) constitue la base des directives d'exploitation et de communication destinées à chaque organisation. Ce document ne constitue pas un contrat entre les parties indiquées selon les lois des Etats-Unis ni du Canada. Les signatures indiquent seulement une acceptation des procédures décrites.

Cette instruction concerne l'exploitation des lignes Les Cèdres – Boundary (CRT) (CD11, CD22) et Boundary (CRT) -Dennison (CD1 CD2):

1.0 GENERAL

This document signed by HYDRO-QUÉBEC TRANSÉNERGIE (HQ), CORNWALL ELECTRIC, a Fortis Ontario Company (CE), NIAGARA MOHAWK POWER CORP. a National Grid Company (NIMPC), and SOCIÉTÉ DE TRANSMISSION ÉLECTRIQUE DE CEDARS RAPIDS LTÉE (CRT) provides the basis for operating and communication Instructions issued within each respective organization. This document does not form a contract between the listed parties under any law or regulation in either the US or Canada. Signatures only indicate concurrence with the procedures outlined herein.

The instruction covers operation of the Cedars - Boundary (CRT) lines (CD11, CD22) and Boundary (CRT) - Dennison lines (CD1 CD2):

Ligne *Line*		Tension *Voltage*	Parcours *Route*
Section Est *Eastern Section*	CD11 CD22	120 kV	Les Cèdres – Boundary (CRT) Attache St.Polycarpe *tap*
Section Ouest *Western Section*	CD1 CD2		Boundary (CRT) - Dennison Attaches / *Taps* (5): Cornwall Electric

Priorités d'alimentation

Les lignes entre Les Cèdres et Dennison doivent alimenter prioritairement CORNWALL ELECTRIC. Une fois ces besoins satisfaits, les lignes seront utilisées pour transiter de l'énergie entre HQ et NMPC.

1.1 Supply Priorities

Cedars-Dennison transmission lines will have a priority to supply energy to CORNWALL ELECTRIC. After satisfying this priority, the transmission lines will be used for energy transfer between HQ and NMPC.

Responsabilités

Le responsable de l'exploitation pour HQ est le répartiteur CCR interconnexions qui se trouve au Centre de Conduite du réseau (CCR) à Montréal.

Le responsable de l'exploitation pour NMPC est le *Shift Supervisor* du réseau NMPC au Centre de Conduite du réseau (PCC) situé à Syracuse, NY.

1.2 Operating Authorities

The operating authority for HQ is the System Dispatcher - Interconnections located at the System Control Center (CCR) in Montreal.

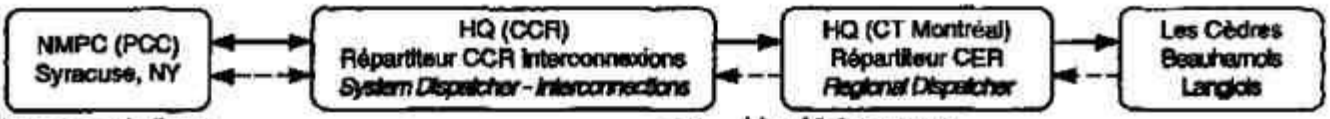
The NMPC operating authority is the Shift Supervisor at the System Power Control Center (PCC) located in Syracuse, NY.

Demande de variation de livraisons-exploitation normale

Toute demande de variation de livraisons d'énergie doit être exécutée après entente entre NMPC (PCC) et HQ (CCR). Au moment convenu, le répartiteur CCR interconnexions fait effectuer les manoeuvres aux installations concernées.

1.3 Request For Variation of Delivery - Normal Operation

All requests for variations of delivery will be mutually agreed upon by NMPC (PCC) and HQ (CCR). At the agreed time, HQ System Dispatcher - Interconnections (CCR) will initiate the required changes at the appropriate facilites.



Entretien de ligne

L'entretien sur les lignes Les Cèdres-Dennison est sous la responsabilité de LONG SAULT INC., pour la partie aux États Unis, et la SOCIÉTÉ DE TRANSMISSION ÉLECTRIQUE CEDARS RAPIDS LIMITÉE (CRT), au Canada.

CRT doit être informé, dans les plus brefs délais, de tout incident pouvant toucher la capacité de l'interconnexion afin d'apporter les corrections nécessaires (s'il y a lieu) ou annuler les manoeuvres inutiles.

L'entretien de la dérivation CD22 St.Polycarpe est sous la responsabilité d'HQ.

1.4 Line Maintenance

Maintenance on lines Cedars-Dennison is to be the responsibility of LONG SAULT INC., for the US section, and the SOCIÉTÉ DE TRANSMISSION ÉLECTRIQUE DE CEDARS RAPIDS LIMITÉE (CRT), within Canada.

CRT must be informed, as soon as possible, of any incident that could affect the tie capability in order to make the applicable corrections or cancel the unnecessary switching.

HQ is responsible for maintenance performed on the St.Polycarpe tap.

EXPLOITATION DES LIGNES

2.0 OPERATION OF LINES

Utilisation normale des lignes à 120 kV Les Cèdres - Dennison

En plus d'alimenter Cornwall Electric les lignes d'interconnexion sont normalement utilisées pour transporter vers NMPC l'énergie électrique produite par des groupes des Cèdres et/ou de Beauharnois, et/ou provenant du transformateur à fréquence variable (TFV) de Langlois. Les réseaux de NMPC et d'HQ étant asynchrones, les groupes en question sont isolés du réseau principal d'HQ et synchronisés au réseau de NMPC.

Avec la mise en service du TFV de Langlois, il est aussi techniquement possible d'utiliser les lignes d'interconnexion pour transporter de l'énergie de NMPC vers le réseau principal d'HQ sans affecter l'alimentation de CE.

En condition normale, l'attache St Polycarpe est maintenue ouverte à l'entrée du poste, qui est alimenté par le réseau principal d'HQ.

2.1 Normal Use of 120 kV Cedars - Dennison Lines

Besides feeding Cornwall Electric, the interconnection lines are normally used to transfer electrical power produced by Cedars and/or Beauharnois generators and/or coming from Langlois Variable Frequency Transformer (VFT). NMPC and HQ systems being asynchronous, the generators in question are isolated from the HQ system and synchronized to the NMPC system.

Following the commissioning of Langlois VFT, it is also technically possible to use the interconnection lines to transmit electrical energy from NMPC to the HQ system while maintaining the supply to CE.

In normal condition, the St-Polycarpe tap is maintained open at the station, which is fed from HQ system.

Description des lignes

La description des lignes et leurs départs apparaissent à l'annexe B.

2.2 Description of Lines

Appendix B provides data concerning the lines and Terminal station equipment.

Relais de protection de lignes

La description de la protection des lignes aux postes Boundary (CRT) et Dennison et à la centrale Les Cèdres apparaît à l'annexe C.

2.3 Line Protection Relays

Appendix C provides a description of line protection at Boundary (CRT) and Dennison Stations, and at Cedars Generating Station.

Réenclencheurs

Les lignes Les Cèdres - Dennison sont munies de réenclencheurs aux postes Dennison (NMPC) et Boundary (CRT). Il n'existe aucun réenclencheur du côté HQ au poste Les Cèdres

2.4 Reclosing Devices

The Cedars - Dennison lines are equipped with reclosing devices at NMPC's Dennison Substation and at the CRT's Boundary Switching Station. There are no reclosing devices at HQ Cedars Substation.

Contrôle de la tension

En contrôlant la tension, HQ fournira dans la mesure du possible, d'une façon sécuritaire, la puissance réactive demandée par NMPC.

De la même manière, en contrôlant la tension, NMPC assistera HQ pour l'échange de puissance réactive demandée par cette dernière.

Afin d'assurer un contrôle plus efficace des niveaux de tension sur le côté HQ tout en ne dépassant pas les limites de l'appareillage, le contrôle de la tension sera sous la juridiction du répartiteur CCR interconnexions.

Le *Shift Supervisor* du réseau NMPC (PCC) avisera le répartiteur CCR interconnexions de tout changement pouvant faire varier la tension de plus de 5%.

Le répartiteur CCR interconnexions d'HQ avisera le *Shift Supervisor* du réseau NMPC (PCC) de tout changement pouvant faire varier la tension de plus de 5%.

Déclenchement

Poste Les Cèdres (HQ)

Après le déclenchement d'un disjoncteur d'une des lignes CD11 ou CD22, l'opérateur de Les Cèdres vérifie si la ligne est sous tension. Si la ligne est sous tension, il vérifie le synchronisme et exécute la mise en charge, à moins que la ligne ne soit l'objet d'une retenue.

Si après trois (3) minutes il n'y a pas de retour de tension ou s'il y a une indication de défaut sur un disjoncteur, l'exploitant de l'installation doit aviser le répartiteur CCR interconnexions via le cheminement normal des communications.

Sur réception de cette information, le répartiteur CCR interconnexions rendra compte de la situation à l'opérateur du réseau (PCC) de NMPC, lequel informera CE via l'opérateur du Central Regional Control Center (CRCC) de NMPC. CE avisera CRT immédiatement.

Poste Boundary (CRT)

Chaque commande d'ouverture d'un disjoncteur (manuelle ou par la protection) sur une ligne à Boundary (CRT), va initier l'émission du signal de rejet de production à la centrale Les Cèdres.

À la réception de ce signal, qui est supervisé par une détection de passage de courant de 850 A et plus sur la ligne restante (175 MVA), il y aura rejet de production sans déclenchement. L'émission du signal de rejet de

2.5 Voltage Control

HQ will assist with voltage control to the extent possible consistent with safe transfer of reactive power, as requested by NMPC.

Similarly, NMPC will assist with voltage control to the same extent by transmitting reactive power, as requested by HQ.

To assure the most efficient voltage control on the HQ side while not exceeding the limits of the apparatus, the voltage control will be the responsibility of HQ System Dispatcher - Interconnections (CCR).

The NMPC Shift Supervisor (PCC) will advise the HQ System Dispatcher - Interconnections (CCR) of any change which could affect the voltage level by more than 5%.

The HQ System Dispatcher - Interconnections (CCR) will notify the NMPC Shift Supervisor (PCC) of any change which could affect the voltage level by more than 5%.

2.6 Automatic Outages

2.6.1 Cedars Substation (HQ)

If the 120 kV breaker on line CD11 or CD22 opens automatically, the Cedars operator will check potential on the line. If alive, he will check synchronism and put in service, unless the line is under Non Reclosure Assurance protection.

If after three (3) minutes there is no potential on the line or if there is a breaker failure indication, the station operator must communicate this to the HQ System Dispatcher - Interconnections (CCR) via the normal communication path.

On receipt of this information, the HQ System Dispatcher - Interconnections (CCR) will communicate the situation to the NMPC Shift-Supervisor PCC, who in turn will notify CE via the NMPC Central Regional Control Center (CRCC) Operator. CE will immediately notify CRT.

2.6.2 Boundary Switching Station (CRT)

Any line breaker opening order (manual or by relaying) at Boundary (CRT) substation will trigger a signal towards the Cedars generation rejection scheme.

Upon detection of a current of 850 A or greater on the other line (175 MVA), this signal will activate the Cedars generation rejection scheme.

The present generation rejection signal from Dennison

production en provenance du poste Dennison sera reçu à Boundary (CRT) et retransmis vers Les Cèdres.
La réenclenchement automatique à Boundary (CRT) de la section Boundary (CRT)-Les Cèdres (CD11/CD22) sera rapide avec vérification de synchronisme. *(Pendant l'exploitation de l'attache de St.Polycarpe, il est recommandé de mettre le réenclenchement de la CD22 hors service).*
Le réenclenchement automatique à Boundary (CRT) de la section Boundary (CRT)-Dennison (CD1/CD2) sera plus lent que le premier réenclenchement à Dennison et avec vérification de synchronisme.

Poste Dennison (NMPC)

Si les disjoncteurs d'une ou des deux lignes déclenchent à Dennison, l'opérateur CRCC de NMPC:

1. établit la communication avec le répartiteur CCR interconnexions via le *Shift Supervisor* du réseau de NMPC PCC et
2. avise CE, qui avisera CRT immédiatement.

Mise sous tension et en charge

Normalement, la mise sous tension des lignes s'effectue au poste Dennison.
La synchronisation et la mise en charge s'effectuent au poste Les Cèdres.

Conditions anormales d'exploitation Les Cèdres

Lorsqu'une condition anormale de fréquence apparaît sur les lignes Cèdres-Dennison, une protection de fréquence avec temporisation déclenchera les disjoncteurs de ces lignes.

L'exploitant de Les Cèdres vérifie si la ligne est sous tension; si oui, il vérifie le synchronisme et la met en charge, autrement il attend le retour de la tension, vérifie le synchronisme et la met en charge, à moins que la ligne ne soit l'objet d'une retenue.

Si après trois (3) minutes il n'y a pas eu de retour de la tension, l'exploitant avise le répartiteur CCR interconnexions via le cheminement normal des communications.

Utilisation des lignes en condition d'urgence

Alimentation du poste St Polycarpe

Si le poste St Polycarpe ne peut pas être alimenté par le réseau principal d'HQ pour une période prolongée, on peut rétablir son alimentation à l'aide de l'attache raccordée sur la ligne CD22.

Pendant l'exploitation de l'attache St Polycarpe, la

is now received at Boundary (CRT) and re-sent towards Cedars Generating Station.

The Boundary (CRT) automatic reclosure for the Boundary (CRT)-Cedars section (lines CD11/CD22) will be fast and with synchro check.
(It is recommended to turn circuit CD22 automatic reclosure OFF while the St.Polycarpe tap is in operation.)

The Boundary (CRT) automatic reclosure for the Boundary (CRT)-Dennison section (lines CD1/CD2) will be slower than the first Dennison reclosure, and also with synchro check.

2.6.3 Dennison Substation (NMPC)

If one or both lines trip at Dennison, the NMPC CRCC Operator should:

1. establish communication with the HQ System Dispatcher - Interconnections (CCR) via the NMPC-PCC Shift Supervisor *and*
2. notify CE, who will immediately inform CRT.

2.6.4 Energizing and Paralleling

Following an outage, the lines will normally be re-energized from Dennison.
Synchronizing and paralleling will normally be done at Cedars Substation.

2.6.5 Abnormal Operating Conditions Cedars

A delay frequency protection scheme will automatically trip Cedars-Dennison circuit breakers if abnormal conditions of frequency appear on either or both lines.

The Cedars Operator will check for potential and, if alive, he will check synchronism and reclose; if not alive, he will await for potential, check synchronism and reclose, unless the line is under Non Reclosure Assurance protection.

If not restored within three (3) minutes, the Station Operator must notify the HQ System Dispatcher - Interconnections (CCR) via the normal communication path.

2.7 Line Usage During Emergency Condition

2.7.1 Supply of St Polycarpe Station

If the St-Polycarpe station cannot be supplied from the HQ system for an extended period, its supply can be restored via the St-Polycarpe tap connected to line CD22.

During operation of the St.Polycarpe tap, the

configuration des autres éléments raccordés aux lignes d'interconnexion restent inchangée mais les échanges entre NMPC et HQ peuvent s'en trouver limités.

Synchronisation au réseau d'HQ

S'il est impossible de raccorder les lignes CD1 et CD2 au réseau de NMPC, les lignes d'interconnexion peuvent quand même servir à alimenter Cornwall, à condition de maintenir les lignes CD11 et CD22 synchronisées au réseau d'HQ à la centrale Les Cèdres.

REJET DE PRODUCTION

À la centrale Les Cèdres, une protection de surintensité et deux minuteries sont installées sur chacune des lignes Les Cèdres-Dennison.

Ces appareils préviennent un dépassement du transit maximum sur les lignes en déclenchant, après temporisation, les disjoncteurs sélectionnés pour le rejet de production. *(Voir les schémas de protection et les descriptions à l'annexe C).*

RETRAITS

Afin de se conformer aux procédures en usage avec d'autres réseaux voisins, les retraits doivent être programmés de la manière décrite ci-dessous.

Procédure

Les informations suivantes seront fournies:

(a) nom et entreprise du demandeur;
(b) nom de l'équipement;
(c) date et heures du retrait et du début des manoeuvres;
(d) nature du travail;
(e) délai de remise en exploitation en cas d'urgence;
(f) analyse du retrait.

Avis à respecter

Retraits affectant la capacité de l'interconnexion

Les demandes se rapportant à des retraits prévisibles d'équipements de CE, d'HQ, de CRT, de NMPC et/ou de Long Sault, qui affectent la capacité de transfert sur les lignes d'interconnexion, doivent être soumises de la façon habituelle et dans les délais prescrits pour chaque entreprise.

Ces délais doivent cependant être suffisants pour permettre à NMPC, CE et HQ de compléter la programmation des retraits, au moins **dix (10) jours**

configuration of other elements connected to the interconnection lines remain unchanged but the interchanges between NMPC and HQ may be limited accordingly.

2.7.2 Synchronization to HQ System

If it becomes impossible to connect lines CD1 and CD2 to the NMPC system, the interconnection lines can still be used to feed Cornwall, provided that the lines CD11 and CD22 are synchronized to the HQ system at the Cedars Generating Station.

3.0 GENERATION REJECTION

At Cedars Generating Station overcurrent protection and two timers are installed on each of the CRT's Cedars-Donnison lines

This equipment is to prevent operation of either line above its maximum export limit by tripping, after a delay, circuit breakers which have been pre-selected by means of toggle switches *(refer to protection diagrams and description of scheme in Appendix C).*

4.0 OUTAGE ARRANGEMENTS

Outages should be scheduled in the following manner in order to conform to existing procedures with other systems.

4.1 Procedure

The following information will be required:

(a) name and organization of the requesting party;
(b) name of equipment;
(c) date and time of outage and beginning of switching;
(d) nature of work;
(e) emergency restoration time;
(f) analysis of outage.

4.2 Time Frame to be Observed

4.2.1 *Outages That Affect Tie Capability*

Applications for planned outages of CE, HQ, CRT, NMPC and/or Long Sault facilities which affect the amount of power that may be transferred on the interconnection lines must be submitted the usual way and within the delays specified for each organization.

However, the delay must sufficient to allow NMPC, CE and HQ to complete the outage scheduling a minimum of **ten (10) days** in advance of the intended

avant la date prévue du retrait.
L'accord mutuel de NMPC, CE et HQ est requis pour la programmation des retraits affectant la capacité de transfert des lignes d'interconnexion.

outage starting date.
Mutual agreement of NMPC, CE and HQ is required for the scheduling of outages affecting the transfer capability of the interconnection lines.

Retraits n'affectant pas la capacité de l'interconnexion

4.2.2 Outages That Do Not Affect Tie Capability

Les retraits et les essais de voies de communication, de systèmes de protection spéciaux, d'appareillage de poste, de dispositifs électromécaniques, de télémesure et autres du même genre qui n'affectent pas la capacité de l'interconnexion seront programmés au plus tard à midi, deux (2) jours ouvrables à l'avance.

Outages and testing of communication links, special protection systems, relays, terminal controls, metering, telemetering and other similar equipment which does not affect the tie capability will be scheduled no later than 12 noon, two (2) working days in advance.

Retraits non planifiés

4.2.3 Unplanned Outages

Les imprévus exigeant une intervention plus rapide seront traités cas par cas. L'accord mutuel de NMPC, CE et HQ est requis pour la programmation des retraits affectant la capacité de transfert de l'interconnexion.

Emergencies requiring shorter notice will be treated on a case by case basis. Mutual agreement of NMPC, CE and HQ is required for the scheduling of outages affecting the transfer capability of the interconnection line.

Retraits demandés par HQ

4.3 Outages Required by HQ

Toute demande de retraits émanant d'HQ doit être coordonnée avec NMPC-PCC. PCC informe l'opérateur CRCC et CE qui à son tour informe CRT.
CRCC confirme à CE le retrait.

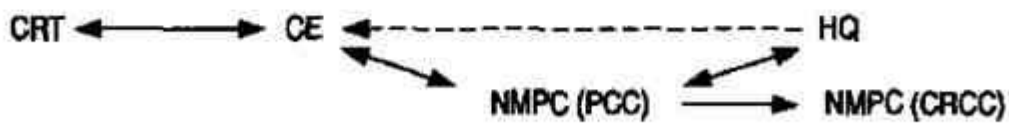
All outages required by HQ should be coordinated with NMPC-PCC who will inform the NMPC-CRCC Operator and CE, who in turn will inform CRT.
CRCC confirms the outage with CE.

Retraits demandés par CRT

4.4 Outages Required by CRT

Les retraits requis par CRT sont coordonnées par CE lequel à son tour coordonne ces retraits avec NMPC-PCC. PCC coordonne ces retraits avec HQ et informe CRCC. *HQ confirme le retrait à CE, qui informe CRT.*

Outages required by CRT will be coordinated with CE, who in turn, will coordinate with NMPC-PCC, who in turn shall coordinate with HQ. PCC shall inform CRCC. *HQ confirms the outage with CE, who informs CRT.*

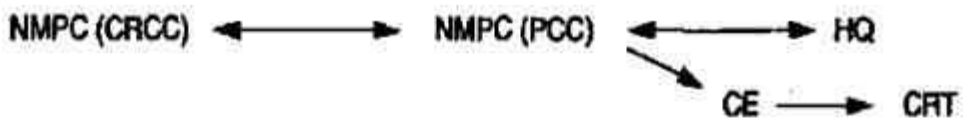


Retraits demandés par NMPC

4.5 Outages Required by NMPC

Les retraits requis par NMPC-CRCC sont soumis à NMPC-PCC lequel coordonne ces retraits avec HQ et informe CE. CE informe CRT

Outages required by NMPC-CRCC are submitted to NMPC-PCC who coordinates with HQ and informs CE. CE informs CRT.



Retraits demandés par CE

Les retraits requis par CE sont soumis à NMPC-PCC lequel coordonne ces retraits avec HQ-CCR et informe NMPC-CRCC. CE informe CRT.

4.6 Outages Required by CE

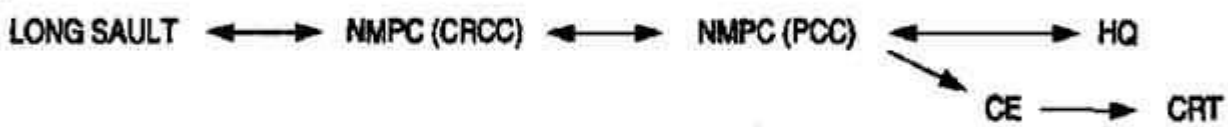
Outages required by CE are submitted to NMPC-PCC who coordinates with HQ, and informs NMPC-CRCC. CE informs CRT.

Retraits demandés par LONG SAULT

Tout retrait requis par LONG SAULT est soumis à NMPC-CRCC lequel le soumet à NMPC-PCC.
NMPC-PCC coordonne ces retraits avec HQ et informe CE lequel à son tour informe CRT.

4.7 Outages Required by LONG SAULT

Outages required by LONG SAULT are submitted to the NMPC-CRCC who submits them to NMPC-PCC.
PCC coordinates with HQ and informs CE, who will inform CRT.



MESURES DE SÉCURITÉ

Pour tout travail planifié ou en urgence et qui requiert des conditions sécuritaires de travail sur les lignes d'interconnexion ou les appareils connexes, le personnel (CE, HQ CRT et NMPC) devra respecter les procédures normales d'exploitation et les maintenir jusqu'à ce que le personnel se soit rapporté et que les retenues et les autorisations de travail soient remises.

Les sectionneurs de lignes devront être cadenassés *en position ouverts, leur mécanisme motorisé devra* être neutralisé mécaniquement et/ou électriquement et les pancartes de condamnation appropriées devront être apposées.

Le *"Code des travaux"* d'HQ, le *"EOP 21"* de NMPC et le *"Work Protection Code"*, (pour CE et CRT) renferment les définitions suivantes:

Dégagement (HQ)

Mesure utilisée entre autorités différentes, garantissant que les conditions d'exploitation convenues ont été réalisées à l'installation ou à l'appareil et ne peu-

5.0 WORK PROTECTION

For all work, planned or emergency, requiring the establishment of safe working conditions on interconnections or connected equipment (CE, HQ, CRT and NMPC) personnel shall follow standard operating procedures to properly protect workmen and maintain this protection until all personnel have been reported clear of the apparatus and the Protection Guarantee is surrendered.

The appropriate line disconnecting switches shall be locked open; the motor mechanism disabled mechanically and/or electrically; and the appropriate tag applied.

HQ's *"Code des travaux"*, NMPC's *"EOP 21"*, and *"Work Protection Code,"* (for CE and CRT) include the following definitions:

5.1 Station Guarantee (NMPC) Supporting Guarantee (CRT and CE)

This measure guarantees that pre-established operating conditions have been met and will not change in the installation or apparatus under the responsibility of a diffe-

vent être modifiées tant que le dégagement n'est pas retourné.

Autorisation de travail (HQ)

Est une garantie que la ligne ou l'appareillage concerné(e) est isolé de toute source normale d'énergie.

Ligne CD 22: CE devra inclure les points de coupure au poste St. Polycarpe.

Retenue (HQ)

Est une garantie donnée qui stipule que l'appareillage concerné ne sera pas refermé sans l'autorisation du détenteur de la retenue advenant un déclenchement ou une ouverture manuelle.

Note: La retenue est émise pour permettre le travail sur l'appareillage sans qu'il soit nécessaire de le mettre hors tension.

Avant qu'une retenue soit émise, le responsable de l'émission doit s'assurer que:

a) Toutes les protections reliées à l'appareil concerné soient en circuit.

b) Tous les réenclencheurs soient hors circuit.

MANOEUVRES

Avant d'initier quelque manoeuvre que ce soit ou émettre des garanties, l'opérateur du réseau CE, l'opérateur NMPC-CRCC et le répartiteur CER doivent au préalable, obtenir l'autorisation du répartiteur CCR *interconnexions et/ou le Shift Supervisor* de NMPC-PCC.

Suite à un besoin exprimé par l'opérateur du réseau CE, les manoeuvres à Dennison seront commandées par l'opérateur CRCC.

Suite à un besoin exprimé par l'opérateur CE, les manoeuvres requises à Les Cèdres seront commandées par le répartiteur CER et à Boundary (CRT) par l'opérateur de CE, mais réalisées par CRT.

Les manoeuvres requises sur le réseau CE seront commandées par l'opérateur CE.

CE est "*Controlling Authority*" pour CRT, au sens du "*Work Protection Code*". Les autorisations de travail et les garanties concernant CRT seront émises par l'opérateur du réseau CE.

rent Operating Authority, until the Station/Supporting Guarantee has been surrendered.

5.2 Work Permit (CRT and CE)
Mark-up (NMPC)

A guarantee that the line or apparatus to be worked on is isolated from all normal sources of energy.

NOTE *Line CD 22: CE should include the isolation points at St. Polycarpe substation.*

5.3 Non-Reclose Assurance (NMPC, CRT, CE)

A guarantee which stipulates that the apparatus concerned will not be reclosed without the approval of the Holder of the Non-Reclose Assurance in the event of an automatic or manual breaker trip.

Note: The *Non-Reclose Assurance* is used to allow work on apparatus which does not necessitate the removal from service of the apparatus.

Operators responsible for the issuance of a Non-Reclose Assurance must ascertain that:

a) All protective relaying is in service on the apparatus concerned.

b) All reclosing features are out of service.

6.0 SWITCHING PROCEDURES

Before initiating any switching or issuing Guarantees, the CE Dispatcher, the NMPC-CRCC Operator and the HQ Regional Dispatcher must obtain authorization from the HQ CCR System Dispatcher - *Interconnections and/or the* NMPC-PCC *Shift-Supervisor.*

6.1 At the request of the CE Dispatcher, switching at Dennison will be ordered by the CRCC Operator.

At the request of the CE Dispatcher, switching at Cedars will be ordered by the HQ Regional Dispatcher, and at Boundary (CRT) Switching Station ordered by the CE Dispatcher, but performed by CRT.

Switching at Cornwall Electric will be ordered by the CE Dispatcher.

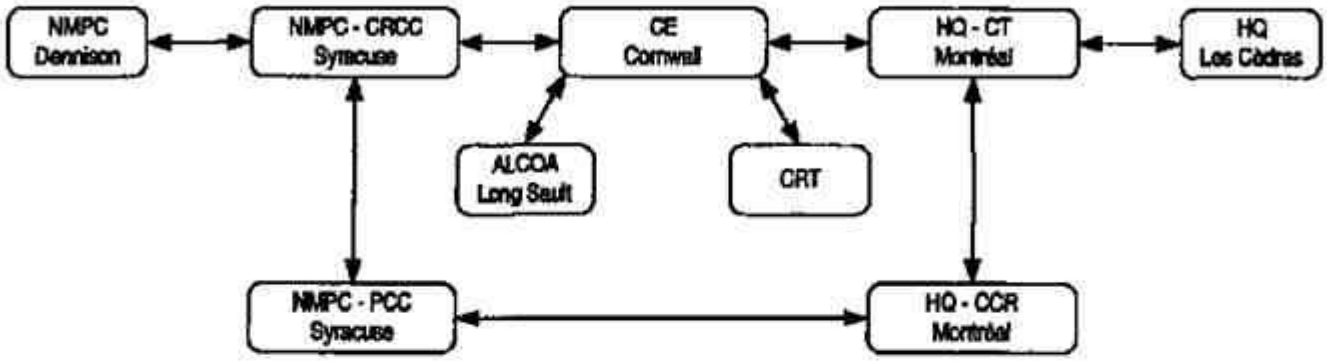
6.2 CE is the Controlling Authority for CRT, as defined in the "*Work Protection Code*". Line Work Permits and Guarantees involving CRT will be issued by the CE Dispatcher.

Les dégagements peuvent être émis par l'opérateur du réseau de CE (de concert avec CRT si requis), le répartiteur CER ou l'opérateur CRCC.

6.3 Station/Supporting Guarantees may be issued by the CE Dispatcher (in coordination with CRT if required); the HQ Regional Dispatcher or the CRCC Operator.

Les manoeuvres en vue d'un retrait ou pour entretien ou celles faisant suite à un essai infructueux de remise en charge des lignes CD1/CD11 et CD2/CD22 après un déclenchement seront coordonnées pour toutes les installations par l'opérateur du réseau CE avec le répartiteur CER, l'opérateur CRCC et l'opérateur CRT.

6.4 Switching to effect an outage for maintenance; or following an unsuccessful attempt to restore service on lines CD1/CD11 and CD2/CD22 after an automatic trip out; will be arranged for all stations by the CE Dispatcher with the HQ Regional Dispatcher, the CRCC Operator and the CRT Operator.



L'opérateur NMPC-CRCC tiendra NMPC- PCC et CE informés de la condition des lignes de transport.

6.5 The NMPC-CRCC Operator will keep NMPC-PCC and CE informed on status of the transmission lines.

Dès que CRT aura identifié et localisé le défaut, il informera CE, qui avisera à son tour HQ et NMPC aussitôt possible.

As soon as CRT identifies the nature and location of the fault, CRT will notify CE immediately, who will inform HQ and NMPC.

Le répartiteur CER informera le répartiteur CCR interconnexions de la condition des lignes de transport.

The HQ Regional Dispatcher will inform the System Dispatcher - Interconnections on the status of the transmission lines.

Dans les plus brefs délais possibles, l'opérateur NMPC-PCC et le répartiteur CCR interconnexions s'informeront mutuellement sur:

a) la nature et la localisation du défaut;

b) le délai possible pour rétablir l'échange normal d'énergie.

As soon as possible, NMPC-PCC and HQ System Dispatcher - Interconnections *(CCR)* will exchange information on:

a) nature of trouble and its location;

b) probable time to restore to normal energy exchanges.

Toute reprise de livraison doit être autorisée par l'opérateur du réseau de NMPC-PCC. CRCC devra informer NMPC-PCC lorsque les lignes d'interconnexion redeviennent disponibles pour reprendre la charge normale.

6.6 All restoration of delivery must be authorized by NMPC-PCC.
CRCC will inform NMPC-PCC when the interconnection is available for normal loading.

L'opérateur du réseau NMPC-PCC avisera le répartiteur CCR interconnexions quand il sera prêt pour recevoir la livraison de l'énergie telle qu'établie au préalable.

NMPC-PCC will advise HQ System Dispatcher - Interconnections *(CCR)* when ready for restoration of scheduled delivery.

APPROUVÉ PAR / APPROVED BY:

Hydro Québec TransÉnergie

Michel Armstrong
Directeur Contrôle des mouvements d'énergie

Date: 04/03/15

NIAGARA MOHAWK POWER CORPORATION

Herbert Schrayshuen
Vice President, Transmission Commercial Services
National Grid USA,
for , Niagara Mohawk Power Corporation

Date: 3/30/04

CORNWALL ELECTRIC

Fred O'Brien
Vice-president of Operations

Date: March 23, 2004

SOCIÉTÉ DE TRANSMISSION ÉLECTRIQUE CEDARS RAPIDS LIMITÉE

Sylvain Clermont, Ing.
Directeur Général

Date: 2004/03/19

En vigueur 2004-04-13 Effective

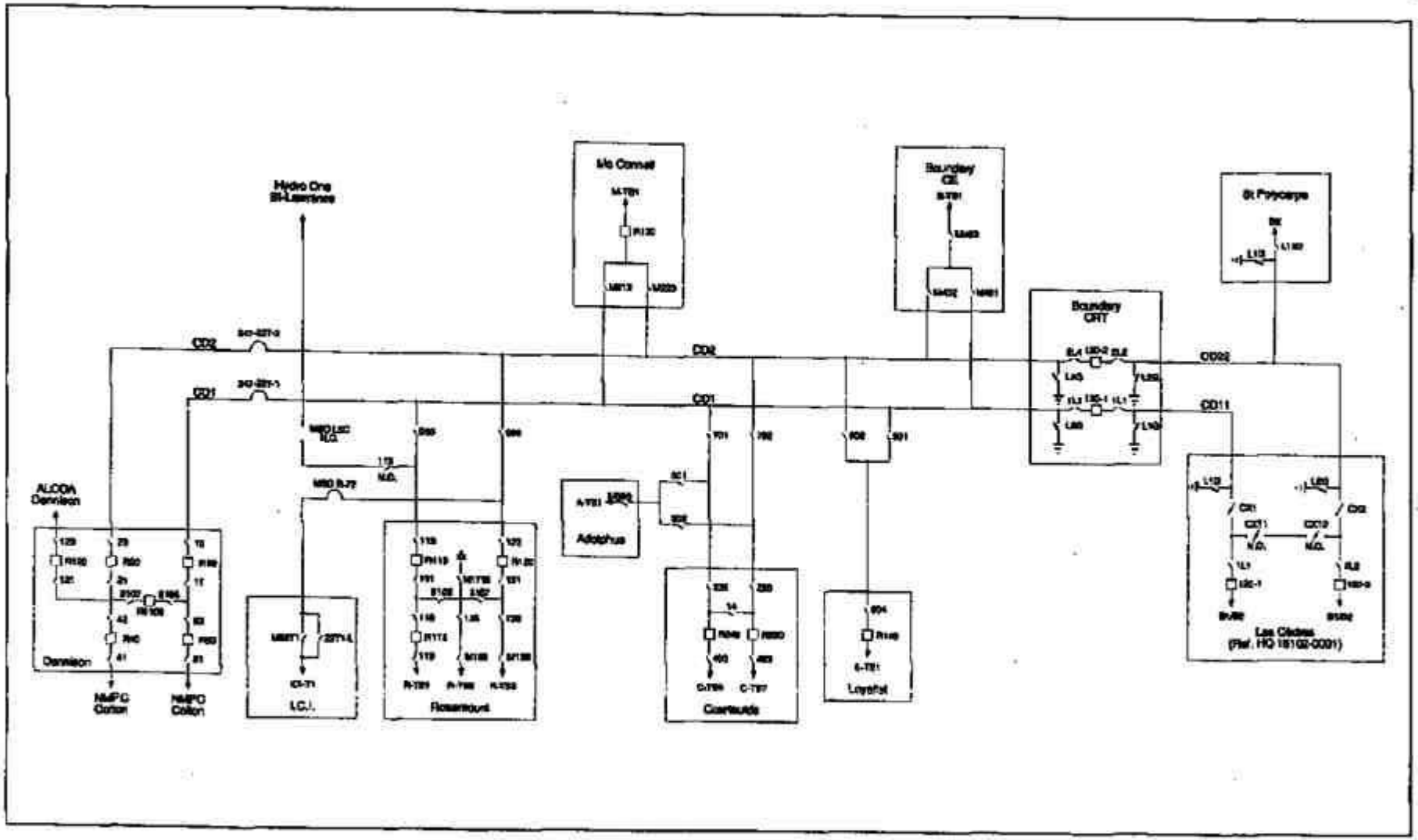


SCHÉMA UNIFILAIRE SIMPLIFIÉ DES LIGNES D'INTERCONNEXION

SIMPLIFIED ONE LINE DIAGRAM OF THE INTERCONNECTION LINES

CARACTÉRISTIQUES DES LIGNES ET DE L'APPAREILLAGE CONNEXE
LINES AND SWITCHGEAR DATA

Les Cèdres – Boundary (CRT)			CD11	CD22
Conducteur *Conductor*		mm² MCM	523,7 1033.5 ACSR	523,7 1033.5 ACSR
Longueur totale *Total Length*		km mi	60,90 37.84	60,90 37.84
Capacité max. @115kV *Max. Rating @115kV*	été/*summer* hiver/*winter*	MVA MVA	184 240	184 240
Capacité *Continuous Rating*	été/summer hiver/winter	A A	1350 1750	1350 1750

Boundary (CRT) - Dennison			CD1			CD2		
Longueur totale *Total Length*		km mi	20,56 12.77			20,56 12.77		
Capacité max. @115kV *Max. Rating @115kV*	été/*summer* hiver/*winter*	MVA MVA	175 199			175 199		
Long Sault/NMPC (US side)		km mi	3,69 2.29	5,75 3.57	0,03 0.02	3,69 2.29	5,75 3.57	0,03 0.02
Conducteur *Conductor*		mm² MCM	322,2 636 ACSR	282 556 ACSR	402,8 795 ACSR	322,2 636 ACSR	282 556 ACSR	402,8 795 ACSR
Capacité *Continuous Rating*	été/*summer* hiver/*winter*	A A		888 1081			888 1081	
Section CRT (Canada)		km mi	11,14 6.92		2,36 1,16	11,14 6.92		2,36 1,16
Conducteur *Conductor*		mm² MCM	523,7 1033.5 ACSR		322,2 636 ACSR	523,7 1033.5 ACSR		322,2 636 ACSR
Capacité *Continuous Rating*	été/summer hiver/winter	A A	1350 1750			1350 1750		

ATTACHE ST.POLYCARPE: charge de 50 MW environ. Environ 6 km sur pylône de bois conducteur 504 MCM à partir de la ligne CD 22.
ST.POLYCARPE TAP: approximate load 50 MW. From line CD 22 for 6 km on wood towers (504 MCM conductor).

POSTE / *SUBSTATION*			DENNISON NMPC	BOUNDARY CRT	CEDARS HQ	DENNISON NMPC	BOUNDARY CRT	CEDARS HQ
Sectionneurs	nominale/*rated*	A	3000	1200	800	3000	1200	800
Disconnects	été/*summer*	A	3240		925	3240		925
	hiver/*winter*	A	4230		1200	4230		1200
Disjoncteur	nominale/*rated*	A	3000	1200	1200	3000	1200	1200
Breaker	été/*summer*	A	3120		1295	3120		1295
	hiver/*winter*	A	3660		1535	3660		1535
Transformateur	nominale/*rated*	A	1000	1200	1000	1000	1200	1000
de courant	été/*summer*	A	1000		1000	1000		1000
Current Transformer	hiver/*winter*	A	1000		1230	1000		1230
Circuit bouchon	nominale/*rated*	A	–	–	–		1250	1200
Wave Trap	été/*summer*	A	–	–	–			1270
	hiver/*winter*	A	–	–	–			1450

PROTECTION

POSTE DENNISON (NMPC)

PROTECTION DE LIGNES (RELAIS) DENNISON

PROTECTION

1.0 DENNISON SUBSTATION (NMPC)

1.1 LINE PROTECTION (RELAYS) DENNISON

RELAIS / *RELAYS*	FONCTION / *FUNCTION*
SEL 321	P/G distance directional
SEL 311B	P/G distance directional
SEL 351	Reclosing

NOTE: Les relais sont les mêmes pour les deux lignes./*Relaying for both lines is the same.*

PROTECTION AVEC DÉPASSEMENT DENNISON

Les deux lignes Dennison – Boundary (CRT), Ln1(CD1) et Ln2(CD2), sont protégées par deux systèmes séparés.

Le relais primaire pour chaque ligne est un relais à microprocesseur SEL 321. Il fournit une protection de distance phase-phase, une protection de distance phase-terre et une protection directionnelle de surintensité qui amorce un signal de téléaccéléération avec dépassement transmis physiquement par onde porteuse sur la ligne Ln2 (CD2).

Le relais secondaire est un relais à microprocesseur SEL 311B. Il fournit une protection de distance phase-phase, une protection directionnelle de surintensité, et une protection de distance phase-terre.

Les deux relais de protection SEL 321 et SEL 311 B amorcent le système de rejet de production.

Le réenclenchement des disjoncteurs à Dennison est assuré par un relais à microprocessuer SEL 351.

Note : Le système de transmission par onde porteuse pour les signaux de téléaccélération et de rejet de production n'est pas fonctionnel en date de 12/2003.

1.2 ACCELERATING RELAYS DENNISON

Both Dennison – Boundary (CRT) Ln1(CD1) and Ln2(CD2) are protected using two separate relay systems.

The first package for each line is a SEL 321 microprocessor relay package that provides a phase and ground distance protection scheme, a ground distance protection scheme and a directional over-current protection scheme the output of which keys a permissive overreaching transfer trip communication channel via power-line carrier which is physically conveyed on Ln2 (CD2).

The second protection package is a SEL 311B microprocessor relay which provides a phase and ground distance protection scheme a directional over-current protection scheme, and a ground distance protection scheme.

Both SEL 321 and SEL 311 B microprocessor relay packages key the generation rejection scheme.

Dennison breaker re-closing is provided by a SEL 351microprocesor package.

Note: The Carrier communication channel for the POTT and Generation rejection is not functional as of 12/2003.

POSTE BOUNDARY (CRT)

PROTECTION DE LIGNES (RELAIS) BOUNDARY

Il y a deux protections de distance complètes SEL-321 et LFZP accélérées avec dépassement par l'intermédiaire d'onde porteuse sur chaque section de ligne vers Les Cèdres et Dennison. De plus, un relais CVX-1 est utilisé pour chaque disjoncteur pour vérifier le synchronisme lors de son réenclenchement. La synchronisation des deux réseaux se faisant à la

2.0 BOUNDARY SWITCHING STATION (CRT)

2.1 LINE PROTECTION (RELAYS) BOUNDARY

There are two complete distance protections SEL-321 and LFZP permissive and overreaching on each of the lines towards Cedars (CD11/CD22) and Dennison (CD1/CD2). Furthermore, a CVX-1 relay is installed on each of the line breakers for synchro-check before re-closing.

Final synchronization being performed at Cedars,

centrale Les Cèdres, il faut que Dennison ferme le premier.

Dennison is closing first.

RELAIS / *RELAYS*	FONCTION / *FUNCTION*
SEL-321 (21 Φ-N)	Distance Phase et Neutre
LFZP (21 Φ-N)	*Distance Phase et Neutre*
CVX-1 (25)	Vérif. de synchronisme / *Synchro verifier*

PROTECTION AVEC DÉPASSEMENT

Les protections de distance des lignes Boundary (CRT)-Dennison utilisées à Boundary (CRT) sont accélérées avec dépassement par les protections de distance utilisées à Dennison par l'intermédiaire d'ondes porteuses.

Les protections de distance des lignes Boundary (CRT)-Les Cèdres utilisées à Boundary (CRT) sont accélérées avec dépassement par les protections de distance utilisées à Les Cèdres par l'intermédiaire d'ondes porteuses.

2.2 ACCELERATING RELAYS

The line distance protections used for Boundary (CRT)-Dennison lines (CD1/CD2) are overreaching transfer trip schemes, via power line carrier relaying at Boundary (CRT) Switching Station.

The line distance protections used for Boundary (CRT)-Cedars lines (CD11/CD22) are overreaching transfer trip schemes, via power line carrier relaying at Cedars GS.

POSTE LES CÈDRES (HQ)

PROTECTION DE LIGNES (RELAIS)

Il y a deux groupes de relais de lignes au poste Les Cèdres, un groupe est utilisé pour chaque ligne.

Chaque groupe de relais se compose de 3 relais GCX et d'une minuterie pour les défauts phase-à-phase et de 3 relais GCXG ainsi qu'une minuterie pour les défauts phase-terre.

Les disjoncteurs des lignes CD11/CD22 déclenchent lorsque la fréquence sort de la plage 58,5-61,5 Hz pour plus de 5,5 secondes. (330 cycles)

Pour le rejet de production, quatre relais de surintensité RRIG et deux minuteries sont utilisés pour chacune des lignes (référence schémas de protection et description de l'automatisme, annexe C).

Pour les besoins de l'opérateur de CE, chacun des 32 relais est identifié par un numéro. Après un défaut, l'opérateur de Les Cèdres transmettra le numéro ainsi que la zone de protection (voir liste suivante) au répartiteur CCR interconnexions via les communications normales, lequel les transmet aux opérateurs de CE et NRCC.

De la même façon, l'opérateur CRCC transmettra le numéro ainsi que la zone de protection à l'opérateur du réseau de CE et au répartiteur CCR interconnexions via les communications normales.

3.0 *CEDARS SUBSTATION (HQ)*

3.1 LINE PROTECTION (RELAYS)

There are two sets of line protection relays at Cedars, one set for each line.

Each set of relays consist of three GCX relays and a timer for phase-to-phase fault protection and three GCXG relays and a timer for phase-to-ground fault.

Lines CD11 and/or CD22 will trip if the frequency goes outside the range of 58.5 to 61.5 Hz for more than 5.5 seconds. (330 cycles)

For the generation rejection there are four definite time over load relays RRIG and two timers for each line (refer to protection diagrams and description of scheme in Appendix C).

For convenience in reporting relay operation to the CE Dispatcher, each of the 32 protective relays is identified by a number. Following a fault, the Cedars operator will report each relay number and zone (see following table), to the HQ System Dispatcher - Interconnections (CCR) via normal communication path, who will transit this information to the CE Dispatcher and NRCC Operator.

Also the CRCC Operator will report each Dennison CD1/CD2 relay and zone to the CE Dispatcher and HQ System Dispatcher - Interconnections (CCR) via normal communication path.

LIGNE/*LINE* CD11		LIGNE/*LINE* CD22		FONCTION/*FUNCTION*
No	TYPE	No	TYPE	
11	CX17G (21-N)	31	GCX17G (21-N)	Phase A (1) terre/*ground*
12	GCX17G (21-N)	32	GCX17G (21-N)	Phase B (2) terre/*ground*
13	GCX17G (21-N)	33	GCX17G (21-N)	Phase C (3) terre/*ground*
112	GCX17B (21-Φ)	212	GCX17B (21-Φ)	Phase A (1) - phase B (2)
123	GCX17B (21-Φ)	223	GCX17B (21-Φ)	Phase B (2) - phase C (3)
131	GCX17B (21-Φ)	231	GCX17B (21-Φ)	Phase C (3) - phase A (1)
19	CO8 (50/51)	39	CO8 (50/51)	Phase A (1)
20	CO8 (50/51)	40	CO8 (50/51)	Phase B (2)
21	CO8 (50/51)	41	CO8 (50/51)	Phase C (3)
22	CO8 (50/51)	42	CO8 (50/51)	Terre/*ground*
--	BCD (50/50N)	-	BCD (50/50N)	Phase terre/*ground*
REJET DE PRODUCTION / *GENERATION REJECTION*				
14	RXIG (50)	34	RXIG (50)	Phase A (1)
15	RXIG (50)	35	RXIG (50)	Phase B (2)
16	RXIG (50)	36	RXIG (50)	Phase C (3)
17	CO7 (51)	37	CO7 (51)	Phase A (1)
18	RXFE4 (81)	38	RXFE4 (81)	Fréquence/*Frequency*

PROTECTION AVEC DÉPASSEMENT

Les protections de distance des lignes utilisées à Les Cèdres sont accélérées avec dépassement par les protections de distance utilisées à Boundary (CRT) par l'intermédiaire d'ondes porteuses.

3.2 ACCELERATING RELAYS

The line distance protections used at Cedars are overreaching transfer trip schemes, via power line carrier relaying at Boundary (CRT) Switching Station.

REJET DE PRODUCTION DE LA CENTRALE LES CÈDRES

Le rejet de production fut installé à Les Cèdres pour:

- *Prévenir l'instabilité des groupes restants de la centrale Les Cèdres, suite à des incidents de réseau.*
- *Réduire la charge des lignes Les Cèdres-Dennison advenant une surcharge qui excéderait leur capacité thermique.*

Le rejet de production opérera dans les conditions suivantes:

Une protection de sur/sous fréquence (61,5/58,5 Hz) va initier le rejet de production.

La détection d'une faute sur l'une ou l'autre des lignes Les Cèdres-Dennison, dont le transit avant l'apparition de la faute excédait 425 A.
Le rejet de production s'effectuera en dedans de six à huit cycles à partir de la détection de la faute.

Sur ouverture du disjoncteur d'une des lignes CD11 ou CD22 à Les Cèdres sans défaut, correspondant à une valeur minimale de courant de 425 A, avant l'ouverture

3.3 DESCRIPTION OF THE CEDARS GENERATION REJECTION SCHEME

The generation rejection scheme was installed at Cedars to:

- *Prevent the instability of the remaining Cedars area units for certain contingencies on the power system.*
- *Relieve the overload of the Cedars-Dennison lines in the event that the current flow in the lines should exceed their thermal capacity.*

The rejection scheme will operate for the following conditions:

3.3.1 An over and under frequency (61.5/58.5 Hz) protection will initiate the generation rejection.

3.3.2 Detection of a fault on either Cedars-Dennison line, and current in each Cedars-Dennison line of 425 A or greater just prior to the detection of the fault.
Generation rejection is completed six to eight cycles after fault detection.

3.3.3 Opening without a fault of the Cedars end breaker of either CD11 or CD22 line if the current in each line is 425 A or greater just prior to opening the breaker.

du disjoncteur. Le rejet de production s'effectuera en dedans de 6 à 8 cycles après l'ouverture du disjoncteur.

Generation rejection is completed in six to eight cycles after breaker opening.

3.3.4 Un Incident sur le réseau qui cause les conditions suivantes à Les Cèdres:

3.3.4 A contingency on the power system that causes the following conditions at Cedars:

(a) La valeur du courant sur chacune des lignes a, préalablement à l'événement, atteint ou dépassée 425 A.

(a) The pre-contingency current in each line is 425 A or greater.

(b) La tension sur les barres à Les Cèdres a chuté à 0,75 p.u. ou moins.

(b) The voltage at the Cedars bus falls to 0.75 per unit or lower.

(c) L'admittance des lignes à Les Cèdres vue par la protection de distance détecte un défaut dans le troisième gradin. Les conditions citées en 2 et 3 doivent avoir une durée d'au moins quatre (4) cycles. Le temps du rejet de production sera d'environ sept (7) cycles.

(c) The admittance seen by the Cedars end distance relays of either line enters zone three. Conditions 2 and 3 must last for at least four (4) cycles.
The generation rejection is completed in about seven (7) cycles.

(d) Le rejet de production s'effectuera à environ trois (3) cycles après l'initiation du signal, si la valeur du courant dans l'une ou l'autre des lignes atteint ou dépasse 850 A pendant 60 cycles.

(d) If the current in either line reaches 850 A or more for 60 cycles. The generation rejection is completed about three (3) cycles after the rejection signal is initiated.

En relève, une temporisation de 120 cycles réinitie le rejet de production et provoque le déclenchement des disjoncteurs de la ligne.

As a back-up, a timer adjusted to 120 cycles re-initiate the generation rejection and provides the tripping of the line.

En plus des moyens précités, l'ajout d'une voie de communication entre Les Cèdres et Dennison augmente la rapidité de fonctionnement du rejet de production, pour des conditions à Dennison.

In addition to the above, a communication channel is provided between Dennison and Cedars to allow the Generation Rejection to operate faster for certain conditions at Dennison.

L'émission d'un signal vers Les Cèdres est initiée par les conditions suivantes:

The signal to Cedars is keyed for each of the following conditions:

- à Dennison
  l'ouverture d'un des disjoncteurs R-10, R-20 ou R-120;
  la protection des lignes CD1 ou CD2;
  la protection différentielle des barres A et B
- à Boundary (CRT): l'ouverture d'un ou des deux disjoncteurs

- at Dennison
  R-10 open, R-20 open, R-120 open;
  CD1 line relay operation, CD2 line relay operation;
  "A" & "B" bus differential operation.
- at Boundary (CRT): one or both breakers open.

Une réception du signal à Les Cèdres dérive la temporisation de 60 cycles de la condition (d) précitée.

Receipt of the signal at Cedars bypasses the 60 cycle time delay for (d) condition above.

Les disjoncteurs d'HQ et autres appareils impliqués sont énumérés ci-dessous:

The HQ circuit breakers and other equipments included in this scheme are listed below:

120-4 - L1261, Les Cèdres - Beauharnois (SF_6)
120-5 - L1260, Les Cèdres - Beauharnois (SF_6)/Beauharnois Est
TFV Langlois *VFT* (repli de puissance / *runback*)
120-12 - A1, A2, A3, Les Cèdres
120-13 - A4, A5, A6, A7, A8, A9, Les Cèdres
120-16 - A10, A11, A12, Les Cèdres
120-17 - A13, A14, A15, A16, A17, A18, Les Cèdres

La protection de survitesse va déclencher les groupes

An overspeed protection will also trip the generators

précités sur des variations de fréquence en dehors des limites de 105% à 110%.

La protection de sur/sous fréquence (61,5/58,5 Hz) va provoquer aussi le déclenchement des disjoncteurs de la ligne.

listed above for frequency variations outside a range of 105 to 110%.

The over and under frequency (61.5/58.5 Hz) protection will also initiate the tripping of the line.

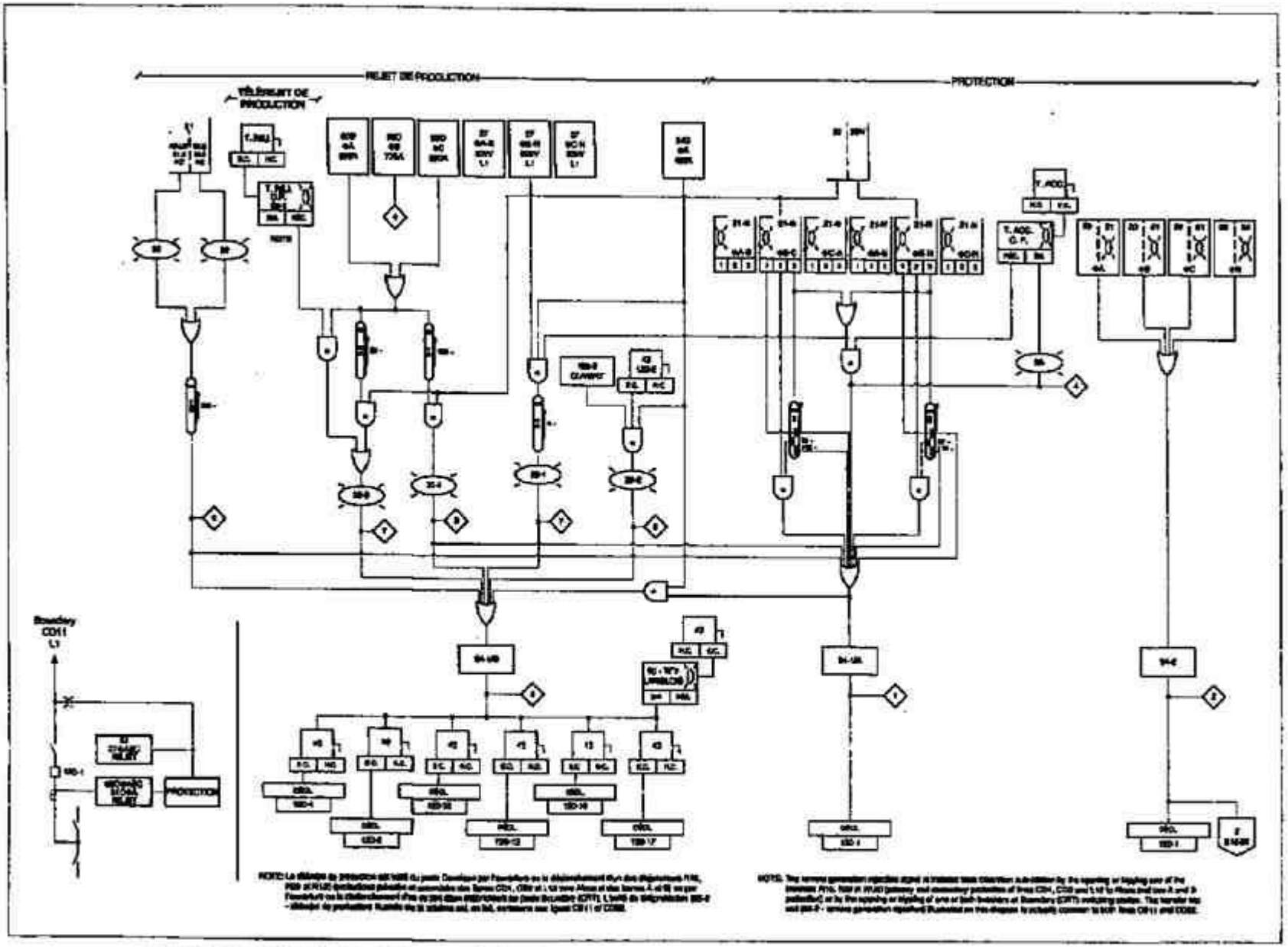


SCHÉMA DE PROTECTION LES CÈDRES LIGNE CD11

CEDARS PROTECTION DIAGRAM LINE CD11

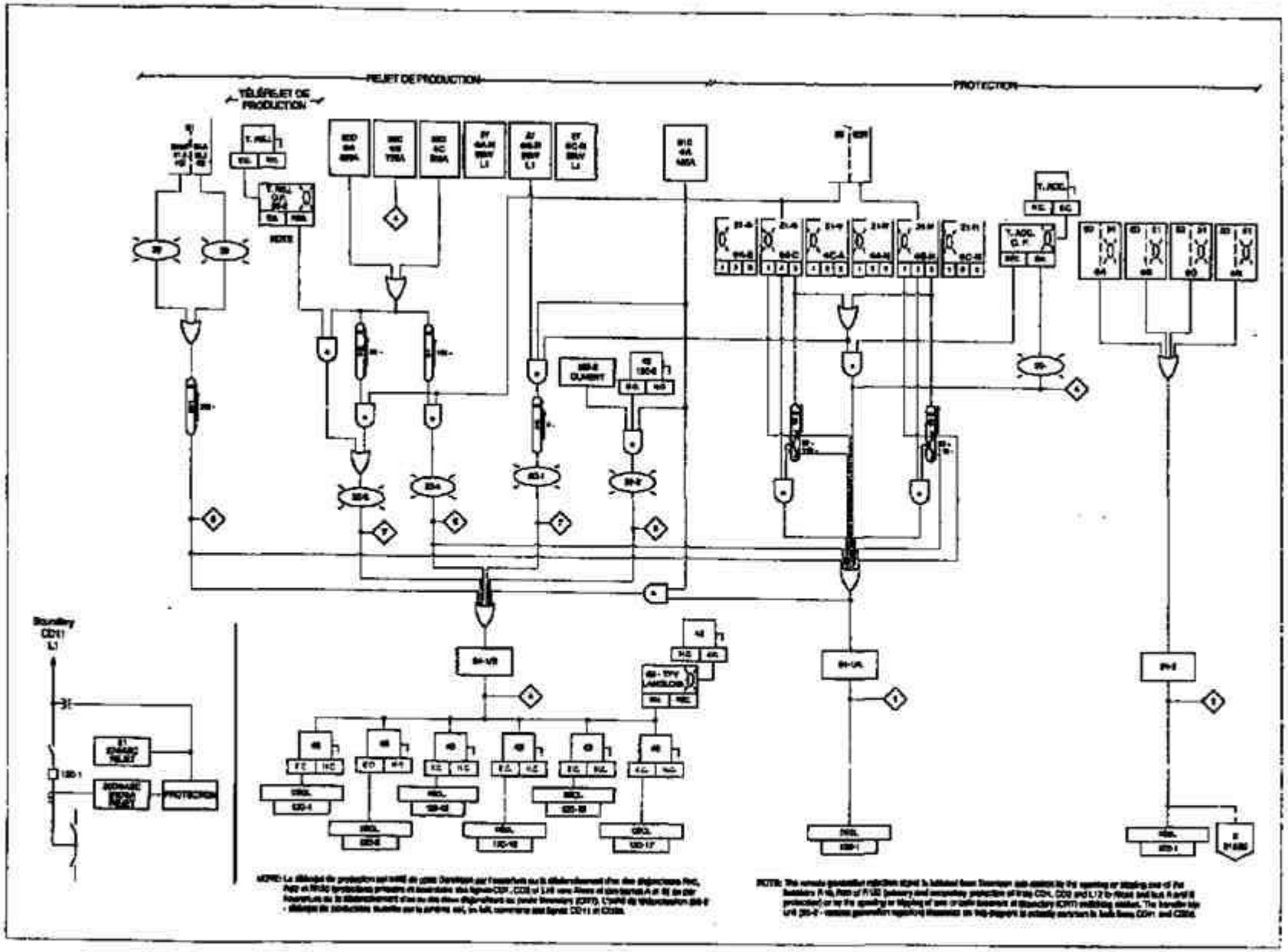


SCHÉMA DE PROTECTION LES CÈDRES LIGNE CD22

CEDARS PROTECTION DIAGRAM LINE CD22

NUMÉROS DE TÉLÉPHONE IMPORTANTS / BUSINESS TELEPHONE NUMBERS

CEDARS RAPIDS TRANSMISSION

Téléphone/Phone #	*FAX*		
Bureau/*Office* (Rivière-Beaudette)		(450) 269-3461	*269-2889*
Robert Charette		(450) 370-2728	
	Emergency		
	Residence	(514) 763-2790	
	Téléavertisseur	(450) 567-6785	
Poste Boundary CRT Station		(613) 936-0649	

HYDRO-QUÉBEC TRANSÉNERGIE

Ligne dédiée / *Dedicated Full Talk Circuit (HQ-PCC) Automatic Ring*

Répartiteur CCR interconnexions	(514) 289-4992	*289-4693*
/ *System Dispatcher - Interconnections* (CCR)	(514) 289-4991	
	(514) 289-4990	
Agent en planification du réseau - retraits / *Outage Coordinator*	(514) 289-4364	*289-4689*
	(514) 289-4363	
	(514) 289-3845	
Agent en planification du réseau / *Production Scheduler*	(514) 289-4365	289-4688
Répartiteur CER, CT Montréal /	(514) 289-3800	*289-3747*
Regional Dispatcher, CT Montréal		

NIAGARA MOHAWK POWER CORPORATION

SYRACUSE (POWER CONTROL CENTER) PCC

Ligne dédiée/Dedicated Full Talk Circuit (PCC-HQ) Automatic Ring

Opérateur du réseau/*Shift Operator*	(315) 460-2110	460-2120
Coordonnateur des retraits / *Outage Coordinator*	(315) 460-2475	

SYRACUSE (CENTRAL REGIONAL CONTROL CENTER) CRCC

Opérateur du réseau / *Operator*	(315) 460-2750	460-2420
CRCC Superintendent	(315) 460-2435	
CRCC Shift Supervisor	(315) 460-2421	
Coordonnateur des retraits / *Outage Coordinator*	(315) 460-2419	

CORNWALL ELECTRIC

Unlisted Direct voice line to Dispatcher:	(613) 932-5493	*932-6498*
- If busy, call	(613) 932-0141 Ext.255	
- If busy, call (and ask for Dispatch)	(613) 932-0123	
After hours - Office telephone will be answered by answering service, who will contact person "on call."	(613) 932-0123	
Urgence/Emergency Unlisted direct voice line to Dispatcher:	(613) 932-5493	
W.Budz (résidence/*home*)	(613) 932-2700	
(portable/*cellular*)	(613) 936-7645	
K.Kilfoil (résidence/*home*)	(613) 931-0951	
(portable/*cellular*)	(613) 551-4352	
David Winkenweder (portable/*cellular*)	(613) 360-6204	
Michael Pescod (résidence/*home*)	(613) 936-2426	
(portable/*cellular*)	(613) 930-5913	

LONG SAULT (ALCOA)

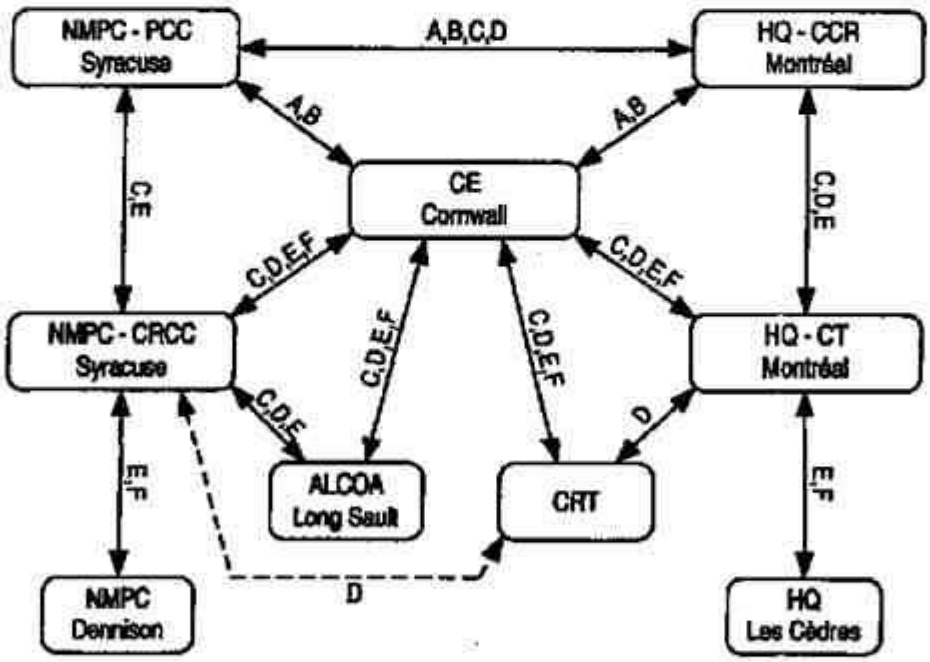
Jerry Murray Control Room/Salle de commande	(315) 764-4417
Guard / *Gardien*	(315) 764-4128

(If request for patrol lines after hours, call -*through the Guard*- J.Murray or W.Brockway at home)

SCHÉMA de COMMUNICATION

COMMUNICATION DIAGRAM

LIVRAISONS D'ÉNERGIE	A	POWER DELIVERIES
CONTRÔLE DE TENSION	B	VOLTAGE CONTROL
AVIS AVANT MANOEUVRES	C	NOTICE BEFORE SWITCHING
RAPPORT APRÈS DÉCLENCHEMENT	D	REPORT AFTER TRIPPING
MANOEUVRES	E	SWITCHING
MESURES DE SÉCURITÉ: *DÉGAGEMENT, AUTORISATION DE TRAVAIL, RETENUE.*	F	PROTECTIONS FOR WORK: *STATION/SUPPORTING GUARANTEE, WORK PERMIT/MARK-UP, NON-RECLOSE ASSURANCE*



Après les heures normales / *After working hours*

DETAILED SWITCHING PROCEDURES ON THE CD1/CD11 and CD2/CD22 LINES by CORNWALL ELECTRIC DISPATCH

1.0 To Isolate CD11 Line (BOUNDARY CRT to CEDARS) :

1.1 Contact CE to confirm that the total CE load may be fed by CD22, CD2 and CD1 via DENNISON Station.
If YES, proceed to § 1.2.
If NO, other procedures will be required.

1.2 CE requests HQ to open 120-1 breaker at CEDARS.

1.3 Advise CE that CRT is standing by to open 120-1 breaker at BOUNDARY (CRT).

1.4 At CE's request, CRT opens 120-1 at BOUNDARY (CRT) and locks 120-1 OPEN by removing the interlock key on the 120-1 breaker.

1.5 CRT advises CE that 120-1 breaker at BOUNDARY (CRT) is OPEN.

1.6 CE advises CRT and HQ that CD11 line is off potential.

1.7 CE requests HQ to isolate CD11 at CEDARS.

1.8 At CE's request, CRT opens disconnect 1L1 at BOUNDARY (CRT) (lock and tag) and reports to CE.

Note *The required key to open disconnect 1L1 at BOUNDARY (CRT) is secured to the interlock key of breaker 120-1. The latter may not be removed from the breaker unless 120-1 is tripped OPEN.*

1.9 At CE's request, CRT closes ground disconnect L1G at BOUNDARY (CRT) and reports to CE.

1.10 CE advises HQ that CD11 is isolated and requests HQ to close L1G at CEDARS.

1.11 If required, CE will prepare a NRA (Non Reclosure Assurance) on CD22.

1.12 CE issues the required Work Permit.

1.13 CRT/HQ checks for potential on line CD11 and then applies the proper grounds before proceeding to work on CD11 and notifies CE of location of portable grounds.

- *Restoration of line to previous conditions: proceed in reverse doer.*
  Final synchronization will always be performed by HQ at CEDARS upon restoration.

2.0 To Isolate CD22 Line (BOUNDARY CRT to LES CÈDRES) :

2.1 Contact CE to confirm that the total CE load may be fed by CD11, CD1 and CD2 via DENNISON Station.
If YES, proceed to § 2.2.
If NO, other procedures will be required.

2.2 CE requests HQ to open 120-2 breaker at CEDARS.

2.3 Advise CE that CRT is standing by to open 120-2 breaker at BOUNDARY (CRT).

2.4 At CE's request, CRT opens 120-1 at BOUNDARY (CRT) and locks 120-2 OPEN by removing the interlock key on the 120-2 breaker.

2.5 CRT advises CE that 120-2 breaker at Boundary (CRT) is OPEN.

2.6 CE advises CRT and HQ that CD22 line is off potential.

2.7 CE requests HQ to isolate CD22 at CEDARS.

2.8 At CE's request, CRT opens disconnect 2L2 at BOUNDARY (CRT) (lock and tag) and reports to CE.

Note *The required key to open disconnect 2L2 at BOUNDARY (CRT) is secured to the interlock key of breaker 120-2. The latter may not be removed from the breaker unless 120-2 is tripped OPEN.*

2.9 At CE's request, CRT closes ground disconnect L2G at BOUNDARY (CRT) and reports to CE.

2.10 CE advises HQ that CD22 is isolated and requests HQ to close L2G at CEDARS.

2.11 If required, CE will prepare a NRA (Non Reclosure Assurance) on CD11.

2.12 CE issues the required Work Permit.

2.13 CRT/HQ checks for potential on line CD22, then applies the proper grounds before proceeding to work on CD22 and notifies CE of location of portable grounds.

- *Restoration of line to previous conditions: proceed in reverse order.*
  Final synchronization will always be performed by HQ at CEDARS upon restoration.

3.0 To Isolate CD1 Line (BOUNDARY CRT to DENNISON) :

3.1 CE transfers all loads from CD1 to CD2.

3.2 When all loads are transferred to CD2, CE requests HQ to open 120-1 breaker at CEDARS.

3.3 CE asks CRT to open 120-1 breaker at BOUNDARY (CRT) and NIMO to open R-10 breaker at DENNISON.

Note *120-1 breaker at Boundary (CRT) must be locked in the OPEN position by removing the interlock key from 120-1.*

3.4 CRT advises CE that 120-1 breaker at BOUNDARY (CRT) is OPEN.

3.5 CRT requests HQ to close 120-1 breaker at CEDARS, energizing line CD11 up to breaker 120-1 at BOUNDARY (CRT).

3.6 At CE's request, CRT opens disconnect 1L3 at BOUNDARY (CRT) (lock and tag) and reports to CE.

Note *The required key to open disconnect 1L3 at BOUNDARY (CRT) is secured to the interlock key of breaker 120-1. The latter may not be removed from the breaker unless 120-1 is tripped OPEN.*

3.7 At CE's request, CRT closes ground disconnect L3G at BOUNDARY (CRT) and reports to CE.

3.8 If required, CE will prepare a NRA (Non Reclosure Assurance) on CD2.

3.9 CE issues the required Work Permit.

3.10 Work crews will check for potential on line CD1 and then apply the proper grounds before proceeding to work on CD1 and notify CE of location of portable grounds.

- *Restoration of line to previous conditions: proceed in reverse order.*
  Final synchronization will always be performed by HQ at CEDARS upon restoration.

4.0 To Isolate CD2 (BOUNDARY CRT to DENNISON) :

4.1 CE transfers all loads from CD2 to CD1.

4.2 When all loads are transferred to CD1, CE requests HQ to open 120-2 breaker at CEDARS.

4.3 CE asks CRT to open 120-2 breaker at BOUNDARY (CRT) and NIMO to open R-20 breaker at DENNISON.

Note *120-2 breaker at Boundary (CRT) must be locked in the OPEN position by removing the interlock key from 120-2.*

4.4 CRT advises CE that 120-2 breaker at BOUNDARY (CRT) is OPEN.

4.5 CRT requests HQ to close 120-2 breaker at CEDARS, energizing line CD22 up to breaker 120-2 at BOUNDARY (CRT).

4.6 At CE's request, CRT opens disconnect 2L4 at BOUNDARY (CRT) (lock and tag) and reports to CE.

Note *The required key to open disconnect 2L4 at BOUNDARY (CRT) is secured to the interlock key of breaker 120-2. The latter may not be removed from the breaker unless 120-2 is tripped OPEN.*

4.7 At CE's request, CRT closes ground disconnect L4G at BOUNDARY (CRT) and reports to CE.

4.8 If required, CE will prepare a NRA (Non Reclosure Assurance) on CD1.

4.9 CE issues the required Work Permit.

4.10 Work crews will check for potential on line CD2 and then apply the proper grounds before proceeding to work on CD2 and notify CE of location of portable grounds.

- *Restoration of line to previous conditions: proceed in reverse order.*
  Final synchronization will always be performed by HQ at CEDARS upon restoration.

5.0 REQUEST FOR NRA (Non Reclosure Assurance) :

5.1 At CE's request, CRT will turn the Reclose Selector Switch for breakers at BOUNDARY (CRT) 120-1 and/or 120-2 on Panel No. 5 to the HORS position and will hang a DNO (Do Not Operate) tag.

5.2 CRT will then advise CE that breakers 120-1 and/or 120-2 at BOUNDARY (CRT) are/is blocked from RECLOSING.

6.0 BOUNDARY (CRT) BREAKER TRIP (120-1 & 120-2) FOLLOWED BY SUCCESSFUL RECLOSING :

6.1 Following a trip of a breaker 120-1 and/or 120-2 at BOUNDARY (CRT) followed by a successful automatic reclosing, a signal will be sent to the DAT (Data Acquisition System) at Rivière-Beaudette as well as a signal to the CRT's supervisor on call at the time.

6.2 The CRT supervisor will then be able to question the system to establish the nature of the fault and its location. With that information on hand, the supervisor will take the appropriate measures.

6.3. CRT will then pass on the available information to CE.

7.0 BOUNDARY (CRT) BREAKER TRIP WITH NO RECLOSING :

7.1 Following a breaker trip with no reclosing, the CRT supervisor will be notified by his telephone signal and the DAT at Rivière-Beaudette will also be notified.

7.2 The CRT supervisor takes the appropriate measures.

7.3 CRT will pass on the available information to CE.

MESURES DE SÉCURITÉ PRISES PAR CORNWALL ELECTRIC (à la demande d'HQ)

WORK PROTECTION MEASURES TAKEN BY CORNWALL ELECTRIC (as requested by HQ)

Demande de création de la zone protégée (sous la juridiction de CE)

G-1.0 Request to Establish a Protected Area (under CE Authority)

Selon les méthodes en vigueur, lorsque une ou plusieurs équipes partagent une même zone protégée, un seul dégagement est requis.

G-1.1 According to the methods in effect, when one or more crews are working in the same protected area, only one station guarantee is required.

Un cadenas est installé sur chaque point de coupure de la zone protégée, auquel on ajoute une pancarte de condamnation pour chacun des responsables des travaux.

A padlock is installed on each isolation point of the protected zone.
The padlock's tag bears each crew foreman's name.

Après avoir reçu les approbations requises de la section de coordination des retraits, le répartiteur CER communique avec l'opérateur du réseau CE en spécifiant:

G-1.2 After receiving the necessary approval from the Outage Coordinator, the HQ Regional Dispatcher will contact the CE Dispatcher and will indicate:

Les numéros d'identification des sectionneurs devant servir de points de coupure de la zone protégée

G-1.2.1 The device number of the disconnect switch(es) to be used to establish the Protected Area;

Le nom a être associé aux pancartes de condamnation correspondant à chaque responsable des travaux.

G-1.2.2 The name of each crew foreman having to work within the same Protected Area.

Établissement de la zone protégée (sous la juridiction de CE)

G-2.0 Establishing a Protected Area (under CE Authority)

La création de la zone protégée implique:

The operations include:

Confirmation que les sectionneurs désignés points de coupure sont ouverts et cadenassés avec des cadenas de condamnation, leur mécanisme motorisé est neutralisé mécaniquement (et électriquement s'il y a lieu);

G-2.1 Confirmation that the disconnect switches designated as isolation points are locked in the open position and padlocked with the specific padlocks designated for that device; their motorized mechanism disabled mechanically and/ or electrically;

Confirmation que chaque point de coupure porte une pancarte de condamnation associée à chaque responsable des travaux partageant la même zone protégée;

G-2.2 Confirmation that a tag is placed on each isolation point bearing the name of each crew foreman working within the same Protected Area;

Les clés servant au cadenassage sont conservées sous surveillance contrôlée par l'exploitant.

G-2.3 The individual keys for each locked device placed in a location controlled by the Station Operator.

Obtention du dégagement

G-3.0 Issuance of Station Guarantee

Lorsque la condamnation de la zone protégée est complétée, le répartiteur CER se fait confirmer par l'opérateur du réseau CE, l'identification et l'état des trois (3) points de l'article G-2.

Once the isolating and grounding conditions have been completed, the HQ Regional Dispatcher receives the confirmation from the CE Dispatcher that Items §G-2.1 to G-2.3 are completed.

Après quoi il obtient le Dégagement de la part de l'opérateur du réseau CE.

A Station Guarantee will then be issued by the CE Dispatcher.

Fin des travaux et Décondamnation de la zone protégée

G-4.0 End of Work and Untagging of the Protected Area

Lorsque toutes les autorisations de travail ont été retournées, le répartiteur CER communique avec l'opérateur du réseau CE et:

After all Work Permits have been returned, the HQ Regional Dispatcher contacts the CE Dispatcher and:

Lui transmet l'identification de la ligne concernée;

G-4.1 Transmits the identification number of the line involved;

Lui retourne le numéro de dégagement correspondant;

G-4.2 Surrenders the Station Guarantee obtained;

Lui retourne également le nom du responsable de travaux associé aux pancartes de condamnation;

G-4.3 Transmits the name of each crew foreman corresponding to the different tags installed for each of them;

L'opérateur du réseau CE fait enlever les pancartes de condamnation associées aux noms des responsables des travaux, que le répartiteur CER lui a mentionnés.

G-4.4 CE Dispatcher proceeds to remove the tags installed for the HQ crew foremen, as per section §G-4.3.

Les cadenas sont enlevés seulement après que toutes les pancartes de condamnation ont été retirées.

NOTE *The padlocks will be removed only after all tags have been removed.*

Avec l'autorisation de son répartiteur, l'exploitant de l'installation prépare la ligne pour la remise en exploitation.

After agreement with his Regional Dispatcher, the Station Operator prepares the line for service.

SCHEDULE C

METERING

1.0 General Metering Equipment Requirements

1.1 Blondel's Theorem

Blondel's Theorem states that the minimum number of meter elements required to measure power in a polyphase system is one less than the number of wires in the polyphase system at the point of measurement. Metering Equipment shall conform to Blondel's Theorem.

1.2 Instrument Transformers

1.2.1 Approval

- Instrument transformers shall be approved for use by Measurement Canada and the New York State Public Service Commission ("NYPSC"), or shall have special dispensation from Measurement Canada and the NYPSC.

1.2.2 Current Transformers

- Current transformers shall conform at least to the ANSI C57.13 (latest revision) for 0.3 accuracy class.

1.2.3 Voltage Transformers

- Voltage transformers shall conform at least to the ANSI C57.13 (latest revision) for 0.3 accuracy class.

1.2.4 Use of Instrument Transformers

- Instrument transformers shall be used solely for the purposes of revenue metering and not for any other purposes, including, but not limited to, the attachment of other devices.

1.2.5 Configuration

- Instrument transformers can be configured as three single units, combined units (current and voltage in the same unit) or as one three phase unit.

1.2.6 Size of Secondary Cabling

- The secondary cabling between the current transformers and the meter box shall be of a sufficient size that the rated burden for the 0.3% ANSI accuracy class is not exceeded when current, equivalent to the rated current, flows in the secondary winding.

1.2.7 Minimizing Error

- The error introduced by the secondary cable and terminations shall be <0.02% or an error correction shall be supply.

1.2.8 Burden

- *Instrument transformers shall operate within their rated burden limits for the 0.3 ANSI accuracy* class.

1.2.9 Security

- Instrument transformers connections to cabling shall be secure and tamper proof.

1.3 Meters

- Metering installations shall meet the minimum requirements listed below:

a) Metering installations shall be composed of a main meter and a redundant meter

b) Meters shall have Measurement Canada and NYPSC type approval

c) Meters shall meet or exceed the 0.2 accuracy class of ANSI standard C12.20 (latest revision)d) Meters shall be configured so that external access to billing information is read only.

e) Meters shall provide 60 minutes interval data for Wh and varh.

f) Meters shall be compatible with a mutually agreed on commercially available meter interrogation system through a revenue communication port.

g) All other communication ports shall not interfere with the revenue communication port.

h) A communication port shall be reserved for real time system.

i) Meters shall be equipped of KYZ outputs, optical port or others devices allowing calibration verification.

j) Meters shall be fed by an external power supply.

k) Meter shall be capable of being programmed to include line losses compensation

2.0 Metering Equipment Documentation (records)

Each Party shall keep up to date its documentation about their respective metering equipment and provide a copy of its updated documentation to the other Party (single line diagrams; a diagram identifying each cable going from instrument transformers to the meter; a diagram identifying all the wiring and devices for meter communication by phone and real time data transmission information; meter; model, serial number, nameplate, options and specifications; programming and configuration of each meter, including password and phone line number; all measurement available for each meter; instrument transformers nameplate rating; commissioning test results (meters and transformers) if available; technical confirmation that the maximum burden of each instrument transformer is not exceeded).

3.0 Metering Equipment Seal Requirements

- The seals shall be broken only in the presence of the other Party unless the other Party has decided not to be present. Each seal shall have a unique serial number and the number shall be known by both Party. In the event of a failure that requires the seal to be broken, the other Party will be notified as soon as possible and then the Parties will decide if any further action is required.

- Each Party shall make their best efforts to keep the metering installations secured and to prevent

unauthorized access.

4.0 Metering Equipment Audit

- Either Party shall have the right, upon 30 business days written notice to the Asset Owners Committee to audit any Metering Equipment used on the Interconnection Facilities, which is owned, leased or contracted for use by the other Party. The audit request shall identify the reason for the audit and specify the details of the procedures to be performed. Audit requests may be modified by the Asset Owners Committee

5.0 Metering Equipment, Calibration, Verification and Maintenance

- Each Party and its representatives will be entitled to a notice of at least 10 business days and to be present at, any calibration, verification or maintenance of the Metering Equipment on the Interconnection facilities performed by the other Party. Provided a Party is given such notice, the other Party may proceed with maintenance or meter verification notwithstanding the Party's absence.

- Calibration, verification and maintenance shall be performed by each Party for the Metering Equipment it owns, at intervals required by the Party's respective regulatory bodies. Calibration, verification and maintenance may be performed more often that the required intervals as may be determined by the owning Party.If a meter is found to be out of its specifications, then the meter will be readjusted or replaced. Both Parties may agree to modify the testing schedule if appropriate. Each Party will assume its own costs of participating in the testing of the other party.

- The meter standard used during the annual testing shall be traceable to NIST (National Institute of Standards and Technology) for substations located in the United States and traceable to the NRC (National Research Council) for substations located in Canada.

6.0 Metering Equipment Readings

- Each Party shall be responsible of its own Metering Equipment readings. Each Party shall provide appropriate access to its Metering Equipment to the other Party for the purpose of real time communications. Responsibility for the cost and provision of communication facilities other than that forming part of the Metering Equipment shall remain with the Party requiring such access.

- Metering data from the main meter shall be used for settlement unless valid metering data is unavailable. If data is unavailable, data from the alternate meter (redundant meter) may be substituted. The Party responsible for the metering installation shall specify validation criteria for the metering installations for which it is responsible

- Metering Equipments shall keep Eastern Standard Time all year.

- Other terms and conditions for metering readings are specified in the Energy Data Services Agreement shown in Schedule "D" hereto.

7.0 Third Parties

- Either Party may engage a third party to provide and maintain Metering Equipment and data in accordance with this Agreement but nothing in this Article will relieve a Party from its obligations under this Agreement for Metering Equipment it owns, leases or contracts to use.

8.0 Safety procedures

- Each Party shall respect all safety regulations applicable at the other Party's Metering Equipment locations.
- Each Party will bear its own costs to meet such safety .

9.0 Metering Equipment Audit and Verification Notices

- Notices required for audits shall be deemed properly given only when submitted to the Asset Owners Committee.
- Notices for calibrations, verifications and maintenance shall be deemed properly given only if e-mailed, mailed, facsimiled or delivered to:

For TransÉnergie:

Mr. François Brassard
Mesurage et relève (Metering Department)
201, rue Jarry Ouest
Montréal (Québec) H2P 1S7
Telephone: (514) 385-8888 (2922)
Fax: (514) 385-2841

For Niagara Mohawk:

Mr. Larry Durante
National Grid USA Service Company
Meter Engineering Department
7437 Henry Clay Boulevard
Liverpool, New York 13088
Telephone: (315) 460-2145
Fax: (315) 460-2290

E-Mail Address: larry.durante@us.ngrid.com

SCHEDULE D

ENERGY DATA SERVICES AGREEMENT

THIS AGREEMENT made effective this 17th day of April 2003.

BETWEEN : Niagara Mohawk Power Corporation, ("Niagara Mohawk" or "Party" or "Company"), a corporation organized and existing under the laws of the State of New York, whose principal place of business is at 300 Erie Boulevard West, Syracuse New York 13202

PARTY OF THE FIRST PART

AND : Cedar Rapids Transmission Co. ("CRT", "Recipient" or "Party"), whose principal place of business is at 944, rue Principale, Riviere Beaudette, Quebec J0P 1R0 Canada.Niagara Mohawk and CRT shall be collectively referred to as the "Parties"

PARTY OF THE SECOND PART

WHEREAS, Niagara Mohawk owns, operates and maintains the Dennison Substation located in the Town of Massena, County of St. Lawrence, New York ("FACILITY") into which FACILITY CRT transmission lines enter;

WHEREAS, Niagara Mohawk has installed, operates and maintains electric metering equipment at the FACILITY that allows measurement of electricity over the CRT transmission lines into and out of the FACILITY ("METERING"), as set forth on the attached Attachment 1 schematic drawing of Dennison Substation, incorporated herein and a part hereof;

WHEREAS, NIAGARA MOHAWK is willing to coordinate with CRT, at CRT's expense, to allow CRT to ascertain metering readings from the METERING with regard to the CRT transmission lines;

WHEREAS, Niagara Mohawk's METERING includes electric interval recorder(s) to measure and record electric energy in and out of the FACILTY, including translating and distributing electric interval pulse data.

NOW, *THEREFORE,* the Parties intending to be legally bound, agree as follows:

1. **The Scope of Work.** Niagara Mohawk agrees to provide and CRT agrees to accept, subject to the terms and conditions contained herein read only telephonic access to the electric 15 minute interval pulse data stored in the interval pulse data recording devices that are designated by the Niagara Mohawk Customer ID # 440012, 440013, 440014, 440015 pertaining to the CRT transmission lines that enter/exit FACILITY ("Data"), which scope of work shall be termed the "Work";

2. **Limitation of Data Use.** CRT shall use the Data for any purpose it uses similar data as part of the normal course of business of CRT.

3. **Term.** This Agreement shall remain in force and effect for one (1) year from the effective date first shown above, and shall be automatically renewed annually for succeeding one year terms upon mutual agreement of Niagara Mohawk and the Recipient. Mutual agreement to annual renewal shall be presumed unless, at least ninety (90) days prior to the annual renewal date, one party to this Agreement gives the other party formal written notification of termination of the Agreement.

4. **Conditions.** Niagara Mohawk's Energy Data Services has agreed to provide the following Work on FACILTY METERING Data:

a. All Niagara Mohawk installed interval-recording meters will require remote meter reading capability ("Communications"). CRT will use Niagara Mohawk already installed telephone line and communication equipment. CRT will be responsible for all communication charges such as long distance charges, with its phone company.

b. Should CRT require a different Communications to the meter scheme, an agreement should be negotiated between the parties to cover the new situation.

c. Any applicable Niagara Mohawk filed tariff rules in effect supersede the content of this contract;

d. Niagara Mohawk will provide and maintain required password codes for secure CRT read only access to the designated interval pulse data recording device; Niagara Mohawk and CRT agree to notify the other utility of any changes that impact meter data access to the other utility;

e. Email requests for historical, previously supplied unedited Data, processed during the term of this Agreement, will be provided to CRT at CRT's cost within ten days of receipt of the request from CRT.

f. Delivery of Data used for billing /credit calculations and/or ISO reporting on a daily frequency will continue with validation of meter and recorder to, and not be affected by the extract from, the same interval pulse data recorder at the FACILITY; CRT cannot access the designated interval pulse data recording device from 00:01 hours – 09:00 hours each day;

g. If disputes arise regarding the interpretation of any Data obtained from the interval pulse data recorder, Niagara Mohawk's interpretation of the Data will be utilized;

h. Repair of metering devices and related equipment, including hardware and software, utilized to provide the 15 minute interval pulse Data will be completed during the normal business hours of Niagara Mohawk, excepting hazardous situations. Reasonable effort will be made to repair equipment and software in a timely fashion as circumstances permit; Niagara Mohawk reserves the right to remove, relocate or modify the interval pulse data recording device or any other equipment or facilities at the FACILITY at its' will without being constrained by its' ancillary provision of read only access to CRT. . In such events, Niagara Mohawk will notify CRT of the work in progress in a timely;

i. Niagara Mohawk will make reasonable efforts to maintain equipment under its control within the accuracy specifications of that equipment. Niagara Mohawk will investigate and rectify legitimate issues related to obtaining Data for equipment within its control. CRT warrants that it will not engage in any practice that adversely affects the functioning of the interval pulse data recorder. Niagara Mohawk reserves the right to decline to investigate issues relative to obtaining Data if the problem is known to be the responsibility of another. If CRT request such an investigation, Niagara Mohawk reserves the right to charge CRT the cost for investigating the problem.

5. **Price.** Niagara Mohawk will submit an invoice to the CRT for the Work. The initial year one charge for read only access to the designated interval pulse recording device is $1 (U.S.). This cost is in addition to any specific site costs that pertain to the procurement and installation and maintenance of any newly installed interval pulse data recorder and associated communication equipment for CRT purposes pursuant to this Agreement, which costs are the responsibility of, and are payable to Niagara Mohawk by, CRT. CRT agrees to pay the price within 30 days after a receipt of a Niagara Mohawk invoice.

6. **Termination of Agreement.** In the event that any Party or Parties should be unable or unwilling to fulfill the terms of this Agreement or be in material breach of this Agreement, that Party or those Parties shall have the right to terminate this Agreement with 90 days notice. In addition to termination rights for breach in this Agreement, that Party or those Parties shall have available to it or them all other remedies at law and equity.

7. **Warranty Disclaimer.** ***METERING DATA ACCESS AND OBTAINED METERING DATA ARE PROVIDED 'AS IS' WITHOUT WARRANTY OF ANY KIND OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE RESULT AND PERFORMANCE OF THE DATA ACCESS AND OBTAINED DATA IS ASSUMED BY CRT.***

8. **Limitation of Liability.** ***IN NO EVENT WILL NIAGARA MOHAWK BE LIABLE FOR ANY DAMAGES, INCLUDING LOSS OF DATA, LOST PROFITS, OR OTHER DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES ARISING FROM THE DATA ACCESS AND/OR ANY OBTAINED DATA, HOWEVER CAUSED OR ON ANY THEORY OF LIABILITY. THIS LIMITATION WILL APPLY EVEN IF NIAGARA MOHAWK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. THE OTHER PARTIES TO THIS AGREEMENT ACKNOWLEDGE THAT THE WORK REFLECTS THIS ALLOCATION OF RISK.***

9. **Severability.** In the event any provision of this Agreement shall be adjudged by a court of competent jurisdiction to be invalid or unenforceable for any reason whatsoever, the invalidity or enforceability of said provision shall not effect the validity or enforceability of any other provision of this Agreement and such invalid or unenforceable provision shall be deemed to be deleted from this Agreement.

10. **Applicable Law.** This Agreement has been entered into and performed in the State of New York and shall be governed, interpreted and construed in accordance with the laws of New York.

11. **Waiver of Rights.** No waiver of any right or default hereunder by any Party hereto shall be deemed a continuing waiver or a waiver of any other right or default hereunder by such a Party.

12. **Entire Agreement.** This Agreement states the entire agreement between the Parties and supersedes any and all prior verbal or written promises, statements, representations, understandings and agreements related to the specific subject matter hereof.

13. **Assignment.** This Agreement may not be assigned by any Party to the Agreement without thirty (30) days written notice being provided to the other Party and the other Party consenting to the assignment, which consent shall not be unreasonably withheld.

14. **Signator's Authority to Bind a Party.** Each Party warrants that its signatory has full authority to sign and accept this Agreement and bind each respective party to it.

15. **Notices.** Notices shall be in writing. Any Notices to a Party shall be provided as follows:

To: CRT	To: Niagara Mohawk
Sylvain Clermont General Manager Cedars Rapids Transmission Co. 944, rue Principale Riviere Beaudette (Quebec) J0P 1R0 Canada Telephone: (450) 269-3461 Fax: (450) 269-2889 Email: crtmail@rocler.qc.ca	Michael W. Murphy Supervisor Energy Data Services Energy Data Services, HCB #1 Niagara Mohawk Power Corporation 300 Erie Boulevard West Syracuse, New York 13202-4250 Telephone: 315-460-2594 Fax: 315-460-2597 Email: Michael.Murphy@us.ngrid.com

15. **Confidentiality.** Each party acknowledges and agrees that in order to provide the services and perform the obligations of this Agreement, that its officers, directors, employees or agents may have access to confidential business and proprietary information of the other Party and agrees on behalf of itself and its officers, directors, employees and agents to use its/their best efforts to prevent either duplication or disclosure of data, plans, specifications, formulae, drawings or any other information, whether business or technical, of a confidential nature and so designated by the other Party, which has been furnished directly or indirectly, in writing or otherwise, to the other Party or any of its officers, directors, employees, or agents in connection with this Agreement or the provisions of services hereunder, by the Party, its parent, or any of its affiliates or subsidiaries. "Confidential information" does not include information that (a) is in the public domain prior to the disclosure, becomes part of the public domain through no wrongful act of the Party; (b) was in lawful possession of the Party prior to the disclosure; or (c) was independently developed by the Party outside the scope of the agreement; or (d) the use of which is necessary or appropriate to render a bill by NMPC to CRT or to the retention and maintenance of customer account information by Niagara Mohawk as regards CRT and/or the FACILITY METERING.

Niagara Mohawk	Cedars Rapids Transmission Co.
Michael W. Murphy Signature	Sylvain Clermont Signature
Michael W. Murphy Print Name	Sylvain Clermont Print Name
Supervisor Energy Data Services Title	General Manager Title
5/6/03 Date	2003/04/23 Date