

## **Complementary Agreement no. 7**

(CBJNQ)

BETWEEN

The CREE REGIONAL AUTHORITY, a public corporation duly constituted under Chapter 89 of the Statutes of Québec 1978, herein acting and represented by Ted Moses, its chairman, duly authorized to execute this Agreement;

and

La SOCIÉTÉ D'ÉNERGIE DE LA BAIE JAMES, a corporation duly incorporated with its head office in Montréal, Québec, herein acting and represented by its authorized representative;

and

HYDRO-QUÉBEC, a corporation duly incorporated with its head office in Montréal, Québec, herein acting and represented by its authorized representative.

WHEREAS Hydro-Québec wishes to undertake the LG 1 (1986) Project, the LG 2A Project, the Brisay Project and the RND Project as described herein;

WHEREAS the James Bay Crees, acting through the Cree Regional Authority, consider that their consent is required to undertake those Projects;

WHEREAS Hydro-Québec considers that the consent of the James Bay Crees is required to undertake the LG 1 (1986) Project, but is not required to undertake the LG 2A Project, the Brisay Project and the RND Project as described herein;

WHEREAS the parties hereto agree on the question of consent for the LG 1 (1986) Project including the requirement of the consent of the Chisasibi Band Council, which has intervened herein;

WHEREAS the parties hereto do not agree on the question of consent for the LG 2A Project, the Brisay Project and the RND Project;

WHEREAS, for practical reasons and for the purpose of any future references to Le Complexe La Grande (1975), the parties hereto have agreed to amend certain provisions of Section 8 of the James Bay and Northern Québec Agreement;

WHEREAS it is also appropriate to amend the provisions of subsection 8.9 of the James Bay and Northern Québec Agreement respecting SOTRAC;

WHEREAS the parties hereto are entitled to amend the said provisions of Section 8 of the said James Bay and Northern Québec Agreement in virtue of subsection 8.19 thereof.

NOW, therefore, the parties hereto hereby agree as follows:

**1**

Le Complexe La Grande (1975) as described in the James Bay and Northern Québec Agreement shall include the following Projects:

1.1 The LG 1 (1986) Project

The LG 1 (1986) Project shall consist of the LG 1, Revision 1 Project as described in Complementary Agreement No 4 to the James Bay and Northern Québec Agreement with the following changes (plates 1 and 2) in the number of units, the total installed capacity and the maximum discharge through the units:

## List of plates for the LG 1 (1986) Project

	LG 1, R1	LG 1 (1986)
Number of generating units	10	12
Total installed capacity in MW	1 140	1 368
Maximum discharge through units		
– in cubic feet per second	152 000	210 130
– in cubic meters per second	4 304	5 950

Plate 1 : Agencement général des ouvrages

Plate 2 : Coupe transversale dans l'axe d'un groupe de la centrale

*See plan no. 20 Plate 1 Agencement général des ouvrages (Complementary Documents)*

### **AGENCEMENT GÉNÉRAL DES OUVRAGES**

*See plan no. 21 Plate 2 Coupe transversale (Complementary Documents)*

### **COUPE TRANSVERSALE DANS L'AXE D'UN GROUPE DE LA CENTRALE**

#### 1.2 The LG 2A Project

The LG 2A Project comprises additional generating facilities at the La Grande 2 Reservoir, consisting of a new 6-unit powerhouse and appurtenant works.

The new LG 2A powerplant is located about one kilometer west of the existing LG 2 powerplant (plate 3) and consists of water intake works, an underground powerhouse, discharge works, an underground transformer substation, a surface switching station and a 315 kV transmission line (plate 4). The existing La Grande 2 Reservoir and spillway also serve for the operation of the LG 2A powerplant.

The water intake works comprise an approach channel formed by two dykes, an intake structure and six penstocks.

The approach channel is approximately 600 meters long and 145 meters wide. The dykes are of rockfill with a glacial till core. The crest lengths are respectively 550 and 535 meters and the total volume of fill is about 325 000 cubic meters.

The intake structure for the six penstocks is located downstream of the existing D-6A dyke of the La Grande 2 Reservoir. This dyke acts as an upstream cofferdam during construction of the intake structure. Each of the six openings in the intake structure is equipped with a set of trashracks and a vertical lift wheel gate.

Six parallel penstocks, each approximately 200 meters long, excavated in the rock, connect the intake to the turbines. The sloping sections of the penstocks are concrete-lined while the horizontal sections are steel-lined.

LG 2A is an underground powerplant, excavated in rock and similar in design to the existing LG 2 powerplant. The machine hall is approximately 221 meters long, 23 meters wide and 50 meters high with six turbine-generator units of 333 MW each. The installed capacity is 1998 MW and the design maximum discharge is 1620 cubic meters per second. The net maximum head is 137 meters.

The discharge works comprise six draft tubes connected to a surge chamber and two tailrace tunnels approximately 1330 meters long, 15 meters wide and 20 meters high.

The transformer substation has six 13.8-315 kV transformers and is located in an underground chamber excavated in the rock immediately upstream of the main machine hall. Two shafts for the isolated phase bus ducts connect the transformer substation to the surface switching station.

The LG 2A powerhouse is connected to the Radisson Substation through a double-circuit 315 kV transmission line. This transmission line is approximately 16 kilometers long.

The four existing 735 kV transmission lines, leaving the LG 2 powerplant, are relocated north of the present alignment.

List of the plates for the LG 2A Project

Plate 3 : Agencement général des ouvrages

Plate 4 : Coupe longitudinale des aménagements

*See plan no. 22 Plate 3 Agencement général des ouvrages (Complementary Documents)*

## **AGENCEMENT GÉNÉRAL DES OUVRAGES**

*See plan no. 23 Plate 4 Coupe longitudinale (Complementary Documents)*

## **COUPE LONGITUDINALE DES AMÉNAGEMENTS**

### **1.3 The Brisay Project**

The Brisay Project consists of a powerplant with 460 MW installed capacity and a 315 kV transmission line to the Tilly Substation at LG 4 via the site of the future “Nikamo” collecting substation.

The powerplant is located adjacent to the existing Brisay Control Works which include the intake structure for the powerplant on the common approach canal from the Caniapiscou Reservoir (plate 5). The intake structure has two gates and is connected to the two head race tunnels of which the upstream 100 meters also were constructed concurrently with the Brisay Control Works (plate 6).

The two head race tunnels are approximately 500 meters long, excavated in rock, and are connected through penstocks of approximately 90 meters long to the spiral cases of the turbine generator units.

The powerplant will receive its water from the Caniapiscou Reservoir where the maximum and minimum operating levels will remain at elevations 535.5 and 522.6 meters (1760 and 1717 feet) respectively as described in Section 8 of the James Bay and Northern Québec Agreement.

The powerplant is located above ground. At the generator floor level the powerhouse is approximately 105 meters long and 38 meters wide. It contains two generating units of 230 MW each driven by a Kaplan turbine with steel spiral casings (plate 6). The total installed capacity is 460 MW and the design maximum discharge through the powerplant will be approximately 1133 cubic meters per second. The nominal head is 38.4 meters (plate 7).

The discharge works consist of two draft tubes and a tail race connected to the discharge canal of the Brisay Control Works.

The transformer/switching station is located partly on the roof of the powerhouse and partly on the adjacent rock.

A double circuit 315 kV transmission line connects the Brisay powerplant to the Tilly Substation via the site of the future “Nikamo” collecting substation (plate 8).

The generating units for the Brisay powerplant may, at Hydro-Québec’s option, be changed to three or four units of a total installed capacity of 460 MW within generally the same structural configuration, in

lieu of the two 230 MW units described above. Such change shall not require an amendment to this Agreement, but the Cree Regional Authority shall be notified in writing of such change.

List of the plates for the Brisay Project

Plate 5 : Complexe hydroélectrique de La Grande Rivière – Plan de situation

Plate 6 : Agencement général

Plate 7 : Coupe transversale dans l'axe d'un groupe

Plate 8 : Ligne de transport d'électricité à 315 kV, Brisay-Poste Tilly : Corridor et alignement préférentiels

*See plan no. 24 Plate 5 La Grande Rivière Plan de situation (Complementary Documents)*

### **COMPLEXE HYDROÉLECTRIQUE DE LA GRANDE RIVIÈRE – PLAN DE SITUATION**

*See plan no. 25 Plate 6 Agencement général (Complementary Documents)*

### **AGENCEMENT GÉNÉRAL**

*See plan no. 26 Plate 7 Coupe transversale (Complementary Documents)*

### **COUPE TRANSVERSALE DANS L'AXE D'UN GROUPE**

*See plan no. 27 Plate 8 Ligne de transport (Complementary Documents)*

### **LIGNE DE TRANSPORT D'ÉLECTRICITÉ À 315 kV, BRISAY-POSTE TILLY : CORRIDOR ET ALIGNEMENT PRÉFÉRENTIELS (\*)**

#### 1.4 The RND Project

The 450 kV DC transmission line between Radisson Substation and the 49th parallel will be approximately 600 km long, on steel towers anchored by guy wires spaced approximately 500 meters.

A few rigid-type towers will be used (2%) as well as some guy-supported angular towers (6%), which will occupy surface areas of approximately 60 meters x 70 meters. The standard guyed towers will each occupy surface areas of approximately 24 meters x 30 meters. Two main conductors (four-wire bundles), supported by "V" type insulators, will have a minimum ground clearance of 13.2 meters.

The right-of-way will be 60 meters wide and in general will be cleared only 52 meters.

##### 1.4.1 Radisson Substation

The substation site is the same as that of the Radisson Substation referred to in the James Bay and Northern Québec Agreement.

The Radisson Substation will, in addition to the features described in the James Bay and Northern Québec Agreement, consist of three 735-315 kV power transformers, six 735 kV transmission line startup facilities, four 315 kV transmission line startup facilities, a power converter of approximately 2000 MW and the 450 kV DC transmission line startup facility.

Total additional space required is approximately 394 000 square meters, of which 130 000 square meters will be used for the converter facility. The 735 kV section will be used mainly as a switching facility for the three LG 2 to Nemiscau transmission lines. The 315 kV section will be used for transforming and integrating into Hydro-Québec's James Bay grid the power generated by the LG 2A and LG 1 (1986) powerhouses.

##### 1.4.2 Looping of the three LG 2 – Nemiscau 735 kV transmission lines

The switching system for feeding the 2 000 MW power converter requires the looping of the three LG 2 – Nemiscau lines between the LG 2 Switching Station and the Radisson Substation.

The loops for the first and second lines require seven new towers on a 2.5 km long new right-of-way and the loop for the third line requires thirteen new towers on a 2.5 km long new right-of-way.

Technical specifications of these loops are identical to those of the three LG 2 – Nemiscau lines.

#### 1.4.3 Grounding electrode

A grounding electrode is required to maintain the neutral terminal of the converter at ground potential.

The electrode will consist of a steel conductor placed on a coke bed at a depth of 3.5 meters in ground saturated with water and with minimal electrical resistance.

The actual site for the grounding electrode is still under study. The Cree Regional Authority shall be notified in writing of the actual site of the grounding electrode and the alignment of the transmission line described in 1.4.4 when these are determined.

#### 1.4.4 Transmission line from Radisson Substation to the grounding electrode

The grounding electrode and the Radisson Substation will be linked by a 2-conductor transmission line on wood pole structures spaced an average of 100 meters occupying approximately 8 meters x 8 meters of land including guy wires.

*See plan no. 28 Plate 9 Agencement général - Poste de Radisson (Complementary Documents)*

### **AGENCEMENT GÉNÉRAL – POSTE RADISSON ET LIGNES – TERRITOIRE CBJNQ**

*[Amendment integrated]*

2

The inclusion of the LG 1 (1986), LG 2A, Brisay and RND Projects in the description of Le Complexe La Grande (1975) shall not apply to paragraphs 8.9.1 to 8.9.4 and to subsections 8.10 and 8.17 of the James Bay and Northern Québec Agreement.

*[Amendment integrated]*

3 The present amendment is without prejudice to, nor a renunciation of, the rights or obligations which any of the parties hereto had, or may have had, under the James Bay and Northern Québec Agreement prior to this amendment. Furthermore, the present amendment shall not constitute nor be deemed to constitute an admission by any of the parties hereto that any consent to undertake the Projects described herein was required or was not required under the James Bay and Northern Québec Agreement, except for the LG 1 (1986) Project in respect to which the consent of the James Bay Crees acting through the Cree Regional Authority has been given to and accepted by Hydro-Québec.

4 Subsection 8.9 of the James Bay and Northern Québec Agreement is amended by adding thereto the following paragraph as paragraph 8.9.5:

8.9.5 Upon the incorporation of James Bay Eeyou Corporation by legislation of l'Assemblée nationale du Québec or within one year of the execution of Complementary Agreement No 7, whichever is the earlier, all the rights, assets, powers, obligations and liabilities of SOTRAC shall vest in the James Bay Eeyou Corporation.

*[Amendment integrated]*

5

The James Bay Eeyou Corporation shall be incorporated in order to become the successor to SOTRAC as of the date mentioned in said paragraph 8.9.5, in order to study, plan, design and carry out mitigating measures and control and administer the Mitigating Works (SOTRAC 1986) Fund, consisting of the balance of funds remaining to the credit of SOTRAC at the time mentioned in said paragraph 8.9.5 as well as an additional amount of FIFTEEN MILLION DOLLARS (\$15,000,000) payable over a period of twenty (20) years, the Cree Community Fund in the amount of FIFTY MILLION DOLLARS (\$50,000,000), payable through FIFTEEN MILLION DOLLARS (\$15,000,000) in cash and THIRTY-FIVE MILLION DOLLARS (\$35,000,000) payable over a period of ten (10) years and the Cree Economic Assistance Fund in the amount of FORTY-FIVE MILLION DOLLARS (\$45,000,000) payable over a period of twenty (20) years.

*[Amendment integrated]*

6

The James Bay Eeyou Corporation shall also assume the functions of SOTRAC under the James Bay and Northern Québec Agreement and provide for a continuing forum to deal more efficiently with issues involving the James Bay Crees and Hydro-Québec and perform other functions which may be conferred upon it by the parties hereto.

*[Amendment integrated]*

7

James Bay Eeyou Corporation shall be established as a non-profit corporation without share capital and without pecuniary gain to its members under the name, in English, James Bay Eeyou Corporation, in French, la Société Eeyou de la Baie James, and in Cree, Eeyou Companeé.

*[Amendment integrated]*

8

Upon the execution of this Agreement, the Cree Regional Authority may, at its option, cause to be incorporated the James Bay Eeyou Corporation under the Québec Companies Act prior to its statutory incorporation by l'Assemblée nationale du Québec, if l'Assemblée nationale du Québec deems such statutory incorporation appropriate.

*[Amendment integrated]*

9

Until such statutory incorporation, the James Bay Eeyou Corporation, as incorporated under the Québec Companies Act, shall be and continue to be the James Bay Eeyou Corporation contemplated by this Agreement.

*[Amendment integrated]*

10

Moreover, as a provisional measure, until the incorporation of the James Eeyou Corporation under the Québec Companies Act, the Grand Council of the Crees (of Québec) shall act in the place and stead of the James Bay Eeyou Corporation.

*[Amendment integrated]*

**11**

The members of the James Bay Eeyou Corporation shall be the Cree Regional Authority and Hydro-Québec.

*[Amendment integrated]*

**12**

The affairs of the James Bay Eeyou Corporation shall be managed by a Board of Directors constituted as follows:

12.1 The members of the Council of the Cree Regional Authority shall, by virtue of their office, be members on the Board of Directors of the James Bay Eeyou Corporation and until representatives of the Oujé-Bougoumou Crees are members of the Council of the Cree Regional Authority, the Oujé-Bougoumou Crees shall appoint two (2) members of the Board of Directors.

12.2 Hydro-Québec shall appoint four (4) members of the Board of Directors, who shall hold office for such terms as Hydro-Québec may designate, and shall pay for their expenses.

12.3 With the consent of the Cree Regional Authority, le Gouvernement du Québec may appoint a maximum of three (3) additional members and the Government of Canada one (1) additional member to the Board of Directors.

*[Amendment integrated]*

**13**

The James Bay Eeyou Corporation shall have the following objects:

13.1 To carry out the functions vested in it by this Agreement for the social and civic improvement of the Cree communities.

13.2 To promote the general welfare of the James Bay Crees, to improve the conditions in the Cree communities and to provide training, employment and economic opportunities for the James Bay Crees.

13.3 To carry out mitigating measures respecting the “Le Complexe La Grande (1975)”.

13.4 To assume all of the rights, assets, interests, obligations and liabilities of SOTRAC in accordance with said paragraph 8.9.5.

13.5 To assist the Cree Bands in preserving the traditional way of life of the James Bay Crees based on hunting, fishing and trapping and to assist in promoting the culture, values and traditions of the James Bay Crees.

13.6 To provide for the framework for an improved relationship between the Crees and Hydro-Québec.

13.7 Subject to amendments to the James Bay and Northern Québec Agreement and the legislation pertaining to SODAB, to own the majority of shares in the James Bay Native Development Corporation and to own the latter as a subsidiary of James Bay Eeyou Corporation.

*[Amendment integrated]*

**14**

The powers and duties of the James Bay Eeyou Corporation shall include:

14.1 The control, administration, management and disposition of the Mitigating Works (SOTRAC 1986) Fund, the Cree Community Fund and the Cree Economic Assistance Fund mentioned above.

14.2 To study, plan, design, carry out and administer mitigating measures and to cooperate with Hydro-Québec in respect to the carrying out of mitigating undertakings of Hydro-Québec in respect to Le Complexe La Grande (1975).

14.3 To cooperate with Hydro-Québec in respect to employment, training and contract undertakings of Hydro-Québec.

14.4 To carry out such other functions, powers and duties as may be conferred upon it by the parties to Complementary Agreement No 7.

*[Amendment integrated]*

**15**

The head office of the James Bay Eeyou Corporation shall be situated on Cree Category IA lands in the Cree Community of Chisasibi.

*[Amendment integrated]*

**16** In this Agreement, the expression “James Bay and Northern Québec Agreement” means the agreement approved, given effect to and declared valid by Chapter 32 of the Statutes of Canada, 1976-77 and Lois du Québec 1976, Chapter 46, as amended by complementary agreements No 1 to 6.

**17** As a consequence of the foregoing, Section 8 of the James Bay and Northern Québec Agreement is amended by adding as subparagraphs 8.1.4.1 and 8.1.4.2 thereof sections 1 and 2 hereof respectively and by adding respectively as paragraphs 8.9.6 to 8.9.16 thereof sections 5 to 15 hereof.

For the purpose of said amendments, a reference to this Agreement in sections 5 to 15 hereof shall be a reference to Complementary Agreement No 7.

*[Amendment integrated]*

**18** Complementary Agreement No 7 shall come into force on the date of execution hereof.

AND TO THESE PRESENTS INTERVENED

The Chisasibi Band and Band Council, herein acting and represented by their duly authorized representative, which declare that they have taken cognizance of the foregoing and expressly consent to the provisions hereof to the extent of their interests.

**SIGNATORIES (CBJNQ 7)**

Signée à Chisasibi (Québec), le 6 novembre 1986

Signed at Chisasibi (Québec), November 6, 1986

L'Administration régionale crie –

The Cree Regional Authority

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Ted Moses, Chairman



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Pour la Société d'énergie de la Baie James

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Louis-Georges Boivin, président

Pour Hydro-Québec

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Jean Bernier, secrétaire général

INTERVENANTS

La Bande et le conseil de la Bande de Chisasibi –  
The Chisasibi Band and the Chisasibi Band Council

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Chief Robbie Matthew Sr.