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## Hydro-Québec and the Crees: the challenges of being accountable to First Nations

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**Abstract:** This case highlights various phases in four decades of relations between Hydro-Québec, a provincial utility, and the Crees, a First Nation living mainly in northern Quebec, progressing from conflicts and impasse to accountability. It highlights two processes: 1) the stages in the relational process between a company and a community from the perspective of a social license to operate at the interorganisational level; 2) management accounting processes, which translate into corporate commitments and agreements concerning accountability and transparency. The major purpose of this case is to provide material (background) for discussion on how a company can improve its corporate social responsibility by enhancing transparency and accountability towards its stakeholders. This case illustrates how Hydro-Québec has used accountability mechanisms such as voluntary and mandatory disclosure, environmental impact measurement and assessment, and compensation to engage with the First Nations and to build a long-term reciprocity-based relationship with them.

**Keywords:** social license to operate; state utility; hydropower; accountability; management accounting; First Nations.

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## 1 Case

### 1.1 Cree land, Northern Quebec, Canada, 2004

Tallyman Gordon Wapachee and his wife Minnie expressed their concerns to the review panel about the construction of the Eastmain-1-A and Sarcelle Powerhouses and Rupert Diversion (EPRD), a \$5 billion hydropower project on Cree lands:

“Hydro-Québec has proposed mitigation measures for our trapline. Our family is satisfied with the proposed measures. However, there is a part of us that distrusts Hydro-Québec and those assigned to implement these mitigation measures, as we are rarely listened to but given lip service. We want to be involved to the fullest extent in all decision-making and implementation of these measures. We also feel that a written agreement should be provided to the tallymen so that Hydro-Québec will not negate on its promises.” (COMEX, 2006)<sup>1</sup>

### 1.2 Hydro-Québec sustainability report

“Six Cree communities were visited for meetings with the tallymen and land users directly affected by the project to inform them about the follow-up on commitments and the work carried out in their area. The Crees are consulted at every stage of development of the follow-up measures and participate in implementing many of them.” [Hydro-Québec, (2011), p.30]

### 1.3 Hydro-Québec

Hydro-Québec is a state utility which, as of 2012, defined itself as follows:

“Hydro-Québec generates, transmits and distributes electricity, mainly using renewable energy sources, in particular hydroelectricity. It is one of the biggest electric utilities in North America.” (Hydro-Québec, 2012b)<sup>2</sup>

As of December 2011, Hydro-Québec had 22,500 employees and generated an operating income of CA\$5.1 billion, CA\$2.6 billion in profit, and CA\$1.9 billion in dividends to the Government of Quebec, its sole shareholder [Hydro-Québec, (2012a), p.50].

The creation and growth of Hydro-Québec was closely associated with the post-WWII history of the province of Quebec. Established in 1944, it grew quickly after 1963, when private electricity producers and distributors were nationalised by the Quebec Government. This move by the province was prompted by industrial necessity, nationalist affirmation, and a desire to master the vast territory of northern Quebec. In the 1960s and 1970s, Hydro-Québec built several hydropower plants in northern Quebec, including the Manic Complex, La Grande, and Great Whale:

“With over 30 years’ experience in large-scale projects, SEBJ [*Société d’énergie de la Baie James*] offers a complete range of services in generation and transmission plant engineering, project management and construction.”

“Over the years, SEBJ has also developed particular expertise in remote areas and multicultural environments, as evidenced by its role as prime contractor for one of the largest hydroelectric developments in the world—the La Grande complex in the heart of northern Québec—which supplies over 50% of the electricity generated by Hydro-Québec. This was further demonstrated in the Peruvian Andes, where SEBJ personnel constructed a 220-kV transmission line

at altitudes of 4,000 metres or more. Every project presents major challenges, and SEBJ has the qualified people to meet them.”

“Part of the considerable know-how SEBJ has accumulated over the years rests on the solid relationships it has forged with the people affected by its projects. Developing business partnerships and working in close cooperation with the Cree, Inuit and Peruvian communities, for example, as well as working to maximize regional economic spinoffs all attest to SEBJ expertise in this area.” (SEBJ, n.d.)<sup>3</sup>

#### *1.4 Hydro-Québec and the Cree nation*

The development of hydropower generation in northeastern Quebec took place on Native lands, and therefore strongly affected the Cree and Inuit nations. The Cree First Nation has been living in northern parts of Quebec and Ontario for at least three or four thousand years. The Cree traditionally lived by hunting, fishing, and trapping, with small groups pursuing a semi-nomadic lifestyle. In the early 1970s, their land covered approximately 250,000 sq. km of Quebec territory, an area the size of the UK, for a population of less than 10,000.

#### *1.5 The James Bay agreement*

In the 1960s, Quebec began developing potential hydroelectric resources in the North, and in 1971 the James Bay Development Corporation was created to develop mining, forestry, and other potential resources. The James Bay Hydroelectric Project was a massive undertaking that was directed by the Government of Quebec without consulting Aboriginal peoples, including the Crees and Inuits. The Quebec Association of Indians, an ad hoc group representing northern Aboriginal Quebecers, sued the government, and on November 15, 1973, they won an injunction in the Quebec Superior Court, blocking hydroelectric development until the province could negotiate an agreement with the First Nations (*Arrêt Malouf*). This judgement was overruled seven days later by the Quebec Court of Appeal. However, the legal requirement that Quebec negotiate a treaty covering the territory was not overturned, and over the next year, the Government of Quebec negotiated the required accord. On November 15, 1974, the Governments of Canada and Quebec, Hydro-Québec, the Grand Council of the Crees (headed by Billy Diamond), and the Northern Quebec Inuit Association signed an agreement-in-principle. The final accord, the James Bay And Northern Quebec Agreement (*La Convention de la Baie James et du Nord québécois*), was signed on November 11, 1975.<sup>4</sup>

The James Bay Agreement (1975) was innovative at the time, being one of the first formal agreements between an aboriginal population and a North American Government. However, the Crees generally felt that Hydro-Québec and the Government of Quebec were reluctant to actually implement all the clauses and commitments of the agreement. Furthermore, the Crees felt that they had authorised projects en bloc, but had not been consulted for the details of the hydro projects. Despite these concerns, the La Grande Complex was built on Cree lands from 1975 to 1988.

### 1.6 *The Great Whale 2 controversy*

In 1988, Quebec Premier Robert Bourassa announced the Great Whale 2 Project, involving a \$15 billion long-term power supply contract with New York State. The Crees protested against the project, arguing that they had not been consulted and that no independent environmental assessment had been conducted. They claimed that this was a re-enactment of previous projects, which had resulted in significant losses for them. The Crees mounted a public relations and lobbying campaign, mainly in the USA, which underscored the lack of consultation and environmental assessments surrounding the proposed project. They mobilised several key figures, including Robert Kennedy, Jr., to lobby US state legislatures. These efforts discredited Quebec and the Hydro-Québec Great Whale 2 Project in the USA,<sup>5</sup> and in 1992, New York State cancelled the hydro contract.

In 1994, Quebec Premier Jacques Parizeau announced that the project was indefinitely on hold. From 1994 to 2002, official relations between Hydro-Québec and the Crees were suspended. Meanwhile, work was underway on the ground to conduct preparatory studies for potential hydro projects.

### 1.7 *La Paix des Braves: a new generation of relations, a new generation of projects*

As relations between Quebec and the Cree Nation warmed, negotiations began on a new footing in 2002, when La Paix des Braves, a nation-to-nation agreement (the Cree Nation and Quebec) was signed by Quebec Premier Bernard Landry and Cree Chief Ted Moses. Romeo Saganash, a Cree activist and politician, declared:

“We reached an understanding and a level of mutual respect and recognition that I believe could well be the very beginning of a rights-based approach for indigenous peoples throughout the world. We have fought long and hard for this, and I feel that the Cree Nation has finally been heard and understood, at least by the Government of Québec.” [Martin and Hoffmann, (2008), p.31]

In the words of Premier Landry (Interview, July 5, 2012, by the authors):

“The people who live in the North, they are neighbours, they are nations that we know, who are experiencing material difficulties as well as health, education, family, alcohol, and drug issues. So, just like someone who goes to work in a very under-developed country, they do it not for material reasons, but for humanitarian reasons. That said, I’ve always believed that there were thousands of megawatts out there, and mines and forests. That was not the primary motivation.”<sup>6</sup>

Beyond these noble motives, the Paix des Braves opened the way to a number of projects for Hydro-Québec. At the same time, Hydro-Québec and the Government of Quebec were well aware that they had to ‘do the right thing’ with respect to the Cree population. The renewed relationship made it possible to initiate a *project de nouvelle generation* (next-generation project): the Eastmain-1-A Powerhouse and Rupert Diversion (EPRD) project.

## 2 The EPRD project

This project was massive in scope, both financially and technically, and in terms of the size of the territory involved. Hydro-Québec's \$5 billion hydroelectric project consisted of building a 768-MW powerhouse (Eastmain-1-A) near the Eastmain-1 powerhouse and diverting part of the Rupert River's flow through these facilities and subsequently through the Sarcelle powerhouse and three other existing generating stations in the La Grande Complex: Robert-Bourassa, La Grande-2-A, and La Grande-1. The total land surface covered by the Eastmain project was about 450 sq. km (174 sq. miles).

(Appendix 1 presents a map of the area impacted by the project.)

The EPRD project represented a production increase of approximately 8.5 TWh in average annual output for Hydro-Québec Production:<sup>7</sup> 2.3 TWh from Eastmain-1-A, 0.9 TWh from Sarcelle, and 5.3 TWh in overall output increase from the three generating stations (La Grande-1, Robert-Bourassa, and La Grande-2-A) located along the lower Grande Rivière. This increased production capacity allowed Hydro-Québec Distribution to meet the growing demand for electricity in Quebec and to increase its sales by expanding its markets outside Quebec, which accounted for a substantial portion of Hydro-Québec's profitability.<sup>8</sup> Altogether, the project was expected to generate enough electricity to serve the population of an area the size of Québec City (640,000 people in 2001) (Gouvernement du Québec, 2005).

(Appendix 2 presents an overview of the main permanent structures built in the area impacted by the EPRD project).

### 2.1 Engaging upstream, changing design, and innovating

Hydro-Québec and the Crees began working on the project in the early 2000s. The previous tense and conflictual relations between Hydro-Québec and the Crees, followed by the new climate established by the 2002 Paix des Braves, gave way to an unprecedented consultation process for all stages of the project, from the design to the definition of the mitigation measures.

“Moreover—through the negotiation of the Nadoshtin and Boumhounan Agreements, later to be amalgamated into the Niskamowin Agreement—the Crees and Hydro-Québec developed a much more collaborative approach to the construction of the Eastmain-1 and Eastmain-1-A projects than had ever been tried before. The trappers were consulted in detail, and Cree companies and workers were able to benefit from the construction of the projects.” [Namagoose, (2012), pp.5–6]

The agreements between Hydro-Québec, the *Société d'énergie de la Baie James*, and the Crees of Quebec highlight the Crees' engagement in all stages of the process:

“The Crees will participate directly, with Hydro-Québec, in studies and work related to the project and will be involved throughout the feasibility phase, during which the necessary permits must be obtained.” [Hydro-Québec, (2002), p.3]

This engagement of the Crees at the very early stage led to significant design changes in order to address the concerns they expressed:

“The agreement provides for the implementation of various environmental, mitigating and remedial works, measures and programs aimed at reducing the impacts of the project on concerned Crees.” (i.b.)

The partial diversion of the Rupert River is one example of the changes made to the project design and implementation. Among Hydro-Québec’s commitments and mitigation measures (see Appendix 3), the most important was to maintain an ecological upstream flow regime to preserve the fish stocks and river habitats located downstream of the Rupert dam, along the Rupert River. In order to do so, Hydro-Québec designed and built pioneering hydroelectric infrastructures, including a 3-km-long tunnel between the Lemare and Nemiscau watersheds, as well as eight canals and 75 dikes, including one on Arques Creek, a tributary of the Nemiscau River.

These hydroelectric structures created two diversion bays, connected by the tunnel, to release the equivalent of the original flow, and through which water is channelled into the Eastmain-1 reservoir. Other mitigation measures include the construction of a new drinking water treatment plant to ensure a long-term supply for the community of Waskaganish and a 40-km permanent road between the Eastmain-1 powerhouse and the Muskeg substation (Hydro-Québec Production, 2004).<sup>9</sup>

This engagement process unfolded over a ten-year period. Hydro-Québec presented the project options to each of the five potentially impacted communities in 1997, which led to joint environmental assessments and the signing of agreements. Cree trappers were met with in 2001 and presented with the project and its impacts on lakes, river flows, flooded land areas, and so forth.

For example, the consultation process that the Environmental and Social Impact Review Committee (COMEX) for the EPRD Project undertook together with the community of Waskaganish lasted from 1997 to 2012 and involved more than 66 formal meetings with the community (Hydro-Québec, 2012c).

The consultation process with the Waskaganish community may be summarised as follows:

**Table 1** Stages of the consultation process for the EPRD project

1997–2001	Preliminary studies	Resulted in authorisation for Hydro-Québec to proceed with the necessary technical studies to identify alternatives for partial diversion of the Rupert River.
2002–2006	Draft phase	Mainly discussions and dissemination of information to the Crees about the project design, impacts, and proposed mitigation measures.
2007–2012	Construction	Several meetings with tallymen to discuss, engage, and plan logistics for field studies, as well as training and orientation of Cree personnel by consulting firms.

*Source:* Hydro-Québec (2012c)

## 2.2 *Building the project*

The project also intentionally created substantial socioeconomic spinoffs for the Cree and Jamesian communities and benefited recreational tourism and infrastructure development in their territories. Construction contracts and associated purchases of goods and services generated more than \$210 million in economic spinoffs: \$105 million was injected into the Cree economy and \$107 million into the Jamesian economy. The project created over

27,000 person-years of employment in Quebec, including 1,052 in Cree communities and 1,189 in the Jamesian community (Hydro-Québec, 2011, 2012d). Of the \$5 billion project, Hydro-Québec agreed in the Boumhounan Agreement to “offer to and negotiate with the Cree and Cree Enterprises a minimum of two hundred forty million dollars (\$240,000,000) in contracts in relation to the construction phase of the Project” (Grand Council of the Crees, n.d.).<sup>10</sup> More importantly, Hydro-Québec committed to offer \$45,000,000 in contracts during the operating phase (Hydro-Québec, 2002). Several of these contracts concerned projects such as wildlife management (trapping beavers, building spawning ponds), landscape management (tree clearing and planting), road and project construction, and the service sector (for construction sites). Hydro-Québec kept the local communities regularly informed on offers and developments through brochures describing what had been accomplished and what remained to be done in Wemindji, Nemaska, and other communities.<sup>11</sup>

### 2.3 *Agreements between Hydro-Québec and groups concerning the EPRD Project*

During project construction, Hydro-Québec was bound to several groups by the following general and specific conventions and agreements:

- La Paix des Braves: The Crees gave their overall consent to the project under the February 7, 2002 Agreement Concerning a New Relationship between the Gouvernement du Québec and the Crees of Québec, also known as the Paix des Braves.
- The Boumhounan Agreement, a special agreement subsequently concluded in 2002 between the Quebec Crees, Hydro-Québec, and the *Société d'énergie de la Baie James* (SEBJ), provided the background for the forums where the Crees and Hydro-Québec could discuss any issue that the parties considered important concerning the conduct and results of field studies, project design, and the mitigation measures applied to the areas affected by the EPRD project. This agreement and the partnerships provided the framework for the public consultation process with the six Cree communities as well as Hydro-Québec's public disclosure and information dissemination process concerning the environmental impacts of the EPRD project.
- Hydro-Québec signed agreements with the six First Nations authorities of the communities affected (Mistissini, Nemaska, Waskaganish, Eastmain, Wemindji, and Chisasibi) and with the Jamesians, or the non-indigenous population who lived in this region. These specific one-on-one (Hydro-Québec and each community) agreements concerned mitigation measures for issues such as preservation of the fish population and fish habitats in the Rupert River, continued pursuit of hunting, fishing, and trapping by the Crees, the recreational and scenic value of the Rupert River, and economic spinoffs. The signing of these agreements on compensation and mitigation measures for the Cree and Jamesian communities was one of the Crees' main conditions for the project to go ahead.<sup>12</sup>
- Last but not least, Hydro-Québec signed agreements with the Cree tallymen who would be affected by the construction of the EPRD hydropower project. The James Bay territory is divided up into traplines, with each trapline supervised by a head trapper in charge of the wildlife resources for that area.



In general, the EPRD Project was portrayed by both Hydro-Québec and the Cree Nation as a model of sustainable development (see Appendix 4) and a model of new relations.

“The experience of Eastmain-1-A has changed the way Hydro-Québec relates with Aboriginal communities,” says Craik [Brian Craik, Director of Federal Relations for the Grand Council of the Crees]. “At least, I hope it has. First of all, Hydro-Québec’s policy on hydro projects is now: a project can go ahead if it will be profitable, if local communities accept it, and if it makes sense ecologically. All of these projects change the environment, and they all change Cree land use, but for the first time people from Hydro-Québec were continually asking tallymen their views on everything, continually asking workers for their input, and doing all kinds of surveys of workers’ opinions. All of this has been ongoing through the whole project, and it’s had a very positive effect.” [Staniforth, (2012), p.27]

#### 2.4 *Operationalising accountability*

Compliance to and follow-up on these agreements was ensured by the SEBJ Environmental Compliance and Follow-up Programs (Hydro-Québec Production, 2004). The stakeholders in this project, to whom the SEBJ was accountable, were Hydro-Québec Production, the Crees, the communities, the head trappers, and the Government of Quebec. Accordingly, the SEBJ ensured that the environmental mitigation measures were applied appropriately, and that all the required permits were obtained. The programmes were bound by several agreements, including the Boumhounan Agreement.

The SEBJ achieved environmental compliance throughout the construction of Eastmain 1-A by ensuring that all planned mitigation measures were applied. A follow-up program implemented in 2004 by the Environmental Compliance and Follow-up Programs committees, made up of representatives of SEBJ, Hydro-Québec, and the Cree community, allowed systematic and timely assessments of the environmental impacts and the efficacy of the mitigation measures in place (Hydro-Québec Production, 2004, 2012). For instance, the project included various measures designed to mitigate impacts on the biophysical and human environment, enhance certain resources, or compensate the Cree and Jamesian communities for the loss or permanent disruption of certain environmental components.

These measures fell into four categories:

- 1 measures incorporated into the project design
- 2 general mitigation measures
- 3 specific mitigation measures
- 4 compensation and enhancement measures (Hydro-Québec Production, 2004).

(Appendix 3 presents examples of specific mitigation measures under the Eastmain-1-A/Rupert project).

- From the planning and design stage, the EPRD project incorporated major considerations to ensure a harmonious fit between the project and the environment. This approach led Hydro-Québec to select from the three project variants studied the one that flooded the least land.

- The general mitigation measures were taken from a list of standard environmental clauses that the SEBJ developed in 2004, a series of practices and procedures covering issues such as noise, land clearing and drainage, construction machinery, traffic, and blasting.
- Specific mitigation measures were developed for particular projects to mitigate specific or very localised impacts, and most of the time they addressed local stakeholders' concerns and requests.<sup>13</sup>
- Compensation and enhancement measures were implemented as well. Examples included the development of multispecies spawning grounds downstream of certain structures to improve the potential of certain Rupert River tributaries to sustain brook trout, and seeding lake sturgeon fry in the Rupert River. Other enhancement measures covered aspects such as public tours of Hydro-Québec structures and the use of the Municipality of Baie-James recreation and tourism facilities.<sup>14</sup>

### **3 Case requirements**

- 1 Based on the case data provided, apply the four-stage model of the social license to operate to the relationship-building process between Hydro-Québec and the Crees from 1971 to 2013.
- 2 We are now in the early 2010s. Relations have improved, and Hydro-Québec has integrated several accountability mechanisms into its operations. Identify the accountability mechanisms in the Eastmain project.
- 3 Based on the drivers of corporate sustainability performance, analyse Hydro-Québec's approach to measuring the social, environmental, and economic impacts of the Eastmain project.
- 4 Discuss the sustainability drivers and causalities, and draw a causal map identifying the inputs/processes/outputs/outcomes documented in the Eastmain project.

### **Acknowledgements**

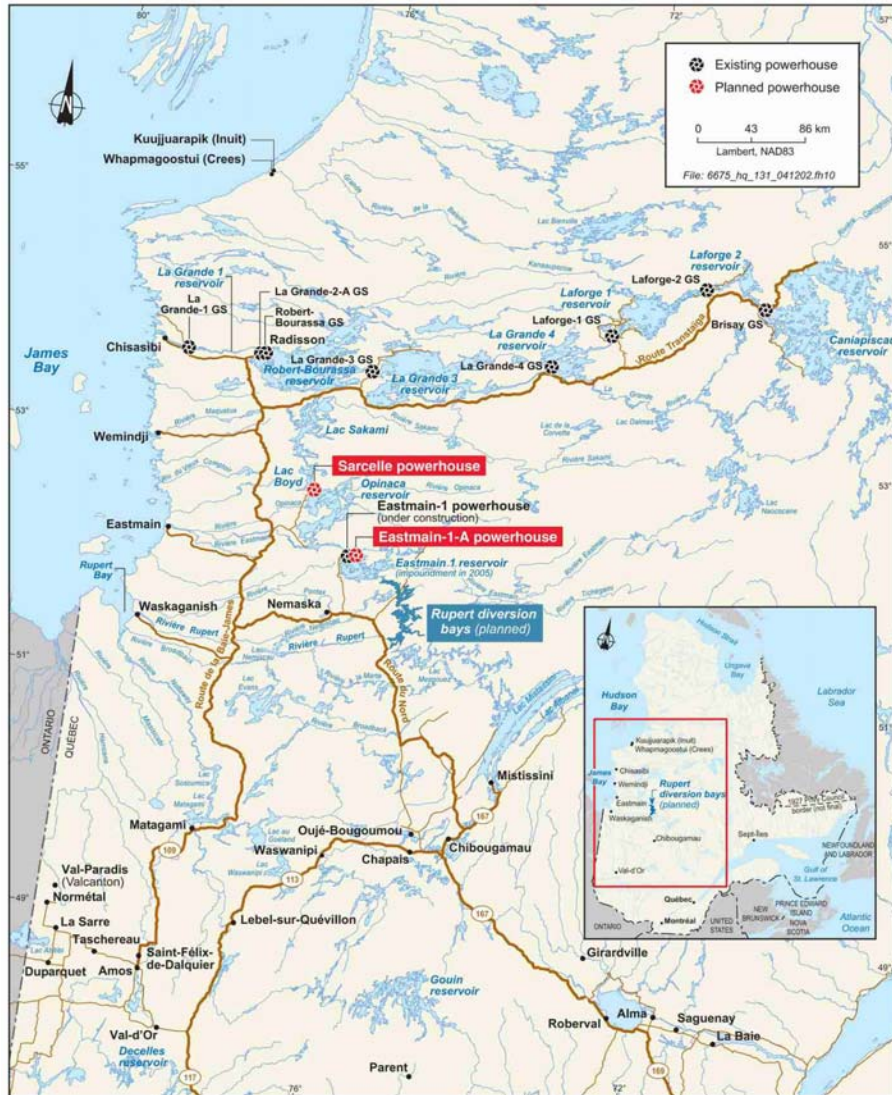
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## References

- Atkinson, M. (2008) *Caring for the Land: Nemaska Cree Strategies of Resistance to the EM-1-A and Rupert Diversion Project in Eastern James Bay*, 147p, Montréal, Concordia University, northern Quebec, MA.
- Gouvernement du Québec (2005) *Population and Land Occupation, Québec Administrative Regions*, 2001 [online]  
[http://www.stat.gouv.qc.ca/regions/lequebec/population\\_que/occupter20.htm](http://www.stat.gouv.qc.ca/regions/lequebec/population_que/occupter20.htm) (accessed 24 November 2012).
- Grand Council of the Crees (n.d.) *Boumhounan Agreement* [online]  
<http://www.gcc.ca/archive/article.php?id=163> (accessed 16 September 2012).
- Hydro-Québec (2002) *Agreements between Hydro-Québec, the Société d'énergie de la Baie James and the Crees of Québec – Summaries*, p.17.
- Hydro-Québec (2011) *Sustainability Report 2010*, 50pp [online]  
[http://www.hydroquebec.com/publications/en/enviro\\_performance/pdf/rdd\\_2010\\_en.pdf](http://www.hydroquebec.com/publications/en/enviro_performance/pdf/rdd_2010_en.pdf)  
 (accessed 20 June 2013).
- Hydro-Québec (2012a) *Annual Report 2011*, Hydro-Québec, 9 September, 120pp [online]  
[http://www.hydroquebec.com/publications/en/annual\\_report/pdf/annual-report-2011.pdf](http://www.hydroquebec.com/publications/en/annual_report/pdf/annual-report-2011.pdf)  
 (accessed 20 June 2013).
- Hydro-Québec (2012b) *Hydro-Québec – Profile* [online]  
<http://www.hydroquebec.com/profile/index.html> (accessed 24 November 2012).
- Hydro-Québec (2012c) *Summary of Mitigation and Enhancement Measures: Part 3 – Waskaganish*, 40pp [online]  
<http://www.hydroquebec.com/rupert/en/pdf/bilans/2012/waskaganish-en.pdf>  
 (accessed 20 June 2013).
- Hydro-Québec (2012d) *Sustainability Report 2011*, 44pp [online]  
[http://www.hydroquebec.com/publications/en/enviro\\_performance/pdf/rdd\\_2011\\_en.pdf](http://www.hydroquebec.com/publications/en/enviro_performance/pdf/rdd_2011_en.pdf)  
 (accessed 20 June 2013).
- Hydro-Québec Production (2004) *Eastmain-1-A Powerhouse and Rupert Diversion: Environmental Impact Statement – Summary Report*, 161pp [online]  
[http://www.hydroquebec.com/rupert/en/pdf/eastmain1a\\_rupert\\_en\\_synthese.pdf](http://www.hydroquebec.com/rupert/en/pdf/eastmain1a_rupert_en_synthese.pdf)  
 (accessed 20 June 2013).
- Hydro-Québec Production (2012) *Eastmain-1-A and Sarcelle Powerhouses and Rupert Diversion: Translated Excerpts from the Bilan des activités environnementales 2011 (Report on Environmental Follow-Up Activities)*, 28pp [online]  
[http://hydroforthefuture.com/docs/sizes/50f6dab80b1f3/source/EM1-A\\_Report-2011.pdf](http://hydroforthefuture.com/docs/sizes/50f6dab80b1f3/source/EM1-A_Report-2011.pdf)  
 (accessed 20 June 2013).
- Martin, T. and Hoffmann, S.M. (Eds.) (2008) *Power Struggles: Hydro Development and First Nations in Manitoba and Quebec*, 334pp, University of Manitoba Press.
- Namagoose, B. (2012) *Editorial, EeyouEenou Nation – The Voice of the People*, Summer [online]  
<http://www.gcc.ca/pdf/Eeyou-Eenou-Summer-2012-E.pdf> (accessed 20 June 2013).
- SEBJ (n.d.) *Société d'énergie de la Baie James – Profile* [online]  
<http://www.hydroquebec.com/sebj/en/profil.html> (Retrieved March 10, 2013 from)
- Staniforth, J. (2012) 'Going with the flow, EeyouEenou Nation – the voice of the people', Summer [online]  
<http://www.gcc.ca/pdf/Eeyou-Eenou-Summer-2012-E.pdf> (accessed 20 June 2013).
- Telbec, C.N.W. (2012) *Hydro-Québec Presents the Tenth Edition of Its Sustainability Report* [online]  
<http://www.newswire.ca/fr/story/969221/hydro-quebec-presents-the-tenth-edition-of-its-sustainability-report> (accessed 20 June 2013).

Appendix 1

Figure A1 Map of the area impacted by the Eastmain-1-A/Rupert project (see online version for colours)



Source: Hydro-Québec

## Appendix 2

### The project

More details on the project can be found at:

- [http://www.hydroQuebec.com/ruPERT/en/projet\\_en\\_bref.html](http://www.hydroQuebec.com/ruPERT/en/projet_en_bref.html)
- [http://www.hydroquebec.com/ruPERT/en/pop\\_animation.html](http://www.hydroquebec.com/ruPERT/en/pop_animation.html).

**Table A1** Eastmain-1A/Rupert project components – permanent structures

<i>Rupert diversion bays:</i>	
• Dams	4 (total fill: 1,100,000 m <sup>3</sup> )
• Dikes	75 (total fill: 4,200,000 m <sup>3</sup> )
• Spillway	1 (on the Rupert) also acting as an instream flow release structure
• Instream flow release structures	4 (1 on the Lemare, 3 on the Nemiscau)
• Transfer tunnel	2.9 km, with a concrete weir above the entrance (maximum flow: 800 m <sup>3</sup> )
• Canals	8 (total material to excavate: 3,900,000 m <sup>3</sup> )
• Relocation of transmission lines	8.3 km of line in all and 19 towers
• Diversion bay access roads	132 km (with 3 bridges and 1 prefabricated culvert)
• Circuits 7,069 and 7,070 road	5 km (with 1 bridge)
• 25-kV lines	60 km (to supply the Rupert and Lemare dam sites)
<i>Increased-flow section:</i>	
• Eastmain-1-A powerhouse	768 MW
• Sarcelle powerhouse	120 MW
• 315-kV Eastmain-1-A-Eastmain-1 line	1 km
• 315-kV Sarcelle-Eastmain-1 line	101 km
• Sakami Lake outlet	Canal and weir
• Muskeg-Eastmain-1 road	40 km
<i>Rupert reduced-flow section:</i>	
• Rock blanket	KP 20, 4
• Weirs	KP 33, 49, 85, 110, 3, 170 and 223
• Rock fill spur dike	KP 290
• Waskaganish drinking water supply	New plant with increased intake pump capacity
• Bank stabilisation	Banks near the Waskaganish water intake

### Appendix 3

#### *Examples of specific mitigation, compensation, and enhancement measures<sup>15</sup>*

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##### *Specific mitigation measures*

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###### *Bank stability*

- Seed grasses on nearly 1,500 ha of exposed banks on the Rupert River in order to prevent erosion.
- Install 9.2 km of granular blankets between KP 9.7 and KP22.5 on the left bank of the Grande Rivière and near KP34 on the right bank.

###### *Cree society, economy, and culture*

- Apply the terms and conditions of the Training Fund for Crees and the provisions of the Boumhounan Agreement regarding employment of Cree workers.
- Award contracts for remedial works to the families of tallymen.
- Encourage Cree entrepreneurs to remind employees to take their medication to the workcamps in order to reduce pressure on healthcare services in nearby Cree communities.
- Record and preserve traditional knowledge about flooded areas pursuant to the provisions of the Boumhounan Agreement.
- Promote involvement by the Crees, especially tallymen, in mitigation measures, remedial works, and follow-up studies.
- Encourage sports and leisure activities that bring together Cree and non-Native workers as well as workers and Cree communities.

###### *Cree hunting, fishing, and trapping*

- Implement the Boumhounan Remedial Works Fund for the pursuit of traditional activities and use of areas affected by the project.
  - Implement the EenouIndohoun Fund for promotion of traditional activities.
  - Implement the claims procedure for property damage suffered by Crees as a result of the project.
  - Implement the Eastmain-1-A/Mercury Fund.
  - Inform users of the construction schedule so that they can plan their activities accordingly.
  - Ensure the safety of users travelling in work areas (boat routes, portages, snowmobile trails).
  - In cooperation with users, install appropriate signs and manage traffic in such a way as to ensure users' safety and limit disruptions.
  - Monitor the stability of the ice cover at Rupert River crossing points, in cooperation with the tallymen.
  - Implement measures as necessary at Smokey Hill to support dip-net fishing for Lake Cisco and maintain access to the boat landing.
  - In affected areas (e.g., exposed to flooded areas), move permanent camps or temporary camp facilities as required.
  - Install signs on circuits 4,003 and 4,004 road to indicate the presence of the cultural camp.
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*Examples of specific mitigation, compensation, and enhancement measures<sup>15</sup>*  
(continued)

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*Specific mitigation measures*

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- Manage sport hunting and fishing activities in the Weh-Sees Indohoun Corporation territory, as well as the hunting and fishing activities of workcamp residents outside this territory.
- Inform users of the dates the spillway will operate.
- At the Crees' request, maintain the construction roads to the structures at KP 110.3 and 170, and extend the road from KP 290 to KP 281.
- Build a dike on the bay at KP311.
- Apply the measures provided for burial sites in the Boumhounan Agreement.
- Establish corridors for crossing the diversion bays on snowmobiles and monitor ice cover stability on the diversion bays and Opinaca reservoir, in cooperation with the tallymen.
- Develop 10 h of wetlands in the diversion bays for use by waterfowl.
- Build a boat ramp on Lake Boyd.

*Public services*

- SEBJ to maintain public roads and make necessary repairs in case of damage caused by jobsite traffic.

*Heritage, archaeology, and burial sites*

- Carry out an archaeological inventory and dig programme prior to construction.
- Create a fund for archaeological sites under the Boumhounan Agreement in order to carry out a programme that includes researching and marking burial sites.

*Cree economy*

- During construction, implement the \$1.5 million Training Fund for formal and on-the-job training.
- Lobby the Québec Construction Commission to facilitate the hiring of Crees.
- Hire a Cree employment counsellor.
- During construction, negotiate contracts worth \$240 million.
- In the operation phase, apply the provisions of the Cree Agreement regarding contract negotiations and the hiring of Crees by Hydro-Québec.

*Jamesian economy*

- During construction, give priority to regional businesses for purchases and contracts of less than \$1 million.
  - Apply the subcontracting clause during construction.
  - Hire a jobsite liaison officer.
  - In the operation phase, apply the provisions of the financial partnership entered into with the Municipality of Baie James.
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*Examples of specific mitigation, compensation, and enhancement measures<sup>15</sup>*  
*(continued)*

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*Specific mitigation measures*

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*Compensation measures*

*Fish*

- Develop multispecies spawning grounds at seven locations: below the Lemare, Nemiscau-1, and Nemiscau-2 instream flow release structures, at the exit of canal S73-3 in the forebay, immediately downstream of canal 15 in the tailbay, and downstream of weirs at KP 110.3 and KP223 of the Rupert River.
- Stock the stretch of the Rupert River between KP110 and KP170 with lake sturgeon fry.
- Enhance the brook trout potential of Rupert River tributaries at KP41, 191, and 311 (expand existing spawning grounds or develop new ones and enhance rearing-area quality).

*Enhancement measures*

*Recreation and tourism*

- Update interpretation panels at the rest stops built by MBJ at KM257 on the James Bay highway and KM238 of the Route du Nord.
- Install interpretation panels at the sites of future boat ramps in the diversion bays.

*Landscape*

- Add scenic lookouts and interpretation panels on structure sites (Rupert dam, instream flow release structures).
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## **Appendix 4**

### *The project as seen by Hydro-Québec and the Crees*

#### *Eastmain-1-A – Sarcelle – Rupert: a model of sustainability<sup>16</sup>*

The result of numerous consultations with stakeholders, the Eastmain-1-A – Sarcelle – Rupert project includes the construction of Eastmain-1-A powerhouse, which was commissioned in January 2012, and Sarcelle powerhouse. It also includes the diversion of part of the Rivière Rupert to these powerhouses, then north to the La Grande complex. In 2011, the project created 1,463 person-years of jobs, with Cree and Jamesian workers accounting for 10.6% of the workforce.

The project's distinguishing features are the scale of the measures undertaken to preserve the environment and take community concerns into account. Hydro-Québec rehabilitated sites, enhanced the area affected by the project, preserved the fishing activities and improved access to the area. The company also seeded 300 hectares to support goose hunting, as well as building two pools and boardwalks at Smokey Hill Rapids for traditional Cree Cisco fishing.

In its 12th global inventory of electricity production from renewable sources, the Observatoire des énergies renouvelables (Observ'ER) cited the Eastmain-1-A project as a 'prime example of how to incorporate environmental constraints'. Observ'ER is a world reference in renewable energy and sustainable development.

- <http://www.hydroQuébec.com/rupert/en/index.html>
- <http://www.hydroQuébec.com/rupert/en/batir/photos-centrale-sarcelle.html>



## Notes

- 1 Cited in Atkinson (2008, p.96).
- 2 Accessed November 24, 2012.
- 3 Accessed March 10, 2013.
- 4 Electronic version of agreement can be found at <http://www.gcc.ca/pdf/LEG000000006.pdf>.
- 5 For a detailed examination of the Great Whale 2 Controversy, see the documentary *Power* (Magnus Isacsson, 1997, National Film Board of Canada).
- 6 “Des gens vivent dans le Nord, ce sont des voisins, ce sont des nations que nous reconnaissons, qui connaissent des difficultés matérielles, de santé, d’éducation, de famille, d’alcool et de drogue. Alors comme quelqu’un qui va travailler dans une ONG dans un pays très sous-développé, qu’il ne le fait pas pour des raisons matérielles, mais des raisons humaines. Cela dit, j’ai toujours été sûr qu’il y avait des milliers de mégawatts derrière ça, il y avait des mines et des forêts. Ce n’était pas la première motivation”.
- 7 Hydro-Québec’s divisions include Equipment, Production, and Distribution.
- 8 In 2011, the Hydro-Québec Production division reported a net income of CA\$1,690 million, up from CA\$85 million over 2010, mainly due to electricity exports. This is a remarkable profitability growth, given the declining energy prices on markets in northeastern North America during the same period [Hydro-Québec, (2012a), pp.8–9].
- 9 Information on mitigation measures from pp.2–8 to pp.2–14.
- 10 The monetary commitments are quantified in the agreements.
- 11 See <http://www.hydroquebec.com/hydroandfriends/publications.html>.
- 12 For further details, see: <http://www.hydroquebec.com/rupert/en/bilan-mesures-attenuation.html>.
- 13 See, for example, the report on the Waskaganish community, pp.20–24, at <http://www.hydroquebec.com/rupert/fr/pdf/bilans/2012/waskaganish-fr.pdf>.
- 14 The use of the land for recreational activities and tourism is fairly recent, and only lately has organisations such as James Bay Tourism and the Cree Outfitting and Tourism Association (COTA) begun to coordinate regional development initiatives (Hydro-Québec Production, 2004, 2012).
- 15 Source: Hydro-Québec Production (2004): Table 9-1.
- 16 Source: Telbec (2012).