TRANSMISSION SYSTEM PLANNING
(EXHIBIT HQT-9, DOCUMENT 1,
IN THE FILE R-3706-2009)

TRANSMISSION SYSTEM PLANNING

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This exhibit presents the method used for transmission system planning and outlines the capital projects and commissionings projected for the next ten years.

In addition, Exhibit HQT-9, Document 1.1 provides detailed information on power transformation at the Transmission Provider's substations.

Finally, Exhibit HQT-9, Document 1.2, which is filed in strict confidentiality, contains single-line diagrams and diagrams illustrating power flows at the forecast system peak.

1. TRANSMISSION SYSTEM PLANNING METHOD

1.1 System design and planning approach

1.1.1 Background

To meet the growing needs of its customers in a cost-effective and reliable manner, the Transmission Provider must manage its existing assets proactively. It must also develop the transmission system so that it can meet the needs of all its customers efficiently and with the expected quality.

In Quebec, demand is particularly high during winter cold snaps, mainly due to the use of electric heating. At such times, the grid must have enough transmission equipment available to handle the maximum power demand. For this reason, transmission system planning is essentially based on the winter peak. The Transmission Provider conducts the necessary studies to ensure that supply matches demand, especially during winter when transmission needs are at their greatest.

The Transmission Provider also studies other situations that could place stress on the system and have an impact on its planning. This is the case, for example, when a load area is characterized by the presence of a wind farm, industrial loads or heavy use of air-conditioning.

Over the years, the Transmission Provider has developed a structured, integrated approach to asset management in order to meet the needs of all its customers while seeing to the long-term operability of its transmission fleet. This approach makes it possible to ensure transmission system reliability and performance.

Moreover, the Transmission Provider is continuing to optimize its ways of doing things in order to ensure system availability and high-quality service in a context where the number of growth projects is expected to rise considerably, the system use rate is increasing and the fleet is aging. To this end, the Transmission Provider has set up special teams to optimize the system planning process in order to seize new opportunities to achieve efficiencies and improve practices. As one example of this integrated planning approach, the Transmission Provider is continuing its efforts to better harmonize its Growth and Maintenance capital investment projects by including growth and long-term operability parameters in its analyses.

As explained in more detail in Exhibit HQT-3, Document 1, section 1.4.1, by integrating the planning of projects related to long-term operability with the planning of projects necessitated by growth in customer needs, the Transmission Provider reduces the level of capital investment by avoiding costs. Over the years, this will reduce growth in the rate base and in the depreciation expense reflected in the Transmission Provider's cost of service.

To sum up, the planning approach favoured by the Transmission Provider enables it to maintain an overall vision of system development while ensuring coherency in all the actions needed for the fulfillment of its core mission.

1.1.2 Transmission system design

Transmission assets form an integral whole, and their interaction is necessary for the proper operation of the system.

It is worth a brief reminder that transmission system planning involves the application of certain guiding principles: compliance with design criteria, financial and environmental acceptability, operating flexibility, and adaptation to the territory. Of these guiding principles, compliance with design criteria is the most fundamental.

To ensure an adequate level of system reliability, the Transmission Provider applies design criteria that shape the planning studies conducted with a view to choosing an optimal scenario. These criteria ensure that the transmission system is designed with enough flexibility and robustness to meet transmission needs securely despite variable operating conditions, faults and equipment outages. They also serve as a basis for the Transmission Provider's decisions about the system reinforcements and expansions needed and for the deployment of proposed solutions to customer needs.

More particularly, the system design criteria set out the electrical parameters that the Transmission Provider must analyze in order to correct any problems occurring on the system, in light of demand growth or other changes. They address both equipment performance and system behaviour under steady-state and transient operating conditions. They cover system stability, equipment capacities, service continuity (assured through equipment redundancies, system looping and other means), operating capacity, maintenance of facilities in good condition, power quality, and selection of equipment.

The criteria are thus aimed at countering two types of possible system disturbances: normal events and off-normal events. Compliance with reliability standards is an integral part of the design criteria applied to transmission system planning. Reliability standards set out the performance that the system must deliver during such events or operating conditions. They are applied according to a deterministic method that intrinsically provides for a basic reserve in terms of transmission facilities.

Normal events are those which the system must handle regularly with no loss of load. The criteria addressing such events set out the level of robustness the system must have in order to meet transmission needs securely while providing the expected quality of service. Complying with these criteria involves adding facilities to the existing system structure, thus modifying the system architecture.

Off-normal events are more extreme and less probable than normal events. They cannot be covered at all times unless considerable investments are made to increase considerably system robustness. To deal with such events, the Transmission Provider uses special protection systems, such as generation rejection and load shedding, to limit system degradation.

For several years, the Transmission Provider has been applying the standards of the North American Electric Reliability Corporation *(*NERC) and the Northeast Power Coordinating Council Inc. (NPCC), which are recognized authorities in power transmission system reliability, in addition to applying its own criteria in this regard.

In Decision D-2003-65,[1] the Régie stated that the standards used by the Transmission Provider were on the whole satisfactory, necessary, and enabled it to manage its system effectively.

It should be remembered that in 2006 the Régie was given new powers related to reliability, including the power to adopt and enforce reliability standards. On August 14, 2007, in Decision D-2007-95, the Régie designated the Direction Contrôle des mouvements d'énergie (CMÉ) of the Transmission Provider as Reliability Coordinator for Quebec. On June 2, 2009, the CMÉ, in its capacity as Reliability Coordinator for Quebec, filed an application with the Régie to adopt reliability standards, including those of the NERC, along with an assessment of the pertinence and impacts of the standards and a list of the entities likely to be subject to them. The Régie entered into an agreement with NERC and NPCC in May 2009 to obtain their assistance in setting up a mandatory system for reliability standards in Quebec and deploying a program for enforcing and applying these standards.

[1] R-3498-2002, Application for approval of standards for operations, technical requirements and reliability requirements for the Hydro-Québec transmission system, November 2002.

It should also be remembered that on September 27, 2006, the NPCC officially recognized that the Quebec transmission system constitutes an interconnection in its own right, being asynchronous with neighbouring systems. Figure 1 shows the NPCC geographic regions for information purposes.

Figure 1
NPCC Geographic Regions

1.1.3 Transmission system planning approach

The approach used by the Transmission Provider for transmission system planning is based on a ten-year horizon and enables the Transmission Provider to have a comprehensive vision of the issues, problems and needs underlying any action to be undertaken to meet customer needs with the expected level of quality.

This horizon is divided by the Transmission Provider into two planning periods: an initial five-year period for which detailed information is supplied about the projects needed, and a subsequent five-year period for which capital investments are estimated.

Estimates are made for the Distributor's native load requirements, generators' requests, long-term operability projects, technological innovation requirements, projects needed to maintain or improve quality or to comply with external regulatory requirements or standards, and projects for system control and telecommunications. These needs are estimated on the basis of available and foreseeable information and likely scenarios, with a view to choosing the solution that is best from a technical, economic and environmental viewpoint.

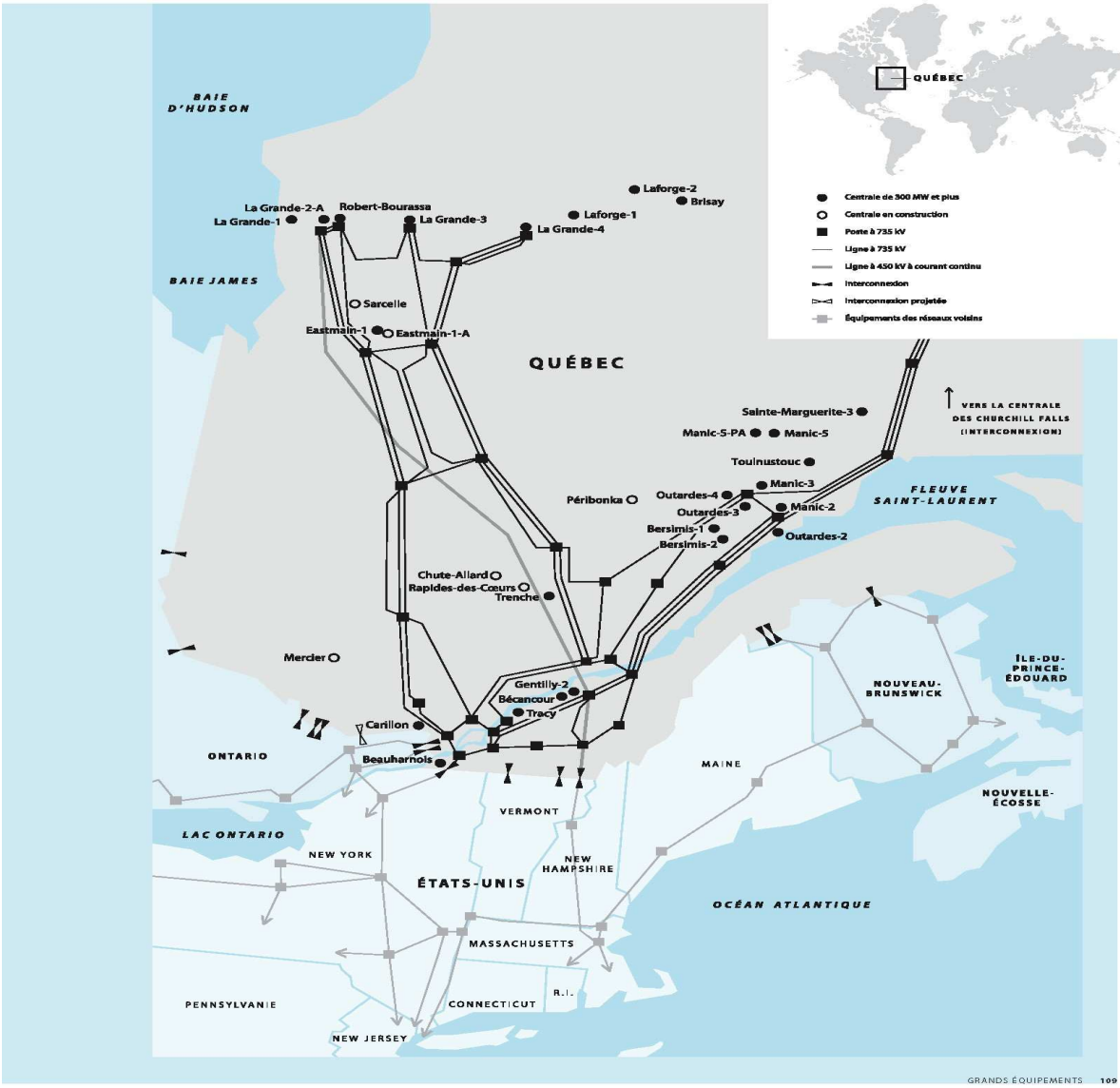
System investment needs are established as parametric costs, mainly because there is some uncertainty related to undertakings such as growth projects, and also because some transmission projects take several years to realize. Furthermore, maintenance or long-term operability projects can be moved ahead or postponed, since the Transmission Provider will take advantage of growth projects to solve problems in a given area or at a given facility.

As previously mentioned, the Transmission Provider has set up teams dedicated to optimizing the system planning process, with a view to improving project portfolio management.

1.2 Transmission System Growth

1.2.1 Map of the transmission system

Figure 2
Transmission Provider's System



1.2.2 Transmission system growth by voltage level

Table 1 shows the growth in transmission system substations and lines from December 31, 2008 to December 31, 2010, based on approved projects.

Table 1
Transmission system growth by voltage level, 2008 to 2010

Voltage	Substations (number)		Lines (km)	
	At Dec. 31, 2008	Projected at Dec. 31, 2010	At Dec. 31, 2008	Projected at Dec. 31, 2010
765 kV and 735 kV	38	38	11,422	11,422
450 kV	2	2	1,218	1,218
315 kV	63	65	5,127	5,255
230 kV	50	52	3,048	3,121
161 kV	41	41	2,013	2,026
120 kV	214	218	6,624	6,660
69 kV or less	103	100	3,606	3,642
Total	**510**	**516**	**33,058**	**33,344**

1.2.3 System use rate

Transmission system use rates for the twelve months of 2008 are shown in Table 2.

Table 2
Transmission System Use Rate in 2008

	Native load	Overall (native load and point to point)
January	90.3%	96.7%
February	84.7%	95.4%
March	76.9%	87.4%
April	70.3%	81.8%
May	59.6%	67.7%
June	52.3%	64.4%
July	54.7%	65.4%
August	54.0%	65.7%
September	55.6%	67.1%
October	65.9%	72.5%
November	73.8%	84.7%
December	85.3%	90.6%

These use rates represent the ratio between use of the transmission system at peak and the transmission capacity of the system for the year. The peak is the hour during which native load transmission and point-to-point transmission are at their maximum.

Transmission capacity is determined through simulation of a scenario in which high demand occurs under peak operating conditions. For 2008, transmission capacity was 40,150 MW.

1.2.4 Interconnections, growth and use

Interconnections ensure energy security in Quebec and, in import mode, enable the Distributor to diversify its supply sources. The Distributor, in accordance with its Electricity Supply Plan 2008-2017, designated 500 MW from the New York power system as a resource to be used for the native load.

Interconnections also ensure access for Quebec generators to outside markets, in export mode, and access for outside generators to other markets through the Transmission Provider's system, either by simultaneous receipt and delivery or by wheel-through.

In the event of damage to strategic infrastructure in the 735-kV transmission system, the Transmission Provider's interconnections make it possible to compensate for any generation losses that could affect customer service. In the event of significant damage to regional transmission infrastructure, border substations in Abitibi, the Ottawa Valley, the Eastern Townships and the Gaspé Pensinsula could receive minimal assistance through interconnections with Ontario, Vermont and New Brunswick, making it possible to ensure continued servicing of native loads.

Tables 3 and 4 show the transfer capacities of the Transmission Provider's interconnections in receipt and delivery mode for 2008.

Table 3
Transfer capacity, receipt mode, 2008 [1]

SYSTEM	PATH	MW
Ontario		
	LAW-HQT	470
	DYMO-HQT	0
	OTTO-HQT	110
	CHNO-HQT	0
	P33C-HQT	0
	Q4C-HQT	140
	ON-HQT [2]	*0*
	TOTAL	**720**
New York		
	CRT-HQT	100
	MASS-HQT	1,000
	TOTAL	**1,100**
New England		
	HIGH-HQT	170
	DER-HQT	0
	NE-HQT	1,700
	TOTAL	**1,970**
New Brunswick		
	TOTAL	**770**
Alcan		
	TOTAL	**650**
Brascan		
	MATI-HQT	250
	MAFA-HQT	95
	TOTAL	**345**
Churchill Falls		
	TOTAL	**5,150**
TOTAL		**10,705**

[1] Total transfer capacity (TTC) corresponds to the maximum capacity that can be transferred at a given moment in the year.

[2] The interconnection with Ontario went into commercial service in July 2009.

Table 4
Transfer capacity, delivery mode, 2008 [1]

SYSTEM	PATH	MW
Ontario		
	HQT-LAW	800
	HQT-DYMO	85
	HQT-OTTO	0
	HQT-CHNO	65
	HQT-P33C	345
	HQT-Q4C	0
	HQT-ON [2]	*0*
	TOTAL	**1,295**
New York		
	HQT-CRT	325
	HQT-MASS	1,800
	TOTAL	**2,125**
New England		
	HQT-HIGH	225
	HQT-DER	50
	HQT-NE	2,000
	TOTAL	**2,275**
New Brunswick		
	TOTAL	**1,100**
Alcan		
	TOTAL	**1,275**
Brascan		
	HQT-MATI	115
	HQT-MAFA	0
	TOTAL	**115**
Churchill Falls		
	TOTAL	**0**
TOTAL		**8,185**

[1] Total transfer capacity (TTC) corresponds to the maximum capacity that can be transferred at a given moment in the year.

[2] The interconnection with Ontario went into commercial service in July 2009.

For information purposes, energy interchanges over the Transmission Provider's interconnections in 2008 are shown in tables 5 and 6. Transmission losses are not included.

Table 5
Power interchanges - Receipt

Neighbouring system	Path	2007 (GWh)	2008 (GWh)
Ontario	LAW DYMO OTTO CHNO P33C Q4C	2,200	2,699
New Brunswick	NB	287	58
New York	CRT	0	0
New York	MASS	1,196	698
New England	DER	0	0
New England	HIGH	34	7
New England	NE	576	120
TOTAL		**4,293**	**3,582**

Table 6
Power interchanges - Delivery

Neighbouring systerm	Path	2007 (GWh)	2008 (GWh)
Ontario	LAW DYMO OTTO CHNO P33C Q4C	1,100	887
New Brunswick	NB	1,722	3,409
New York	CRT	855	784
New York	MASS	4,573	5,624
New England	DER	211	189
New England	HIGH	1,403	1,435
New England	NE	6,981	8,127
TOTAL		**16,845**	**20,555**

In 2008, power receipts over interconnections totaled 3.6 TWh, for a decrease of 17% over 2007. Deliveries totaled 20.6 TWh, for an increase of 22% over 2007.

2. CAPITAL PROJECTS AND COMMISSIONINGS PROJECTED OVER A TEN-YEAR HORIZON

Section 3 deals with forecasts of transmission system capital projects and commissionings over the next ten years, 2010-2019. Included are descriptions of the investment categories and tables providing the forecast of capital investments and commissionings, the forecast of transmission needs, projected inflation rates and the estimated rate impacts of the planned investments.

2.1 Description of investment categories

Investments are classed as to whether or not they generate additional revenue.

Investments generating no additional revenue

- *Asset maintenance*: capital investments in this category are needed to maintain the service capacity offered by the Transmission Provider to its customers, and to benefit from any recent useful technological advances.
- *Quality maintenance and improvement*: capital investments in this category are aimed at customer satisfaction and maintaining or improving the quality of service in meeting the existing demand; essentially, these projects represent optimum solutions chosen to solve performance problems related to system behaviour, service continuity, equipment reliability or power quality.
- *Compliance*: capital investments in this category are aimed at complying with laws and regulations in effect, the Transmission Provider's contractual commitments and internal guidelines and standards.

Investments generating additional revenue

- *Growth in customer needs*: capital investments in this category stem from needs and requests expressed by customers of the Transmission Provider; on the one hand, they aim to meet the growth in native load by increasing transmission system capacity by adding equipment according to orientations established in collaboration with the Distributor; on the other hand, system connections, extensions and modifications make it possible to integrate the power produced by new generation sources and to ensure the transmission of

additional power from new or uprated generating units in an existing generating station.

2.2 Forecast of capital projects and commissionings

Table 7 shows the capital investments planned for 2008 and 2009 and those expected over the following ten years, from 2010 to 2019, grouped into the categories described above.

The table lists the projects worth $25 million or more and the level of investment for each. It also contains information on investments for projects estimated at less than $25 million, as well as customer contributions based on the year of commissioning.

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Table 7 Capital Investments by Category to 2019 ($M)

	CATEGORIES ($ millions)	Date of commissioning	Authorization	2008 and -	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
1.	***Investments generating no additional revenue***															
1.1	**Asset maintenance**															
	Poste Chomedey	2010-2013			2.1	7.1	10.3	6.1	4.7							30.2
	Poste Bourassa	2013			1.2	6.1	9.8	23.7	21.2							62.0
	Poste Montcalm	2012		0.6	1.5	7.6	9.5	69.2	0.7							89.3
	Poste Neubois	2012-2014		0.1	0.9	3.2	7.1	17.4	4.0	0.0						32.6
	Poste Rivière des prairies	2010	D-2009-069	1.3	13.4	20.0	0.1									34.9
	Poste St-Maxime	2009-2010	D-2007-87	7.7	8.1	8.8										24.5
	Poste Lévis – Synchronous compensator	2007-2009	D-2005-45	32.8	1.6											34.4
	Poste Sorel	2009-2010		14.3	19.8	16.7										50.8
	Poste Chelsea	2011			0.3	4.3	25.2									29.8
	Poste Dufournel	2014-2015				0.3	0.7	1.2	8.5	29.1	5.0					44.8
	Poste Rapides/Farmers	2011		0.0	0.3	4.3	25.2									29.8
	Hauterive	2008-2012	D-2004-187	15.4	7.2	5.7	5.4	0.9	1.1							35.7
	Poste Abitibi – Reconditioning of synchronous compensators	2010-2011	D-2009-063	3.8	7.9	33.7	27.5	1.0								73.9
	Poste Némiscau Albanel – Static VAR compensator	2014		0.5	7.1	1.3	3.2	6.6	28.9	28.0						75.6
	Poste Manic	2015-2016						0.1	1.3	7.9	32.1	25.7				67.1
	Poste Radisson	2015						3.0	5.0	27.0	36.0					71.0
	Poste Nicolet	2017								3.0	5.0	27.0	35.0			70.0
	Poste Madawaska	2014					1.0	4.0	16.0	22.0						43.0
	Interconnection with New York (Poste Châteauguay)	2012		0.0	3.0	10.0	30.0	45.0								88.0
	Substations other	2015-2019						10.7	10.7	36.0	62.7	22.7	41.3	42.7	26.7	253.3
	Investments less than $25 million				392.6	384.3	399.4	377.4	480.5	498.7	508.1	621.1	619.9	666.7	703.7	5,652.5
	Telecom more than $25 million				2.8	7.5	21.5	18.9	9.8	8.6	20.2	23.2	20.0	20.0		152.6
	Telecom less than $25 million and preauthorized				55.7	37.6	36.8	42.8	44.0	36.3	29.9	21.8	25.0	25.0	45.0	399.9
	TOTAL – Asset maintenance			**76.6**	**525.4**	**558.6**	**612.5**	**628.0**	**636.3**	**696.7**	**698.9**	**741.6**	**741.3**	**754.4**	**775.4**	**7,445.7**
1.2	**Quality improvement**															
	Poste Hauterive	2008-2012	D-2007-41	2.1	4.3	0.9	1.5	0.1								8.9
	Reinforcement of the transmission system 2011	2011-2012		2.2	10.8	64.5	120.5	53.0								251.0
	Eastmain 1 improvement	2006-2009	D-2004-187	9.1	0.2											9.3
	Warren Commission – Bulk System Reinforcement Manic/Bergeronne lines	2018								0.5	5.3	16.7	21.0	16.7	1.4	61.6
	Allouetes- Sept-Îles –St-Arnaud improvement	2011			1.0	5.0	4.0									10.0
	Lévis de-icer	2007-2009	D-2004-175	196.1	7.4	0.0										203.6
	Investments less than $25 million				50.5	50.0	50.7	22.3	52.0	52.0	52.7	53.3	53.3	54.0	54.0	544.8
	Telecom more than $25 million				1.4	6.7	0.8									8.9
	Telecom less than $25 million and preauthorized				5.4	17.2	4.0	2.8	1.4	1.5	1.5	1.5	1.5	1.5	1.5	39.8
	TOTAL – Quality Improvement			**209.5**	**81.0**	**144.3**	**181.4**	**78.3**	**53.4**	**54.0**	**59.5**	**71.5**	**75.8**	**72.2**	**56.9**	**1,137.8**
1.3	**Compliance**															
	Allouetes-Sept-Îles-St-Arnaud	2011			2.0	18.0	10.0									30.0
	Allouetes-Sept-Îles-St-Arnaud contribution	2011					(34.5)									-34,5
	Telecom more than $25 million				30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	330.0
	Telecom less than $25 million and preauthorized				0.1	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	9.7
	TOTAL – Compliance				**32.0**	**48.9**	**6.4**	**30.9**	**30.9**	**31.0**	**31.0**	**31.0**	**31.0**	**31.0**	**31.0**	**335.2**
	TOTAL Investments generating no additional revenue			**286.1**	**638.4**	**751.8**	**800.4**	**737.2**	**720.6**	**781.7**	**789.4**	**844.0**	**848.1**	**857.6**	**863.3**	**8,918.7**

Table 7 (cont'd) Capital Investments by Category to 2019 ($M)

	CATEGORIES ($ millions)	Date of commissioning	Authorization	2008 and -	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
2.	***Investments generating additional revenue***															
2.1	**Telecommunications**															
	Telecom more than $25 million and prudently acquired				4.4	10.8	16.1	18.3	19.6	16.7	21.1	13.1	3.3	3.5		127.0
	Telecom less than $25 million and preauthorized				13.8	5.5	3.6	0.1		1.0		5.0	5.0	5.0	8.5	47.5
	TOTAL – Telecommunication				**18.2**	**16.4**	**19.7**	**18.3**	**19.6**	**17.7**	**21.1**	**18.1**	**8.3**	**8.5**	**8.5**	**174.5**
2.2	**Power integration**															
	SM-3 generating station, third unit (440 MW)	2014		0.1	2.0	3.0	28.0	40.0	30.0	190.0	58.0					351.1
	SM-3 generating station, third unit (440 MW) contribution HQP	2014								(90.0)						-90.0
	Expansion of the transmission system in Minganie	2014-2020		14.9	15.2	11.9	12.9	102.6	271.8	220.8	102.9	288.4	213.3	70.9	60.2	1,385.9
	Expansion of the transmission system in Minganie contribution HQP	2014-2020								(337.4)		(155.9)	(177.0)			-670.3
	Rapide-des-Coeurs et Ch. Allard Integration (138 MW)	2007-2008		100.7	1.4											103.7
	Rapide-des-Coeurs et Ch. Allard Integration (138 MW) contribution HQP	2007-2008		(38.6)	(16.4)											-55.0
	Integration Péribonka (385 MW)	2007-2008	D-2006-25	165.6	0.7	1.3										167.7
	Integration Péribonka (385 MW) contribution HQP	2007-2008	D-2006-25	(12.0)												-12.0
	Integration Péribonka (385 MW) payment HQP	2007-2008	D-2006-25	13.7												13.7
	Eastmain 1A-La Sarcelle Integration (903 MW)	2011	D-2008-149	6.8	12.8	88.7	65.2	2.2								175.8
	Eastmain 1A-La Sarcelle Integration (903 MW) contribution HQP	2011	D-2008-149				(30.7)									-30.7
	Ontario Interconnection (1250 MW)	2009		356.6	59.1	2.7										418.4
	Ontario Interconnection - Phase II (1250 MW)	2010	D-2008-030	21.9	148.5	40.2										210.6
	HQT-MASS AND HQT-NE firm transmission 2400 MW long term	2012-2014				4.6	13.5	29.8	43.8	15.7						107.4
	New England Interconnection	2014				2.2	22.3	71.7	310.1	153.2						559.5
	Power Increase Manic 2	2013				3.4	7.2	26.8	23.6							61.0
	Power Increase Manic 2 contribution HQP	2013							(2.5)							-2.5
	Power Increase Manic Manic 3	2015-2019						0.9	7.0	42.3	115.5	56.9	27.2	24.6	10.2	284.6
	Power Increase Manic Manic 3 contribution HQP	2015-2019										(177.1)				-177.1
	Reinforcement of the Matapedia regional system	2005-2009	D-2005-142	32.8	1.6											34.5
	Integration of 8 wind farms to the transmission system (990 MW)	2006-2011	D-2007-141	143.9	105.4	78.0	178.7	33.0								538.9
	Integration of 8 wind farms to the transmission system (990 MW) – maintenance expenses	2006-2011	D-2007-141		4.8		16.8	4.6								26.1
	Integration of the wind farms of the second tender	2011-2015		0.7	5.1	13.1	297.7	352.0	229.1	142.7	143.5					1,183.8
	Integration of the wind farms from the second tender – maintenance expenses	2011-2015					18.8	21.1	16.5	7.6	11.4					75.4
	Other projects									67.6	137.6					205.2
	Investment less than $25 million				1.5	0.3	0.0	0.0	9.6	0.3						11.7
	TOTAL – Power Integration			**807.2**	**341.8**	**249.5**	**630.4**	**684.6**	**938.9**	**412.7**	**568.9**	**12.4**	**63.5**	**95.5**	**70.4**	**4,875.9**

Table 7 (cont'd) Capital Investments by Category to 2019 ($M)

	CATEGORIES ($ millions)	Date of commissioning	Authorization	2008 and -	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
2.3	**Increase native load**															
	Poste Chomedey	2010-2013		2.2	6.9	7.9	16.4	6.1	4.2							43.8
	Poste Charlesbourg	2014		0.1	1.0	1.4	3.1	18.4	55.5	3.9						83.4
	Poste Rive Sud / Montarville	2013		0.1	2.4	1.8	3.4	14.0	35.0							56.7
	Poste St-Janvier	2012-2013			0.3	2.6	19.4	17.0	26.7							66.0
	Poste Waconichi and transmission line	2011	D-2009-075	1.3	1.3	13.0	20.2	0.2								36.0
	Ligne Beauceville / St-Marie	2011		0.2	5.8	12.1	14.4	0.2								32.7
	Poste Anne Hébert	2010-2011	D-2008-129	4.3	34.5	36.9	1.4	0.2	1.9							79.1
	Poste Mont-Tremblant	2009-2010	D-2008-043	9.6	36.1	0.3										46.0
	Saraguay new section	2007-2009	D-2005-153	27.5	2.6											30.1
	Poste Saint-Lin	2008-2009	D-2007-78	42.0	3.0											45.1
	Poste St-Maxime	2008-2010	D-2007-87	10.1	4.3	0.8										15.2
	Poste Vaudreuil-Soulanges	2009	D-2007-118	7.2	20.0	0.1										27.3
	Poste Duvernay	2011				6.3	25.0	0.9								32.2
	Hauterive (Alcoa)	2008-2011	D-2007-41	13.6	10.5	4.0	3.8	0.5								32.3
	Wemindji	2008	D-2007-18	19.6	2.8											22.4
	Poste Bélanger	2014		0.5	0.7	0.1	0.6	7.5	17.0	33.0						59.3
	Poste Bout de l'île	2014				4.0	4.9	5.0	56.0	156.0						225.9
	Poste Legardeur	2014				0.7	1.0	5.3	15.9	31.8						54.7
	Poste Brome 120-25KV	2014			0.1	0.3	1.0	3.1	16.6	13.4						34.7
	Poste St-Jérôme North	2015					0.3	0.7	3.7	13.3	23.3					41.3
	Mining client (Éléonore)	2010	D-2008-073	11.6	24.6	17.5	0.3									54.0
	Mining client (Éléonore) contribution by PP	2010	D-2008-073			(54.8)										-54.8
	Aluminium producer Alcoa client (Sept-îles –Hauterives)	2012-2013			5.8	8.5	27.0	21.0	5.2							67.5
	Substations other	2012-2019				2.3	28.9	62.8	8.6	7.2	33.5	11.3	20.7	21.3	13.3	209.9
	Investments less than $25 million				77.0	112.0	101.1	84.9	34.4	109.2	176.2	243.0	247.0	245.0	255.0	1,684.8
	TOTAL – Increase native load			**149.8**	**239.9**	**177.7**	**272.3**	**247.8**	**280.7**	**367.7**	**233.0**	**254.3**	**267.7**	**266.3**	**268.3**	**3,025.6**
	TOTAL Investments generating additional revenue			**957.0**	**599.9**	**443.5**	**922.4**	**950.8**	**1,239.2**	**798.2**	**823.0**	**284.9**	**339.4**	**370.3**	**347.3**	**8,075.9**
	TOTAL INVESTMENTS			**1,243.2**	**1,238.3**	**1,195.4**	**1,722.7**	**1,688.0**	**1,959.8**	**1,579.9**	**1,612.4**	**1,128.9**	**1,187.5**	**1,227.9**	**1,210.7**	**16,994.6**

Tables 8 and 9 summarize the planned capital investments and commissionings by category.

Table 8
Summary of Capital Investments by Category to 2019
($M)

Investment category	Actual	Budgeted	Planned									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Generating no additional revenue	**546.7**	**638.4**	**751.8**	**834.8**	**737.2**	**720.6**	**781.7**	**789.4**	**844.0**	**848.1**	**857.6**	**863.3**
Asset maintenance	453.5	525.4	558.6	612.5	628.0	636.3	696.7	698.9	741.6	741.3	754.4	775.4
Maintenance and improvement	43.5	81.0	114.3	181.4	78.3	53.4	54.0	59.5	71.5	75.8	72.2	56.9
Compliance	49.8	32.0	48.9	40.9	30.9	30.9	31.0	31.0	31.0	31.0	31.0	31.0
Generating additional revenue	**567.8**	**611.6**	**498.3**	**917.5**	**925.1**	**1,225.2**	**1,218.1**	**812.2**	**617.8**	**516.5**	**370.3**	**347.3**
Increase in needs	567.8	611.6	498.3	917.5	925.1	1,225.2	1,218.1	812.2	617.8	516.5	370.3	347.3
Total	**1,114.5**	**1,250.0**	**1,250.2**	**1,752.4**	**1,662.3**	**1,945.8**	**1,999.8**	**1,601.5**	**1,461.8**	**1,364.6**	**1,227.9**	**1,210.7**

Table 9
Summary of Commissionings by Category to 2019
($M)

Commissioning category	Actual	Budgeted	Planned									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Generating no additional revenue	**521.8**	**604.8**	**662.2**	**733.7**	**902.2**	**622.8**	**831.6**	**869.1**	**695.2**	**860.4**	**896.1**	**871.8**
Asset maintenance	388.6	498.8	569.4	547.9	668.1	539.1	747.1	784.4	609.9	774.6	750.0	791.3
Maintenance and improvement	96.5	71.5	61.9	159.3	203.2	52.9	53.5	53.7	54.3	54.8	115.2	49.5
Compliance	36.6	34.5	30.9	26.4	30.9	30.9	31.0	31.0	31.0	31.0	31.0	31.0
Generating additional revenue	**263.1**	**638.7**	**587.9**	**739.6**	**728.0**	**620.8**	**1,689.4**	**1,005.8**	**79.4**	**708.2**	**338.8**	**478.7**
Increase in needs	263.1	638.7	587.9	739.6	728.0	620.8	1,689.4	1,005.8	79.4	708.2	338.8	478.7
Total	**784.8**	**1,243.5**	**1,250.1**	**1,473.3**	**1,630.2**	**1,243.6**	**2,521.0**	**1,874.9**	**774.5**	**1,568.6**	**1,234.9**	**1,350.5**

2.3 Forecast transmission needs

Table 10 shows the forecast transmission needs to 2019, for both native load and long-term point-to-point service.

Table 10
Forecast Transmission Needs
(MW)

Transmission services	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Native load	35,230	36,244	36,791	37,232	37,583	37,960	38,272	39,159	39,495	39,808
Point to point	4,575	4,908	4,908	4,908	5,645	6,172	6,172	6,172	6,172	6,172
Total	39,805	41,152	41,699	42,140	43,228	44,132	44,444	45,331	45,667	45,980

2.4 Projected inflation rates

The projected inflation rates are shown in table 11.

Table 11
Inflation Rate

	Canada			United States		
Year	Consumer Price Index	Industrial Products Price Index	Gross Domestic Product Implicit Price Index	Consumer Price Index	Industrial Products Price Index	Gross Domestic Product Chain Index
	%	%	%	%	%	%
2001	2.6	1.0	1.1	2.8	1.1	2.4
2002	2.2	0.1	0.9	1.6	-1.3	1.5
2003	2.8	-1.2	3.5	2.3	3.2	1.6
2004	1.9	3.4	3.2	2.7	3.6	2.1
2005	2.2	1.5	3.1	3.4	4.9	2.8
2006	2.0	2.3	2.1	3.2	4.7	2.9
2007	2.2	1.6	3.1	2.9	3.9	2.7
2008	2.3	4.3	3.9	3.8	9.9	2.2
2009	0.2	-0.2	-0.5	-1.9	-13.7	0.9
2010	2.0	0.6	1.0	1.7	2.2	0.8
2011	2.0	0.8	2.0	2.2	2.7	1.3
2012	2.0	1.6	2.2	2.3	3.1	1.4
2013	2.0	1.8	2.0	2.6	3.9	1.9
2014 and later	2.0	1.6	1.8	2.4	1.5	2.0

2.5 Estimated rate impact of planned capital investments

Table 12 shows the estimated rate impact of planned capital investments to 2019.

To estimate this impact, the Transmission Provider looks at transmission needs and the costs associated with the project commissionings. The costs include straight-line depreciation, cost of capital, tax on capital, public utilities tax and operating expenses.

According to this estimate, the unit cost will remain below the present rate of $72.00/kW from 2011 to 2014, and slight increases will follow in subsequent years.

Table 12
Rate Impact of Planned Capital Investments to 2019

Year	Net additions to rate base (millions $)	Cost of capital[1] (millions $)	Capital expenses (millions $)	Depreciation (millions $)	Tax on capital[2] (millions $)	Public Utilities Tax[3] (millions $)	Total (millions $)	Required revenues (millions $)	Transmission needs (MW)	Annual rate ($/kW)
2009								2,741	38,072	72.00
2010	332	-6	8	165	0	0	168	2,909	39,805	73.09
2011	641	8	19	120	0	2	148	2,889	41,152	70.21
2012	852	39	30	121	0	5	195	2,936	41,699	70.41
2013	492	75	38	153	0	9	275	3,017	42,140	71.59
2014	1,798	116	60	178	0	11	365	3,106	43,228	71.85
2015	1,173	180	74	221	0	20	494	3,235	44,132	73.31
2016	89	223	76	260	0	25	584	3,325	44,444	74.81
2017	895	219	86	276	0	23	604	3,345	45,331	73.79
2018	578	241	92	304	0	26	664	3,405	45,667	74.56
2019	694	254	100	333	0	27	714	3,455	45,980	75.15
2010 to 2019										72.88

(1) Expected average weighted capital costs of 5.401% proposed in this request, Exhibit HQT-8, Document 1.

(2) Tax on capital of 0.12% in 2010 and of 0.00% in the following years according to the Government of Quebec 2007-2008 (May 24, 2007) *Additional Information on the Budgetary Measures*, Section A, page 12.

(3) Public Utilities Tax of 0.55% according to the Government of Québec 2005-2006 Budget (April 21, 2005), Section 1, page 120.