

**TRANSMISSION PROVIDER'S RESPONSES TO RÉGIE DE L'ÉNERGIE'S REQUEST FOR INFORMATION
NO. 3 TO THE TRANSMISSION PROVIDER**

**Translation commissioned by
NEWFOUNDLAND AND LABRADOR HYDRO (NLH)**

NOTE TO READER

This document provides a complete translation of the text of the responses provided by the Transmission Provider. However, given the great similarities between the various tables provided in Schedules 1 and 2, this document provides a partial translation of these Schedules, namely the first tables, in order to provide the reader with sufficient guidance to the reader.

RÉGIE DE L'ÉNERGIE'S (THE RÉGIE) REQUEST FOR INFORMATION NO. 3
RESPECTING NETWORK UPGRADES

**Payment terms of contribution to a project containing several commissioning dates
staggered over time**

- 1. References:**
- (i) Exhibit B-0035, p. 15 to 22;
 - (ii) Exhibit B-0035, R6.1, p. 29;
 - (iii) Exhibit A-0008, question 8.2, p. 14;
 - (iv) Exhibit B-0035, R4.5, p. 15;
 - (v) R-3631-2007, HQT-7, document 1, p. 7;
 - (vi) R-3742-2010, phase 2, Exhibit B-0037, Schedule 4;
 - (vii) R-3836-2013, Exhibit B-0005, Schedule 7, p. 3.

Preamble:

(i) The Régie asked the Transmission Provider to illustrate the rate impact of the three methodologies that seek to respond to the problem of the payment terms for the contribution to a project containing several commissioning dates staggered over time.

(ii) “6.1 *Supposing that the amendment to the OATT is retrospective in its effect, as described in reference (iv), as for the time at which payment is made of the contributions for all of the projects underway, and not just for those projects for which the Régie has reserved its final decision on certain aspects, please respond to requests 8.1 and 8.2 of the Régie (Exhibit A-0008) by including all of the projects underway that have been approved by the Régie.*

R6.1

As regards projects underway that have been approved by the Régie, for which a contribution has been estimated and for which commissionings are staggered over time, the Transmission Provider notes the projects for the first, second and third calls for tenders in respect of which the Régie has reserved its decisions regarding the estimated contribution by the Distributor and regarding the payment terms of the said contribution, as well as the project to connect to the transmission system of the de la Romaine complex, in respect of which the Régie has rendered its final decision.

The contribution of the project to connect to the transmission system of the de la Romaine complex, net of the contributions for the switchyards that are paid in respect of the specific commissionings of each of them, based on the data available at the time this case was being

prepared, is estimated at \$687.3 million, including \$89.7 million in operating and maintenance costs. The payments of this contribution, including the operating and maintenance costs, as of the commissioning at which the project's maximum amount is reached and, thereafter, upon each subsequent commissioning, would be \$555.4 million in 2017, \$6.8 million in 2018, \$0.8 million in 2019 and \$124.3 million in 2020. [emphasis added]

This response is provided without any prejudice to the Transmission Provider's right to make any representation respecting the existence and legal effect of established contractual or legal frameworks and the limits set on amending the OATT retroactively or retrospectively. The Transmission Provider also reserves the right to object to any evidence it deems to be illegal in that respect". [emphasis added]

(iii) Request 8.2 cited in the above preamble reads as follows:

"Please illustrate the rate impact of the Transmission Provider's proposal described in reference (i) by applying it to the project cited in reference (iii)."

(iv) *"For the project of the second call for tenders contemplated by decision D-2010-165, the Transmission Provider does not illustrate the rate impact of its proposal seeing as, for this project, there is no estimated Distributor's contribution as explained in the response to request 5.2."*

(v) The Transmission Provider provides the rate impact of the first wind farm call for tenders.

(vi) The Transmission Provider provides the rate impact for the second wind farm call for tenders. The Régie notes that a \$203 million contribution was then estimated and that there were several commissionings staggered over time.

(vii) The Transmission Provider provides the rate impact of the third wind farm call for tenders.

The Régie understands that in response to the request cited in reference (i), the Transmission Provider provides the rate impact of the difference resulting from the application of these new methodologies as opposed to the current practice and based on the currently known data. The Régie instead asked for an illustration of how the various methodologies considered apply, using concrete examples.

The Régie notes from the response in reference (ii) that the Transmission Provider provides certain information respecting the payment terms of the contribution, but does not provide the rate impact.

Requests:

1.1 Please provide the rate impact for the projects cited in references (iii), (iv) and (v), based on the data provided in the context of these cases, that would have resulted from the application of the following methodologies:

- payment of the contribution upon reaching the maximum amount;
- payment of the contribution attributed based on MWs, specifying the number of MWs associated with each commissioning;
- payment of the contribution attributed based on the commissionings' value.

R1.1

In the tables set forth in Schedule 1, the Transmission Provider presents the rate impact of the projects cited in references (iii), (iv) and (v), namely the projects contemplating the interconnection of the transmission system in the first call for tenders (C/T 2003-02), the second call for tenders (C/T 2005-03) and the third call for tenders (C/T 2009-02) of the Distributor, in the context of the following cases:

- **Request for authorization of the Transmission Provider to acquire and build the assets and immovables needed to interconnect the wind farms to the Matapédia regional transmission system (R-3631-2007);**
- **Transmission Provider's request to obtain the authorization needed to acquire and build immovables or assets destined for electricity transmission – Project to interconnect the wind parks of call for tenders C/T 2005-03 to the transmission system of Hydro-Québec (R-3742-2010 - Phase 2);**
- **Transmission Provider's request for authorization respecting a project to interconnect the wind farms of call for tenders C/T 2009-02 to the transmission system (R-3836-2013).**

The tables set forth in Schedule 1 are organized as follows:

- **Rate impact, as it was presented in the matter of the request for authorization;**
- **Rate impact, simulating payment of the contribution upon reaching the maximum amount;**
- **Rate impact, simulating payment of the contribution, distributed based on the value of the commissionings;**
- **Rate impact, simulating payment of the contribution, distributed based on MWs, specifying the number of MWs associated with each commissioning.**

For the four cases cited above, the tables are presented for each project based on the form used in the records of the request for authorization:

- **Rate impact of project over 20 years;**
- **Rate impact of project over 20 years – sensitivity testing;**

- Rate impact of project over 40 years;
- Rate impact of project over 40 years – sensitivity testing.

The rate impact is based on the data provided in the context of these cases.

Consequently, these data consider the fact that the project in R-3731-2007 falls under the “customer demand growth” investment category, the project in R-3742-2010 – Phase 2 falls under the “customer demand growth” and “service quality maintenance and improvement” investment categories, and the project in R-3836-2013 falls under the “customer demand growth” and “asset maintenance” investment categories.

The estimated contribution of the Distributor, at the time of filings in these matters, will be revised with the actual costs of the commissionings.

Moreover, in order to facilitate the appreciation of the tables in Schedule 1, the Transmission Provider also presents the following tables that summarize, for each project, the effect of the contribution payment based on each of the methodologies indicated in the request.

Table R1.1-1
Summary of the contribution payment based on each of the methodologies
Interconnection of the wind farms with the Matapédia regional system in call for tenders C/T 2003-02
R-3631-2007

Commissioning	Date	2006-11	2007-06	2007-12	2008-12	2009-07	2009-12	2010-12	2011-12	2012-12	total
	MW Amount (\$M)	109.5 36.9	100.5 21.4	150.0 47.8	109.5 50.2	110.1	150.0 47.3	100.5 141.8	159.0 120.6	111.0 21.7	990.0 597.6
Contribution payment (\$M)	Upon reaching the maximum amount								11.7	21.7	33.3
	distributed based on the value of commissionings								6.7	1.2	33.3
	distributed based on MWs	2.1 3.7	1.2 3.4	2.7 5.0	2.8 3.7	6.1 0.0	2.6 5.0	7.9 3.4	5.3	3.7	33.3
with 10% sensitivity											
Commissioning	Date	2006-11	2007-06	2007-12	2008-12	2009-07	2009-12	2010-12	2011-12	2012-12	total
	MW Amount (\$M)	109.5 40.6	100.5 23.5	150.0 52.6	109.5 55.2	121.2	150.0 52.0	100.5 155.9	159.0 132.6	111.0 23.8	990.0 657.4
Contribution payment (\$M)	Upon reaching the maximum amount								69.2	23.8	93.1
	distributed based on the value of commissionings								18.8	3.4	93.1
	distributed based on MWs	5.7 10.3	3.3 9.4	7.4 14.1	7.8 10.3	17.2 0.0	7.4 14.1	22.1 9.4	14.9	10.4	93.1

Table R1.1-2
Summary of the contribution payment based on each of the methodologies
Interconnection of wind farms in call for tenders C/T 2005-03
R-3742-2010 - Phase 2

Commissioning	Date	2011-12	2012-12	2013-12	2014-12	2015-12	2016-12	total
	MW	394.6	596.0	421.9	318.0	274.0		2004.5
	Amount (\$M)*	152.5	366.8	213.2	459.5	101.3	104.3	1397.6
Contribution payment (\$M)	Upon achieving the maximum amount					98.6	104.3	202.9
	distributed based on the value of commissionings	22.1	53.2	31.0	66.7	14.7	15.1	202.9
	distributed based on MWs	39.9	60.3	42.7	32.2	27.7		202.9

* net of investments associated with the "service quality maintenance and improvement" category and the reimbursement of operating and maintenance costs (1,491.3 - 18.8 - 74.9 = 1,397.6)

with a sensitivity of 15%

Commissioning	Date	2011-12	2012-12	2013-12	2014-12	2015-12	2016-12	total
	MW	394.6	596.0	421.9	318.0	274.0	0.0	2004.5
	Amount (\$M)	159.7	400.6	228.4	516.6	106.2	119.9	1531.4
Contribution payment (\$M)	Upon reaching the maximum amount				110.6	106.2	119.9	336.7
	distributed based on the value of commissionings	35.1	88.1	50.2	113.6	23.3	26.4	336.7
	distributed based on MWs	66.3	100.1	70.9	53.4	46.0		336.7

* net of investments associated with the "service quality maintenance and improvement" category and the reimbursement of operating and maintenance costs (1,627.9 - 21.6 - 74.9 = 1,531.4)

Table R1.1-3
Summary of contribution payment based on each of the methodologies
Interconnection of wind farms in call for tenders C/T 2009-02
R-3836-2013

Commissioning	Date	2013-8	2013-10	2014-3	2014-8	2014-9	2015-5	2015-7	2015-9	2016-7	2018-12	total
	MW	47.6	24.0	49.2	23.5	24.0	25.0	24.6	72.0			289.9
	Amount (\$M)	17.7	8.8	14.1	8.9	13.9	7.9	8.1	32.1	21.3	130.0	262.8
Contribution payment (\$M)	Upon reaching the maximum amount										97.3	97.3
	distributed based on the value of commissionings	6.6	3.3	5.2	3.3	5.2	2.9	3.0	11.9	7.9	48.1	97.3
	distributed based on MWs	16.0	8.1	16.5	7.9	8.1	8.4	8.3	24.2	0.0	0.0	97.3

* net of investments associated with the "asset maintenance" category and the reimbursement of operating and maintenance costs (281.7 - 8.7 - 10.2 = 262.8)

with 15% sensitivity

Commissioning	Date	2013-8	2013-10	2014-3	2014-8	2014-9	2015-5	2015-7	2015-9	2016-7	2018-12	total
	MW	47.6	24.0	49.2	23.5	24.0	25.0	24.6	72.0	0.0	0.0	289.9
	Amount (\$M)	18.5	9.3	14.3	9.4	15.3	8.0	8.6	34.6	24.5	149.5	292.0
Contribution payment (\$M)	Upon reaching the maximum amount										126.5	126.5
	distributed based on the value of commissionings	8.5	4.2	6.8	4.3	6.7	3.8	3.9	15.4	10.3	62.6	126.5
	distributed based on MWs	20.8	10.5	21.5	10.3	10.5	10.9	10.7	31.4	0.0	0.0	126.5

* net of investments associated with the "asset maintenance" category and the reimbursement of operating and maintenance costs (312.2 - 10.0 - 10.2 = 292.0)

1.2 Please provide the rate impact of project R-3757-2011 using the most recent data or based on the data provided in the context of the request for approval of the project, using each of the following payment terms for the contribution:

- payment of the contribution upon reaching the maximum amount;
- payment of the contribution attributed based on MWs, specifying the number of MWs associated with each commissioning;
- payment of the contribution attributed based on the commissionings' value.

R1.2

In the tables provided in Schedule 2, the Transmission Provider presents the rate impact of the project in the context of R-3757-2011 respecting the interconnection of generating stations of the de la Romaine complex to the transmission system.

The tables set forth in Schedule 2 are organized as follows:

- Rate impact, as it was presented in the matter of the request for authorization;
- Rate impact, simulating payment of the contribution upon reaching the maximum amount;
- Rate impact, simulating payment of the contribution, distributed based on the value of the commissionings;
- Rate impact, simulating payment of the contribution, distributed based on MWs, specifying the number of MWs associated with each commissioning.

For the four cases cited above, the tables are presented for each project based on the form used in the records of the request for authorization:

- Rate impact of project over 20 years;
- Rate impact of project over 20 years – sensitivity testing;
- Rate impact of project over 40 years;
- Rate impact of project over 40 years – sensitivity testing.

The rate impact is based on the data provided in the context of R-3757-2011.

For comparison purposes, payment of the contribution is based, as presented in the case R-3757-2011, on the estimated contribution of the Generator using the commissionings, starting in 2014, of \$902.0 million. As was explained in this case, the total estimated contribution of the generator is \$918.3 million.

The estimated contribution of the Generator will be revised against the actual costs of the commissionings once this case is filed.

The Transmission Provider specifies that the data provided in R-3757-2011 and, consequently, in this response differed from those presented in the response to request 6.1 of the request for information number 2 of the Régie (HQT-4, Document 1.1, page 29), which corresponds to the data available at the time this case was being prepared in the matter of the upgrade policy.

Moreover, in order to facilitate the appreciation of the tables set forth in Schedule 2, the Transmission Provider also presents the following table R1.2.1, which summarizes the effect of the contribution payment depending on each of the methodologies indicated in the question.

Table R1.2-1
Summary of contribution payment based on each of the methodologies
Interconnection of the de la Romaine complex generating stations to the transmission system
R-3757-2011

Commissioning	Date	2014-8	2014-9	2015-8	2016-7	2016-9	2017-6	2020-7	total
	MW Amount (\$M)	640.0 543.5	236.2	1.8	270.0 65.8	155.9	395.0 482.1	245.0 31.9	1550.0 1517.1
Contribution payment (\$M)	Upon reaching the maximum amount								
	distributed based on the value of commissionings	212.5	92.4	0.7	25.7	79.3	482.1	31.9	593.3
	distributed based on MWs	245.0			103.4	61.0	186.5 151.2	12.5 93.8	593.3 593.3

* net of contributions for switchyards that are paid upon the commissionings (1,825.8 - 308.7 = 1,517.1)

** net of contributions for switchyards that are paid upon the commissionings (902.0 - 308.7 = 593.3)

with a sensitivity of 15%

Commissioning	Date	2014-8	2014-9	2015-8	2016-7	2016-9	2017-6	2020-7	total
	MW Amount (\$M)	640.0 617.0	271.6	2.1	270.0 72.3	179.2	395.0 549.4	245.0 32.5	1550.0 1724.2
Contribution payment (\$M)	Upon reaching the maximum amount								
	distributed based on the value of commissionings	286.4	126.1	1.0	39.2	179.2	549.4	32.5	800.4
	distributed based on MWs	330.5			33.6 139.4	83.2	255.1 204.0	15.1 126.5	800.4 800.4

* net of contributions for switchyards that are paid upon the commissionings (2,099.8 - 375.6 = 1,724.2)

** net of contributions for switchyards that are paid upon the commissionings (1,175.9 - 375.5 = 800.4)

As indicated in R-3757-2011, in Exhibit HQT-1, Document 1, Schedule 1, the terms of the contribution payment of the Generator are provided for in the connection agreement to interconnect the generating stations to the transmission system of Hydro-Québec between Hydro-Québec TransEnergie and Hydro-Québec Production in respect of the de la Roumaine complex. This connection agreement is filed in this matter as Exhibit HQT-4, Document 1.2.1.

This connection agreement provides the following in its Section 6 – *Frais d'intégration, d'exploitation et de maintenance*¹ (maintenance, operating and integration fees):

[TRANSLATION]

“(b) Surplus assumed by the **Generator**

Should the *interconnection fees* to be assumed by the **Transmission Provider** exceed the maximum amount provided for in the *OATT*, the surplus amount shall be assumed by the **Generator** and shall be payable thirty (30) *business days* following receipt of a notice from the **Transmission Provider**.

(c) Review of *interconnection fees*.

The *interconnection fees* shall be reviewed by the **Transmission Provider** no later than six (6) months following the end of the *interconnection work* carried out by the **Transmission Provider**. These revised *interconnection fees* shall be final and may not be subsequently reviewed other than in the case provided in section 20.”

Moreover, Schedule III – *Travaux d'intégration, coût et échéancier* (interconnection work, cost and timetable) in Section B² (p.36) provides that the contribution amount is

¹ Section 6.1, paragraphs b and c, page 13.

² Section B – Estimation of *interconnection work* cost, page 36.

payable at the end of the interconnection work carried out by the Transmission Provider:

[TRANSLATION]

“According to the provisions of the *OATT* as at the date hereof, the maximum amount that may be assumed by the **Transmission Provider** for network upgrades responding to the interconnection needs of *generating stations* is \$923,800,000, namely 1,550,000 kW*\$596/KW.

[...]

“Pursuant to Section 6.1, the estimated amount of the surplus to be assumed by the **Generator** is \$918,344,388 and shall be reviewed no later than six (6) months following the end of the *interconnection work* carried out by the **Transmission Provider**.”

The Transmission Provider repeats what is indicated in response to request 8.2 of the request for information number 1 of the Régie (HQT-4, Document 1) at page 25, lines 1 through 6.

Finally, the Transmission Provider indicated that this response is subject to correction, as indicated in the response to request 6.1 of the request for information number 2 of the Régie (HQT04, Document 1.1, page 29).

Schedules 1 and 2

Schedule 1 – Interconnection of call for tenders C/T 2003-02 (R-3631-2007)

Rate impact, as presented in R-3631-2007, Exhibits HQT-7, Document 1, pages 7 and 8 and HQT-14, Document 1, pages 30 through 33

Table 1.1.1 – 1.1 Rate impact of project over 20 years

Project cost (\$M)	597.6
Estimated contribution of Distributor (\$M)	33.3
Net commissioning (\$M)	564.3
Years of commissioning	Up to 2012
Average weighted prospective capital cost ¹	6.35%
Maintenance and operation ²	1.3 %
Capital tax ³	2008 0.36%
	2009 and up 0.29%
Public services tax (PST) ⁴	0.55%
Number of years	20

Years	Depreciation (\$M)	Cumulative depreciation (\$M)	Additions to rate base (\$M)	Capital cost (\$M)	Maintenance and operation (\$M)	Capital tax (\$M)	Public services tax (\$M)	Total (\$M)	Revenue required (\$M)	Transmission needs (MW)	Annual rate (\$/kW)
2007									2 573,717	36 341	70.82
2008	4,003	5,892	150,330	6,507	1,483	0,376	0,573	12,941	2 586,658	36 811	70.27
2009	7,699	13,590	300,036	10,976	2,895	0,587	0,827	22,984	2 596,701	36 961	70.26
2010	12,080	25,670	429,728	18,726	4,378	0,869	1,650	37,703	2 611,420	37 061	70.46
2011	17,718	43,388	532,565	26,774	6,261	1,224	2,364	54,341	2 628,057	37 220	70.61
2012	22,736	66,124	531,481	33,105	7,772	1,484	2,929	68,026	2 641,742	37 331	70.77
2013	23,088	89,212	475,088	31,061	7,591	1,378	2,923	66,041	2 639,757	37 331	70.71
2014	23,677	112,889	451,411	29,416	7,591	1,309	2,613	64,607	2 638,323	37 331	70.67
2015	24,387	137,276	427,024	27,890	7,591	1,238	2,483	63,590	2 637,306	37 331	70.65
2016	25,119	162,395	401,905	26,318	7,591	1,166	2,349	62,543	2 636,259	37 331	70.62
2017	25,873	188,268	376,032	24,699	7,591	1,090	2,210	61,464	2 635,181	37 331	70.59
2018	26,649	214,917	349,383	23,032	7,591	1,013	2,068	60,353	2 634,070	37 331	70.56
2019	27,448	242,365	321,935	21,314	7,591	0,934	1,922	59,209	2 632,925	37 331	70.53
2020	28,272	270,637	293,663	19,545	7,591	0,852	1,771	58,030	2 631,747	37 331	70.50
2021	29,120	299,757	264,543	17,723	7,591	0,767	1,615	56,816	2 630,533	37 331	70.47
2022	29,994	329,751	234,549	15,846	7,591	0,680	1,455	55,566	2 629,282	37 331	70.43
2023	30,893	360,644	203,656	13,913	7,591	0,591	1,290	54,278	2 627,994	37 331	70.40
2024	31,820	392,464	171,836	11,922	7,591	0,498	1,120	52,951	2 626,668	37 331	70.36
2025	32,775	425,239	139,061	9,871	7,591	0,403	0,945	51,585	2 625,302	37 331	70.32
2026	33,551	458,790	105,510	7,760	7,508	0,306	0,765	49,890	2 623,607	37 331	70.28
2027	31,567	490,357	73,943	5,687	6,873	0,214	0,580	44,922	2 618,639	37 331	70.15
2028	28,584	518,940	45,360	3,788	6,108	0,132	0,407	39,018	2 612,735	37 331	69.99
2029	22,984	541,924	22,376	2,099	4,696	0,065	0,249	30,093	2 603,810	37 331	69.75
2030	16,178	558,102	6,198	0,907	3,213	0,018	0,123	20,439	2 594,156	37 331	69.49
2031	7,130	565,232	0,466	0,167	1,329	0,003	0,034	8,662	2 582,379	37 331	69.18

2008 to 2031 period

70.33

1. Average weighted prospective capital cost of 6.35% authorized by decision D-2007-34 in the context of R-3605-2006
2. Operating and maintenance costs corresponding in 15% of the investment
3. Capital tax according to the Québec Government budget dated April 21, 2005, Renseignements additionnels sur les mesures du budget, Section 1, page 28.
4. Public services tax according to the Québec Government budget dated April 21, 2005, Renseignements additionnels sur les mesures du budget, Section 1, page 133.

Schedule 1 – interconnection of call for tenders C/T 2003-02 (R-3631-2007)

Rate impact, as presented in R-3631-2007, Exhibits HQT-7, Document 1, pages 7 and 8 and HQT-14, Document 1, pages 30 through 33

Table 1.1.1 – 1.2 Rate impact of project over 20 years – Sensitivity test

		<i>Sensitivity Test</i>
Project cost (\$M)	+ 10%	657.4
Estimated contribution of Distributor (\$M)		93.1
Net commissioning (\$M)		564.3
Years of commissioning		Up to 2012
Average weighted prospective capital cost ¹	+ 10%	6.99%
Maintenance and operation ²		1.4 %
Capital tax ³	2008	0.36%
	2009 and up	0.29%
Public services tax (PST) ⁴		0.55%
Number of years		20

Years	Depreciation (\$M)	Cumulative depreciation (\$M)	Additions to rate base (\$M)	Capital Cost (\$M)	Maintenance and operation (\$M)	Capital tax (\$M)	Public services tax (\$M)	Total (\$M)	Revenue required (\$M)	Transmission needs (MW)	Annual rate (\$/kW)
2007									2 573,717	36 341	70.82
2008	4,403	6,481	165,363	7,874	1,715	0,413	0,630	15,035	2 588,751	36 811	70.33
2009	8,468	14,949	330,039	13,282	3,348	0,646	0,909	26,654	2 600,370	36 961	70.36
2010	13,287	28,237	472,701	22,659	5,063	0,956	1,815	43,781	2 617,497	37 061	70.63
2011	19,490	47,726	585,822	32,397	7,241	1,346	2,600	63,073	2 636,790	37 220	70.84
2012	25,010	72,736	584,629	40,057	8,988	1,632	3,222	78,908	2 652,625	37 331	71.06
2013	23,472	96,208	468,092	34,008	7,980	1,357	3,215	70,032	2 643,749	37 331	70.82
2014	23,887	120,095	444,205	31,862	7,980	1,288	2,575	67,592	2 641,309	37 331	70.75
2015	24,604	144,698	419,602	30,168	7,980	1,217	2,443	66,412	2 640,129	37 331	70.72
2016	25,342	170,040	394,260	28,424	7,980	1,143	2,308	65,197	2 638,914	37 331	70.69
2017	26,102	196,142	368,158	26,627	7,980	1,068	2,168	63,946	2 637,662	37 331	70.66
2018	26,885	223,027	341,273	24,777	7,980	0,990	2,025	62,657	2 636,373	37 331	70.62
2019	27,692	250,719	313,581	22,871	7,980	0,909	1,877	61,329	2 635,046	37 331	70.59
2020	28,522	279,241	285,059	20,907	7,980	0,827	1,725	59,962	2 633,678	37 331	70.55
2021	29,378	308,619	255,681	18,885	7,980	0,741	1,568	58,553	2 632,270	37 331	70.51
2022	30,259	338,879	225,421	16,802	7,980	0,654	1,406	57,102	2 630,819	37 331	70.47
2023	31,167	370,046	194,254	14,657	7,980	0,563	1,240	55,608	2 629,324	37 331	70.43
2024	32,102	402,148	162,152	12,447	7,980	0,470	1,068	54,069	2 627,785	37 331	70.39
2025	33,065	435,214	129,086	10,171	7,980	0,374	0,892	52,483	2 626,200	37 331	70.35
2026	33,830	469,043	95,257	7,829	7,885	0,276	0,710	50,529	2 624,246	37 331	70.30
2027	31,554	500,598	63,702	5,539	7,151	0,185	0,524	44,953	2 618,669	37 331	70.15
2028	28,178	528,776	35,524	3,465	6,266	0,103	0,350	38,363	2 612,079	37 331	69.97
2029	21,920	550,696	13,604	1,654	4,632	0,039	0,195	28,441	2 602,158	37 331	69.71
2030	14,330	565,026	0,654	0,450	2,917	0,002	0,075	17,773	2 591,490	37 331	69.42
2031	3,907	568,933	0,579	0,200	0,675	0,015	0,004	4,802	2 578,518	37 331	69.07

2008 to 2031 period

70.39

1. Average weighted prospective capital cost of 6.35% authorized by decision D-2007-34 in the context of R-3605-2006
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Schedule 1 – Interconnection of call for tenders C/T 2003-02 (R-3631-2007)

Rate impact, as presented in R-3631-2007, Exhibits HQT-7, Document 1, pages 7 and 8 and HQT-14, Document 1, pages 30 through 33

Table 1.1.1 – 1.3 Rate impact of project over 40 years

Project cost (\$M)	597.6
Estimated contribution of Distributor (\$M)	33.3
Net commissioning (\$M)	564.3
Years of commissioning	Up to 2012
Average weighted prospective capital cost ¹	6.35%
Maintenance and operation ²	1.0 %
Capital tax ³	2008 0.36%
	2009 and up 0.29%
Public services tax (PST) ⁴	0.55%
Number of years	40

Years	Depreciation (\$M)	Cumulative depreciation (\$M)	Additions to rate base (\$M)	Capital Cost (\$M)	Maintenance and operation (\$M)	Capital tax (\$M)	Public services tax (\$M)	Total (\$M)	Revenue required (\$M)	Transmission needs (MW)	Annual rate (\$/kW)
2007									2 573,717	36 341	70.82
2008	2,926	4,141	152,081	6,584	1,342	0,382	0,577	11,810	2 585,527	36 811	70.24
2009	4,832	8,974	304,652	11,182	2,514	0,602	0,836	19,967	2 593,683	36 961	70.17
2010	7,162	16,135	439,263	19,176	3,741	0,897	1,676	32,650	2 606,367	37 061	70.33
2011	9,749	25,885	550,068	27,633	5,264	1,275	2,416	46,337	2 620,053	37 220	70.39
2012	12,423	38,308	559,298	34,544	6,530	1,564	3,025	58,086	2 631,803	37 331	70.50
2013	13,197	51,504	512,796	33,143	6,450	1,487	3,076	57,353	2 631,069	37 331	70.48
2014	13,556	65,060	499,240	32,132	6,450	1,448	2,820	56,406	2 630,122	37 331	70.45
2015	13,962	79,022	485,278	31,258	6,450	1,407	2,746	55,824	2 629,540	37 331	70.44
2016	14,381	93,403	470,897	30,359	6,450	1,366	2,669	55,224	2 628,941	37 331	70.42
2017	14,813	108,216	456,084	29,432	6,450	1,323	2,590	54,607	2 628,323	37 331	70.41
2018	15,257	123,473	440,827	28,477	6,450	1,278	2,508	53,971	2 627,687	37 331	70.39
2019	15,715	139,187	425,113	27,494	6,450	1,233	2,425	53,316	2 627,032	37 331	70.37
2020	16,186	155,373	408,927	26,481	6,450	1,186	2,338	52,641	2 626,357	37 331	70.35
2021	16,672	172,045	392,255	25,438	6,450	1,138	2,249	51,946	2 625,662	37 331	70.33
2022	17,172	189,217	375,083	24,363	6,450	1,088	2,157	51,230	2 624,946	37 331	70.32
2023	17,687	206,904	357,396	23,256	6,450	1,036	2,063	50,493	2 624,209	37 331	70.30
2024	18,218	225,121	339,179	22,116	6,450	0,984	1,966	49,733	2 623,450	37 331	70.28
2025	18,764	243,885	320,415	20,942	6,450	0,929	1,865	48,951	2 622,667	37 331	70.25
2026	19,263	263,148	301,152	19,733	6,424	0,873	1,762	48,056	2 621,772	37 331	70.23
2027	18,444	281,592	282,708	18,528	6,101	0,820	1,656	45,549	2 619,266	37 331	70.16
2028	16,296	297,888	266,412	17,435	5,592	0,773	1,555	41,650	2 615,366	37 331	70.06
2029	15,290	313,178	251,122	16,432	5,284	0,728	1,465	39,200	2 612,916	37 331	69.99
2030	13,737	326,915	237,385	15,510	4,892	0,688	1,381	36,209	2 609,925	37 331	69.91
2031	12,766	339,681	224,619	14,669	4,602	0,651	1,306	33,993	2 607,710	37 331	69.85
2032	10,954	350,636	213,664	13,915	4,175	0,620	1,235	30,900	2 604,616	37 331	69.77
2033	9,828	360,463	203,837	13,256	3,908	0,591	1,175	28,758	2 602,474	37 331	69.71
2034	10,122	370,586	193,714	12,622	3,908	0,562	1,121	28,336	2 602,052	37 331	69.70
2035	10,426	381,012	183,288	11,970	3,908	0,532	1,065	27,901	2 601,617	37 331	69.69
2036	10,739	391,751	172,549	11,298	3,908	0,500	1,008	27,453	2 601,170	37 331	69.68
2037	11,061	402,812	161,488	10,606	3,908	0,468	0,949	26,992	2 600,709	37 331	69.67
2038	11,393	414,205	150,095	9,893	3,908	0,435	0,888	26,517	2 600,234	37 331	69.65
2039	11,735	425,939	138,361	9,158	3,908	0,401	0,826	26,028	2 599,744	37 331	69.64
2040	12,087	438,026	126,274	8,402	3,908	0,366	0,761	25,524	2 599,241	37 331	69.63
2041	12,449	450,476	113,824	7,623	3,908	0,330	0,695	25,005	2 598,722	37 331	69.61
2042	12,823	463,298	101,002	6,821	3,908	0,293	0,626	24,470	2 598,187	37 331	69.60
2043	13,208	476,506	87,794	5,994	3,908	0,255	0,556	23,920	2 597,636	37 331	69.58
2044	13,604	490,110	74,190	5,143	3,908	0,215	0,483	23,353	2 597,069	37 331	69.57
2045	14,012	504,122	60,178	4,266	3,908	0,175	0,408	22,769	2 596,485	37 331	69.55
2046	14,341	518,462	45,838	3,364	3,864	0,133	0,331	22,032	2 595,748	37 331	69.53
2047	13,752	532,214	32,086	2,474	3,624	0,093	0,252	20,195	2 593,912	37 331	69.48
2048	13,366	545,580	18,720	1,613	3,424	0,054	0,176	18,635	2 592,351	37 331	69.44
2049	10,535	556,115	8,185	0,821	2,560	0,024	0,103	14,042	2 587,759	37 331	69.32
2050	7,360	563,475	0,825	0,286	1,725	0,002	0,045	9,418	2 583,135	37 331	69.20
2051	2,294	565,769	0,512	0,022	0,483	0,004	0,005	2,808	2 576,525	37 331	69.02

2008 to 2051 period

69.95

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Schedule 1 – Interconnection of call for tenders C/T 2003-02 (R-3631-2007)

Rate impact, as presented in R-3631-2007, Exhibits HQT-7, Document 1, pages 7 and 8 and HQT-14, Document 1, pages 30 through 33

Table 1.1.1 – 1.4 Rate impact of project over 40 years – Sensitivity test

		<i>Sensitivity Test</i>
Project cost (\$M)	+ 10%	657.4
Estimated contribution of Distributor (\$M)		93.1
Net commissioning (\$M)		564.3
Years of commissioning		Up to 2012
Average weighted prospective capital cost ¹	+ 10%	6.99%
Maintenance and operation ²		1.1 %
Capital tax ³	2008	0.36%
	2009 and up	0.29%
Public services tax (PST) ⁴		0.55%
Number of years		40

Years	Depreciation (\$M)	Cumulative depreciation (\$M)	Additions to rate base (\$M)	Capital Cost (\$M)	Maintenance and operation (\$M)	Capital tax (\$M)	Public services tax (\$M)	Total (\$M)	Revenue required (\$M)	Transmission needs (MW)	Annual rate (\$/kW)
2007									2 573 717	36 341	70.82
2008	3,219	4,555	167,289	7,967	1,566	0,420	0,634	13,806	2 587,522	36 811	70.29
2009	5,316	9,871	335,118	13,531	2,948	0,662	0,920	23,376	2 597,092	36 961	70.27
2010	7,878	17,749	483,189	23,203	4,392	0,987	1,843	38,302	2 612,018	37 061	70.48
2011	10,724	28,473	605,075	33,436	6,190	1,402	2,658	54,410	2 628,127	37 220	70.61
2012	13,665	42,138	615,227	41,798	7,680	1,721	3,328	68,192	2 641,908	37 331	70.77
2013	13,830	55,968	508,332	36,487	6,943	1,474	3,384	62,118	2 635,835	37 331	70.61
2014	14,142	70,111	494,189	35,013	6,943	1,433	2,796	60,327	2 634,044	37 331	70.56
2015	14,566	84,677	479,623	34,010	6,943	1,391	2,718	59,629	2 633,345	37 331	70.54
2016	15,003	99,680	464,620	32,978	6,943	1,347	2,638	58,910	2 632,626	37 331	70.52
2017	15,454	115,134	449,166	31,914	6,943	1,303	2,555	58,169	2 631,885	37 331	70.50
2018	15,917	131,051	433,249	30,818	6,943	1,256	2,470	57,405	2 631,122	37 331	70.48
2019	16,395	147,446	416,854	29,690	6,943	1,209	2,383	56,619	2 630,336	37 331	70.46
2020	16,886	164,332	399,968	28,528	6,943	1,160	2,293	55,810	2 629,526	37 331	70.44
2021	17,393	181,725	382,575	27,330	6,943	1,109	2,200	54,976	2 628,692	37 331	70.42
2022	17,915	199,640	364,660	26,097	6,943	1,058	2,104	54,117	2 627,833	37 331	70.39
2023	18,452	218,093	346,207	24,827	6,943	1,004	2,006	53,232	2 626,949	37 331	70.37
2024	19,006	237,098	327,202	23,519	6,943	0,949	1,904	52,321	2 626,037	37 331	70.34
2025	19,576	256,675	307,625	22,171	6,943	0,892	1,800	51,382	2 625,099	37 331	70.32
2026	20,093	276,767	287,533	20,784	6,913	0,834	1,692	50,316	2 624,032	37 331	70.29
2027	19,159	295,926	268,374	19,403	6,540	0,778	1,581	47,462	2 621,178	37 331	70.21
2028	16,762	312,689	251,611	18,160	5,951	0,730	1,476	43,079	2 616,796	37 331	70.10
2029	15,621	328,310	235,990	17,029	5,595	0,684	1,384	40,314	2 614,031	37 331	70.02
2030	13,877	342,186	222,114	15,999	5,142	0,644	1,298	36,960	2 610,676	37 331	69.93
2031	12,772	354,958	209,342	15,069	4,806	0,607	1,222	34,475	2 608,191	37 331	69.87
2032	10,741	365,699	198,601	14,247	4,312	0,576	1,151	31,028	2 604,744	37 331	69.77
2033	9,462	375,161	189,139	13,542	4,003	0,549	1,092	28,648	2 602,365	37 331	69.71
2034	9,746	384,907	179,393	12,871	4,003	0,520	1,040	28,181	2 601,897	37 331	69.70
2035	10,038	394,945	169,355	12,180	4,003	0,491	0,987	27,700	2 601,416	37 331	69.69
2036	10,339	405,284	159,016	11,468	4,003	0,461	0,931	27,204	2 600,920	37 331	69.67
2037	10,650	415,934	148,366	10,735	4,003	0,430	0,875	26,693	2 600,410	37 331	69.66
2038	10,969	426,903	137,397	9,980	4,003	0,398	0,816	26,167	2 599,884	37 331	69.64
2039	11,298	438,201	126,099	9,203	4,003	0,366	0,756	25,626	2 599,342	37 331	69.63
2040	11,637	449,838	114,462	8,402	4,003	0,332	0,694	25,068	2 598,784	37 331	69.61
2041	11,986	461,824	102,476	7,577	4,003	0,297	0,630	24,493	2 598,209	37 331	69.60
2042	12,346	474,170	90,130	6,727	4,003	0,261	0,564	23,901	2 597,617	37 331	69.58
2043	12,716	486,886	77,414	5,851	4,003	0,225	0,496	23,291	2 597,008	37 331	69.57
2044	13,098	499,984	64,316	4,950	4,003	0,187	0,426	22,663	2 596,380	37 331	69.55
2045	13,491	513,474	50,826	4,021	4,003	0,147	0,354	22,016	2 595,733	37 331	69.53
2046	13,794	527,269	37,031	3,066	3,951	0,107	0,280	21,198	2 594,914	37 331	69.51
2047	13,087	540,356	23,944	2,129	3,667	0,069	0,204	19,157	2 592,873	37 331	69.46
2048	12,602	552,958	11,342	1,232	3,430	0,033	0,132	17,429	2 591,145	37 331	69.41
2049	9,424	562,383	1,917	0,422	2,404	0,006	0,062	12,319	2 586,035	37 331	69.27
2050	5,734	568,117	1,272	0,071	1,381	0,011	0,010	7,208	2 580,925	37 331	69.14
2051	0,025	568,142	0,961	0,026	0,005	0,001	0,002	0,059	2 573,775	37 331	68.94

2008 to 2051 period

69.99

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