

**LISTE DES «ÉVÉNEMENTS RAPPORTABLES» ET RAPPORT
QUE LE TRANSPORTEUR PRÉPARE, POUR DÉPÔT AU
NPCC, POUR CHACUNE DES OCCASIONS OÙ UNE
INDISPONIBILITÉ RENCONTRE LES CRITÈRES
D'«ÉVÉNEMENT RAPPORTABLE», SOIT UNE PERTE DE
CHARGE DE 300 MW ET PLUS OU UNE PERTE DE
PRODUCTION DE 500 MW ET PLUS ¹**

¹ Décision D-2002-175 du 14 août 2002 (R-3482-2002), Annexe 1.

Événements rapportés au NPCC (CO-8) en 2004

Temps			MW perdus		Événement	T récupération		Fréquence extrême	C-11 %charge/0, 1 Hz	% Récup.		Cause	Caté- gories
Mois	Jour	Heure	Produc- tion	Charge		ACE (T-4)	ACE=0			%APC <1000 (code 1)	%APC >=1000 (code 2)		
Janvier	7	01:22:27	900		Décl. GC1, GC2 à Châteauguay (perte d'import)	05:19	04:45	59.40 Hz	3.27%	100%	-	Problème de permutation du S.A. - décl. d'un disj. 600V surchauffé, perte du syst. de refroidissement du CLC11	3
Avril	20	02:48:15		650	Perte de cuves chez ABI	s/o	06:36	60.54 Hz	2.08%	100%	-	Problème chez le client industriel Aluminerie Bécancour	-
Mai	17	09:39:51	895		Décl. T76 à Churchill falls (A10,A11)	02:54	03:25	59.19 Hz	1.91%	100%	-	Incident technicien CFLCo en travaillant sur la protection du T76	-
	19	12:01:36	757		Décl. T1 à LG4 (A1,A2,A3)	04:13	04:14	59.33 Hz	2.40%	100%	-	Corrosion sur des raccords des TC à la boîte à bornes de la traversée	3
Juin	22	22:13:13	1054		Rejet de production à LG 2A et LG 1 par l'opération de ARC-LG1	02:56	02:57	59.08 Hz	2.44%	-	100%	En isolant L7063 pour contrôle de tension à Radisson, l'opérateur a fermé par erreur le D700-21. Malfunction de l'automatisme ARC-LG1 due à un bas transit entre LG2 et Nemiscau (alarmes incohérentes émises).	2 + 3
	23	21:46:27		634	Perte de charge chez ABI	01:59	01:54	60.54 Hz	2.37%	100%	-	Problème interne à une cuve chez le client industriel Aluminerie Bécancour	-
Juillet	5	17:18:36	2922	1875	Rejet de production à LG 2 par l'opération de RPTC	14:11	14:13	58.68 Hz	4.16%	-	100%	Incident pendant entretien protection L7088, contact entre circuit 69 Vca et 129 Vcc de prot. B. Faux signaux de perte de L7062 et L7063 transmis au RPTC (L7061 au retrait).	2 + 3
Août	11	22:30:00	800		Perte de production à la centrale Chute-des-Passes, réseau Alcan	s/o	01:41	59.33 Hz	2.82%	100%		Foudre	1

s/o : sans objet car ACE à T-4 est positif

* 1: causes naturelles (météo) 2: incident, intervention humaine 3: bris d'appareillage/défaut logiciel

Report No. TQ401071 Date (MMDDYY): 01-07-04 Time (HHMMSS): 01:22:27

QUÉBEC

Origin: Reception loss from NY-ISO of 900 MW at Chateaugay substation.

Cause: Tripping of both converter units caused by an overheated 600V breaker which tripped in the auxiliary services of the static compensator CLC101.

Generation Loss: 900 MW Percent of Loss to First Contingency: 90 %
 Load Loss: _____ MW Maximum Interchange Deviation: 867 MW

Time to return ACE to initial (T-4) value: 05:19 minutes
 Time to return ACE to zero: 04:45 minutes

Runback? (Y/N) N
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Freq. (@T-4) 59.9968 Freq. (after) 0.0157 Freq. Dev. -59.9810

Comments: All associated protections fonctionned normally. No load shedding and no generation loss. CLC101 and both GC1 and GC2 were back on service at 08:37 the same day.

See Comment File: _____ See Graph File(s): _____

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	59.7940	-1989	-1022	-1559
T-56 sec					T+36 sec	59.7940	-1989	-1023	-1559
T-52 sec					T+40 sec	59.8163	-1989	-1023	-1390
T-48 sec	59.9810	-1989	-1882	-144	T+44 sec	59.8377	-1989	-1022	-1229
T-44 sec	59.9810	-1989	-1877	-144	T+48 sec	59.8620	-1989	-1023	-1045
T-40 sec	59.9810	-1989	-1882	-144	T+52 sec	59.8620	-1989	-1018	-1045
T-36 sec	59.9810	-1989	-1877	-144	T+56 sec	59.8620	-1989	-1020	-1045
T-32 sec	59.9810	-1989	-1881	-144	T+60 sec	59.8620	-1989	-1021	-1045
T-28 sec	59.9810	-1989	-1885	-144	T+2 min	59.8810	-1989	-1019	-901
T-24 sec	59.9810	-1989	-1880	-144	T+3 min	59.9440	-1989	-1005	-424
T-20 sec	59.9810	-1989	-1880	-144	T+4 min	59.9810	-1989	-997	-144
T-16 sec	59.9810	-1989	-1880	-144	T+5 min	59.9810	-1989	-986	-144
T-12 sec	59.9630	-1989	-1879	-280	T+6 min	60.0130	-1989	-993	98
T-08 sec	59.9630	-1989	-1881	-280	T+7 min	59.9810	-1989	-995	-144
T-04 sec	59.9750	-1989	-1884	-189	T+8 min	60.0500	-1989	-985	378
T=0 sec	59.9810	-1989	-1879	-144	T+9 min	60.0000	-1989	-985	0
T+04 sec	59.5500	-1989	-1026	-3407	T+10 min	60.0000	-1989	-983	0
T+08 sec	59.4207	-1989	-1050	-4386	T+11 min	60.0000	-1839	-989	0
T+12 sec	59.6060	-1989	-1025	-2983	T+12 min	60.0000	-1839	-980	0
T+16 sec	59.8373	-1989	-1017	-1231	T+13 min	60.0000	-1439	-981	0
T+20 sec	59.9247	-1989	-1018	-570	T+14 min	59.9810	-1289	-982	-144
T+24 sec	59.9000	-1989	-1019	-757	T+15 min	60.0060	-1089	-991	45
T+28 sec	59.7153	-1989	-1025	-1307					

TQ404201

Date (MMDDYY): 04-20-04

Time (HHMMSS): 02:48:15

QUÉBEC

Origin: Load loss of 650 MW at Bécancour substation.

Cause: Explosion of a 25-kV circuit breaker at Aluminerie Bécancour industrial customer.

Generation Loss: _____ MW Percent of Loss to First Contingency: 65 %
 Load Loss: 650 MW Maximum Interchange Deviation: 112 MW

Time to return ACE to initial (T-4) value: _____ minutes

Time to return ACE to zero: 06:36 minutesRunback? (Y/N) NIncluded in DCS? (Y/N) Y

Freq. (@T-4) Freq. (after) Freq. Dev.
60.0015 0.0005 -60.0010

Reviewed by Area? (Y/N) NReviewed by CO-1? (Y/N) N

Comments: _____

See Comment File: _____

See Graph File(s): _____

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	60.2197	-2385	-2275	898
T-56 sec	60.0063	-639	-752		T+36 sec	60.2110	-2385	-2278	936
T-52 sec				-84	T+40 sec	60.1910	-2385	-2274	875
T-48 sec	59.9890	-2385	-2371	-62	T+44 sec	60.1803	-2385	-2277	790
T-44 sec	59.9897	-2385	-2374	-45	T+48 sec	60.2020	-2385	-2291	765
T-40 sec	59.9850	-2385	-2378	-49	T+52 sec	60.2163	-2385	-2318	880
T-36 sec	59.9880	-2385	-2371	-68	T+56 sec	60.2137	-2385	-2316	907
T-32 sec	60.0017	-2385	-2374	-34	T+60 sec	60.2150	-2385	-2315	897
T-28 sec	60.0090	-2385	-2370	19	T+2 min	60.0760	-2385	-2351	269
T-24 sec	60.0220	-2385	-2368	44	T+3 min	60.0600	-2385	-2377	266
T-20 sec	60.0303	-2385	-2372	105	T+4 min	60.0510	-2385	-2375	206
T-16 sec	60.0330	-2385	-2368	131	T+5 min	60.0940	-2385	-2387	417
T-12 sec	60.0310	-2385	-2366	146	T+6 min	60.0510	-2385	-2400	170
T-08 sec	60.0240	-2385	-2372	126	T+7 min	59.9720	-2385	-2435	-113
T-04 sec	60.0107	-2385	-2365	88	T+8 min	59.9730	-2385	-2442	-113
T=0 sec	60.0010	-2385	-2373	28	T+9 min	59.9070	-2385	-2469	-379
T+04 sec	60.1500	-2385	-2272	58	T+10 min	59.9430	-2385	-2479	-279
T+08 sec	60.4787	-2385	-2263	1108	T+11 min	59.9670	-2385	-2449	-124
T+12 sec	60.4310	-2385	-2253	2256	T+12 min	59.9710	-2385	-2425	-127
T+16 sec	60.2160	-2385	-2259	1573	T+13 min	59.9530	-2385	-2432	-178
T+20 sec	60.1313	-2385	-2271	768	T+14 min	60.0270	-2385	-2398	10
T+24 sec	60.1550	-2385	-2275	525	T+15 min	60.0550	-2385	-2361	258
T+28 sec	59.7153	-2385	-2272	721					

TQ405171

Date (MMDDYY): 05-17-04

Time (HHMMSS): 09:39:51

QUÉBEC

Origin: Generation loss of 895 MW at Churchill Falls GS (units 10 and 11).

Cause: Tripping of one 735-kV power transformer (T76) caused by a CFLCO technician working on the protection of the transformer (gas relay).

Generation Loss: 895 MW Percent of Loss to First Contingency: 89.5 %
 Load Loss: _____ MW Maximum Interchange Deviation: 179 MW

Time to return ACE to initial (T-4) value: 02:54 minutesTime to return ACE to zero: 03:25 minutesRunback? (Y/N) NIncluded in DCS? (Y/N) Y

Freq. (@T-4) Freq. (after) Freq. Dev.
60.0163 0.0662 -59.9500

Reviewed by Area? (Y/N) NReviewed by CO-1? (Y/N) N

Comments: No impact on customers in the Hydro-Québec control area.
 The protections fonctionned normally.

See Comment File: _____

See Graph File(s): _____

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	59.7210	-1067	-741	-1510
T-56 sec	60.0083	-1067	-713		T+36 sec	59.7100	-1067	-747	-1534
T-52 sec				19	T+40 sec	59.7113	-1067	-741	-1600
T-48 sec	59.9940	-1067	-717	-58	T+44 sec	59.7307	-1067	-740	-1549
T-44 sec	60.0033	-1067	-714	-25	T+48 sec	59.7350	-1067	-739	-1461
T-40 sec	60.0173	-1067	-715	43	T+52 sec	59.7317	-1067	-748	-1460
T-36 sec	60.0060	-1067	-720	115	T+56 sec	59.7403	-1067	-754	-1470
T-32 sec	59.9937	-1067	-715	17	T+60 sec	59.7440	-1067	-756	-1468
T-28 sec	59.9837	-1067	-712	-55	T+2 min	59.8920	-1067	-734	-518
T-24 sec	59.9700	-1067	-712	-104	T+3 min	59.9510	-1067	-722	-278
T-20 sec	59.9530	-1067	-712	-205	T+4 min	60.0660	-1067	-711	380
T-16 sec	59.9643	-1067	-709	-270	T+5 min	60.0220	-1067	-710	141
T-12 sec	59.9680	-1067	-713	-174	T+6 min	60.0640	-1067	-699	437
T-08 sec	59.9483	-1067	-714	-219	T+7 min	60.0140	-1067	-691	48
T-04 sec	59.9503	-1067	-709	-301	T+8 min	60.0150	-1067	-690	82
T=0 sec	59.9330	-1067	-759	-274	T+9 min	60.0160	-1067	-705	84
T+04 sec	59.4123	-1067	-888	-1135	T+10 min	60.0370	-1067	-703	59
T+08 sec	59.2483	-1067	-821	-3771	T+11 min	60.0420	-1067	-706	170
T+12 sec	59.4450	-1067	-736	-4024	T+12 min	60.0250	-1067	-699	133
T+16 sec	59.6387	-1067	-734	-2749	T+13 min	60.0070	-1067	-707	2
T+20 sec	59.7280	-1067	-734	-1810	T+14 min	60.0620	-1067	-710	325
T+24 sec	59.7410	-1067	-739	-1419	T+15 min	59.9710	-1067	-716	-76
T+28 sec	59.7153	-1067	-738	-1446					

Report No. TQ405191 Date (MMDDYY): 05-19-04 Time (HHMMSS): 12:01:36

QUÉBEC

Origin: Generation loss of 757 MW at La Grande 4 GS (units 1, 2 and 3).
 Cause: Tripping of one 735-kV power transformer (T1) caused by corrosion on some current transformers connectors to the terminal box of a bushing.

Generation Loss: 757 MW Percent of Loss to First Contingency: 75.7 %
 Load Loss: _____ MW Maximum Interchange Deviation: 96 MW

Time to return ACE to initial (T-4) value: 04:13 minutes
 Time to return ACE to zero: 04:14 minutes

Runback? (Y/N) N
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Freq. (@T-4) 59.9690 Freq. (after) 60.0198 Freq. Dev. 0.0508

Comments: The tripping of T1 caused the tripping of a 735-kV line (L7071).
No impact on customers in the Hydro-Quebec control area neither on neighbouring systems.
The protections functionned normally.

See Comment File: _____ See Graph File(s): _____

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	59.7993	-167	-286	-960
T-56 sec	60.0157	-167	-289		T+36 sec	59.8010	-167	-284	-1072
T-52 sec				97	T+40 sec	59.8267	-167	-281	-1006
T-48 sec	60.0200	-167	-291	148	T+44 sec	59.8493	-167	-278	-872
T-44 sec	60.0150	-167	-286	100	T+48 sec	59.8660	-167	-278	-762
T-40 sec	60.0137	-167	-287	83	T+52 sec	59.8623	-167	-278	-699
T-36 sec	60.0060	-167	-287	73	T+56 sec	59.8443	-167	-275	-737
T-32 sec	60.0000	-167	-282	24	T+60 sec	59.8390	-167	-274	-755
T-28 sec	59.9987	-167	-282	-1	T+2 min	59.8560	-167	-257	-780
T-24 sec	59.9940	-167	-285	-11	T+3 min	59.8770	-167	-244	-576
T-20 sec	59.9923	-167	-282	-37	T+4 min	59.9840	-167	-182	-78
T-16 sec	59.9910	-167	-280	-34	T+5 min	60.0490	-167	-168	252
T-12 sec	59.9890	-167	-280	-60	T+6 min	60.0320	-167	-163	260
T-08 sec	59.9963	-167	-278	-49	T+7 min	60.0570	-167	-162	379
T-04 sec	60.0110	-167	-288	-8	T+8 min	59.9970	-167	-164	109
T=0 sec	59.8630	-167	-364	82	T+9 min	60.1050	-167	-161	526
T+04 sec	59.4050	-167	-384	-1435	T+10 min	60.0160	-167	-162	-31
T+08 sec	59.3757	-167	-314	-3331	T+11 min	60.1130	-167	-162	564
T+12 sec	59.5610	-167	-290	-3109	T+12 min	60.0140	-167	-168	116
T+16 sec	59.7200	-167	-287	-2066	T+13 min	60.0290	-167	-164	234
T+20 sec	59.8153	-167	-287	-1311	T+14 min	59.9970	-167	-168	123
T+24 sec	59.8460	-167	-289	-867	T+15 min	60.0390	-167	-159	80
T+28 sec	59.7153	-167	-290	-828					

TQ406221

Date (MMDDYY): 06-22-04

Time (HHMMSS): 22:13:13

QUÉBEC

Origin: Generation rejection of 1054 MW at La Grande 2A GS (units A23 and A24 for 478 MW) and La Grande 1 GS (units A11, A4, A5 and A7 for 576 MW) due to the operation of ARC-LG1 SPS.

Cause: An inadvertent operation of ARC-LG1 SPS was caused by low load-flow between LG2 and Nemiscau substations which sent incoherence alarms to the SPS.

Generation Loss: 1054 MW Percent of Loss to First Contingency: 105.4 %
 Load Loss: _____ MW Maximum Interchange Deviation: 188 MW

Time to return ACE to initial (T-4) value: 02:56 minutes

Time to return ACE to zero: 02:57 minutes

Runback? (Y/N) N

Included in DCS? (Y/N) N

Freq. (@T-4) Freq. (after) Freq. Dev.
 60.0193 0.0322 -59.9870

Reviewed by Area? (Y/N) N

Reviewed by CO-1? (Y/N) N

Comments: T2, T3 and Line 3152 tripped at Radisson substation and lines 3162 and 3163 became de-energized. Poles 1 and 2 were on shutdown and line L7089 was unavailable.
 The protections functionned normally.

See Comment File: _____

See Graph File(s): _____

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	59.7647	-1755	-1798	-462
T-56 sec					T+36 sec	59.7440	-1755	-1802	-475
T-52 sec					T+40 sec	59.7343	-1755	-1800	-511
T-48 sec	59.9700	-1755	-1684	-74	T+44 sec	59.7337	-1755	-1805	-526
T-44 sec	59.9757	-1755	-1685	-59	T+48 sec	59.7410	-1755	-1807	-526
T-40 sec	59.9803	-1755	-1686	-49	T+52 sec	59.7623	-1755	-1814	-501
T-36 sec	59.9930	-1755	-1689	-38	T+56 sec	59.7843	-1755	-1813	-458
T-32 sec	60.0053	-1755	-1684	-7	T+60 sec	59.7900	-1755	-1813	-448
T-28 sec	60.0107	-1755	-1685	16	T+2 min	59.9130	-1755	-1773	-203
T-24 sec	60.0090	-1755	-1677	23	T+3 min	60.0160	-1755	-1757	11
T-20 sec	60.0070	-1755	-1685	18	T+4 min	59.9930	-1755	-1782	17
T-16 sec	60.0083	-1755	-1686	15	T+5 min	59.9430	-1755	-1785	-150
T-12 sec	60.0010	-1755	-1690	18	T+6 min	59.9960	-1755	-1790	-13
T-08 sec	59.9967	-1755	-1691	-2	T+7 min	60.0020	-1755	-1795	-26
T-04 sec	60.0027	-1755	-1688	-3	T+8 min	59.9970	-1755	-1793	-22
T=0 sec	60.0020	-1755	-1691	8	T+9 min	60.0240	-1755	-1794	63
T+04 sec	59.9973	-1755	-1721	1	T+10 min	60.0150	-1755	-1798	25
T+08 sec	59.7593	-1755	-1842	-5	T+11 min	60.0420	-1755	-1801	55
T+12 sec	59.1580	-1755	-1876	-710	T+12 min	60.0060	-1755	-1797	20
T+16 sec	59.1770	-1755	-1812	-1690	T+13 min	60.0240	-1755	-1801	76
T+20 sec	59.4437	-1755	-1790	-1508	T+14 min	60.0190	-1755	-1795	43
T+24 sec	59.6740	-1755	-1798	-954	T+15 min	60.0280	-1755	-1804	37
T+28 sec	59.7153	-1755	-1799	-593					

Report No. TQ406231 Date (MMDDYY): 06-23-04 Time (HHMMSS): 21:46:27

QUÉBEC

Origin: Load loss of 634 MW at Aluminerie Becancour Inc. industrial client.

Cause: Internal tank problem at the client's installation.

Generation Loss: _____ MW Percent of Loss to First Contingency: 63.4 %
 Load Loss: 634 MW Maximum Interchange Deviation: 49 MW

Time to return ACE to initial (T-4) value: 01:59 minutes

Time to return ACE to zero: 01:54 minutes

Runback? (Y/N) N

Included in DCS? (Y/N) Y

Freq. (@T-4) 59.9810 Freq. (after) 59.9643 Freq. Dev. -0.0168

Reviewed by Area? (Y/N) N

Reviewed by CO-1? (Y/N) N

Comments: No impact on other customers in the Hydro-Quebec control area.

See Comment File: _____

See Graph File(s): _____

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec		-739		
T-56 sec					T+36 sec		-739		
T-52 sec					T+40 sec		-739		
T-48 sec		-739			T+44 sec		-739		
T-44 sec		-739			T+48 sec	60.1190	-739	-759	393
T-40 sec		-739			T+52 sec		-739		
T-36 sec		-739			T+56 sec		-739		
T-32 sec		-739			T+60 sec	60.0750	-739	-767	254
T-28 sec		-739			T+2 min	59.9870	-739	-796	-26
T-24 sec		-739			T+3 min	60.0190	-739	-795	101
T-20 sec	59.9810	-739	-807	-8	T+4 min	60.0440	-739	-803	64
T-16 sec					T+5 min	60.0440	-739	-799	67
T-12 sec	59.9810	-739	-805	-20	T+6 min	60.0310	-739	-792	53
T-08 sec	59.9810	-739	-807	-22	T+7 min	60.0190	-739	-789	71
T-04 sec	59.9810	-739	-805	-23	T+8 min	60.0690	-739	-809	218
T=0 sec	59.9810	-739	-805	-38	T+9 min	59.9690	-739	-821	-37
T+04 sec	60.2690	-739	-756	-10	T+10 min	59.9380	-739	-932	-150
T+08 sec	60.4380	-739	-781	609	T+11 min	59.9870	-739	-1002	-34
T+12 sec	60.2500	-739	-762	1323	T+12 min	59.9380	-739	-1049	-102
T+16 sec		-739			T+13 min	59.9310	-739	-1110	-149
T+20 sec		-739			T+14 min	59.9750	-739	-1139	-52
T+24 sec	60.1190	-739	-756	231	T+15 min	60.0130	-739	-1150	50
T+28 sec	59.7153	-739	-756	237					

TQ407051

Date (MMDDYY): 07-05-04

Time (HHMMSS): 17:18:36

QUÉBEC

Origin: Generation rejection of 2922 MW at La Grande-2 GS (10 units).

Cause: During some tests on the protection system of Line 7088 at La Grande-2 substation, a +64 Vcc signal was injected to test a protection relay. But a contact with an adjacent terminal caused the grounding of a battery. RPTC SPS received false indication and operated as designed.

Generation Loss: 2922 MW Percent of Loss to First Contingency: 292.2 %
 Load Loss: 1875 MW Maximum Interchange Deviation: 407 MW

Time to return ACE to initial (T-4) value: 14:11 minutesTime to return ACE to zero: 14:31 minutesRunback? (Y/N) NIncluded in DCS? (Y/N) N

Freq. (@T-4) Freq. (after) Freq. Dev.
59.9900 59.9850 -0.0050

Reviewed by Area? (Y/N) NReviewed by CO-1? (Y/N) N

Comments: Load shedding of 1500 MW by RPTC SPS and load loss of 375 MW. Load was restored at 17:55.
 Transit on Line 7040 to NY-ISIO varied from 1303 to 1081 MW for 6 seconds.
 Line L7061 LG2/Nemiscau was under withdrawal to replace a disconnecting switch at LG2 substation.
 An analysis is being made to prevent any recurrence of this type of event.

See Comment File: _____ See Graph File(s): _____

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec	60.0000	922	925	76	T+32 sec	59.6600	922	854	-848
T-56 sec	60.0000	922	924	9	T+36 sec	59.6600	922	854	-913
T-52 sec					T+40 sec	59.6800	922	854	-891
T-48 sec	60.0000	922	927	-14	T+44 sec	59.6800	922	853	-845
T-44 sec	59.9800	922	928	-30	T+48 sec	59.6800	922	853	-865
T-40 sec	59.9800	922	928	-63	T+52 sec	59.7000	922	859	-822
T-36 sec	59.9800	922	922	-91	T+56 sec	59.7533	922	861	-735
T-32 sec	60.0000	922	922	-62	T+60 sec	59.7600	922	862	-735
T-28 sec	60.0000	922	924	-3	T+2 min	59.8900	922	914	-259
T-24 sec	60.0000	922	925	23	T+3 min	59.9000	922	918	-304
T-20 sec	60.0000	922	925	13	T+4 min	59.8600	922	883	-367
T-16 sec	59.9933	922	926	-8	T+5 min	59.8300	922	937	-447
T-12 sec	59.9900	922	930	-45	T+6 min	59.8600	922	921	-363
T-08 sec	59.9900	922	929	-40	T+7 min	59.8300	922	900	-452
T-04 sec	59.9900	922	928	-30	T+8 min	59.8900	922	910	-292
T=0 sec	59.4900	922	521	-42	T+9 min	59.9100	922	933	-217
T+04 sec	59.2367	922	548	-1078	T+10 min	59.9100	922	909	-248
T+08 sec	58.7300	922	602	-3151	T+11 min	59.9800	922	911	-95
T+12 sec	59.2300	922	787	-2752	T+12 min	59.9600	922	934	-111
T+16 sec	59.3467	922	806	-2318	T+13 min	59.9600	922	942	-47
T+20 sec	59.5800	922	846	-1451	T+14 min	59.9800	922	926	-47
T+24 sec	59.6800	922	848	-914	T+15 min	60.0400	922	945	44
T+28 sec	59.7153	922	850	-892					

TQ408111

Date (MMDDYY): 08-11-04

Time (HHMMSS): 22:30:00

QUÉBEC

Origin: Generation loss of 800 MW at Chute-des-Passes GS, owned by the private producer Alcan.

Cause: Tripping of two lines (L61 and L62) at Ile Maligne substation caused by lightning storm (severe storm conditions).

Generation Loss: 800 MW Percent of Loss to First Contingency: 80 %
 Load Loss: _____ MW Maximum Interchange Deviation: 752 MW

Time to return ACE to initial (T-4) value: _____ minutes

Time to return ACE to zero: 01:41 minutesRunback? (Y/N) NIncluded in DCS? (Y/N) N

Freq. (@T-4) Freq. (after) Freq. Dev.
59.9870 60.0113 0.0242

Reviewed by Area? (Y/N) NReviewed by CO-1? (Y/N) N

Comments: Hydro-Quebec reacted adequately to the frequency variation.

No impact on customers in the Hydro-Quebec Control Area.

See Comment File: _____

See Graph File(s): _____

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	59.8070	1254	1918	-458
T-56 sec	60.0230	1254	1200	47	T+36 sec	59.7830	1254	1917	-593
T-52 sec					T+40 sec	59.7933	1254	1930	-625
T-48 sec	59.9700	1254	1196	-15	T+44 sec	59.8320	1254	1934	-582
T-44 sec	59.9397	1254	1198	-115	T+48 sec	59.8930	1254	1945	-451
T-40 sec	59.9337	1254	1200	-191	T+52 sec	59.9347	1254	1940	-271
T-36 sec	59.9450	1254	1196	-190	T+56 sec	59.9327	1254	1942	-184
T-32 sec	59.9553	1254	1188	-155	T+60 sec	59.9300	1254	1943	-179
T-28 sec	59.9633	1254	1189	-121	T+2 min	60.0340	1254	1981	82
T-24 sec	59.9670	1254	1187	-105	T+3 min	59.9660	1254	1976	-68
T-20 sec	59.9683	1254	1189	-95	T+4 min	59.9960	1254	1975	-2
T-16 sec	59.9770	1254	1192	-90	T+5 min	60.0120	1254	1972	22
T-12 sec	60.0020	1254	1193	-56	T+6 min	60.0030	1254	1960	17
T-08 sec	60.0047	1254	1189	10	T+7 min	60.0770	1484	1936	109
T-04 sec	60.0027	1254	1193	9	T+8 min	60.0450	1484	1933	170
T=0 sec	60.0090	1254	1203	9	T+9 min	59.9920	1484	1876	8
T+04 sec	59.8687	1254	1911	9	T+10 min	60.0090	1484	1885	11
T+08 sec	59.4180	1254	1897	-736	T+11 min	60.0260	1484	1874	74
T+12 sec	59.3840	1254	1931	-1988	T+12 min	60.0410	1484	1878	104
T+16 sec	59.6350	1254	1926	-1601	T+13 min	59.9960	1484	1868	-41
T+20 sec	59.8250	1254	1916	-891	T+14 min	60.0000	1484	1882	-5
T+24 sec	59.8940	1254	1919	-401	T+15 min	60.0080	1834	1881	67
T+28 sec	59.7153	1254	1919	-332					