

RAPPORTS AU NPCC

L'obligation pour Hydro-Québec TransÉnergie de transmettre annuellement à la Régie de l'énergie, en vertu de la décision D-2002-175, une copie des rapports publics qu'elle aura fournis au *Northeast Power Coordinating Council* («*NPCC*») s'applique aux rapports qu'elle sait au départ être de ceux qui seront assurément rendus publics ou mis d'une quelconque façon à la disposition du public, par exemple en les déposant dans un centre de documentation accessible à tous. Aucun tel rapport n'a été déposé par Hydro-Québec TransÉnergie ni requis par le NPCC en 2005.

Tout autre rapport ou donnée déposé par Hydro-Québec TransÉnergie au NPCC n'est accessible qu'aux instances du NPCC (conseil, comités, groupes de travail, etc.) ou aux membres ayant signé le «*Membership Agreement*» du NPCC, qui exige qu'ils respectent la confidentialité des informations requise par ces instances.

D'ailleurs, la Régie de l'énergie est elle-même membre du NPCC, à titre de «membre d'intérêt public» («*Public-Interest Membership*»), soit, entre autres, les organismes de réglementation ayant juridiction sur les «membres réguliers» («*Full Membership*»), soit les entités participant au marché d'électricité interconnecté du nord-est de l'Amérique du Nord, dont Hydro-Québec TransÉnergie fait partie. À ce titre, la Régie de l'énergie, tout en ayant l'obligation de respecter toute confidentialité requise, a le droit d'assister à toutes les réunions des membres réguliers et a accès aux procès-verbaux, rapports et données qui sont déposés par les membres réguliers, par exemple les déclarations de conformité en vertu du *NPCC Reliability Compliance and Enforcement Program*.

Par ailleurs, le Transporteur présente ci-après la liste des événements rapportables au NPCC et les rapports qu'il lui a transmis en 2005.

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)		
Mai	25	14:17:07	855		Décl. intempêtif de L7081	2:17	2:18	59,19 Hz	1,80%	100%	-	Incident, technicien travaillant sur un système de protection au poste Abitibi.	2
Juin	2	13:10:37	1390		Décl. du RMCC phase 2	2:44	02:49	58,96 Hz	2,11%	-	100%	Feux de forêt (court-circuit phase B-N sur L7061).	1
	2	14:50:20	960		Décl. L7061	s/o	11:26	59,13 Hz	2,04%	100%	-	Feux de forêt	1
	2	15:38:40	580		Décl. L7061	s/o	2:41	59,50 Hz	2,43%	100%	-	Feux de forêt (court-circuit phase B-C-N sur L7061).	1
	2	16:13:03	600		Décl. L7061	s/o	2:59	59,47 Hz	2,83%	100%	-	Feux de forêt (court-circuit phases B-C sur L7061).	1
	2	17:48:23	2190	1400	Rejet et DSF lors du décl. du corridor L7063, L7062 et L7061	11:06	11:20	58,89 Hz	2,86%	-	100%	Feux de forêt	1
	6	12:07:15	740		Décl. L7025	s/o	2:06	59,46 Hz	3,31%	100%	-	Foudre sévère	1
	13	10:04:39		630	Perte d'export de 630 MW vers NYISO lors du décl. de GC1 and GC2 à Chateauguay	s/o	2:25	60,42 Hz	6,75%	100%	-	Décl. du T2 par débalancement de surintensité causé par le D300-22 phase B ouverte, tringlerie cassée	3
	14	14:15:48	765		Rejet lorsque l'état HORS de L7018 (au retrait) est transmis une 2e fois de Chamouchouane à Jacques-Cartier	2:26	2:32	59,42 Hz	2,64%	100%	-	Perte de télécommunication: RTPC considère l'état de la ligne EN et au retour des télécom l'état HORS de la ligne est retransmis.	3
23	01:18:36	670		Décl. du A2 lors d'un essai de décharge partielle sur le banc de batteries 250 Vcc	s/o	6:51	59,32 Hz	2,21%	100%	-	Décl. intempêtif du D230-2 à cause d'un problème de MALT sur la commande #2 (via le 125 Vcc) du disjoncteur.	3	
Juillet	1	11:15:42	525		Rejet lors du décl. de L7059	s/o	01:25	59,57 Hz	1,89%	100%		Foudre	1
	11	15:33:15	750		Rejet lors du décl. L7069	s/o	03:45	59,33 Hz	2,70%	100%		Contournement de CXC69 à Albanel, causé par une surchauffe des varistances	3
	14	10:12:54		680	Perte d'export RMCC lors du décl. GC3 et GC4 à Des Cantons	02:58	01:55	60,53 Hz	1,95%	100%	-	Incident pendant qu'un technicien qui cherchait l'origine d'une alarme.	2
	14	12:58:12	1085		Perte prod. lors du décl. L3123 et L3032	02:50	02:51	59,13 Hz	3,59%	-	100%	Foudre	1
	17	13:15:56	2600	1173	Rejet et DSF lors du décl. de L7055 et de L7056	09:46	10:01	58,54 Hz	4,18%	-	100%	L7055: Incident, technicien travaillant la protection. L7056: mauvaise opération de la protection de ligne	2, 3
	19	14:06:24	930		Perte prod. lors du décl. de L3123 and L3032 à Micoua	s/o	03:32	59,32 Hz	1,92%	100%	-	L3123: foudre L3032: mauvaise opération de la protection de ligne	1, 2
	25	05:14:24		645	Décl. L2334, L2345	01:57	01:54	60,56 Hz	1,08%	100%		Foudre près du poste Trois-Rivières et variation de tension sur L2346 et L2379	1

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)		
Août	1	23:07:15	887		Rejet lors du décl. de L3172 et L3173	01:47	01:57	59,32 Hz	2,24%	100%	-	Foudre	1
	9	02:20:57	240	536	Décl. L1611, L1612 et L3026, séparation de LCHM	s/o	01:17	60,34 Hz	3,00%	100%	-	Foudre près de LCHM	1
	9	17:36:51	930		Rejet lors du décl. de L7004	01:54	01:55	59,44 Hz	2,92%	100%	-	Foudre sévère dans la région	1
	12	00:26:30	460		Perte d'import 415 MW de EISO et perte de production de 45 MW Beauh lors du décl. L1291, L1292	01:55	01:58	59,49 Hz	2,28%	100%	-	Surcharge de L1291	3
	28	03:58:54	972 import		Décl. L7040	13:42	13:50	59,08 Hz	2,54%	100%		Erreur d'un technicien à Massena.	-
	28	20:53:33	586		Perte de prod. à LG1 lors du décl. L3153 Radisson/LG1	01:25	01:42	59,57 Hz	3,09%	100%	-	Foudre	1
	29	17:14:00	1142		Perte prod. lors du décl. de L3153 Radisson/LG1	s/o	02:56	59,19 Hz	2,70%	-	100%	Foudre	1
	30	12:33:45	623		Rejet lors du décl. de L7080 Nemiscau/Abitibi	02:45	02:51	59,52 Hz	4,09%	100%	-	Foudre	1
Sept.	1	15:24:50		876	Décl. ligne 2383	03:00	02:59	60,52 Hz	3,01%	100%		Problème chez client ABI, sectionneur en fusion.	-
Déc.	25	16:45:15	880		Perte de production lors du décl. T75 Churchill Falls	s/o	01:45	59,43 Hz	2,66%	100%	-	n/d	-

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

TQ505251 Date (MMDDYY): 05-25-05 Time (HHMMSS): 14:17:07

QUÉBEC

Origin: Generation rejection on units A4, A14 and A15 at La Grande-2 GS.
 Cause: Inadvertant tripping of one 735-kV line (L7081) at Nemiscau and Abitibi substations caused by an incident while a maintenance technician was working on protection at Abitibi substation.

Generation Loss: 855 MW Percent of Loss to First Contingency: 85,5 %
 Load Loss: MW Maximum Interchange Deviation: 171 MW

Time to return ACE to initial (T-4) value: 02:17 minutes
 Time to return ACE to zero: 02:18 minutes
 Runback? (Y/N) N

Freq. (@T-4) 60,0060 Freq. (after) 60,0063 Freq. Dev. 0,0002
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: Unit A16 tripped 3 seconds after, by mechanical protection.
 The protections functionned normally. L7081 returned in service at 14h21.
 The Swanton Village Electric Company, in Vermont, lost 1.38 MW when their UF relays actuated.

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	59,9810	43	60	1790	T+32 sec	59,7800	1776	1707	-778
T-56 sec	59,9720	1776	1782	-117	T+36 sec	59,7600	1776	1712	-833
T-52 sec					T+40 sec	59,7493	1776	1713	-908
T-48 sec	59,9870	1776	1781	-88	T+44 sec	59,7673	1776	1716	-922
T-44 sec	59,9900	1776	1786	-49	T+48 sec	59,8000	1776	1723	-838
T-40 sec	59,9880	1776	1783	-40	T+52 sec	59,8167	1776	1723	-727
T-36 sec	59,9830	1776	1780	-51	T+56 sec	59,8253	1776	1728	-667
T-32 sec	59,9747	1776	1782	-77	T+60 sec	59,8260	1776	1729	-654
T-28 sec	59,9727	1776	1781	-107	T+2 min	59,9690	1776	1759	-153
T-24 sec	59,9690	1776	1782	-108	T+3 min	60,1140	1776	1803	357
T-20 sec	59,9600	1776	1777	-134	T+4 min	59,9960	1776	1794	-9
T-16 sec	59,9553	1776	1774	-168	T+5 min	60,0030	1776	1787	66
T-12 sec	59,9700	1776	1779	-180	T+6 min	60,0400	1776	1792	146
T-08 sec	59,9933	1776	1779	-96	T+7 min	60,0260	1776	1797	121
T-04 sec	60,0047	1776	1779	-10	T+8 min	60,0270	1776	1797	81
T=0 sec	59,8580	1776	1742	25	T+9 min	60,0300	1776	1803	158
T+04 sec	59,3200	1776	1608	-1140	T+10 min	60,0250	1776	1791	114
T+08 sec	59,2560	1776	1610	-2806	T+11 min	60,0120	1776	1787	56
T+12 sec	59,4390	1776	1685	-2656	T+12 min	59,9940	1776	1785	-29
T+16 sec	59,6107	1776	1698	-1914	T+13 min	60,0280	1776	1789	13
T+20 sec	59,7333	1776	1706	-1317	T+14 min	60,0030	1776	1801	35
T+24 sec	59,7960	1776	1703	-893	T+15 min	60,0000	1776	1790	43
T+28 sec	59,7153	1776	1705	-758					

Report No. TQ506021 Date (MMDDYY): 06-02-05 Time (HHMMSS): 13:10:37

QUÉBEC

Origin: Tripping of 5 units (A21,A22,A24,A25,A26) at La Grande-2A GS.
 Cause: Tripping of RMCC phase 2 (DC power lines) caused by forest fire
(Short circuit Phase B-N on line 7061).

Generation Loss: 1390 MW Percent of Loss to First Contingency: 139 %
 Load Loss: _____ MW Maximum Interchange Deviation: 353 MW

Time to return ACE to initial (T-4) value: 02:44 minutes
 Time to return ACE to zero: 02:49 minutes
 Runback? (Y/N) N
 Included in DCS? (Y/N) N
 Freq. (@T-4) 59,9970 Freq. (after) 60,0083 Freq. Dev. 0,0113
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: No impact on customers in the Hydro-Quebec 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	59,71733	1339	1213,943	-1187,64
T-56 sec					T+36 sec	59,7420	1339	1223	-1115
T-52 sec	59,9937	1339	1310	-28	T+40 sec	59,7767	1339	1229	-983
T-48 sec	59,9960	1339	1306	-24	T+44 sec	59,7930	1339	1226	-841
T-44 sec	60,0010	1339	1308	-12	T+48 sec	59,7870	1339	1249	-841
T-40 sec	60,0090	1339	1310	11	T+52 sec	59,7817	1339	1246	-839
T-36 sec	60,0170	1339	1311	45	T+56 sec	59,7597	1339	1243	-863
T-32 sec	60,0200	1339	1308	73	T+60 sec	59,7520	1339	1244	-907
T-28 sec	60,0173	1339	1311	73	T+2 min	59,8610	1339	1246	-667
T-24 sec	60,0140	1339	1313	68	T+3 min	60,0150	1339	1284	143
T-20 sec	59,9943	1339	1312	15	T+4 min	60,0220	1339	1312	85
T-16 sec					T+5 min	60,0020	1339	1319	-1
T-12 sec	59,9820	1339	1312	-34	T+6 min	59,9890	1339	1306	-218
T-08 sec	59,9790	1339	1314	-77	T+7 min	59,9720	1339	1305	-109
T-04 sec	59,9877	1339	1318	-78	T+8 min	60,0140	1339	1322	-50
T=0 sec	59,9970	1339	1316	-35	T+9 min	60,0000	1339	1318	41
T+04 sec	59,8690	1339	1190	-4	T+10 min	59,9890	1339	1317	-34
T+08 sec	58,8277	1339	965	-641	T+11 min	59,9690	1339	1316	-221
T+12 sec	59,1130	1339	1029	-4052	T+12 min	60,0080	1339	2425	-11
T+16 sec	59,4370	1339	1254	-3300	T+13 min	60,0290	1339	2430	96
T+20 sec	59,6510	1339	1221	-1899	T+14 min	59,9810	1339	1329	-78
T+24 sec	59,6500	1339	1210	-1528	T+15 min	60,0150	1339	1339	112
T+24 sec	59,8950	1391	1345	-817	T+15 min	60,0110	1441	1448	40
T+28 sec	59,9320	1339	1215	-1325					

Report No. TQ506022 Date (MMDDYY): 06-02-05 Time (HHMMSS): 14:50:20

QUÉBEC

Origin: Generation rejection of 3 units (13, 14 and 15) at La Grande-2 GS.

Cause: Tripping of one 735-kV line (L7061) caused by forest fire.

Generation Loss: 960 MW Percent of Loss to First Contingency: 96 %
 Load Loss: _____ MW Maximum Interchange Deviation: 269 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 11:26 minutes Runback? (Y/N) N

Freq. (@T-4) 60,0620 Freq. (after) 60,0460 Freq. Dev. -0,0160
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: L7061 was successfully restored at 14:54 and the production was back on line at 14:57.
No impact on customers in the Hydro-Quebec control area.
The SPS and 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	59,8250	1760	1619	-838
T-56 sec					T+36 sec	59,8500	1760	1613	-650
T-52 sec	59,9893	1242	1151	400	T+40 sec	59,8420	1760	1608	-546
T-48 sec	59,9550	1760	1692	-188	T+44 sec	59,8123	1760	1612	-608
T-44 sec	59,9663	1760	1687	-170	T+48 sec	59,8010	1760	1624	-731
T-40 sec	59,9750	1760	1692	-126	T+52 sec	59,7957	1760	1619	-770
T-36 sec	59,9810	1760	1695	-91	T+56 sec	59,7803	1760	1620	-784
T-32 sec	59,9837	1760	1694	-72	T+60 sec	59,7900	1760	1625	-813
T-28 sec	59,9877	1760	1702	-67	T+2 min	59,7710	1760	1614	-850
T-24 sec	59,9990	1760	1701	-39	T+3 min	59,8020	1760	1600	-764
T-20 sec	60,0103	1760	1704	9	T+4 min	59,7890	1760	1603	-814
T-16 sec	60,0257	1760	1704	52	T+5 min	59,7990	1760	1612	-746
T-12 sec	60,0420	1760	1707	125	T+6 min	59,8580	1760	1552	-479
T-08 sec	60,0480	1760	1704	173	T+7 min	59,8830	1760	1500	-479
T-04 sec	60,0580	1760	1707	202	T+8 min	59,9060	1760	1450	-472
T=0 sec	60,0620	1760	1706	246	T+9 min	59,8980	1760	1460	-435
T+04 sec	60,0460	1760	1710	251	T+10 min	59,9230	1625	1488	-333
T+08 sec	59,7250	1760	1647	153	T+11 min	59,9690	1625	1597	-186
T+12 sec	59,1450	1760	1438	-2652	T+12 min	60,0570	1625	1630	243
T+16 sec	59,3223	1760	1578	-3466	T+13 min	60,0740	1625	1628	275
T+20 sec	59,5780	1760	1656	-2417	T+14 min	59,9980	1625	1578	38
T+24 sec	59,6790	1760	1601	-1548	T+15 min	60,0550	1625	1560	187
T+28 sec	59,9320	1760	1598	-1119					

Report No. TQ506023 Date (MMDDYY): 06-02-05 Time (HHMMSS): 15:38:40
QUÉBEC

Origin: Generation rejection of two units (14 and 15) at La Grande-2 GS.

Cause: Tripping of one 735-kV line (L7061) caused by forest fire
(Short circuit Phases B-C-N on line 7061).

Generation Loss: 580 MW Percent of Loss to First Contingency: 58 %
 Load Loss: _____ MW Maximum Interchange Deviation: 111 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 02:41 minutes Runback? (Y/N) N

Freq. (@T-4) 60,0620 Freq. (after) 60,0283 Freq. Dev. -0,0337
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: L7061 was successfully restored at 15:40 and production was back on line at 15:47.
No impact on customers in the Hydro-Quebec control area.
The SPS and 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	59,89	1804	1826	-317
T-56 sec					T+36 sec	59,90	1804	1830	-449
T-52 sec	60,03	1804	1852	106	T+40 sec	59,93	1804	1831	-396
T-48 sec	60,04	1804	1858	141	T+44 sec	59,93	1804	1819	-253
T-44 sec	60,03	1804	1858	142	T+48 sec	59,92	1804	1820	-321
T-40 sec	60,04	1804	1859	144	T+52 sec	59,92	1804	1820	-311
T-36 sec	60,04	1804	1869	150	T+56 sec	59,91	1804	1807	-307
T-32 sec	60,03	1804	1858	149	T+60 sec	59,90	1804	1812	-329
T-28 sec	60,04	1804	1859	141	T+2 min	59,94	1804	1816	-211
T-24 sec	60,04	1804	1862	149	T+3 min	60,05	1804	1873	99
T-20 sec	60,05	1804	1856	165	T+4 min	59,99	1804	1888	-18
T-16 sec	60,05	1804	1861	188	T+5 min	60,05	1804	1926	213
T-12 sec	60,05	1804	1862	209	T+6 min	60,05	1804	1928	257
T-08 sec	60,03	1804	1863	186	T+7 min	60,04	1804	1916	141
T-04 sec	60,01	1804	1867	81	T+8 min	60,05	1804	1916	259
T=0 sec	60,01	1804	1862	31	T+9 min	60,06	1804	1916	263
T+04 sec	59,84	1804	1862	40	T+10 min	60,04	1804	1920	129
T+08 sec	59,42	1804	1756	-793	T+11 min	60,05	1804	1922	231
T+12 sec	59,67	1804	1807	-1849	T+12 min	60,03	1804	1910	58
T+16 sec	59,90	1804	1799	-1129	T+13 min	60,00	1804	1890	11
T+20 sec	60,02	1804	1803	-189	T+14 min	60,07	1815	1898	236
T+24 sec	59,98	1804	1810	-49	T+15 min	60,01	1815	1893	34
T+28 sec	59,93	1804	1825	-70					

Report No. TQ506024 Date (MMDDYY): 06-02-05 Time (HHMMSS): 16:13:03
QUÉBEC

Origin: Generation rejection of two units (14 and 15) at La Grande-2 GS.

Cause: Tripping of one 735-kV line (L7061) caused by forest fire
(Short circuit Phases B-C on line 7061).

Generation Loss: 600 MW Percent of Loss to First Contingency: 60 %
 Load Loss: _____ MW Maximum Interchange Deviation: 87 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 02:59 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) 59,9990 Freq. (after) 60,0080 Freq. Dev. 0,0090

Comments: L7061 was successfully restored at 16:18 and production was back on line at 16:25.
No impact on customers in the Hydro-Quebec control area.
The SPS and the protections fonctionned normally.

See Comment File: _____

See Graph File(s): _____

INTERCHANGE TABLE

Time of Disturbance

Time	F	Sched	Actual	ACE
T-60 sec				
T-56 sec				
T-52 sec				
T-48 sec	59,9770		1412	-149
T-44 sec	59,9893		1408	-85
T-40 sec	59,9927		1414	-42
T-36 sec	59,9960		1421	-30
T-32 sec	59,9963		1416	-18
T-28 sec	60,0010		1419	-10
T-24 sec	60,0040		1418	10
T-20 sec	60,0043		1415	15
T-16 sec	60,0103	1391	1416	26
T-12 sec	60,0048	1391	1417	50
T-08 sec	60,0090	1391	1419	41
T-04 sec	59,9970	1391	1418	33
T=0 sec	59,9750	1391	1416	-33
T+04 sec	59,9723	1391	1426	-130
T+08 sec	59,9813	1391	1464	-120
T+12 sec	59,5090	1391	1331	-712
T+16 sec	59,4623	1391	1385	-2471
T+20 sec	59,7507	1391	1352	-2273
T+24 sec	59,8950	1391	1345	-817
T+28 sec	59,9257	1391	1361	-305

Time	F	Sched	Actual	ACE
T+32 sec	59,8997	1391	1364	-279
T+36 sec	59,8700	1391	1371	-462
T+40 sec	59,8487	1391	1371	-565
T+44 sec	59,8473	1391	1374	-650
T+48 sec	59,8520	1391	1370	-602
T+52 sec	59,8667	1391	1375	-618
T+56 sec	59,8997	1391	1374	-534
T+60 sec	59,9030	1391	1373	-477
T+2 min	60,0020	1391	1399	-14
T+3 min	60,0270	1391	1435	116
T+4 min	60,0050	1391	1459	22
T+5 min	59,9700	1391	1456	-152
T+6 min	60,0280	1441	1475	67
T+7 min	60,0030	1441	1456	1
T+8 min	60,0620	1441	1467	197
T+9 min	59,9770	1441	1454	-89
T+10 min	60,0460	1441	1457	186
T+11 min	60,0410	1441	1470	194
T+12 min	60,0010	1441	1472	-24
T+13 min	59,9830	1441	1462	-73
T+14 min	60,0370	1441	1472	148
T+15 min	60,0110	1441	1448	40

Report No. TQ506025 Date (MMDDYY): 06-02-05 Time (HHMMSS): 17:48:23

QUÉBEC

Origin: Generation rejection of 2190 MW at La Grande-2 GS (units 1, 2, 5, 6, 7, 9 and 10)
 Cause: and load shedding of 1500 MW by the RPTC SPS.
Tripping of three parallel 735-kV lines (7063, 7062 and 7061) caused by forest fire.

Generation Loss: 2190 MW Percent of Loss to First Contingency: 219 %
 Load Loss: 1400 MW Maximum Interchange Deviation: 162 MW

Time to return ACE to initial (T-4) value: 11:05 minutes
 Time to return ACE to zero: 11:20 minutes
 Runback? (Y/N) N

Freq. (@T-4) 60,0060 Freq. (after) 60,0360 Freq. Dev. 0,0300
 Included in DCS? (Y/N) N
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: Frequency deviation corresponding to the three line trippings: 59.25, 59.54 and 59.89 Hz.
Load restoration started at 18:08 and was completed by 18:27.
The SPS and the protections functionned normally.

See Comment File: _____ See Graph File(s): Graph 506025

INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	59,8083	1499	1423	-606
T-56 sec					T+36 sec	59,8190	1499	1416	-687
T-52 sec	59,9927	1499	1488	-8	T+40 sec	59,8217	1499	1405	-675
T-48 sec	59,9950	1499	1479	-21	T+44 sec	59,6110	1499	1375	-642
T-44 sec	59,9943	1499	1482	-32	T+48 sec	59,5590	1499	1379	-1609
T-40 sec	60,0237	1499	1482	5	T+52 sec	59,6803	1499	1372	-1619
T-36 sec	60,0410	1499	1480	123	T+56 sec	59,8033	1499	1361	-1060
T-32 sec	60,0373	1499	1481	158	T+60 sec	59,8020	1499	1372	-945
T-28 sec	60,0293	1499	1477	142	T+2 min	59,5460	1499	1302	-1497
T-24 sec	60,0230	1499	1477	108	T+3 min	59,8080	1499	1337	-517
T-20 sec	60,0113	1499	1483	85	T+4 min	59,6990	1499	1331	-999
T-16 sec	59,9820	1499	1480	15	T+5 min	59,7630	1499	1334	-985
T-12 sec	59,9650	1499	1482	-100	T+6 min	59,7270	1499	1334	-825
T-08 sec	59,9773	1499	1488	-131	T+7 min	59,7360	1499	1350	-853
T-04 sec	60,0000	1499	1488	-68	T+8 min	59,7920	1499	1355	-657
T=0 sec	60,0220	1499	1489	25	T+9 min	59,8360	1499	1369	-488
T+04 sec	59,9767	1499	1464	108	T+10 min	59,9590	1499	1369	-178
T+08 sec	59,2730	1499	1326	-133	T+11 min	59,9640	1499	1352	-89
T+12 sec	59,3770	1499	1370	-2705	T+12 min	60,0490	960	1344	181
T+16 sec	59,6797	1499	1402	-2204	T+13 min	60,0310	960	1297	54
T+20 sec	59,9223	1499	1392	-916	T+14 min	60,0190	960	1186	62
T+24 sec	59,8800	1499	1402	-456	T+15 min	60,0450	960	1158	117
T+28 sec	59,9320	1499	1407,045	-444,778					

Report No. TQ506025 Date (MMDDYY): 06-06-05 Time (HHMMSS): 12:07:15

QUÉBEC

Origin: Generation rejection of three units (4, 5 and 9) at La Grande-4 GS.

Cause: Tripping of one 735-kV line (7025) caused by a severe lightning storm.

Generation Loss: 740 MW Percent of Loss to First Contingency: 74 %
 Load Loss: _____ MW Maximum Interchange Deviation: 87 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 02:06 minutes Runback? (Y/N) N

Freq. (@T-4) 59,9920 Freq. (after) 60,0080 Freq. Dev. 0,0160
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: Back to normal condition at 14:08.

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	59,8997	1391	1364	-279
T-56 sec					T+36 sec	59,8700	1391	1371	-462
T-52 sec					T+40 sec	59,8487	1391	1371	-565
T-48 sec	59,9770	1391	1412	-149	T+44 sec	59,8473	1391	1374	-650
T-44 sec	59,9893	1391	1408	-85	T+48 sec	59,8520	1391	1370	-602
T-40 sec	59,9927	1391	1414	-42	T+52 sec	59,8667	1391	1375	-618
T-36 sec	59,9960	1391	1421	-30	T+56 sec	59,8997	1391	1374	-534
T-32 sec	59,9963	1391	1416	-18	T+60 sec	59,9030	1391	1373	-477
T-28 sec	60,0010	1391	1419	-10	T+2 min	60,0020	1391	1399	-14
T-24 sec	60,0040	1391	1418	10	T+3 min	60,0270	1391	1435	116
T-20 sec	60,0043	1391	1415	15	T+4 min	60,0050	1391	1459	22
T-16 sec	60,0103	1391	1416	26	T+5 min	59,9700	1391	1456	-152
T-12 sec	60,0090	1391	1417	50	T+6 min	60,0280	1441	1475	67
T-08 sec	60,0090	1391	1419	41	T+7 min	60,0030	1441	1456	1
T-04 sec	59,9970	1391	1418	33	T+8 min	60,0620	1441	1467	197
T=0 sec	59,9750	1391	1416	-33	T+9 min	59,9770	1441	1454	-89
T+04 sec	59,9723	1391	1426	-130	T+10 min	60,0460	1441	1457	186
T+08 sec	59,9813	1391	1464	-120	T+11 min	60,0410	1441	1470	194
T+12 sec	59,5090	1391	1331	-712	T+12 min	60,0010	1441	1472	-24
T+16 sec	59,4623	1391	1385	-2471	T+13 min	59,9830	1441	1462	-73
T+20 sec	59,7507	1391	1352	-2273	T+14 min	60,0370	1441	1472	148
T+24 sec	59,8950	1391	1345	-817	T+15 min	60,0110	1441	1448	40
T+28 sec	59,9320	1391	1360,98	-305,431					

Report No. TQ506131 Date (MMDDYY): 06-13-05 Time (HHMMSS): 10:04:39

QUÉBEC

Origin: Exportation loss of 630 MW to Massena (NYISO).
 Cause: Tripping of converter units GC1 and GC2 at Chateauguay substation after a 735-kV transformer (T2) tripped following a circuit breaker failure.

Generation Loss: _____ MW Percent of Loss to First Contingency: 63 %
 Load Loss: 630 MW Maximum Interchange Deviation: 578 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 02:25 minutes Runback? (Y/N) N

Freq. (@T-4) 60,1850 Freq. (after) 60,0070 Freq. Dev. -0,1780
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: T1 was withdrawn.
Converters GC1 and GC2 were energized at 12:50 and the hour ending 14:00 schedule was realized

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	60,1497	2973	2280	741
T-56 sec	60,0377	2973	2783	147	T+36 sec	60,0930	2973	2272	528
T-52 sec	60,0330	2973	2788	149	T+40 sec	60,0423	2973	2265	330
T-48 sec	60,0380	2973	2789	131	T+44 sec	60,0317	2973	2263	123
T-44 sec	60,0370	2973	2793	157	T+48 sec	60,0500	2973	2261	172
T-40 sec	60,0250	2973	2787	138	T+52 sec	60,0513	2973	2256	215
T-36 sec	60,0240	2973	2792	91	T+56 sec	60,0577	2973	2262	213
T-32 sec	60,0310	2973	2804	108	T+60 sec	60,0600	2973	2260	226
T-28 sec	60,0257	2973	2808	127	T+2 min	59,9840	2973	2229	-78
T-24 sec	60,0140	2973	2812	93	T+3 min	60,0280	2973	2196	106
T-20 sec	60,0103	2973	2809	53	T+4 min	59,9860	2973	2206	33
T-16 sec	60,0157	2973	2818	43	T+5 min	60,0050	2973	2206	-33
T-12 sec	60,0590	2973	2821	74	T+6 min	59,9700	2973	2232	-98
T-08 sec	60,0883	2973	2808	275	T+7 min	60,0160	2973	2229	48
T-04 sec	60,1550	2973	2788	374	T+8 min	59,9540	2973	2218	-184
T=0 sec	60,2700	2973	2210	754	T+9 min	59,9860	2973	2228	-98
T+04 sec	60,4433	2973	2287	1221	T+10 min	59,9860	2973	2234	-31
T+08 sec	60,3850	2973	2299	1989	T+11 min	59,9760	2973	2224	-90
T+12 sec	60,1650	2973	2318	1111	T+12 min	60,0240	2273	2236	103
T+16 sec	60,0850	2973	2312	530	T+13 min	59,9870	2273	2219	-74
T+20 sec	60,0867	2973	2288	265	T+14 min	60,0170	2273	2237	84
T+24 sec	60,1490	2973	2281	482	T+15 min	60,0340	2273	2235	100
T+28 sec	59,9320	2973	2276,295	648,9717					

Report No. TQ506141 Date (MMDDYY): 06-14-05 Time (HHMMSS): 14:15:48

QUÉBEC

Origin: Generation rejection of 3 units (A4, A5 and A9) at La Grande-4 GS.

Cause: Telecommunication problem.

Generation Loss: 765 MW Percent of Loss to First Contingency: 76,5 %
 Load Loss: _____ MW Maximum Interchange Deviation: 113 MW

Time to return ACE to initial (T-4) value: 02:26 minutes Runback? (Y/N) N
 Time to return ACE to zero: 02:32 minutes Included in DCS? (Y/N) Y

Freq. (@T-4) Freq. (after) Freq. Dev. Reviewed by Area? (Y/N) Reviewed by CO-1? (Y/N)
59,9890 60,0140 0,0250 N N

Comments: The generating units were back by 14:42.

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	59,8590	2939	2813	-411
T-56 sec					T+36 sec	59,8280	2939	2822	-581
T-52 sec					T+40 sec	59,8227	2939	2824	-666
T-48 sec	60,0330	2939	2869	133	T+44 sec	59,8440	2939	2828	-665
T-44 sec	60,0270	2939	2871	124	T+48 sec	59,8610	2939	2823	-565
T-40 sec	60,0197	2939	2874	98	T+52 sec	59,8797	2939	2819	-503
T-36 sec	60,0130	2939	2876	72	T+56 sec	59,8833	2939	2836	-433
T-32 sec	60,0067	2939	2872	43	T+60 sec	59,8810	2939	2822	-448
T-28 sec	60,0087	2939	2880	26	T+2 min	59,8980	2939	2832	-344
T-24 sec	60,0080	2939	2879	40	T+3 min	60,0880	2939	2906	298
T-20 sec	59,9970	2939	2874	20	T+4 min	60,0080	2939	2886	11
T-16 sec	59,9903	2939	2877	-16	T+5 min	60,0260	2939	2896	105
T-12 sec	59,9800	2939	2881	-48	T+6 min	60,0180	2939	2898	29
T-08 sec	59,9820	2939	2879	-79	T+7 min	60,0040	2939	2883	26
T-04 sec	59,9880	2939	2875	-62	T+8 min	59,9710	2939	2876	-102
T=0 sec	59,9880	2939	2876	-43	T+9 min	60,0120	2939	2872	10
T+04 sec	59,9840	2939	2870	-46	T+10 min	59,9880	2939	2887	27
T+08 sec	59,9800	2939	2861	-65	T+11 min	59,9800	2939	2869	-95
T+12 sec	59,5010	2939	2762	-532	T+12 min	60,0460	2939	2869	183
T+16 sec	59,3930	2939	2822	-2313	T+13 min	60,0380	2939	2899	118
T+20 sec	59,6517	2939	2799	-2368	T+14 min	59,9840	2939	2871	-73
T+24 sec	59,8260	2939	2799	-1040	T+15 min	60,0140	2939	2884	32
T+28 sec	59,9320	2939	2816,967	-522,831					

Report No. TQ506231 Date (MMDDYY): 06-23-05 Time (HHMMSS): 01:18:36

QUÉBEC

Origin: Generation loss at Gently-2 GS (unit 2).
 Cause: The unit tripped during a periodic test sequence and was caused by an insulation failure on the tripping control of a circuit breaker (D230-2).

Generation Loss: 670 MW Percent of Loss to First Contingency: 67 %
 Load Loss: _____ MW Maximum Interchange Deviation: 179 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 06:51 minutes Runback? (Y/N) N

Freq. (@T-4) 59,9450 Freq. (after) 60,0170 Freq. Dev. 0,0720
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: The generating unit was back online at 01:23.

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	59,7600	-2309	-2461	-497
T-56 sec					T+36 sec	59,7440	-2309	-2450	-614
T-52 sec					T+40 sec	59,7640	-2309	-2444	-614
T-48 sec	60,0830	-2309	-2331	172	T+44 sec	59,7873	-2309	-2439	-554
T-44 sec	60,0677	-2309	-2337	194	T+48 sec	59,8240	-2309	-2439	-478
T-40 sec	60,0550	-2309	-2339	149	T+52 sec	59,8280	-2309	-2428	-403
T-36 sec	60,0720	-2309	-2331	134	T+56 sec	59,8303	-2309	-2426	-408
T-32 sec	60,0650	-2309	-2335	172	T+60 sec	59,8450	-2309	-2423	-409
T-28 sec	60,0463	-2309	-2333	151	T+2 min	59,9130	-2309	-2392	-243
T-24 sec	60,0240	-2309	-2332	98	T+3 min	59,9350	-2309	-2395	-133
T-20 sec	60,0150	-2309	-2334	51	T+4 min	59,9450	-2309	-2383	-179
T-16 sec	60,0323	-2309	-2331	37	T+5 min	59,9290	-2309	-2385	-237
T-12 sec	60,0710	-2309	-2330	100	T+6 min	59,9580	-2309	-2382	-100
T-08 sec	60,0403	-2309	-2339	166	T+7 min	60,0130	-2309	-2365	17
T-04 sec	59,9617	-2309	-2342	44	T+8 min	59,9860	-2309	-2358	-19
T=0 sec	59,9270	-2309	-2344	-133	T+9 min	60,0160	-2309	-2352	31
T+04 sec	59,9217	-2309	-2347	-192	T+10 min	59,9610	-2309	-2346	-74
T+08 sec	59,9247	-2309	-2362	-194	T+11 min	60,0110	-2309	-2325	64
T+12 sec	59,4370	-2309	-2518	-342	T+12 min	59,9920	-2309	-2321	10
T+16 sec	59,3077	-2309	-2522	-1683	T+13 min	59,9750	-2309	-2330	-40
T+20 sec	59,5567	-2309	-2402	-1734	T+14 min	60,0920	-2309	-2304	131
T+24 sec	59,6980	-2309	-2444	-957	T+15 min	60,0090	-2309	-2311	30
T+28 sec	59,9320	-2309	-2446,04	-645,229					

Report No. TQ507011 Date (MMDDYY): 07-01-05 Time (HHMMSS): 11:15:42

QUÉBEC

Origin: Generation rejection of two units (5 and 9) at La Grande-4 GS.

Cause: Tripping of on 735-kV line (7059) Albanel-Chissibi caused by a lightning storm.

Generation Loss: 525 MW Percent of Loss to First Contingency: 52,5 %
 Load Loss: _____ MW Maximum Interchange Deviation: 82 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 01:25 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) 60,0100 Freq. (after) 60,0228 Freq. Dev. 0,0128

Comments: At 11:23 the two groups were back on line and at 11:27 line 7059 was restored.
The SPS and the protections functionned normally.

See Comment File: _____ See Graph File(s): Graph 506025

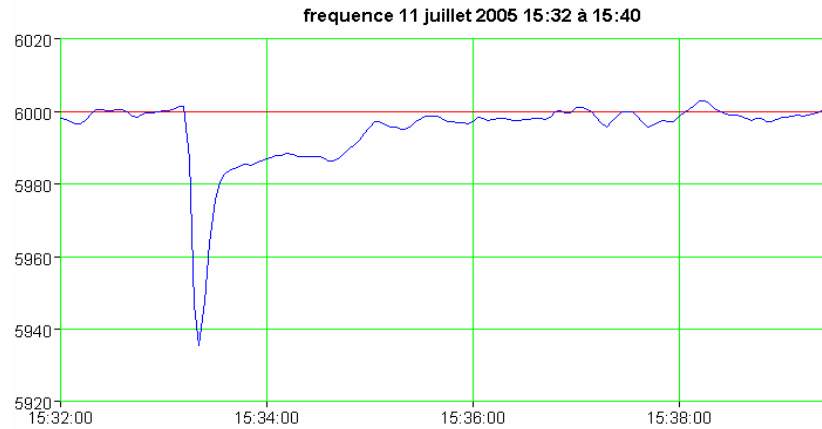
INTERCHANGE TABLE

T = Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	59,8680	1839	1856	-469
T-56 sec	60,0133	728	680	1286	T+36 sec	59,8770	1839	1867	-542
T-52 sec	59,9873	1839	1915	-30	T+40 sec	59,9157	1839	1858	-485
T-48 sec	59,9820	1839	1914	-60	T+44 sec	59,9410	1839	1866	-303
T-44 sec	59,9773	1839	1918	-79	T+48 sec	59,9470	1839	1872	-239
T-40 sec	59,9733	1839	1917	-101	T+52 sec	59,9563	1839	1874	-208
T-36 sec	59,9720	1839	1916	-111	T+56 sec	59,9640	1839	1885	-168
T-32 sec	59,9663	1839	1914	-126	T+60 sec	59,9650	1839	1887	-162
T-28 sec	59,9763	1839	1912	-137	T+2 min	60,0640	1839	1933	232
T-24 sec	59,9890	1839	1913	-85	T+3 min	59,9980	1839	1910	43
T-20 sec	59,9923	1839	1916	-44	T+4 min	59,9550	1839	1896	-179
T-16 sec	59,9997	1839	1915	-27	T+5 min	60,0440	1839	1930	200
T-12 sec	60,0050	1839	1918	7	T+6 min	59,9810	1839	1923	-73
T-08 sec	60,0113	1839	1918	28	T+7 min	60,0830	1839	1949	233
T-04 sec	60,0120	1839	1921	54	T+8 min	59,9880	1839	1932	-59
T=0 sec	60,0080	1839	1909	45	T+9 min	60,0020	1839	1936	32
T+04 sec	59,9613	1839	1881	29	T+10 min	60,0070	1839	1930	50
T+08 sec	59,5730	1839	1859	-203	T+11 min	59,9630	1839	1927	-149
T+12 sec	59,6200	1839	1857	-1691	T+12 min	60,0020	1839	1921	-42
T+16 sec	59,7547	1839	1858	-1501	T+13 min	60,0170	1839	1928	64
T+20 sec	59,8643	1839	1839	-859	T+14 min	60,0310	1839	1925	146
T+24 sec	59,8790	1839	1857	-584	T+15 min	60,0410	1839	1929	132
T+28 sec	59,6660	1839	1867,399	-460,614					

FREQUENCY CHART

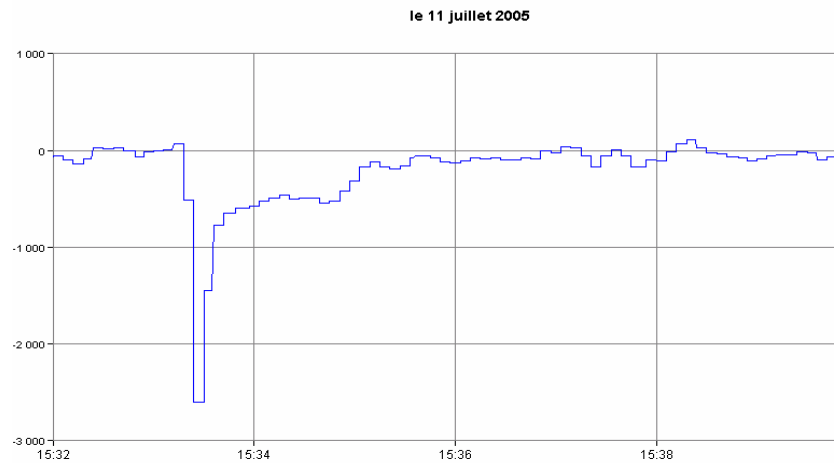
Fr la fréquence pour le 11 juillet 2005 de 15:32 à 15:40
cher min et max



ACE CHART

ut : 11 juillet 2005 de 15:32 à Fin : 11 juillet 2005 de 15:40 seuils inf sup afficher éc 9

ours d'archives : depuis 09 octobre 2004 inclusivement.



ACE DATA

TIME	SYSTCCR ACE		TIME	SYSTCCR ACE
2005-07-11 15:32:00	-65.3700		2005-07-11 15:36:10	-74.9800
2005-07-11 15:32:05	-57.0300		2005-07-11 15:36:15	-74.9800
2005-07-11 15:32:10	-95.9600		2005-07-11 15:36:20	-87.0400
2005-07-11 15:32:15	-141.9000		2005-07-11 15:36:25	-79.0000
2005-07-11 15:32:20	-86.2200		2005-07-11 15:36:30	-95.0600
2005-07-11 15:32:25	25.0800		2005-07-11 15:36:35	-91.0300
2005-07-11 15:32:30	13.9500		2005-07-11 15:36:40	-79.0000
2005-07-11 15:32:40	27.8700		2005-07-11 15:36:45	-79.0000
2005-07-11 15:32:45	0.0000		2005-07-11 15:36:50	-87.0200
2005-07-11 15:32:50	-66.8700		2005-07-11 15:36:55	-5.3500
2005-07-11 15:32:55	-9.7400		2005-07-11 15:37:00	-18.7500
2005-07-11 15:33:00	-9.7400		2005-07-11 15:37:05	42.8500
2005-07-11 15:33:05	-5.5600		2005-07-11 15:37:10	29.4600
2005-07-11 15:33:10	9.7400		2005-07-11 15:37:15	-57.5600
2005-07-11 15:33:15	66.8700		2005-07-11 15:37:20	-57.5600
2005-07-11 15:33:20	-507.5000		2005-07-11 15:37:25	-166.0000
2005-07-11 15:33:25	-2599.0000		2005-07-11 15:37:30	-49.5300
2005-07-11 15:33:30	-1451.0000		2005-07-11 15:37:35	2.6800
2005-07-11 15:33:35	-1451.0000		2005-07-11 15:37:40	-49.5300
2005-07-11 15:33:40	-772.7000		2005-07-11 15:37:45	-166.0000
2005-07-11 15:33:45	-648.1000		2005-07-11 15:37:50	-166.0000
2005-07-11 15:33:50	-598.6000		2005-07-11 15:37:55	-91.0200
2005-07-11 15:33:55	-598.6000		2005-07-11 15:38:00	-91.0200
2005-07-11 15:34:00	-574.5000		2005-07-11 15:38:05	-108.4000
2005-07-11 15:34:05	-519.6000		2005-07-11 15:38:10	-9.3800
2005-07-11 15:34:10	-491.5000		2005-07-11 15:38:15	74.9700
2005-07-11 15:34:15	-464.7000		2005-07-11 15:38:20	115.1000
2005-07-11 15:34:20	-464.7000		2005-07-11 15:38:25	32.1300
2005-07-11 15:34:25	-503.5000		2005-07-11 15:38:30	32.1300
2005-07-11 15:34:30	-491.5000		2005-07-11 15:38:35	-20.0900
2005-07-11 15:34:35	-491.5000		2005-07-11 15:38:40	-34.8100
2005-07-11 15:34:40	-542.3000		2005-07-11 15:38:45	-68.2700
2005-07-11 15:34:45	-542.3000		2005-07-11 15:38:50	-76.3500
2005-07-11 15:34:50	-516.9000		2005-07-11 15:38:55	-107.2000
2005-07-11 15:34:55	-416.5000		2005-07-11 15:39:00	-107.2000
2005-07-11 15:35:00	-312.0000		2005-07-11 15:39:05	-84.3800
2005-07-11 15:35:05	-171.4000		2005-07-11 15:39:10	-57.5900
2005-07-11 15:35:10	-112.5000		2005-07-11 15:39:15	-40.7200
2005-07-11 15:35:15	-170.1000		2005-07-11 15:39:20	-42.0800
2005-07-11 15:35:20	-170.1000		2005-07-11 15:39:25	-8.1400
2005-07-11 15:35:25	-191.5000		2005-07-11 15:39:30	-8.1400
2005-07-11 15:35:30	-158.0000		2005-07-11 15:39:35	-21.7000
2005-07-11 15:35:35	-72.3200		2005-07-11 15:39:40	-96.3700
2005-07-11 15:35:40	-50.8800		2005-07-11 15:39:45	-65.1600
2005-07-11 15:35:45	-76.3200		2005-07-11 15:39:50	-95.0200
2005-07-11 15:35:50	-76.3200		2005-07-11 15:39:55	-100.5000
2005-07-11 15:35:55	-113.8000		2005-07-11 15:40:00	44.8000

Report No. TQ507141 Date (MMDDYY): 07-14-05 Time (HHMMSS): 10:12:48

QUÉBEC

Origin: Loss of export of 660 MW on the high-voltage DC tie (RMCC) phase 1 (Des Cantons and Monroe).
 Cause: Tripping of convertor units GC3 and GC4 at Des Cantons substation caused by a technician who was seeking the origin of an alarm.

Generation Loss: _____ MW Percent of Loss to First Contingency: 68 %
 Load Loss: 680 MW (export) Maximum Interchange Deviation: 1 096 MW

Time to return ACE to initial (T-4) value: 02:58 minutes
 Time to return ACE to zero: 01:55 minutes

Freq. (@T-4)	Freq. (after)	Freq. Dev.	Runback? (Y/N)	<u>N</u>
<u>59,9700</u>	<u>60,0148</u>	<u>0,0448</u>	Included in DCS? (Y/N)	<u>Y</u>
			Reviewed by Area? (Y/N)	<u>N</u>
			Reviewed by CO-1? (Y/N)	<u>N</u>

Comments: The interconnection was restored in service by using phase 2 of the RMCC (Radisson, Nicolet, Sandy Pond).
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	60,1647	1831	1218	527
T-56 sec					T+36 sec	60,1530	1831	1225	636
T-52 sec					T+40 sec	60,1277	1831	1218	589
T-48 sec	59,9670	1831	1849	-93	T+44 sec	60,1123	1831	1227	476
T-44 sec	59,9567	1831	1846	-140	T+48 sec	60,1300	1831	1227	484
T-40 sec	59,9593	1831	1840	-175	T+52 sec	60,1247	1831	1222	520
T-36 sec	59,9740	1831	1846	-148	T+56 sec	60,1010	1831	1221	483
T-32 sec	59,9953	1831	1841	-82	T+60 sec	60,1120	1831	1222	436
T-28 sec	60,0133	1831	1838	5	T+2 min	59,9780	1831	1192	-36
T-24 sec	60,0070	1831	1841	64	T+3 min	60,0000	1831	1170	-78
T-20 sec	59,9803	1831	1840	-60	T+4 min	60,0280	1831	1191	95
T-16 sec					T+5 min	60,0030	1831	1182	-24
T-12 sec	59,9790	1831	1841	-80	T+6 min	59,9930	1831	1183	-49
T-08 sec	59,9817	1831	1842	-78	T+7 min	59,9940	1831	1178	-39
T-04 sec	59,9737	1831	1842	-76	T+8 min	60,0320	1831	1140	105
T=0 sec	59,9690	1831	1843	-113	T+9 min	59,9740	1831	1124	-144
T+04 sec	59,9690	1831	1842	-123	T+10 min	60,0160	1831	1137	55
T+08 sec	60,2140	1831	746	-123	T+11 min	59,9920	1831	1171	-3
T+12 sec	60,5150	1831	1225	1675	T+12 min	60,0230	1831	1178	131
T+16 sec	60,3510	1831	1219	2142	T+13 min	60,0100	1831	1180	55
T+20 sec	60,1253	1831	1238	1217	T+14 min	60,0480	1831	1184	81
T+24 sec	60,1060	1831	1248	524	T+15 min	60,0130	1831	1194	32
T+28 sec	59,6660	1831	1244	379					

Report No. TQ507142 Date (MMDDYY): 07-14-05 Time (HHMMSS): 12:58:12

QUÉBEC

Origin: Generation loss of 611 MW at Manic-5 GS (units 55, 56, 57 and 58) and of 474 MW at Toulnostouc GS (units 1 and 2).

Cause: Tripping of two 325-kV lines (3123 Micoua-Toulnostouc and 3032 Micoua-Manic 5) due to a lightning strike.

Generation Loss: 1085 MW Percent of Loss to First Contingency: 109 %
 Load Loss: _____ MW Maximum 265 MW

Time to return ACE to initial (T-4) value: 02:50 minutes
 Time to return ACE to zero: 02:51 minutes

Freq. (@T-4) 59,98 Freq. (after) 59,99725 Freq. Dev. 0,01725
 Runback? (Y/N) N
 Included in DCS? (Y/N) N
 Reviewed by Area? (Y/N) N
 Reviewed N

Comments: At 13:02 lines were energized.
At 13:03 Manic-5 units were back on line and at 13:30 Toulnostouc units were available.

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	59,8747	1738	1849	-450
T-56 sec					T+36 sec	59,8320	1738	1863	-546
T-52 sec	59,9833	1738	1877	-86	T+40 sec	59,8053	1738	1883	-652
T-48 sec	59,9860	1738	1872	-55	T+44 sec	59,8037	1738	1858	-745
T-44 sec	59,9933	1738	1888	-51	T+48 sec	59,8300	1738	1875	-685
T-40 sec	60,0093	1738	1881	-4	T+52 sec	59,8620	1738	1890	-614
T-36 sec	60,0090	1738	1887	46	T+56 sec	59,9123	1738	1890	-483
T-32 sec	60,0043	1738	1892	30	T+60 sec	59,9120	1738	1883	-412
T-28 sec	60,0030	1738	1900	16	T+2 min	59,9650	2035	1977	-131
T-24 sec	60,0050	1738	1907	10	T+3 min	60,0040	2035	1986	22
T-20 sec	60,0163	1738	1907	29	T+4 min	59,9940	2035	2030	-20
T-16 sec	60,0277	1738	1901	79	T+5 min	60,0720	2035	2051	258
T-12 sec	60,0210	1738	1909	113	T+6 min	60,0270	2035	2089	125
T-08 sec	60,0033	1738	1906	63	T+7 min	60,0230	2035	2107	66
T-04 sec	59,9873	1738	1909	-3	T+8 min	60,1030	2035	2164	367
T=0 sec	59,9710	1738	1948	-68	T+9 min	60,0000	2035	2146	16
T+04 sec	59,6697	1738	1797	-121	T+10 min	59,9990	2035	2134	-7
T+08 sec	58,8883	1738	1644	-1507	T+11 min	60,0070	2035	2147	16
T+12 sec	59,3330	1738	1778	-3103	T+12 min	60,0260	2035	2152	63
T+16 sec	59,5890	1738	1876	-2271	T+13 min	59,9550	2035	2141	-114
T+20 sec	59,7483	1738	1809	-1286	T+14 min	60,0150	2035	2149	3
T+24 sec	59,7890	1738	1860	-1010	T+15 min	59,9930	2035	2152	-20
T+28 sec	59,8610	1738	1852	-707					

Report No. TQ507171 Date (MMDDYY): 07-17-05 Time (HHMMSS): 13:15:56
QUÉBEC

Origin: Generation rejection of 2600 MW at La Grande-4, Laforge-1, Laforge-2 and Brisay GS.

Cause: Tripping of one 735-kV line (7055) due to an error of a technician working on a protection system of this line, followed by the tripping of line 7056 due to a misoperation of a protection system of this line.

Generation Loss: 2600 MW Percent of Loss to First Contingency: 260 %
 Load Loss: 1173 MW Maximum Interchange Deviation: 486 MW

Time to return ACE to initial (T-4) value: 09:46 minutes
 Time to return ACE to zero: 10:01 minutes

Freq. (@T-4)	Freq. (after)	Freq. Dev.	Runback? (Y/N)	<u>N</u>
<u>59,9910</u>	<u>59,9885</u>	<u>-0,0025</u>	Included in DCS? (Y/N)	<u>N</u>
			Reviewed by Area? (Y/N)	<u>N</u>
			Reviewed by CO-1? (Y/N)	<u>N</u>

Comments: The third line of the corridor was out of service for periodic maintenance.
Underfrequency load shedding SPS tripped 1173 MW.
At 13:44 the lines were back on service and at 14:00 all the load was restored.

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	59,6050	3009	2930	-1212
T-56 sec	59,9770	977	1063	2001	T+36 sec	59,6200	3009	2937	-1321
T-52 sec	59,9663	3009	3067	-123	T+40 sec	59,6240	3009	2929	-1321
T-48 sec	59,9640	3009	3065	-142	T+44 sec	59,6463	3009	2934	-1305
T-44 sec	59,9780	3009	3069	-133	T+48 sec	59,7100	3009	2937	-1134
T-40 sec	59,9993	3009	3071	-68	T+52 sec	59,7233	3009	2936	-969
T-36 sec	59,9970	3009	3066	19	T+56 sec	59,7500	3009	2934	-952
T-32 sec	59,9767	3009	3064	-34	T+60 sec	59,7640	3009	2949	-910
T-28 sec	59,9693	3009	3068	-107	T+2 min	59,7780	3009	2966	-748
T-24 sec	59,9710	3009	3069	-126	T+3 min	59,7890	3009	2971	-735
T-20 sec	59,9663	3009	3064	-122	T+4 min	59,8340	3009	2974	-525
T-16 sec	59,9630	3009	3065	-144	T+5 min	59,8410	3009	2989	-510
T-12 sec	59,9690	3009	3068	-152	T+6 min	59,8690	3009	2983	-474
T-08 sec	59,9773	3009	3066	-118	T+7 min	59,8580	3009	2994	-470
T-04 sec	59,9853	3009	3062	-84	T+8 min	59,9620	3009	3000	-218
T=0 sec	59,9910	3009	3066	-54	T+9 min	59,9140	3009	3006	-343
T+04 sec	59,7083	3009	2611	-29	T+10 min	60,0040	3009	3035	-8
T+08 sec	57,9173	3009	2576	-1264	T+11 min	59,9040	3009	3010	-373
T+12 sec	59,0100	3009	2723	-5054	T+12 min	59,9710	3009	3013	-120
T+16 sec	59,5353	3009	2931	-2922	T+13 min	59,9860	3009	3013	-119
T+20 sec	59,7657	3009	2946	-1155	T+14 min	60,0080	3009	3056	65
T+24 sec	59,7220	3009	2920	-990	T+15 min	59,9890	3009	3055	11
T+28 sec	59,6660	3009	2918	-961					

Report No. TQ507191 Date (MMDDYY): 07-19-05 Time (HHMMSS): 14:06:24
QUÉBEC

Origin: Generation loss of 470 MW at Toulustouc GS and of 460 MW at Manic-5 GS.

Cause: A double-circuit 325-kV line (L3123 and L3032) tripped at Micoua substation, due to a lightning strike. L3032 tripped because of an inadvertant operation of the line protection.

Generation Loss: 930 MW Percent of Loss to First Contingency: 93 %
 Load Loss: _____ MW Maximum Interchange Deviation: 134 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 03:32 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) 60,0500 Freq. (after) 60,0170 Freq. Dev. -0,0330

Comments: L3123 dit not reclose because the reclosing device was "OFF" at Toulustouc GS.
At 14:07, lines were energized. Manic-5 groups were back on line at 14:09 and Toulustouc groups at 15:51.

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

INTERCHANGE TABLE

Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec	60,0000		2696	4	T+32 sec	59,8397	2652	2617	-637
T-56 sec	59,9990		2688	2	T+36 sec	59,8570	2652	2620	-625
T-52 sec					T+40 sec	59,8633	2652	2626	-553
T-48 sec	59,9960		2690	-36	T+44 sec	59,8653	2652	2623	-536
T-44 sec	60,0120		2687	2	T+48 sec	59,8720	2652	2624	-524
T-40 sec	60,0247		2689	62	T+52 sec	59,8830	2652	2630	-494
T-36 sec	60,0320		2688	114	T+56 sec	59,9010	2652	2634	-439
T-32 sec	60,0340		2685	133	T+60 sec	59,9050	2652	2635	-420
T-28 sec	60,0407		2687	147	T+2 min	59,9080	2652	2641	-348
T-24 sec	60,0380		2690	175	T+3 min	59,9400	2652	2660	-236
T-20 sec	60,0353		2691	151	T+4 min	60,0500	2652	2701	200
T-16 sec	60,0373	2652	2695	147	T+5 min	60,0140	2652	2701	58
T-12 sec	60,0048	2652	2700	156	T+6 min	60,0110	2652	2684	63
T-08 sec	60,0650	2652	2703	237	T+7 min	60,0480	2652	2700	74
T-04 sec	60,0543	2652	2672	261	T+8 min	60,0030	2652	2688	10
T=0 sec	59,6520	2652	2541	198	T+9 min	60,0290	2652	2691	101
T+04 sec	59,3730	2652	2538	-1776	T+10 min	59,9750	2652	2677	-90
T+08 sec	59,5710	2652	2601	-2319	T+11 min	60,0350	2652	2692	150
T+12 sec	59,7900	2652	2608	-1435	T+12 min	60,0000	2652	2697	38
T+16 sec	59,8577	2652	2604	-738	T+13 min	60,0400	2652	2692	155
T+20 sec	59,8563	2652	2610	-551	T+14 min	60,0210	2652	2692	80
T+24 sec	59,8460	2652	2614	-573	T+15 min	60,0070			
T+28 sec	59,8377	2652	2617	-615					

Report No. TQ507251 Date (MMDDYY): 07-25-05 Time (HHMMSS): 05:14:24

QUÉBEC

Origin: Load loss of 165 MW at Trois-Rivières substation and of 480 MW at Mauricie substation.
 Cause: Tripping of two 230-kV lines (2334, 2345) caused by a lightning strike near Trois-Rivières substation and voltage reduction on lines 2346 and 2379 (Trois-Rivières-Mauricie) causing load losses on industrial customers.

Generation Loss: _____ MW Percent of Loss to First Contingency: 64,5 %
 Load Loss: 645 MW Maximum Interchange Deviation: 154 MW

Time to return ACE to initial (T-4) value: 01:57 minutes
 Time to return ACE to zero: 01:54 minutes

Freq. (@T-4) 59,8000 Freq. (after) 60,0073 Freq. Dev. 0,2073
 Runback? (Y/N) N
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: At 05:14:26 lines were energized.
The SPS and 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	60,2210	-746	-687	653
T-56 sec	59,9767	-746	-842	-70	T+36 sec	60,1580	-746	-663	534
T-52 sec	59,9767	-746	-841	-64	T+40 sec	60,1207	-746	-674	410
T-48 sec	59,9690	-746	-842	-67	T+44 sec	60,1250	-746	-663	311
T-44 sec	59,9713	-746	-843	-85	T+48 sec	60,1500	-746	-662	392
T-40 sec	59,9747	-746	-843	-80	T+52 sec	60,1580	-746	-660	428
T-36 sec	59,9800	-746	-840	-66	T+56 sec	60,1410	-746	-638	448
T-32 sec	59,9877	-746	-837	-50	T+60 sec	60,1330	-746	-650	411
T-28 sec	59,9923	-746	-832	-30	T+2 min	59,9770	-746	-701	-42
T-24 sec	59,9860	-746	-821	-20	T+3 min	59,9940	-746	-720	49
T-20 sec	59,9820	-746	-812	-44	T+4 min	59,9890	-746	-714	-47
T-16 sec	59,9960	-746	-808	-45	T+5 min	59,9900	-746	-709	-13
T-12 sec	60,0120	-746	-806	2	T+6 min	60,0160	-746	-701	35
T-08 sec	59,9987	-746	-805	25	T+7 min	60,0060	-746	-712	-28
T-04 sec	59,9793	-746	-792	-16	T+8 min	60,0000	-746	-710	-30
T=0 sec	59,9700	-746	-763	-72	T+9 min	60,0150	-746	-713	87
T+04 sec	60,1380	-746	-739	-87	T+10 min	60,0230	-746	-712	11
T+08 sec	60,6493	-746	-693	505	T+11 min	59,9960	-746	-716	-37
T+12 sec	60,3960	-746	-668	1529	T+12 min	59,9950	-746	-720	-26
T+16 sec	60,1680	-746	-638	968	T+13 min	59,9890	-746	-711	-35
T+20 sec	60,0700	-746	-647	311	T+14 min	60,0250	-746	-708	23
T+24 sec	60,1520	-746	-673	320	T+15 min	60,0200	-746	-717	75
T+28 sec	59,6660	-746	-681	462					

Report No. TQ508011 Date (MMDDYY): 08-01-05 Time (HHMMSS): 23:07:15

QUÉBEC

Origin: Generation rejection at Laforge-1 GS (units 11,13,15), Laforge-2 GS (21,22) and Brisay GS (1,2).

Cause: Tripping of two 315-kV lines (3172 and 3173) between Tilly and Nikamo substations caused by a severe lightning strike (simultaneous strikes on lines 3172 and 3173).

Generation Loss: 887 MW Percent of Loss to First Contingency: 88,7 %
 Load Loss: _____ MW Maximum Interchange Deviation: 110 MW

Time to return ACE to initial (T-4) value: 01:47 minutes
 Time to return ACE to zero: 01:57 minutes Runback? (Y/N) N

Freq. (@T-4) 60,0300 Freq. (after) 60,0085 Freq. Dev. -0,0215
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: MHTO SPS tripped in an orderly manner lines 3166, 3167, 3168, 3169, 3170 and 3171.
Laforge-2 was restored in service at 23:28, Brisay at 23:34 and Laforge-1 at 23:40.
All protection systems and SPS functioned 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	59,8113	907	1305	-590
T-56 sec					T+36 sec	59,8030	907	1304	-654
T-52 sec	60,0443	907	1537	92	T+40 sec	59,8057	907	1312	-683
T-48 sec	60,0510	907	1520	187	T+44 sec	59,8150	907	1297	-667
T-44 sec	60,0307	907	1522	171	T+48 sec	59,8060	907	1298	-657
T-40 sec	60,0113	907	1519	95	T+52 sec	59,8087	907	1286	-671
T-36 sec	60,0060	907	1517	27	T+56 sec	59,8197	907	1288	-652
T-32 sec	60,0033	907	1508	23	T+60 sec	59,8220	907	1290	-634
T-28 sec	59,9840	907	1507	-1	T+2 min	60,0160	907	1266	37
T-24 sec	59,9640	907	1507	-82	T+3 min	60,0410	907	1244	133
T-20 sec	59,9517	907	1501	-143	T+4 min	60,0960	907	1017	364
T-16 sec	59,9417	907	1495	-191	T+5 min	59,9840	907	964	-46
T-12 sec	59,9420	907	1491	-221	T+6 min	60,0140	907	962	62
T-08 sec	59,9563	907	1392	-215	T+7 min	60,0130	907	960	50
T-04 sec	60,0157	907	1395	-112	T+8 min	59,9840	907	961	-22
T=0 sec	60,0460	907	1393	119	T+9 min	59,9860	907	957	-70
T+04 sec	60,0340	907	1401	190	T+10 min	60,0050	907	969	-13
T+08 sec	59,9203	907	1338	105	T+11 min	59,9990	907	960	-79
T+12 sec	59,3310	907	1296	-1626	T+12 min	60,0070	907	977	18
T+16 sec	59,4737	907	1298	-2521	T+13 min	59,9970	907	971	-9
T+20 sec	59,7030	907	1284	-1684	T+14 min	60,0160	907	966	70
T+24 sec	59,7780	907	1286	-975	T+15 min	60,0140	907	954	47
T+28 sec	59,8810	907	1293	-691					

Report No. TQ508092 Date (MMDDYY): 08-09-05 Time (HHMMSS): 17:36:51
QUÉBEC

Origin: Generation rejection at Manic-5 GS (units 55,56,57) and Manic-5-PA GS (units 41,42).

Cause: Tripping of a 735-kV line (7004) between Micoua and Laurentides substations caused by a lightning strike (severe thunderstorm in the region).

Generation Loss: 930 MW Percent of Loss to First Contingency: 93 %
 Load Loss: _____ MW Maximum Interchange Deviation: 90 MW

Time to return ACE to initial (T-4) value: 01:54 minutes
 Time to return ACE to zero: 01:55 minutes

Freq. (@T-4)	Freq. (after)	Freq. Dev.	Runback? (Y/N)	<u>N</u>
<u>60,0000</u>	<u>60,0158</u>	<u>0,0157</u>	Included in DCS? (Y/N)	<u>Y</u>
			Reviewed by Area? (Y/N)	<u>N</u>
			Reviewed by CO-1? (Y/N)	<u>N</u>

Comments: At 17:42 line 7004 was back online and at 17:49 all the rejected generators were back online.
All protection systems and SPS functioned 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	59,88	3577	3517	-430
T-56 sec					T+36 sec	59,84	3577	3527	-551
T-52 sec	60,00	3577	3590	15	T+40 sec	59,82	3577	3529	-652
T-48 sec	60,00	3577	3587	-10	T+44 sec	59,82	3577	3536	-717
T-44 sec	59,99	3577	3585	-22	T+48 sec	59,83	3577	3528	-718
T-40 sec	59,99	3577	3584	-55	T+52 sec	59,88	3577	3537	-640
T-36 sec	59,99	3577	3583	-56	T+56 sec	59,92	3577	3524	-415
T-32 sec	59,99	3577	3582	-43	T+60 sec	59,91	3577	3528	-388
T-28 sec	59,99	3577	3584	-26	T+2 min	60,01	3577	3549	38
T-24 sec	59,99	3577	3587	-28	T+3 min	60,06	3577	3593	240
T-20 sec	59,99	3577	3580	-58	T+4 min	59,95	3577	3583	-222
T-16 sec	59,99	3577	3586	-52	T+5 min	60,01	3577	3608	3
T-12 sec	59,99	3577	3590	-45	T+6 min	60,07	3577	3627	280
T-08 sec	60,00	3577	3587	-26	T+7 min	60,03	3577	3631	193
T-04 sec	60,00	3577	3589	-8	T+8 min	60,04	3577	3619	85
T=0 sec	60,01	3577	3591	25	T+9 min	60,01	3577	3633	107
T+04 sec	60,03	3577	3547	51	T+10 min	60,02	3577	3610	43
T+08 sec	59,82	3577	3546	120	T+11 min	60,04	3577	3617	170
T+12 sec	59,44	3577	3536	-1861	T+12 min	60,02	3577	3605	86
T+16 sec	59,58	3577	3521	-2346	T+13 min	60,01	3577	3604	45
T+20 sec	59,76	3577	3499	-1530	T+14 min	60,06	3577	3598	212
T+24 sec	59,84	3577	3517	-894	T+15 min	59,98	3577	3591	-89
T+28 sec	59,88	3577	3526	-564					

Report No. TQ508121 Date (MMDDYY): 08-12-05 Time (HHMMSS): 00:26:30
QUÉBEC

Origin: Loss of import of 415 MW from EISO and generation loss of 45 MW at Beauharnois CO GS.

Cause: Tripping of two 120-kV lines (1291, 1292) at Beauharnois CO GS caused by an overload on the line 1291.

Generation Loss: 460 MW Percent of Loss to First Contingency: 46 %
 Load Loss: _____ MW Maximum Interchange Deviation: 361 MW

Time to return ACE to initial (T-4) value: 01:55 minutes
 Time to return ACE to zero: 01:58 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) 59,9900 Freq. (after) 60,0033 Freq. Dev. 0,0132

Comments: _____

See Comment File: _____

See Graph File(s): _____

INTERCHANGE TABLE

Time of Disturbance

Time	F	Sched	Actual	ACE	Time	F	Sched	Actual	ACE
T-60 sec					T+32 sec	59,8747	-1066	-762	-373
T-56 sec	59,9897	-1066	-1095	-454	T+36 sec	59,8970	-1066	-757	-348
T-52 sec	60,0063	-1066	-1097	12	T+40 sec	59,9010	-1066	-757	-276
T-48 sec	59,9990	-1066	-1095	16	T+44 sec	59,8617	-1066	-743	-279
T-44 sec	60,0037	-1066	-1093	-1	T+48 sec	59,8670	-1066	-748	-399
T-40 sec	60,0103	-1066	-1091	18	T+52 sec	59,8790	-1066	-740	-373
T-36 sec	60,0070	-1066	-1094	30	T+56 sec	59,8927	-1066	-754	-336
T-32 sec	59,9923	-1066	-1099	8	T+60 sec	59,9010	-1066	-748	-325
T-28 sec	59,9997	-1066	-1096	-27	T+2 min	60,0110	-1066	-693	9
T-24 sec	60,0080	-1066	-1087	15	T+3 min	60,0330	-1066	-667	100
T-20 sec	60,0033	-1066	-1099	22	T+4 min	59,9720	-1066	-703	-113
T-16 sec	59,9840	-1066	-1097	-4	T+5 min	60,0350	-1086	-693	93
T-12 sec	60,0048	-1066	-1096	-59	T+6 min	59,9960	-1086	-686	31
T-08 sec	59,9907	-1066	-1100	-46	T+7 min	60,0160	-1086	-684	52
T-04 sec	60,0020	-1066	-1100	-19	T+8 min	60,0220	-1086	-684	16
T=0 sec	60,0060	-1066	-1103	14	T+9 min	60,0200	-1086	-683	74
T+04 sec	59,9967	-1066	-1009	18	T+10 min	60,0740	-1086	-667	229
T+08 sec	59,7307	-1066	-1100	-18	T+11 min	59,9810	-1086	-686	-55
T+12 sec	59,5120	-1066	-751	-1281	T+12 min	60,0220	-1086	-693	28
T+16 sec	59,6627	-1066	-775	-1427	T+13 min	60,0140	-1086	-681	87
T+20 sec	59,8167	-1066	-778	-855	T+14 min	59,9950	-1086	-684	-3
T+24 sec	59,8410	-1066	-778	-552	T+15 min	59,9820	-1086	-682	-45
T+28 sec	59,8637	-1066	-770	-419					

Report No. TQ508281 Date (MMDDYY): 08-28-05 Time (HHMMSS): 03:58:51

QUÉBEC

Origin: Loss of import from NYISO at Chateauguay substation.
 Cause: Tripping of a 735-kV line (7040) between Chateauguay and Massena substations caused by an error of a technician at Massena substation.

Generation Loss: 972 MW Percent of Loss to First Contingency: 97.2 %
 Load Loss: _____ MW Maximum Interchange Deviation: 1 119 MW

Time to return ACE to initial (T-4) value: 13:42 minutes
 Time to return ACE to zero: 13:50 minutes
 Runback? (Y/N) N

Freq. (@T-4) 59,9800 Freq. (after) 59,9783 Freq. Dev. -0,0017
 Included in DCS? (Y/N) N
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: The import was restored at 05:54.

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	59,7403	-2666	-1752	-675
T-56 sec	59,9860	-2666	-2598	-50	T+36 sec	59,7720	-2666	-1723	-592
T-52 sec	59,9933	-2666	-2598	-28	T+40 sec	59,7720	-2666	-1741	-516
T-48 sec	59,9990	-2666	-2595	-11	T+44 sec	59,7453	-2666	-1734	-538
T-44 sec	60,0050	-2666	-2596	2	T+48 sec	59,7280	-2666	-1733	-608
T-40 sec	60,0097	-2666	-2594	14	T+52 sec	59,7427	-2666	-1726	-650
T-36 sec	60,0100	-2666	-2594	25	T+56 sec	59,7790	-2666	-1727	-595
T-32 sec	60,0000	-2666	-2593	18	T+60 sec	59,7800	-2666	-1729	-556
T-28 sec	59,9860	-2666	-2593	-7	T+2 min	59,9090	-2462	-1660	-226
T-24 sec	59,9720	-2666	-2599	-42	T+3 min	59,9090	-2462	-1622	-211
T-20 sec	59,9730	-2666	-2593	-68	T+4 min	59,8710	-2462	-1597	-322
T-16 sec	59,9930	-2666	-2588	-54	T+5 min	59,8660	-2462	-1575	-330
T-12 sec	59,9970	-2666	-2591	-2	T+6 min	59,8880	-2461	-1553	-290
T-08 sec	59,9943	-2666	-2591	-10	T+7 min	59,8630	-2461	-1508	-314
T-04 sec	59,9970	-2666	-2589	-10	T+8 min	59,7980	-2448	-1436	-475
T=0 sec	59,9830	-2666	-2597	-7	T+9 min	59,8100	-2448	-1402	-443
T+04 sec	59,5163	-2666	-1470	-50	T+10 min	59,8530	-2448	-1338	-377
T+08 sec	58,8097	-2666	-1874	-1410	T+11 min	59,9300	-1219	-1263	-163
T+12 sec	59,3360	-2666	-1779	-2032	T+12 min	59,9410	-1168	-1240	-144
T+16 sec	59,5827	-2666	-1777	-1404	T+13 min	59,9620	-1168	-1230	-60
T+20 sec	59,6743	-2666	-1786	-837	T+14 min	60,0110	-1168	-1196	12
T+24 sec	59,6730	-2666	-1769	-826	T+15 min	59,9990	-1168	-1196	18
T+28 sec	59,8810	-2666	-1757	-748					

Report No. TQ508291 Date (MMDDYY): 08-29-05 Time (HHMMSS): 17:14:00

QUÉBEC

Origin: Generation loss at La Grande-1 GS (11 units).

Cause: Tripping of one 315-kV line (3153) between Radisson and La Grande-1 substations caused by a lightning strike.

Generation Loss: 1142 MW Percent of Loss to First Contingency: 114,2 %
 Load Loss: _____ MW Maximum Interchange Deviation: 186 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 02:56 minutes Runback? (Y/N) N

Freq. (@T-4) 60,0100 Freq. (after) 60,0345 Freq. Dev. 0,0245
 Included in DCS? (Y/N) N
 Reviewed by Area? (Y/N) N
 Reviewed by CO-1? (Y/N) N

Comments: Line 3153 and groups were back in service at 17:22.

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	59,7630	1915	1845	-959
T-56 sec					T+36 sec	59,7890	1915	1852	-917
T-52 sec					T+40 sec	59,8010	1915	1847	-795
T-48 sec	60,0050	1915	1938	45	T+44 sec	59,7813	1915	1848	-765
T-44 sec	60,0037	1915	1941	19	T+48 sec	59,7870	1915	1846	-862
T-40 sec	60,0017	1915	1942	12	T+52 sec	59,8043	1915	1856	-820
T-36 sec	60,0000	1915	1942	4	T+56 sec	59,8083	1915	1849	-750
T-32 sec	59,9973	1915	1940	-6	T+60 sec	59,8120	1915	1851	-762
T-28 sec	60,0033	1915	1938	-3	T+2 min	59,9170	1915	1870	-344
T-24 sec	59,9930	1915	1935	16	T+3 min	60,0040	1915	1921	22
T-20 sec	59,9983	1915	1941	-27	T+4 min	60,0240	1915	1928	122
T-16 sec	60,0130	1915	1938	14	T+5 min	59,9910	1915	1926	-38
T-12 sec	60,0040	1915	1936	59	T+6 min	60,0070	1915	1927	18
T-08 sec	60,0053	1915	1944	16	T+7 min	59,9890	1915	1930	-37
T-04 sec	60,0067	1915	1944	27	T+8 min	60,0130	1915	1931	20
T=0 sec	59,9990	1915	1938	23	T+9 min	60,0110	1915	1938	40
T+04 sec	59,9897	1915	1939	-11	T+10 min	60,0150	1915	1945	60
T+08 sec	59,9637	1915	1940	-51	T+11 min	60,0310	1915	1947	124
T+12 sec	59,2070	1915	1758	-1792	T+12 min	59,9970	1915	1951	20
T+16 sec	59,3243	1915	1837	-3534	T+13 min	60,0480	1915	1957	155
T+20 sec	59,6033	1915	1851	-2522	T+14 min	60,0640	1915	1963	263
T+24 sec	59,6880	1915	1832	-1487	T+15 min	60,0290	1915	1962	92
T+28 sec	59,7413	1915	1844	-1128					

Report No. TQ508301 Date (MMDDYY): 08-30-05 Time (HHMMSS): 12:33:45

QUÉBEC

Origin: Generation rejection at La Grande-2 GS (units 3 and 5).
 Cause: Tripping of a 735-kV line (7080) between Nemiscau and Abitibi substation caused by a lightning strike.

Generation Loss: 623 MW Percent of Loss to First Contingency: 62,3 %
 Load Loss: _____ MW Maximum Interchange Deviation: 102 MW

Time to return ACE to initial (T-4) value: 02:45 minutes
 Time to return ACE to zero: 02:51 minutes

Freq. (@T-4) 60,0045 Freq. (after) 0,0145 Freq. Dev. -59,9900
 Runback? (Y/N) N
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed 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	59,9207	2162	2139	-286
T-56 sec					T+36 sec	59,9230	2162	2145	-295
T-52 sec	59,9737	2162	2185	-122	T+40 sec	59,9177	2162	2146	-301
T-48 sec	59,9840	2162	2194	-100	T+44 sec	59,9007	2162	2149	-327
T-44 sec	59,9957	2162	2200	-51	T+48 sec	59,8880	2162	2145	-400
T-40 sec	60,0017	2162	2199	-9	T+52 sec	59,8853	2162	2158	-449
T-36 sec	60,0060	2162	2204	12	T+56 sec	59,8843	2162	2155	-445
T-32 sec	60,0063	2162	2205	25	T+60 sec	59,8800	2162	2146	-448
T-28 sec	60,0017	2162	2197	23	T+2 min	59,9500	2162	2156	-192
T-24 sec	59,9950	2162	2210	0	T+3 min	60,0210	2162	2198	36
T-20 sec	60,0003	2162	2205	-19	T+4 min	60,0260	2162	2206	120
T-16 sec	60,0050	2162	2205	13	T+5 min	60,0220	2162	2216	141
T-12 sec	59,9990	2162	2204	15	T+6 min	60,0340	2162	2216	153
T-08 sec	59,9957	2162	2198	-9	T+7 min	60,0280	2162	2215	113
T-04 sec	59,9923	2162	2198	-19	T+8 min	60,0090	2162	2206	-7
T=0 sec	59,9830	2162	2201	-36	T+9 min	60,0100	2162	2189	69
T+04 sec	59,9257	2162	2186	-79	T+10 min	60,0190	2162	2192	102
T+08 sec	59,4767	2162	2095	-341	T+11 min	60,0010	2162	2191	5
T+12 sec	59,6060	2162	2115	-1833	T+12 min	59,9880	2162	2189	-100
T+16 sec	59,7740	2162	2107	-1432	T+13 min	60,0210	2162	2188	43
T+20 sec	59,8703	2162	2101	-714	T+14 min	60,0230	2162	2164	66
T+24 sec	59,8950	2162	2120	-513	T+15 min	59,9860	2162	2142	-3
T+28 sec	59,8810	2162	2133	-371					

Report No. TQ509011 Date (MMDDYY): 09-01-05 Time (HHMMSS): 15:24:50

QUÉBEC

Origin: Load loss at Bécancour substation at three industrial clients: ABI, Nordk Hydro and PCI.

Cause: Tripping of a 230-kV line (2383) between Nicolet and Bécancour substations caused by a melted disconnecting switch at Aluminium Bécancour Inc. (ABI).

Generation Loss: _____ MW Percent of Loss to First Contingency: 87,6 %
 Load Loss: 876 MW Maximum Interchange Deviation: 172 MW

Time to return ACE to initial (T-4) value: 03:00 minutes
 Time to return ACE to zero: 02:59 minutes

Freq. (@T-4) 59,9900 Freq. (after) 59,9938 Freq. Dev. 0,0037
 Runback? (Y/N) N
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed 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	60,1567	2228	2364	461
T-56 sec					T+36 sec	60,1650	2228	2355	581
T-52 sec					T+40 sec	60,1850	2228	2361	642
T-48 sec	59,9920	2228	2238	-46	T+44 sec	60,1817	2228	2355	726
T-44 sec	60,0033	2228	2248	-19	T+48 sec	60,1640	2228	2355	663
T-40 sec	60,0173	2228	2254	26	T+52 sec	60,1507	2228	2372	613
T-36 sec	60,0200	2228	2249	80	T+56 sec	60,1440	2228	2360	558
T-32 sec	60,0090	2228	2251	66	T+60 sec	60,1460	2228	2361	562
T-28 sec	60,0077	2228	2251	28	T+2 min	60,1180	2228	2330	448
T-24 sec	60,0170	2228	2250	34	T+3 min	60,0070	2228	2247	-6
T-20 sec	60,0107	2228	2257	57	T+4 min	59,9920	2228	2237	-67
T-16 sec	60,0067	2228	2251	35	T+5 min	60,0570	2228	2271	250
T-12 sec	60,0030	2228	2255	22	T+6 min	59,9930	2228	2262	-3
T-08 sec	59,9997	2228	2255	9	T+7 min	59,9860	2228	2226	-63
T-04 sec	59,9937	2228	2251	-3	T+8 min	59,9900	2228	2242	-63
T=0 sec	59,9830	2228	2252	-34	T+9 min	60,0020	2228	2250	14
T+04 sec	59,9803	2228	2248	-73	T+10 min	60,0050	2228	2258	44
T+08 sec	60,0527	2228	2306	-80	T+11 min	59,9760	2228	2248	-114
T+12 sec	60,5140	2228	2351	1228	T+12 min	59,9840	2228	2239	-76
T+16 sec	60,4087	2228	2343	2199	T+13 min	59,9910	2228	2229	-110
T+20 sec	60,1567	2228	2423	1455	T+14 min	60,0070	2228	2244	-37
T+24 sec	60,1170	2228	2375	599	T+15 min	59,9930	2228	2237	-44
T+28 sec	60,1210	2228	2373	396					

Report No. TQ512251 Date (MMDDYY): 12-25-05 Time (HHMMSS): 16:45:15

QUÉBEC

Origin: Generation loss at Churchill Falls GS (units 8 and 9).

Cause: Tripping of a 735-kV transformer (T75) at Churchill Falls substation.

Generation Loss: 880 MW Percent of Loss to First Contingency: 88 %
 Load Loss: _____ MW Maximum Interchange Deviation: 170 MW

Time to return ACE to initial (T-4) value: _____ minutes
 Time to return ACE to zero: 01:45 minutes Runback? (Y/N) N

Freq. (@T-4) 60,0060 Freq. (after) 59,9858 Freq. Dev. -0,0203
 Included in DCS? (Y/N) Y
 Reviewed by Area? (Y/N) N
 Reviewed 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	59,9123	-1892	-2027	-353
T-56 sec					T+36 sec	59,8570	-1892	-2030	-477
T-52 sec	60,0043	-1892	-1953	14	T+40 sec	59,8330	-1892	-2019	-659
T-48 sec	60,0040	-1892	-1949	21	T+44 sec	59,8440	-1892	-2029	-740
T-44 sec	59,9983	-1892	-1949	9	T+48 sec	59,8750	-1892	-2022	-632
T-40 sec	59,9970	-1892	-1951	-10	T+52 sec	59,9070	-1892	-2027	-505
T-36 sec	59,9930	-1892	-1956	-12	T+56 sec	59,9223	-1892	-2018	-361
T-32 sec	59,9917	-1892	-1953	-34	T+60 sec	59,9190	-1892	-2019	-374
T-28 sec	59,9970	-1892	-1952	-35	T+2 min	60,0350	-1892	-1954	128
T-24 sec	60,0040	-1892	-1948	-4	T+3 min	60,0190	-1892	-1941	23
T-20 sec	60,0147	-1892	-1948	30	T+4 min	60,0170	-1892	-1937	62
T-16 sec	60,0213	-1892	-1947	82	T+5 min	60,0390	-1892	-1919	164
T-12 sec	60,0170	-1892	-1947	95	T+6 min	60,0320	-1892	-1923	157
T-08 sec	60,0123	-1892	-1947	73	T+7 min	60,0030	-1892	-1924	3
T-04 sec	60,0070	-1892	-1940	43	T+8 min	60,0100	-1892	-1913	135
T=0 sec	60,0060	-1892	-1940	31	T+9 min	60,0110	-1892	-1933	59
T+04 sec	59,9633	-1892	-2012	25	T+10 min	60,0050	-1892	-1933	-6
T+08 sec	59,3857	-1892	-2110	-201	T+11 min	59,9940	-1892	-1909	26
T+12 sec	59,5280	-1892	-2053	-2420	T+12 min	59,9790	-1892	-1875	-71
T+16 sec	59,7280	-1892	-2063	-1887	T+13 min	60,0070	-1892	-1824	-14
T+20 sec	59,8680	-1892	-2056	-953	T+14 min	59,9810	-1892	-1789	-77
T+24 sec	59,8840	-1892	-2036	-634	T+15 min	59,9760	-1351	-1743	-94
T+28 sec	59,9107	-1892	-2036	-453					