

Balancing Authority ACE Limit Proof-of-Concept Field Trial Project 2010-14

Hydro Quebec Update Discussion
June 27, 2011

DISCUSSION STARTING AT 2:00 PM EDT

Bob Klueber – Midwest ISO

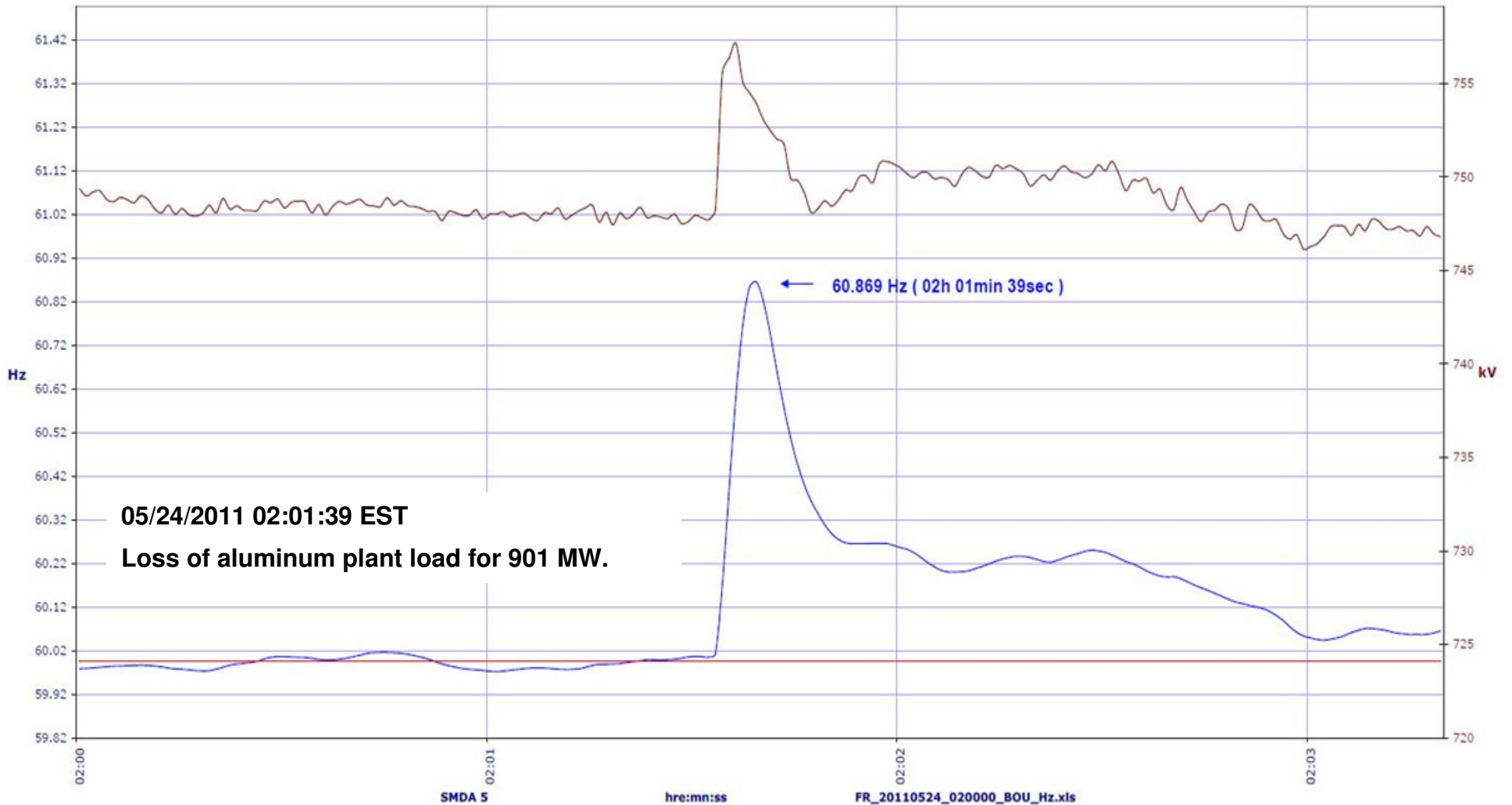
Balancing Authority Reliability-based Control Standard Drafting Team
(BARCSDT)

Frequency Data Summary

Month	May-11
Time above 60.1 Hz from 3 second data (minutes)	36.7
Median time in seconds for frequency excursions above 60.10 Hz	6
Time above 60.1 Hz from 1 minute data (minutes)	7
# of events with at least one 1 minute average frequency above 60.1 Hz	5
# of instances above 60.1 Hz for more than 30 minutes	0
Consecutive minutes above 60.1 Hz for high event #1 (at 2011-05-11 05:19:00)	1
Consecutive minutes above 60.1 Hz for high event #2 (at 2011-05-15 02:55:00)	1
Consecutive minutes above 60.1 Hz for high event #3 (at 2011-05-21 05:08:00)	1
Consecutive minutes above 60.1 Hz for high event #4 (at 2011-05-24 02:02:00)	2
Consecutive minutes above 60.1 Hz for high event #5 (at 2011-05-27 17:07:00)	2
Time below 59.9 Hz from 3 second data (minutes)	15.4
Median time in seconds for frequency excursions below 59.90 Hz	6
Time below 59.9 Hz from 1 minute data (minutes)	5
# of events with at least one 1 minute average frequency below 59.9 Hz	5
Consecutive minutes below 59.9 Hz for low event #1 (at 2011-05-05 06:04:00)	1
Consecutive minutes below 59.9 Hz for low event #2 (at 2011-05-20 06:01:00)	1
Consecutive minutes below 59.9 Hz for low event #3 (at 2011-05-27 00:10:00)	1
Consecutive minutes below 59.9 Hz for low event #4 (at 2011-05-29 10:06:00)	1
Consecutive minutes below 59.9 Hz for low event #5 (at 2011-05-29 19:11:00)	1
# of instances below 59.9 Hz for more than 30 minutes	0

05/24/2011 02:02 EST
2 minute duration above 60.1 Hz

Défaut sur la ligne L1618 à l'installation Arnaud - 02:01:39 le 24 mai 2011
(Perte de charge 941MW (Décl. L1618 : 40 MW , Perte Aluminerie Alouette : 901 MW))
Tension et fréquence à Boucherville



05/29/2011 19:11 EST
1 minute duration below 59.9 Hz

Décl. ligne L7072 (protection de secours du groupe A6 (décl. A4,A5,A6) - LG4) - 19:11:26 le 29 mai 2011

(Perte de production 748MW)

Tension et fréquence à Tilly

