Q. Please provide the 30-year weather data that serves as a basis for long term load forecasting, including date and time of peak hour, amount of peak, and associated temperature and wind values.

A. The following table provides the historical weather data that serves as a basis for Hydro's long-term load forecasting. Please note that the weather data Hydro tracks is associated with NP's native winter peak demand which is the major weather dependent load on the Island Interconnected System. The weather information provided in the table is a weighted average[1] of weather records for the St. John's, Gander and Stephenville airports. Please also note that Hydro calculates and uses the wind chill values in its load forecast model.

[1] Weightings are the percentage of each regions electricity sales (in kWh) relative to total electricity sales (in kWh).

	NP Native Winter Peak			Peak Weather Conditions		
	MW	Date	Time	Temperature (°C)	Wind Speed (Kph)	Calculated Wind Chill (°C)
1976	585	12/10/76	na	-14.0	53	-27.5
1977	584	12/13/77	na	-11.0	35	-21.5
1978	640	12/11/78	na	-9.3	49	-20.7
1979	664	12/11/79	na	-11.1	48	-23.1
1980	663	12/22/80	17:30	-11.6	39	-22.9
1981	716	01/18/82	17:00	-12.3	56	-25.4
1982	732	01/04/83	18:00	-14.1	32	-25.2
1983	743	12/21/83	16:55	-10.4	43	-21.6
1984	834	12/27/84	16:45	-17.7	48	-32.0
1985	826	03/10/86	11:45	-16.9	43	-30.4
1986	848	12/09/86	10:45	-15.1	59	-29.5
1987	886	01/15/88	12:00	-14.2	57	-28.1
1988	957	02/17/89	19:15	-16.9	46	-30.8
1989	1069	02/03/90	17:25	-20.9	51	-36.7
1990	1041	01/08/91	17:00	-16.7	34	-29.0
1991	1088	03/02/92	17:00	-16.2	54	-30.6
1992	1015	01/20/93	17:36	-16.6	32	-28.5
1993	1086	02/09/94	08:15	-21.7	29	-34.7
1994	1019	02/13/95	18:00	-9.6	69	-22.8
1995	1104	01/16/96	17:45	-14.4	46	-27.4
1996	1060	12/31/96	17:15	-8.3	52	-19.6
1997	1049	01/07/98	17:30	-15.6	34	-27.4
1998	1023	12/23/98	18:00	-5.5	55	-16.1
1999	996	01/06/00	17:45	-8.7	34	-18.4
2000	1025	12/24/00	17:45	-5.6	47	-15.6
2001	1176	01/31/02	18:00	-16.7	53	-31.2
2002	1118	02/15/03	18:15	-15.8	33	-27.5
2003	1099	02/16/04	18:00	-14.1	30	-24.8
2004	1167	12/06/04	17:15	-9.1	52	-20.6
2005	1131	01/23/06	17:45	-11.6	50	-23.9
2006	1142	12/29/06	17:45	-9.4	25	-18.0
2007	1181	01/22/08	17:45	-14.4	43	-27.1
2008	1219	01/27/09	08:45	-13.7	40	-25.7
2009	1206	02/03/10	07:45	-12.9	34	-23.9
2010	1166	02/02/11	17:45	-7.7	18	-14.6
2011	1241	01/16/12	17:45	-10.4	31	-20.1
2012	1281	02/09/13	17:45	-11.1	27	-20.5

Notes:
1. NP native winter peaks are actuals and are not weather adjusted.
2. Excluding 1998 and 2004, temperatures are the average of the 20 hours ending nearest the peak time.
3. Temperatures for 1998 and 2004 are the average of the 8 hours ending nearest the peak time.
4. Wind speed for all years is the average of the 8 hours ending nearest the peak time.
5. Weather conditions prior to 1980 are based on the time interval ending at 5:00 PM.
6. Wind Chill = $13.12 + 0.6215 * T - 11.37 * WS^{0.16} + 0.3965 * T * WS^{0.16}$

   where: T is temperature
   WS is wind speed