Q. In the response to CA-70-NLH, there is an indication that Hydro uses Microsoft Excel in preparing operating load forecasts. Please respond to the following:

(a) Is an operating load forecast simply a load forecast? If not, please explain the difference between a load forecast and an operating load forecast?

(b) How frequently is the load forecast updated?

(c) How long is the forecast period for a load forecast?

(d) If the answer to (c) is less than ten years, please explain why this duration is adequate for capacity planning purposes?

(e) Provide a copy of the Microsoft Excel spreadsheets that have been used to develop the last three load forecasts. Clearly identify all variables, parameters, and inputs. Identify the source of all inputs. Please ensure that the spreadsheets are not password protected and that none of the cells are locked.

A. (a) Hydro's Operating Load Forecast (OPLF) is a monthly five-year forecast of Hydro's direct sales or bulk deliveries and net requirements including system transmission losses. The OPLF is used for operational planning, generation scheduling, budgeting, and Cost of Service purposes. The OPLF projections for 2006 and 2007 are summarized in J.R. Haynes Schedules III, IV and V.

Hydro's long-term load forecast is an annual twenty-year planning load forecast used for generation expansion planning and analysis. Long-term load forecasts are prepared for all power systems in the

Province falling under Hydro's purview. The focus of this analytical effort is the twenty-year planning load forecast (PLF) for the Island Interconnected system. The first ten years of Hydro's current load forecast is presented in Regulated Activities: Evidence Table 4.

As CA 70 NLH already provided information on Hydro's operating load forecast, the information that follows pertains to Hydro's long-term forecast.

The long-term load forecast is prepared using an econometric and identity model housed and maintained within EViews, a program for statistical/econometric analysis and forecasting. The important inputs to the long-term model include energy prices and provincial macroeconomic indicators including housing starts, GDP, personal disposable income, the outlook for existing Industrial Customers and the provision, as appropriate, for new industrial or resource developments.

(b) The long-term load forecast is prepared annually, beginning in the fall and normally completed in early winter.

(c) The long-term load forecast is prepared for a period of no less than twenty years.

(d) Please see (c).

(e) As indicated in (a), Hydro's PLF in carried out in EViews, a commercial software platform that Hydro is not able to provide in a Request for Information.

EViews exports its output to Excel files and the PLF summaries for 2004, 2005, and 2006 are attached in table format and Excel spreadsheets. At this time, Hydro has not identified all variables, parameters, and inputs for the 2004, 2005, and 2006 PLFs undertaken in EViews due to the scope of the undertaking. The macroeconomic inputs for the PLF analysis are procured from the Provincial Government's Department of Finance (Economic and Statistics). Hydro's direct industrial load assumptions in the long term forecast are consistent with the current operating load forecast.

2004 PLF

INTERCONNECTED ISLAND LOAD FORECAST SUMMARY

May 2004

INTERCONNECTED ISLAND FORECAST	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Utility Requirements (GWh)	5494	5590	5608	5656	5704	5781	5857	5896	5936	5966	6011	6071	6119	6170	6230	6289	6338	6379	6437	6496
Growth Rate . . . (%)	1.0	1.7	0.3	0.9	0.8	1.3	1.3	0.7	0.7	0.5	0.8	1.0	0.8	0.8	1.0	0.9	0.8	0.7	0.9	0.9
Utility Peak Demand (MW)[1]	1255	1261	1285	1293	1304	1317	1330	1347	1357	1361	1370	1383	1396	1410	1423	1437	1451	1463	1477	1490
Growth Rate . . . (%)	4.3	0.4	1.9	0.6	0.8	1.1	1.0	1.2	0.7	0.3	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.8	0.9	0.9
Total Industrial Requirements (GWh)	2728	2724	2721	2724	2723	2727	2727	2727	3012	3057	3097	3097	3097	3097	3097	3097	3097	3097	3097	3097
Growth Rate . . . (%)	0.3	-0.1	-0.1	0.1	-0.1	0.2	0.0	0.0	10.5	1.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Peak Demand (MW)[1]	366	366	366	366	366	366	366	366	416	416	416	416	416	416	416	416	416	416	416	416
Growth Rate . . . (%)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Losses (GWh)	187	189	190	190	191	192	193	193	197	198	199	199	200	201	201	202	203	203	204	204
Total Island Requirements (GWh)	8409	8503	8519	8571	8618	8700	8777	8817	9145	9221	9307	9368	9416	9467	9528	9588	9637	9679	9738	9798
Growth Rate . . . (%)	0.9	1.1	0.2	0.6	0.5	0.9	0.9	0.5	3.7	0.8	0.9	0.7	0.5	0.5	0.6	0.6	0.5	0.4	0.6	0.6
Island Peak Demand (MW)[2]	1590	1596	1620	1627	1638	1652	1664	1681	1740	1744	1754	1766	1780	1793	1806	1820	1834	1846	1860	1873
Growth Rate . . . (%)	-0.3	0.3	1.5	0.5	0.7	0.8	0.8	1.0	3.5	0.2	0.5	0.7	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7

Notes:
1. Non-coincident demand.
2. System coincident peak demand.

2005 PLF *INTERCONNECTED ISLAND LOAD FORECAST SUMMARY* March 2005

INTERCONNECTED ISLAND FORECAST	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Utility Requirements (GWh)	5640	5666	5741	5784	5860	5951	5990	6035	6074	6131	6196	6261	6325	6395	6461	6517	6567	6628	6694	6758
Growth Rate . . . (%)	3.6	0.5	1.3	0.7	1.3	1.6	0.7	0.8	0.6	0.9	1.1	1.0	1.0	1.1	1.0	0.9	0.8	0.9	1.0	1.0
Utility Peak Demand (MW)[1]	1273	1282	1290	1304	1313	1329	1346	1357	1367	1375	1387	1399	1411	1424	1437	1450	1461	1474	1486	1498
Growth Rate . . . (%)	7.4	0.7	0.6	1.1	0.7	1.2	1.3	0.8	0.8	0.6	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.9
Total Industrial Requirements (GWh)	2750	2750	2815	2815	2815	2815	2815	3085	3130	3170	3120	3120	3120	3120	3120	3120	3120	3120	3120	3120
Growth Rate . . . (%)	-0.9	0.0	2.3	0.0	0.0	0.0	0.0	9.6	1.5	1.3	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Peak Demand (MW)[1]	366	366	375	375	375	375	375	423	423	423	416	416	416	416	416	416	416	416	416	416
Growth Rate . . . (%)	-1.4	0.0	2.6	0.0	0.0	0.0	0.0	12.7	0.0	0.0	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Losses (GWh)	183	185	187	188	189	190	191	195	196	197	197	198	198	199	200	201	201	202	203	203
Total Island Requirements (GWh)	8573	8602	8744	8787	8864	8956	8995	9315	9400	9498	9513	9578	9644	9714	9781	9838	9888	9950	10017	10082
Growth Rate . . . (%)	1.2	0.3	1.6	0.5	0.9	1.0	0.4	3.6	0.9	1.0	0.2	0.7	0.7	0.7	0.7	0.6	0.5	0.6	0.7	0.6
Island Peak Demand (MW)[2]	1612	1621	1637	1651	1660	1676	1693	1751	1761	1769	1774	1786	1798	1811	1824	1836	1847	1860	1872	1884
Growth Rate . . . (%)	1.0	0.6	1.0	0.9	0.5	0.9	1.0	3.4	0.6	0.5	0.3	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.7

Notes:
1. Non-coincident demand.
2. System coincident peak demand.

2006 PLF

INTERCONNECTED ISLAND LOAD FORECAST SUMMARY

February 2006

INTERCONNECTED ISLAND FORECAST	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Utility Requirements (GWh)	5688	5733	5793	5900	6003	6077	6078	6114	6172	6234	6305	6373	6449	6521	6587	6647	6717	6788	6855	6919
Growth Rate . . . (%)	4.5	0.8	1.1	1.9	1.7	1.2	0.0	0.6	1.0	1.0	1.1	1.1	1.2	1.1	1.0	0.9	1.1	1.1	1.0	0.9
Utility Peak Demand (MW)[1]	1281	1289	1303	1315	1334	1355	1357	1371	1378	1390	1402	1415	1427	1441	1454	1465	1479	1491	1504	1516
Growth Rate . . . (%)	2.4	0.6	1.1	0.9	1.5	1.5	0.2	1.0	0.5	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.9	0.8
Total Industrial Requirements (GWh)	2226	2250	2234	2251	2251	2251	2521	2566	2606	2556	2556	2556	2556	2556	2556	2556	2556	2556	2556	2556
Growth Rate . . . (%)	-15.2	1.1	-0.7	0.7	0.0	0.0	12.0	1.8	1.6	-1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Peak Demand (MW)[1]	305	303	303	303	303	303	350	350	350	343	343	343	343	343	343	343	343	343	343	343
Growth Rate . . . (%)	-18.1	-0.7	0.0	0.0	0.0	0.0	15.5	0.0	0.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Losses (GWh)	165	168	169	171	172	173	177	178	179	179	180	181	182	183	184	184	185	186	187	188
Total Island Requirements (GWh)	8079	8150	8196	8322	8426	8501	8775	8857	8956	8969	9040	9110	9186	9259	9326	9386	9458	9529	9597	9663
Growth Rate . . . (%)	-3.4	0.9	0.6	1.5	1.3	0.9	3.2	0.9	1.1	0.1	0.8	0.8	0.8	0.8	0.7	0.6	0.8	0.8	0.7	0.7
Island Peak Demand (MW)[2]	1563	1569	1583	1595	1615	1635	1684	1698	1705	1710	1722	1735	1747	1761	1773	1785	1798	1810	1823	1835
Growth Rate . . . (%)	-2.0	0.4	0.9	0.8	1.2	1.2	3.0	0.8	0.4	0.3	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7

Notes:
1. Non-coincident demand.
2. System coincident peak demand.