Q. References: Section 2, Customer Expectations/Conservation Plan
Vol. 2, Tab 6, Customer, Energy and Demand Forecast

(a) Please provide a detailed explanation of the methodology used to include the impact of conservation and demand management (CDM) in the energy sales forecast.

(b) Please provide the impact on energy and demand of CDM in the energy sales forecast for 2009 and 2010 with details by customer class showing GWh/MW and percentage impacts.

(c) Please provide a table showing actual weather adjusted use per customer by customer class for the years 1999 through 2008 (actual) as well as the forecast weather adjusted use per customer for 2009 and 2010. Include pre-CDM GWh and MW, post-CDM GWh and MW and the difference (CDM impact).

(d) For 2009 and 2010, please provide details by customer class of the customer savings in terms of reduced purchased power costs due to CDM (details corresponding to GWh and MW reductions shown in part (b) above) and costs recovered in rates (i.e., breakdown by customer class the conservation costs of $2.451 million in 2009 and $2.977 million in 2010 identified in Table 2-7).

(e) Please provide details of customer benefits associated with the CDM costs incurred in 2009 and 2010 that are expected to be realized in future years as per the TRC and RIM tests referred to in footnote 16 at page 2-5, showing customer benefits by program for all future years. Also, provide updated forecasts of the benefits of conservation programs.

Please provide detailed information on the processes NP is using or plans to use for verifying the results of the customer energy conservation programs implemented as part of the Conservation Plan.

A. (a) The impacts of the customer energy conservation programs identified in the *Five-Year Conservation Plan 2009 - 2013* (the "Plan") are included in the Company's energy sales forecast. The adjustments to the energy sales forecast were calculated based on the estimated energy savings contained in the 2009 Conservation Cost Deferral Application, as shown in Table 1.

Table 1
Customer Program Portfolio
Energy Reduction Estimates: 2009-2013
by Sector
(MWh)

	2009	2010	2011	2012	2013
Residential					
Insulation Program	2,472	5,191	8,181	11,170	14,160
Thermostat Program	292	677	1,103	1,622	2,181
ENERGY STAR Windows Program	346	730	1,154	1,653	2,207
Commercial					
Lighting Rebate Program	722	1,720	2,988	4,518	6,333
Industrial					
Custom Retrofit Project Rebate Program	-	-	20,000	45,000	45,000
Total	**3,832**	**8,318**	**33,426**	**63,963**	**69,881**

The adjustments to the energy sales forecast for the impact of the customer energy conservation programs were revised from the energy reduction estimates provided in Table 1 to reflect the following changes in assumptions.

(i) The energy sales forecast assumes that 80% of the savings from the Residential and Commercial programs are related to Newfoundland Power's service area, and that none of the savings from the Industrial programs apply.[1] Table 1 presents the energy reduction estimates for the full province.

(ii) The energy sales forecast assumes a mid-year 2009 implementation of the programs with energy savings accruing based on customer participation gradually over the year. Table 1 effectively assumes a full year of energy savings in each year.

[1] The Industrial programs apply to Newfoundland & Labrador Hydro ("Hydro") customers only.

(b) Table 2 provides the estimated impact of customer energy conservation programs on the Company's energy sales forecast by customer class for 2009 and 2010 based on proposed rates.

Table 2
Impact of Customer Energy Conservation Programs
on Energy Sales (MWh) and Demand (KW): 2009 - 2010
by Customer Class

Customer Rate Class	2009F	2009F Impact %	2010F	2010F Impact %
Rate 1.1 (MWh)	362	0.01	2,637	0.08
Rate 2.1 (MWh)	10	0.01	76	0.08
Rate 2.2 (MWh)	74	0.01	558	0.09
Total Energy (MWh)	446	0.01	3,271	0.06
Peak Demand (kW)	107	0.01	784	0.06

Peak demand savings are calculated assuming system losses on energy sales of 5.7% (equivalent to 5.4% on produced and purchased) and a 15-year average system load factor of 50.36%.

(c) Table 3 provides estimated actual weather adjusted average use per customer by customer class for the years 1999 through 2008.

Table 3
Weather Adjusted Use Per Customer
1999 – 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rate 1.1	14,588	14,673	14,927	15,144	15,322	15,443	15,309	15,117	15,241	15,456
Rate 2.1	8,073	8,145	8,226	8,279	8,250	8,207	8,118	7,835	7,654	7,468
Rate 2.2	72,082	73,350	74,401	75,210	75,644	76,089	75,919	75,537	75,164	74,931
Rate 2.3	840,936	869,546	870,720	852,144	850,248	856,392	844,596	837,880	841,804	833,116
Rate 2.4	7,059,842	7,413,144	7,494,486	7,145,325	7,406,650	7,357,681	6,970,455	6,622,460	6,690,258	6,844,116

Table 4 provides forecast weather adjusted average use per customer by customer class for 2009 and 2010 pre-Plan and post-Plan, based on proposed rates.

Table 4
Forecast Weather Adjusted Use Per Customer (kWh)
2009 - 2010

	Pre-Plan		Post-Plan		Plan Impact	
	2009	**2010**	**2009**	**2010**	**2009**	**2010**
Rate 1.1	15,461	15,474	15,459	15,461	-2	-13
Rate 2.1	7,424	7,365	7,423	7,359	-1	-6
Rate 2.2	73,579	73,333	73,570	73,270	-8	-63
Rate 2.3	830,423	841,282	830,423	841,282	-	-
Rate 2.4	6,318,545	6,419,560	6,318,545	6,419,560	-	-

(d) The forecast purchased power cost savings arising from the customer energy conservation programs identified in the Plan are $47,000 and $342,000 in 2009 and 2010, respectively. The 2010 savings have contributed to reducing the Company's overall revenue requirement for 2010 by about 0.06%.

The forecast operating costs related to the Plan to be recovered in rates in 2009 total $0.935 million, and the forecast operating costs related to the Plan to be recovered in proposed rates for 2010 total $3.356 million.[2] The cost increase of $2.421 million from 2009 to 2010 translates to an overall revenue requirement increase of 0.5%.

These forecast costs and savings are not explicitly assigned by each customer class in determining the revenue to be recovered by each class. The proposed rates are set to recover the Company's 2010 revenue requirement based on the Company's overall required increase in revenue from rates and the use of revenue to cost ratios as determined in the Cost of Service Study.[3] The current level of operating costs and purchase power cost savings related to the Plan are not anticipated to impact revenue to cost ratios that would require modification to the Company's rate design proposals.

[2] The forecast 2009 conservation operating costs to be recovered in rates include costs of $2.451 million less the $1.516 million forecast cost deferral. The forecast 2010 conservation operating costs to be recovered in proposed rates is $2.977 million plus the amortization of $0.379 million from the 2009 cost deferral.

[3] The Cost of Service Study is based on an allocation of 2008 actual costs, and does not reflect any change in sales and costs associated with the 2009 and 2010 customer energy conservation programs. For further information, please refer to Section 5.3.2 on page 5-8 of the Evidence.

The estimated customer benefits from the residential and commercial programs identified in the Plan are provided in Attachments A and B, respectively. These benefits reflect the Plan and include the estimated combined impacts on Newfoundland Power and Hydro.

The Company has not completed an updated forecast of the benefits of the energy conservation programs.

(e) The savings will be verified through a range of verification processes that conform to good utility practice. A combination of the following verification process alternatives will be applied based on the characteristics of the programs.

- Gathering information from participants through the application process;
- Reporting from suppliers;
- Performing random audits to verify participation and gather other pertinent information;
- Surveying to obtain information such as market penetration;
- Reviewing participants electricity use;
- Using building modelling to determine electricity savings; and
- Analyzing information shared through the Energy Conservation and Efficiency Partnership and the Federal Department of Natural Resources.

Examples of expected verification processes are provided below:

(i) The Company will conduct field visits on a random sample of 10% of 2009 program participants to verify product installation. Based on the first year's audit results, this sample size may be revised for the following year.

(ii) Participants' energy usage history will be analyzed after the next heating season. This approach will provide an indicator of actual energy savings achieved, however, analysis of this nature is subject to a number of other variables, including weather and changes in household members' demographics or energy use behaviours.

(iii) Participants who concurrently complete an *ecoENERGY* audit will be asked to release the *ecoENERGY* pre and post audit data for analysis by the Company.