Q. Documentation is requested on which modules of Ventyx Strategist Software were used to derive the CPW? Please identify the 'objective functions' used as input and the parameters and weights given to each of the objective functions. If more than one module was used, please elaborate on how these objectives are tied together. What sensitivities were run relative to the base case and what were the results of the sensitivity runs? Please explain how the transmission capabilities, transfer limits and any system operating constraints were factored into the model.

A. The Ventyx Strategist modules used to derive the CPW were:

(1) Load Forecast Adjustment (LFA)
(2) Generation and Fuel (GAF)
(3) Capital Expenditure and Recovery (CER)
(4) PROVIEW (PRV)

Please see CE- 50 (Strategist Module Documentation) for more detail.

The chosen resource plans (generation expansion plans) were selected on the minimization of revenue requirement, modeled as the “minimization of utility cost” objective function. As there was only one objective function used, its weighting was 100 per cent. There were no objectives tied together as only one objective function was used.

Sensitivities were run on capital, fuel and load and the results are summarized in the following table. Details of the sensitivities are provided in Exhibit 43, Rev. 1. This revision to the two load sensitivities provides a correction for a calculation

error and now properly reflects the reduction in fuel costs for the Interconnected Island alternative. In addition, this revision also includes the detailed schedules for the load sensitivities which were inadvertently omitted from the original version.

With this revision, the annual load decrease of 880 GWh no longer eliminates the CPW difference between the two alternatives. For this reason, we have included a third load sensitivity which reflects a reduction of 1,086 GWh which eliminates the CPW difference.

NEWFOUNDLAND AND LABRADOR HYDRO
2010 Generation Expansion Analysis (Revision 1)

	Cumulative Present Worth ($ M)			
	Isolated Island	Labrador Interconnection	Difference	Base Case Difference
Base Case: October 2010	8,810	6,652	2,158	
Fuel Sensitivities:				
Fuel Costs Decreased by 44%	6,134	6,134	(0)	(2,158)
Fuel Costs: PIRA Low	6,221	6,100	120	(2,038)
Fuel Costs: PIRA High	12,822	7,348	5,474	3,316
Fuel Costs: May 2011 Forecast	9,695	6,889	2,806	648
Capital Sensitivities:				
Labrador-Island Link Capital Costs Adjusted by +25%	8,810	7,050	1,760	(398)
Muskrat Falls Capital Costs Adjusted by +25%	8,810	7,229	1,581	(577)
Muskrat Falls and LIL Capital Costs Adjusted by +25%	8,810	7,627	1,183	(975)
Load Sensitivites:				
Annual Load Decrease of 880 GWh (Rev. 1)	6,625	6,217	408	(1,750)
Reduce Annual Percentage Load Growth by 50% post 2014 (Rev. 1)	7,380	6,618	763	(1,395)
Annual Load Decrease of 1086 GWh (New)	6,121	6,121	1	(2,157)

In general, transmission capabilities, transfer limits and any system operating constraints were not directly factored into the model. However, the transmission capabilities and transfer limits for the HVdc link connecting Muskrat Falls to the Island grid were modeled.