Q. **Reference: Rates and Regulation Evidence**

Identify the specific initiatives, by year, that Hydro has undertaken to reduce the rural deficit for the period 2007 to 2013 and estimate the 2013 Test Year savings (in dollars and kW/kWh) resulting from those initiatives. (Rates and Regulation Evidence, page 4.4, lines 3 to 4)

A. Please see NP-NLH-098 Attachment 1 for a list of initiatives which impact the rural deficit, along with the quantifiable 2013 Test Year savings. Hydro continues to consider projects and initiatives which align with its mandate to provide least cost, reliable and safe power. Many projects and initiatives are related not only to the rural deficit areas, but are Hydro-wide. Additionally, not all initiatives are quantifiable in terms of the reduction in costs avoided or saved. Please also see to Hydro's response to NP-NLH-097.

Newfoundland and Labrador Hydro
Initiatives with Rural Deficit Impacts

		Estimated 2013 Test Year Savings		
Year	**Initiative**	**$**	**kW**	**GWh**
Ongoing	Customer Focused Energy Efficiency Measures	1,034,596	Unknown	9.6
Ongoing	Internally Focused Energy Efficiency Measures	647,155	Unknown	3.7
Ongoing	The Automated Meter Reading Project is justified based on a positive net present value, reducing the rural deficit in the long term.	300,894	N/A	
2008	In 2008, Hydro moved the printing of customer bills to in-house to save the printing costs incurred by using an outside printing service company.	16,000	N/A	
2010	Hydro began offering e-billing to its customers in 2010. E-billing is an electronic paperless form of receiving a bill by email. This method of billing is convenient, beneficial to the environment and offers a small cost savings on postage, paper and envelopes.	19,000	N/A	
2007	The diesel unit replacement and fuel storage system upgrade at Williams Harbour includes improved fuel efficiency, lower emissions and reduced maintenance costs.	N/A	N/A	
2007	Upgrades to exhaust stacks in Grey River include expected benefits of eliminating cleaning costs and future damage claims.	N/A	N/A	
2008	The replacement of mufflers on diesel units in L'Anse au Loup and St. Anthony is expected to prolong the life of the exhaust systems. The new stainless steel systems are less prone to corrosion as a result of the intermittent operations of these units than the previously installed carbon steel systems.	N/A	N/A	
2009	Since the road interconnection of the Southern Labrador communities, where possible, Hydro has reduced its reliance on large fuel storage tanks. The result is a reduction in the associated capital requirements and ongoing maintenance costs of these large storage tanks.	N/A	N/A	
2009	Hydro started installing in-line heaters (1500 W, 120 V) at diesel plants and terminal stations which will help reduce energy consumption.	N/A	N/A	
2009	The conductor on Line 2 in the Rocky Harbour distribution system was replaced with a larger conduction which will reduce annual line losses by approximately 75,400 kWh which is equivalent to displacing 120 barrels of fuel at the Holyrood Thermal Generating Station.	N/A	N/A	
2010	Enhancements to the set points of the Cartwright Diesel plant units allows improved load sharing and cycling with improved fuel consumption. The system automation to ensure the right unit is dispatched at the correct time to maximize efficiency for the plant which will reduce fuel consumption.	N/A	N/A	
2010	The Norman's Bay Diesel Plant upgrade capital project resulted in three new, more efficient engines being installed.	N/A	N/A	
2011	Hydro's project, Replace Mini Hydro Turbine in Roddickton, included an energy efficiency component where additional energy would be generated and supplied into the Island Interconnected System because of an increase in turbine efficiency. While it is not possible to accurately measure turbine efficiency at this plant, it is estimated that the deteriorated turbine is operating at an efficiency of 77% as compared to its original guaranteed efficiency of 82%, and the project when completed in 2012 will result in an efficiency rate of 85%, resulting in a 10.4% increase in energy production. Although this project is of benefit to the entire Island Interconnected System, there will be an impact in the total fuel required for the system and therefore a positive impact upon the rural deficit.	N/A	N/A	