Q. **C-6: Install Variable Frequency Drives on Forced Draft Fans, Holyrood; 2013: $697,600; 2014: $2,659,700**

In the report entitled: Install Variable Frequency Drives on Six Forced Draft Fans, located in Volume I, Tab 2, Hydro states, in the Summary, p. i, that:

> *"This project will yield an annual savings of $2.2 million while the Holyrood plant is generating electricity when compared to the status quo of constant speed fan motors."*

On p. 8 of the same report Hydro states that:

> *"Once operational the VFDs will yield an average annual fuel savings of $4.7 million to Hydro while the Holyrood Thermal Plant is generating electricity."*

These numbers are also found in other sections of the report.

Please provide a copy of the Nalcor Energy Corporate Planning Forecast, January 2012, which has provided information used in the present value analysis of the installation of variable frequency drives on forced draft fans.

A. An excerpt from the Nalcor Energy Corporate Planning Assumptions as of January 2012 containing the items relevant to the net present value analysis provided for this capital project is included in Attachment 1.

TABLE 1
NLH INFLATION AND ESCALATION FORECAST At January 2012
(2011 = 1.000)

SEE ANNUAL PERCENT CHANGE STARTING AT LINE 51

	General Inflation		Electric Utility Construction Price Escalation					
	GDP Implicit Price Deflator	Canadian CPI	Combustion Turbine Plant Construction	CCCT Plant Construction	Hydraulic Plant Construction	Transmission Line Construction	Transformer Station Construction	Distribution Line Construction
2000	0.770	0.799	0.745	0.744	0.747	0.789	0.867	0.815
2001	0.779	0.819	0.752	0.754	0.766	0.796	0.888	0.820
2002	0.788	0.837	0.772	0.772	0.779	0.808	0.905	0.826
2003	0.814	0.860	0.780	0.778	0.788	0.804	0.878	0.827
2004	0.840	0.875	0.793	0.792	0.822	0.833	0.888	0.830
2005	0.868	0.894	0.823	0.829	0.843	0.843	0.904	0.846
2006	0.891	0.912	0.858	0.862	0.870	0.879	0.928	0.903
2007	0.919	0.932	0.887	0.893	0.895	0.896	0.942	0.923
2008	0.957	0.953	0.934	0.945	0.953	0.959	0.981	0.967
2009 [2]	0.939	0.956	0.967	0.981	0.983	0.951	0.997	0.973
2010	0.967	0.973	0.974	0.978	0.983	0.970	0.990	0.983
2011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2012	1.024	1.020	1.020	1.025	1.027	1.025	1.025	1.030
2013	1.047	1.042	1.039	1.044	1.052	1.049	1.049	1.057
2014	1.070	1.065	1.066	1.070	1.084	1.088	1.075	1.084
2015	1.092	1.087	1.097	1.102	1.115	1.126	1.101	1.114
2016	1.114	1.109	1.116	1.123	1.136	1.143	1.122	1.139
2017	1.136	1.131	1.136	1.143	1.155	1.159	1.143	1.161
2018	1.159	1.154	1.160	1.168	1.177	1.181	1.166	1.183
2019	1.182	1.177	1.184	1.193	1.200	1.203	1.189	1.206
2020	1.206	1.201	1.208	1.218	1.223	1.225	1.211	1.229
2021	1.230	1.225	1.233	1.244	1.247	1.250	1.234	1.255
2022	1.255	1.250	1.258	1.269	1.272	1.275	1.259	1.280
2023	1.280	1.275	1.283	1.294	1.297	1.301	1.284	1.306
2024	1.306	1.301	1.309	1.320	1.323	1.327	1.310	1.332
2025	1.332	1.327	1.335	1.346	1.349	1.354	1.336	1.359
2026	1.359	1.354	1.362	1.373	1.376	1.381	1.363	1.386
2027	1.386	1.381	1.389	1.400	1.404	1.409	1.390	1.414
2028	1.414	1.409	1.417	1.428	1.432	1.437	1.418	1.442
2029	1.442	1.437	1.445	1.457	1.461	1.466	1.446	1.471
2030	1.471	1.466	1.474	1.486	1.490	1.495	1.475	1.500
2031	1.500	1.495	1.503	1.516	1.520	1.525	1.505	1.530

Notes: 1. GDP implicit price deflator and CPI for 2011 are Conference Board of Canada estimates.

2. General inflation post 2012 is CPI forecast provided by Conference Board of Canada.

3. Does not represent escalation indices applicable for LCP.

Data Sources: Statistics Canada

Conference Board of Canada Dec 2011

IHSGlobal Insight 4th Q 2011

TABLE 2
NALCOR INFLATION AND ESCALATION FORECAST
(Annual Percentage Change)

	General Inflation		Electric Utility Construction Price Escalation					
	GDP Implicit Price Deflator	Canadian CPI	Combustion Turbine Plant Construction	CCCT Plant Construction	Hydraulic Plant Construction	Transmission Line Construction	Transformer Station Construction	Distribution Line Construction
2000	4.1%	2.7%	3.3%	2.8%	2.5%	2.7%	1.5%	2.1%
2001	1.1%	2.5%	1.0%	1.3%	2.6%	0.9%	2.4%	0.6%
2002	1.1%	2.2%	2.6%	2.4%	1.7%	1.5%	1.9%	0.7%
2003	3.3%	2.8%	1.1%	0.8%	1.1%	-0.5%	-3.0%	0.1%
2004	3.2%	1.8%	1.7%	1.8%	4.3%	3.6%	1.1%	0.4%
2005	3.3%	2.2%	3.8%	4.7%	2.5%	1.2%	1.8%	1.9%
2006	2.6%	2.0%	4.2%	4.0%	3.2%	4.3%	2.7%	6.7%
2007	3.2%	2.2%	3.4%	3.6%	2.9%	1.9%	1.5%	2.2%
2008	4.1%	2.3%	5.3%	5.8%	6.5%	7.0%	4.2%	4.8%
2009	-1.9%	0.3%	3.5%	3.8%	3.2%	-0.8%	1.7%	0.6%
2010	2.9%	1.8%	0.8%	-0.3%	0.0%	2.0%	-0.7%	1.0%
2011	3.4%	2.8%	2.7%	2.3%	1.7%	3.1%	1.0%	1.8%
2012 [2]	2.4%	2.0%	2.0%	2.5%	2.7%	2.5%	2.5%	3.0%
2013	2.2%		1.9%	1.8%	2.4%	2.3%	2.4%	2.6%
2014	2.2%		2.6%	2.5%	3.0%	3.7%	2.5%	2.6%
2015	2.1%		2.9%	3.0%	2.8%	3.5%	2.4%	2.8%
2016	2.0%		1.7%	1.9%	1.8%	1.5%	1.9%	2.3%
2017	2.0%		1.8%	1.7%	1.7%	1.4%	1.9%	1.9%
2018	2.0%		2.1%	2.1%	1.9%	1.9%	2.0%	1.9%
2019	2.0%		2.1%	2.1%	1.9%	1.9%	2.0%	2.0%
2020	2.0%		2.0%	2.1%	1.9%	1.8%	1.8%	1.9%
2021	2.0%		2.1%	2.2%	2.0%	2.1%	1.9%	2.1%
Post 2021	2.0%		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

Notes: 1. GDP implicit price deflator and CPI for 2011 are Conference Board of Canada estimates.

2. General inflation post 2012 is CPI forecast provided by Conference Board of Canada.

Data Sources: Statistics Canada
Conference Board of Canada Dec 2011
IHSGlobal Insight 4th Q 2011

Nalcor Energy\NLH Thermal Fuel Oil Price Forecast

Reference Forecast as of January, 2012 (Holyrood)

	#6 0.7%s
	($Cdn/bbl)
Jan-12	**113.00**
Feb-12	**111.30**
Mar-12	**107.90**
Apr-12	**108.20**
May-12	**107.90**
Jun-12	**111.10**
Jul-12	**107.20**
Aug-12	**110.60**
Sep-12	**110.80**
Oct-12	**112.70**
Nov-12	**116.30**
Dec-12	**116.40**
2012	**111.10**
2013	**114.50**
2014	**125.30**
2015	**133.10**
2016	**137.50**
2017	**142.50**

- HFO product prices reflect landed values on Avalon Peninsula.
- 2012 pricing is PIRA Energy Group, World Oil Market Forecast, December 22, 2011
- 2013+ pricing is PIRA Energy Group long term forecast, November, 2011.