EXHIBIT 3 - OPERATING REVENUE

EB-2014-0080

Table of Contents

Load and Revenue Forecast

Ex. 3/Tab 1/Sch. 1 - Overview of Revenue Forecast

Table 3.0 below shows estimated revenues from current distribution charges for 2015. Distribution Revenues are derived through a combination of fixed monthly charges and volumetric charges applied to the utility's proposed Load Forecast. Fixed rate revenues are determined by applying the current fixed monthly charge to the number of customers or connections in each of the customer classes in each month. Variable rate revenue is based on a volumetric rate applied to meter readings for consumption or demand volume. HPDC's 2015 forecasted revenues recovered through its currently approved distribution rates are projected at $1,128,076 (exclusive of all rate riders). This calculated revenue is used to determine the revenue deficiency at current rates which is presented at Ex.6/Tab 2/Sch.1

Table 3.0 – Revenues at Current Rates

Test Year

	Test Year Projected Revenue from Existing Variable Charges							
Customer Class Name	**Variable Distribution Rate**	**per**	**Test Year Volume**	**Gross Variable Revenue**	**Transform. Allowance Rate**	**Transform. Allowance kW's**	**Transform. Allowance $'s**	**Net Variable Revenue**
Residential	$0.0160	kWh	24,257,123	388,114	($0.45)		0	388,114
General Service < 50 kW	$0.0067	kWh	10,891,433	72,973	($0.45)		0	72,973
General Service > 50 to 1499 kW	$2.3213	kW	63,249	146,821	($0.45)	17,580	-7,911	138,909
Intermediate	$1.0215	kW	60,563	61,865	($0.45)	61,760	-27,792	34,073
Sentinel Lighting	$3.1198	kW	50	155	($0.45)		0	155
Street Lighting	$2.2937	kW	4,451	10,209	($0.45)		0	10,209
Total Variable Revenue			**35,276,869**	**680,136**		**79,340**	**-35,703**	**644,433**

Test Year

	Test Year Projected Revenue from Existing Fixed Charges							
Customer Class Name	**Fixed Rate**	**Customers (Connections)**	**Fixed Charge Revenue**	**Variable Revenue**	**TOTAL**	**% Fixed Revenue**	**% Variable Revenue**	**% Total Revenue**
Residential	$9.1900	2,273	250,673	388,114	638,787	39.24%	60.76%	56.63%
General Service < 50 kW	$19.7600	467	110,798	72,973	183,771	60.29%	39.71%	16.29%
General Service > 50 to 1499 kW	$54.8200	40	26,241	138,909	165,150	15.89%	84.11%	14.64%
Intermediate	$223.0100	2	4,891	34,073	38,964	12.55%	87.45%	3.45%
Sentinel Lighting	$7.0900	13	1,106	155	1,261	87.70%	12.30%	0.11%
Street Lighting	$7.8800	951	89,933	10,209	100,142	89.81%	10.19%	8.88%
Total Fixed Revenue		**3,746**	**483,643**	**644,433**	**1,128,076**			

Variance Analysis

	Bridge Year to Test Year Variance			
Customer Class Name	**2013**	**2014**	**Variance**	**% change**
Residential	$650,065.43	$638,787.29	-11,278	-1.73%
General Service < 50 kW	$184,063.27	$183,771.01	-292	-0.16%
General Service > 50 to 1499 kW	$170,775.04	$165,150.40	-5,625	-3.29%
Intermediate	$40,768.48	$38,963.81	-1,805	-4.43%
Sentinel Lighting	$1,457.15	$1,261.19	-196	-13.45%
Street Lighting	$115,489.40	$100,142.25	-15,347	-13.29%
Total Fixed Revenue	**1,162,619**	**1,128,076**	**-34,543**	-2.97%

Ex.3/Tab 1/Sch. 2 - Proposed Load Forecast

This schedule outlines and describes HPDC's load, customer and distribution revenue forecasts. The load forecast methodology and assumptions are described in detail at Ex.3/Tab 1/Sch.3. HPDC's forecast is based on a regression model. The load forecasting model relates monthly historical purchases to monthly weather conditions (measured in cooling-degree-days ("CDD") and heating-degree days (HDD)), and other variables such as which are discussed in detail at Ex.3/Tab 1/Sch.7. Further adjustments for projected Conservation and Demand Management ("CDM") reductions and estimated distribution losses are made to derive distribution sales. HPDC has applied current approved rates to the test year customer and sales forecast in order to derive the test year distribution revenue. Other Revenues are discussed at Tab 3 of this exhibit.

Table 3.1 below shows the actual and forecast trends for customer/connection counts, kWh consumption and billed kW demand. The derivation of forecast for the Test Year can be found throughout this Tab.

Table 3.1- Proposed 2014 Load Forecast (with CDM Adj)

	Year	2010	2011	2012	2013	2014	2015
Residential	Cust/Conn	2,323	2,295	2,291	2,285	2,279	2,273
	kWh	25,155,910	25,365,927	24,020,357	25,464,009	24,920,921	24,257,123
General Service < 50 kW	Cust/Conn	403	422	444	453	460	467
	kWh	11,694,669	12,171,991	11,120,070	11,433,325	11,189,478	10,891,433
General Service > 50 to 4999 kW	Cust/Conn	39	39	40	40	40	40
	kWh	17,746,525	22,119,514	23,869,307	23,368,303	22,869,911	22,260,744
	kW	64,939	65,160	64,939	65,160	64,980	63,249
Intermediate	Cust/Conn	3	3	2	2	2	2
	kWh	18,965,408	19,113,182	20,375,091	21,805,339	21,090,215	20,565,227
	kW	61,632	60,417	62,501	61,716	62,109	60,563
Sentinel Lights	Cust/Conn	18	17	17	17	15	13
	kWh	21,979	21,276	21,276	21,276	19,125	16,617
	kW	72	72	72	72	58	50
Street Lighting	Cust/Conn	922	926	932	941	946	951
	kWh	1,008,500	1,008,758	1,021,182	1,026,377	1,098,123	430,600
	kW	11,064	11,093	11,167	11,288	11,350	4,451
Total	**Cust/Conn**	**3,707**	**3,700**	**3,725**	**3,738**	**3,742**	**3,747**
	kWh	**74,592,991**	**79,800,647**	**80,427,282**	**83,118,629**	**81,187,772**	**78,421,746**
	kW	**137,707**	**136,741**	**138,679**	**138,235**	**138,497**	**128,313**

Ex. 3/Tab 1/Sch. 3 - Overview of Hearst's Load Forecast Methodology

The following section of the application covers the approach taken to determine the Load Forecast. This section also covers economic assumptions and data sources for customer and load forecasts. It explains wholesale purchases and subsequent adjustments to the wholesale purchases. It also provides the rationale behind each variable used in the regression analysis. Lastly, it presents the regression results and explains how they were used to determine the forecast for the bridge and test year.

In its 2010 Cost of Service application, HPDC used the NAC approach to determine its Load Forecast. In its Decision (EB-2009-0266), the Board stated that Hearst Power should explore improved methods of load forecasting for its next cost-of-service application. Furthermore, the Board cautioned Hearst Power to be mindful of the need to weigh the cost and associated rate impacts of achieving a more robust forecast against the benefits gained.

In contrast to the 2010 approach, the load forecast presented in this application uses a multiple regression model developed based on monthly wholesale purchased kWh from January 2004 to December 2013 as measured at the wholesale point of delivery (exclusive of losses; i.e., not loss adjusted). Because this methodology differs from the approach used in the last Cost of Service, HPDC has also run the analysis under the NAC approach in order to compare and confirm the most appropriate method of forecasting. The results of the NAC are presented later in this Exhibit.

While it may sometimes be desirable to isolate demand determinants related to individual rate classes, it is not always necessary or beneficial to do so. In HPDC's case, "Metered" or monthly class consumption measured were tested for the Residential class and yielded unfavorable results. The higher R-Squared obtained was 0.57. HPDC opted for using wholesale purchases which yielded better results.

The methodology proposed in this application predicts wholesale consumption using a multiple regression analysis that relates historical monthly wholesale kWh usage to monthly historical heating degree days and cooling degree days. Heating degree-day provide a measure of how much (in degrees), and for how long (in days), the outside temperature was below that base temperature. The most readily available heating degree days come with a base temperature of 18°C. Cooling degree-day figures also come with a base temperature, and provide a measure of how much, and for how long, the outside temperature was above that base temperature. For degree days, daily observations as reported in Kapuskasing are used. The regression model also uses other variables which are tested to see their relationship and contribution to the fluctuating wholesale purchases. Each variable is discussed in detail later in this section.

Explanation of Multiple Regression Analysis

Multiple regression can be utilized for forecasting purposes by analyzing how a number of variables has affected a depended variable historically. From this, the relationship between these variables and the depended variable can be expressed as;

Y=A+B1X1+B2X2…+bNxN + E

Where :

Y= Predicted depended variable value
A= the value of Y when all Xs are zero
X= the independent variable
B= the coefficients corresponding to the independent variables
n= the number of independent variable
E= and error term

By forecasting the independent variables, the dependent variable, the depended variable can be predicted. However, to ascertain that the relationship are not coincidental, the utility must first assess the correlation between the depended and individual independent variables. This can be accomplished by the Person Correlation Coefficient (otherwise known as "R") to each independent variable. This depicts how much of the change in depended variable can be explained by the change in independent one. Those variables with a high R-squared should then be used for multiple regression. The same correlation coefficient can be applied to multiple independent variables to ascertain how much of the change in dependent variable can be explained by changes in all independent variables.

R Squared=(B'X'Y – nAVG(Y)^2)/Y'Y-nAVG(Y)^2)

Where :

B',X',Y' = Matrixes of all combinations of B,X&Y respectively
^2 = Squared

The adjusted R-squared is calculated by "correcting" for the number of independent variables in a multiple regression analysis. The formula: Adj RSq=(1-(1-RSq)*((n-1)/(n-k))). It is often used to compare models involving different number of coefficients. The statistical significance of the multiple regression can be tested with the F-test which is derived from a normal probability distribution. A critical point along the distribution can be found given a degree of confidence required, the number of variables and the number of observations. If the F-statistic is above this point, then the analysis can be deemed statistically significant at the level of confidence.

Where :

F-statistic =(R Squared/(k-1))/((1-R Squared)/(n-k)

k= number of independent variable
n= number of observations

Independent variables that are highly correlated themselves, can lead to high variances in the slope estimation (B). This is known as “Multicollinearity”. For this reason independent variables with a high level of multicollinearity to the other independent variables should consider being omitted from the analysis.

Ex. 3/Tab 1/Sch. 4 - Load Forecast Details

Ex. 3/Tab 1/Sch. 5 - Economic Overview

Located in Northeastern Ontario, the Town of Hearst has a population of approximately 5,600 people, of which 85% are francophone.

Hearst is home to three major forestry productions that are significant contributors to the local economy, which two of these are located within HPDC's service area. This last decade, the forestry industry was challenged with cost pressures and turmoil in the US housing market (an important consumer of the region's forestry products), which adversely affected employment in that sector, thereby resulting in a decrease in population and a shortage of skilled workers. The Town of Hearst is focused on attracting industry workers and their families to its community.

The principal economic driver of the local economy is the forest industry but the Town of Hearst also provides business activities and employment opportunities in sectors such as fishing & hunting, tourism, educational services, health care, manufacturing, transportation & warehousing, construction, bio-economy, etc…

The Town of Hearst is considered the center for post-secondary education in Northeastern Ontario. The "Université de Hearst and Collège Boréal" provides a wide range of general programs, and are distinguished for their astonishing success rates.

Located near the James Bay lowlands and the "Ring of Fire" (one of the largest potential mineral reserves in Ontario), the Town of Hearst anticipates that someday, this project will create job opportunities and generate growth and long-term prosperity for the community.

HPDC expects the status quo over the planning horizon of this report; no growth and no shrinkage. There are no known expansion plans for industrial, commercial or residential segments of the economy nor are there any known planned closures in the industrial or commercial segments of the economy. The primary business in the area is the production of forest products. This involves timber cutting, hauling, processing, and shipping to market as well as reforestation. The lack of change in the economy means that there is no growth based capital work proposed by HPDC.

Ex. 3/Tab 1/Sch. 6 - Determination of Customer Forecast

HPDC has used a simple geometric mean function to determine the forecasted number of customers of 2014 and 2015. The geometric mean is more appropriate to use when dealing with percentages and rates of change. Although the formula is somewhat simplistic, it is reasonably representative of HPDC's natural customer growth. The geometric mean results were analyzed by HPDC to determine whether they required further adjustments for known particulars. The utility was satisfied with the projected customer count and did not adjust them further.

Historic customer counts and projected customer counts for 2014 and 2015 are presented in Table 3.2 below followed by a variance analysis of customer counts.

Table 3.2 – Customer Forecast

Customer Growth Chart												
	Residential		General Service < 50 kW		General Service > 50 to		Intermediate		Sentinel Lights		Street Lighting	
Date	Cust / Conn	Growth Rate	Cust / Conn	Growth Rate	Cust / Conn	Growth Rate	Cust / Conn	Growth Rate	Cust / Conn	Growth Rate	Cust / Conn	Growth Rate
2004	2340		394		41		3		48		897	
2005	2347	1.0032	392	0.9949	39	0.9506	3	1.0000	46	0.9583	901	1.0045
2006	2331	0.9930	402	1.0255	40	1.0390	3	1.0000	46	1.0000	904	1.0033
2007	2333	1.0009	396	0.9851	39	0.9750	3	1.0000	42	0.9130	911	1.0072
2008	2316	0.9929	386	0.9735	40	1.0128	3	1.0000	39	0.9167	915	1.0049
2009	2325	1.0037	394	1.0208	40	1.0000	3	1.0000	22	0.5714	915	1.0000
2010	2323	0.9991	403	1.0229	39	0.9747	3	1.0000	18	0.8182	922	1.0077
2011	2295	0.9879	422	1.0472	39	1.0130	3	0.8333	17	0.9444	926	1.0038
2012	2291	0.9983	444	1.0534	40	1.0128	2	0.8000	17	1.0000	932	1.0065
2013	2285	0.9976	453	1.0203	40	1.0127	2	1.0000	17	1.0000	941	1.0102
Geomean		*0.9974*		*1.0156*		*0.9986*		*0.9559*		*0.8911*		*1.0053*
2014	2279		460		40		2		15		946	
2015	2273		467		40		2		13		951	

In the section below, LDCs can adjust the computed customer count for the Bridge and Test Year for special cirumstance such as new subdivision or loss of customer or other utiliy spec

Adjusted												
2014	2279	0.9974	460	1.0156	40	0.9986	2	0.9559	15	0.8911	946	1.0053
2015	2273	0.9974	467	1.0156	40	0.9986	2	0.9559	13	0.8911	951	1.0053

Tables 3.3 to 3.8 below show year over year variances in each classes along with an analysis of customer counts.

Table 3.3 - Customer Count Analysis – Residential

Residential		
Year	**Cust**	**%chg**
2004	2,340	
2005	2,347	0%
2006	2,331	-1%
2007	2,333	0%
2008	2,316	-1%
2009	2,325	0%
2010	2,323	0%
2011	2,295	-1%
2012	2,291	0%
2013	2,285	0%
2014	2,279	0%
2015	2,273	0%

The residential customer class has been on a slight downwards slope since the economic downturn of 2009-2010. The class has dropped by approximately 1% per year since 2010. Hearst, much like similar sized small rural towns, has suffered from paralyzed local economies losing industry, services, land value and people. Urbanization and the decline of natural resource-based industries like forestry and mining have led residents of small cities, particularly young people, to migrate out of their hometowns in search of better opportunities and different lifestyles, with the effect of a handful of metropolitan areas in Ontario growing while many other, smaller areas decline. Hearst does not anticipate any growth in its Residential customer count in the 5 year outlook.

Table 3.4 - Customer Count Analysis - GS<50 kW

GS<50		
Year	**Cust**	**%chg**
2004	394	
2005	392	-1%
2006	402	3%
2007	396	-1%
2008	386	-3%
2009	394	2%
2010	403	2%
2011	422	5%
2012	444	5%
2013	453	2%
2014	460	2%
2015	467	2%

The number of customers in the GS<50 kW class have grown steadily since 2008. The primary reason is due to a small but stable manufacturing sector. The utility does not anticipate much growth in this class over the 5 year outlook.

Table 3.5 - Customer Count Analysis - GS > kWh

GS>50		
Year	**Cust**	**%chg**
2004	41	
2005	39	-5%
2006	40	4%
2007	39	-3%
2008	40	1%
2009	40	0%
2010	39	-3%
2011	39	1%
2012	40	1%
2013	40	1%
2014	40	0%
2015	40	0%

The customer count for the GS>50 kW class has seen little change over the last 10 years. The lack of growth can be explained by the relatively narrow economic base and concentration in

slow growing or declining industries. HPDC does not anticipate any changes in customer count for the next 5 years.

Table 3.6 - Customer Count Analysis – Intermediate

Intermediate		
Year	**Cust**	**%chg**
2004	3	
2005	3	0%
2006	3	0%
2007	3	0%
2008	3	0%
2009	3	0%
2010	3	0%
2011	3	-17%
2012	2	-20%
2013	2	0%
2014	2	-4%
2015	2	-4%

Similarly to the GS>50 Class, HPDC does not anticipate any changes in the Intermediate Class between now and the next Cost of Service Application.

Table 3.7 - Customer Count Analysis - Street Lighting

Street Lighting		
Year	**Cust**	**%chg**
2004	897	
2005	901	0%
2006	904	0%
2007	911	1%
2008	915	0%
2009	915	0%
2010	922	1%
2011	926	0%
2012	932	1%
2013	941	1%
2014	946	1%
2015	951	1%

Table 3.7 above shows the yearly change in connection for the Street lighting class. As can be seen from the table, connections have been historically stable and will remain at approximately the same level until the next cost of service. The utility is expecting a 5 connection per year increase in both 2013 and 2014.

Table 3.8 - Customer Count Analysis - Sentinel Lights

Year	Cust	%chg
2004	48	
2005	46	-4%
2006	46	0%
2007	42	-9%
2008	39	-8%
2009	22	-43%
2010	18	-18%
2011	17	-6%
2012	17	0%
2013	17	0%
2014	15	-11%
2015	13	-11%

The Sentinel Light connections have also been on a slight downwards slope over the past dropping for the last 10 years. HPDC projects a decrease of 3 connections from its last Cost of Service. The utility does not anticipate further decrease in the 5 year outlook.

All classes, with the exception of the GS<50 Class are expected to see a slight decrease in the test year. The main reasons for this variance, as explained in the load forecast, is due primarily to the lack of new development in the service area over the last several years. Secondly, additional energy consumption that does not depend on the weather (often referred to as "baseload" energy consumption) is often offset by the additional transitioning to energy efficient lighting, appliances and other energy efficient changes. Revenue Deficiency is discussed further in Ex. 6.

Ex. 3/Tab 1/Sch. 7 - Variables used in the regression analysis

The purpose of a multiple regression equation is to predict a single dependent variable from multiple independent variables. Several variables and the interactions among each variables, affects overall electricity purchases. Various combinations of economic drivers were tested using different model specifications while adding and removing independent variables one at a time. Results from these various scenarios can be found in the excel model filed in conjunction with this application. The decision to add/delete a variable is made on the basis of whether that variable improves the accuracy of the model. The variables listed below were used as initial inputs for the purpose of regression analysis.

- Tested and Included
  - Wholesale Purchases (main)
  - Heating Degree Days (included)
  - Cooling Degree Days (included)
  - Winter Flag (included)
  - Shut down months (included)
  - Customer Count (included)

- Tested and Excluded
  - CPI Ontario (excluded)
  - Average Temperature (excluded)
  - CPI Canada (excluded)
  - Full Time Employment for North Bay (excluded)

Wholesale purchases

HPDC purchases its power from the IESO and Hydro One. The following table outlines the unadjusted monthly wholesale purchases.

Table 3.9 - Unadjusted Wholesale Purchases 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Jan	12693823	12040115	11403923	11144240	9079341	9687027	7877934	8946669	8385129	8938428
Feb	10949312	10319632	11174429	11396537	8837021	8395038	6923499	7921364	7845578	8209750
Mar	10903563	10822381	11177732	10459243	9024592	7068217	6126461	6808616	7503491	8094362
Apr	9829236	9168123	9457861	9692973	7191861	6414184	6975021	7136876	6539070	6171276
May	9406124	9168836	9455389	8815221	6991462	6469952	6192325	5732243	6100225	5970163
June	8779564	8391313	8931355	8406333	6168427	6260939	5966146	5876887	5011748	5636891
Jul	7379012	7715191	7844343	8166977	5381918	4648945	5877652	5555950	5461517	5598405
Aug	8787505	8542170	8930085	8056499	6313812	5697613	5838235	5798395	6002405	5844163
Sept	8756408	8579568	8786642	8441906	6081323	6237383	5299732	5918461	5933883	5891223
Oct	9198886	9633073	9518805	8702807	6749178	7124815	6525309	6234104	6685854	6851089
Nov	9840393	10834098	10297709	8254635	7771702	6010367	7304633	7019349	7408803	7530000
Dec	11101891	11748201	10860583	9574588	9255481	7389479	8576299	7445070	8178514	9066138

The utility was slowly declining from 2004 to 2011 and is slowly growing again. The largest decrease being in 2008 at the height of the recession. This decline is mainly due to the loss of an intermediate customer and reduction in consumption from the GS>50 class. Another reason for the overall decline is the effects of energy efficient changes due to the implementation of conservation measures.

In order to better represent the trend in wholesale purchases, HPDC adjusted its base wholesale purchases prior to running the regression analysis. The purpose of the adjustment was to normalize the data as best as possible. The utility adjusted the wholesale purchases to remove the consumption associated with the intermediate customer who eventually shut down its operations in early 2012. The utility removed approximately 134.63M kWh between January 2004 and December 2013. The table below shows the adjusted monthly wholesale purchases after removal of the GS< 50 customer.

Table 3.10 - Adjusted Wholesale Purchases 2004-2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Jan	9778128	9197784	8679087	8384634	9079341	9687027	7877934	8951168	8394826	8957366
Feb	7980500	7774648	8214062	8800029	8837021	8395038	6923499	7931630	7856980	8233713
Mar	7754983	8036639	7943311	7759037	9024592	7068217	6126461	6825459	7545392	8123150
Apr	6712031	6502163	6342750	7258825	7191861	6414184	6975021	7160592	6601091	6235992
May	6279249	6331361	6369655	6474482	6991462	6469952	6192325	5756556	6184934	6044729
June	5801250	5959868	5967231	6127499	6168427	6260939	5966146	5911849	5091905	5721701
Jul	5350087	5175337	5525210	5932199	5381918	4648945	5877652	5588924	5554382	5699502
Aug	5695534	5779475	5948964	6105556	6313812	5697613	5838235	5840459	6102119	5931245
Sept	5680804	5783367	5877685	6194745	6081323	6237383	5303794	5962697	6019098	5971234
Oct	6171741	6483514	6420299	6541924	6749178	7124815	6529782	6275513	6751614	6921144
Nov	6858966	7676467	7402269	8254635	7771702	6010367	7317834	7043385	7445269	7572978
Dec	8750234	8896336	8310910	9574588	9255481	7389479	8580847	7456721	8195041	9088052

List of variables:

In HPDC's case, variation in monthly electricity consumption is influenced by five main factors – weather (e.g. heating and cooling), which is by far the most dominant effect for most systems; seasonality, in this case, winter flag factors; a utility specific "shut down factor" and the CPI for Ontario. Specifics relating to each variable used in the regression analysis are presented at the next section.

Heating and Cooling Degree days:

In order to determine the relationship between observed weather and energy consumption, monthly weather observations describing the extent of heating or cooling required within the month are necessary. Environment Canada publishes monthly observations on heating degree days (HDD) and cooling degree days (CDD) for selected weather stations across Canada. Heating degree-days for a given day are the number of Celsius degrees that the mean temperature is below 18°C. Cooling degree-days for a given day are the number of Celsius degrees that the mean temperature is above 18°C. For HPDC, the monthly HDD and CDD as reported at Kapuskasing were used.

HPDC has adopted the 10 year average from 2004 to 2013 as the definition of weather normal. Our view is that a ten-year average based on the most recent ten calendar years available is a reasonable compromise that likely reflects the "average" weather experienced in recent years. Many other LDCs have also adopted this definition for the purposes of cost-of-service rebasing. The following table outlines the monthly weather data used in the regression analysis.

Table 3.11 - Heating Cooling Degree Days

	HDD									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Jan	1303.5	1163.2	930.4	995.3	979.5	1190.7	979.5	1145	992.8	1072.1
Feb	882.1	863.7	952.5	1060	974	942.1	847.1	915.2	839.6	961.1
Mar	762	854.5	699	776.1	905.1	825.4	599.5	875.7	595.8	792.9
Apr	571.4	418.7	420.9	506.5	456.4	517.2	371.4	526.5	506.2	592.8
May	355.6	255.8	205.7	235.6	341.4	346.1	217.2	263.5	230.2	311.5
June	145.9	46.9	97.5	107.2	113.3	124.7	134.2	104	51.4	138.3
Jul	63.3	38	49	45.1	50.1	77.6	27.9	24.2	23.7	62.4
Aug	139.8	45.3	105.6	73.6	69.7	105.2	48.2	56.7	79.2	66.6
Sept	135.7	151.8	224.5	184.9	207.2	149.5	243.6	180.9	213.2	191.8
Oct	398.5	368.8	445.2	346.2	400.5	477.3	426.2	349.4	395.2	389.2
Nov	585.5	685.8	586.5	684.7	612.5	485.8	609.2	574	639.4	668.1
Dec	1094.3	974.4	778.7	987.6	1088.9	958.2	862.4	918.7	910.6	1157.5

CDD

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Jan	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0
May	0	2.2	17.7	9.7	0	0	35.3	4.8	12.6	0
June	2.8	52.2	28.6	42.7	12	31.9	8.7	9.5	31.8	13.4
Jul	28.4	83.5	55.1	36.2	14.5	7.4	57.5	65.2	56.3	44.4
Aug	3.9	35.9	17.9	29.6	12.6	22.1	54.4	26.5	24.9	34.2
Sept	13.6	20.1	0.9	6.2	11.2	8.1	0	2.8	10.5	0
Oct	0	3.6	0	0	1.4	0	0	4.4	0	0
Nov	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0

Winter Flag:

HPDC used a “Winter Flag” rather than the more widely used “Spring and Fall Flag”. This utility specific flag was created following the analysis of the Wholesale purchases which showed higher purchases in the months of November to March than the rest of the seasons including the summer months. The assumption is that consumers are not using as much air conditioning during the summer months as one would expect however, it would appear that consumers depend heavily on electricity to heat their homes or businesses during the winter months. It’s important to note that the temperature in Hearst is much colder than other utilities and that it is not unusual for the utility to still have snow in April and sometimes June. Table 3.12 below shows the per month/season analysis behind the “Winter Flag” rational.

Table 3.12 - Winter Flag

	HDD									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Jan	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0
Apr	1	1	1	1	1	1	1	1	1	1
May	1	1	1	1	1	1	1	1	1	1
June	1	1	1	1	1	1	1	1	1	1
Jul	1	1	1	1	1	1	1	1	1	1
Aug	1	1	1	1	1	1	1	1	1	1
Sept	1	1	1	1	1	1	1	1	1	1
Oct	1	1	1	1	1	1	1	1	1	1
Nov	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0

2004-January	10,078,475	2013-March	7,751,038	2006-May	6,626,334	2010-March	5,904,811
2005-January	9,498,131	2011-February	7,737,091	2009-March	6,617,979	2009-September	5,896,429
2009-January	9,240,976	2007-November	7,690,314	2011-March	6,593,118	2013-April	5,864,927
2005-December	9,151,719	2006-November	7,656,128	2005-May	6,588,040	2012-August	5,856,625
2007-December	9,124,580	2010-January	7,638,281	2004-May	6,535,927	2008-June	5,848,758
2007-February	9,099,498	2012-February	7,620,672	2012-October	6,512,727	2013-May	5,793,452
2004-December	9,005,617	2007-April	7,559,213	2007-September	6,447,105	2012-September	5,782,488
2006-January	8,979,435	2008-November	7,406,443	2004-October	6,427,381	2009-November	5,782,420
2013-December	8,842,430	2013-November	7,307,826	2008-October	6,426,926	2008-September	5,781,802
2008-December	8,829,177	2012-March	7,300,266	2012-April	6,379,449	2010-June	5,763,807
2011-January	8,734,761	2011-December	7,249,647	2007-June	6,376,066	2011-September	5,747,287
2013-January	8,717,577	2012-November	7,215,620	2010-October	6,359,707	2013-September	5,737,634
2007-January	8,684,981	2009-December	7,153,500	2007-August	6,348,193	2010-July	5,725,741
2008-January	8,631,307	2010-November	7,117,945	2006-June	6,215,798	2006-July	5,725,126
2006-December	8,566,293	2004-November	7,112,825	2005-June	6,208,435	2013-August	5,711,346
2008-March	8,563,699	2004-April	7,012,419	2006-August	6,191,600	2011-June	5,710,071
2006-February	8,513,532	2011-April	6,982,340	2009-May	6,136,316	2010-August	5,649,629
2008-February	8,397,536	2009-October	6,809,130	2007-July	6,132,116	2011-August	5,634,542
2010-December	8,370,447	2011-November	6,808,127	2006-September	6,130,045	2011-May	5,562,512
2005-March	8,367,032	2005-April	6,802,551	2011-October	6,053,314	2004-July	5,550,003
2004-February	8,279,970	2007-October	6,797,564	2004-June	6,049,817	2013-June	5,507,988
2006-March	8,273,704	2008-April	6,795,318	2005-September	6,035,727	2013-July	5,490,860
2012-January	8,182,675	2010-April	6,753,376	2005-August	6,022,111	2011-July	5,452,151
2007-March	8,089,431	2005-October	6,739,153	2008-August	6,017,903	2009-August	5,397,620
2004-March	8,085,376	2007-May	6,731,161	2009-April	6,001,005	2012-July	5,395,865
2005-February	8,074,118	2010-February	6,718,652	2010-May	5,984,868	2005-July	5,375,253
2012-December	7,988,122	2006-October	6,675,939	2012-May	5,970,867	2008-July	5,117,406
2009-February	7,981,826	2013-October	6,656,403	2004-August	5,938,170	2010-September	5,115,729
2005-November	7,930,326	2008-May	6,651,869	2004-September	5,933,164	2012-June	4,866,224
2013-February	7,925,287	2006-April	6,643,138	2009-June	5,932,717	2009-July	4,369,803

Winter
Summer
Spring
Fall

Shutdown Factor:

A utility specific "shutdown" flag was created for the purpose of determining the load forecast. The flag represents the shutdown of production for the two large wood manufacturer in the area. The shutdown can occur in July or August and generally lasts 2 weeks. The shutdown has an unfavorable effect on the utility's summer consumption.

Customer Count:

Hearst tested the utility's customer count and although the variable did not affect the results significantly, the utility found that the use of the Customer Count produced a slightly favorable Adjusted R-Square. The utility's customer count has been relatively stable over the past 10 years therefore it is no surprise that this did not yield significant results.

Ex. 3/Tab 1/Sch. 8 -Variables tested but not used

Employment Factor:

In order to measure the change in economic activity, a data series must be chosen which represents, as much as possible, regional economic activity. HPDC used the monthly full-time employment levels for the North Bay economic region, as reported in Statistics Canada's Monthly Labour Force Survey (CANSIM). The following table outlines the full-time employment levels for the North Bay economic region which were tested but ultimately rejected due to their negative correlation and coefficient.

Table 3.13 – Employment

	Employment									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Jan	454.6	456.9	459.7	461.3	461.9	462.2	462.2	462.3	461.1	458.3
Feb	454.7	457	459.8	461.3	461.9	462.1	462.1	462.1	460.8	458
Mar	454.8	457.2	459.9	461.3	461.8	461.9	462	461.9	460.6	457.7
Apr	454.9	457.4	460	461.3	461.8	461.9	462	461.8	460.4	457.6
May	455.2	457.7	460.2	461.4	461.9	461.9	462	461.7	460.2	457.4
June	455.4	458.1	460.5	461.5	462	461.9	462.1	461.7	460	457.3
Jul	455.7	458.4	460.7	461.6	462.1	462	462.2	461.6	459.9	457.2
Aug	455.9	458.8	460.9	461.7	462.2	462.1	462.3	461.5	459.7	457.1
Sept	456.2	459.1	461	461.8	462.3	462.1	462.3	461.5	459.4	457
Oct	456.4	459.3	461.1	461.9	462.3	462.2	462.4	461.4	459.2	456.9
Nov	456.6	459.5	461.2	461.9	462.3	462.3	462.4	461.3	459	456.8
Dec	456.7	459.6	461.3	461.9	462.3	462.3	462.4	461.2	458.7	456.7

CPI for Ontario:

The Consumer Price Index (CPI) is an indicator of changes in consumer prices experienced by Ontario residents. It is obtained by comparing, over time, the cost of a fixed basket of goods and services purchased by consumers. The utility ultimately rejected this variable due to its insignificance negative effect on the R-Square

Average Temperature:

The utility tired "Average Temperature" as a variable rather than the HDD and CDD. The utility ultimately rejected this variable due to its insignificance negative effect on the R-Square

Days per month:

Much to the utility's surprise, the Days per Month did not affect the R-Square therefore the utility ultimately rejected the use of the variable.

Origin of variables

- HDD: Stats Canada (Kapuskasing)
- CDD : Stats Canada (Kapuskasing)
- Winter: Computed by HPDC
- Employment: Stats Canada (North Bay)
- Cust count: HPDC (Historical Data)
- AVG Temp: Stats Canada
- Shutdown months: Computed by HPDC
- CPI (Ontario): Stats Canada table 236-0020
- Day per Month: Computed by HPDC

Ex. 3/Tab 1/Sch. 9 - HPDC's Regression Results

The following section presents the regression results used to determine the load forecast.

The table below displays the R-squared for the multiple regression equation, shows the equation's standard error margin, and tests the analysis for statistical significance at a 95% confidence interval. The adjusted R-squared is adjusted for by the sample size and is useful when either increasing or decreasing the number of independent variables in the analysis. For example, when several redundant independent variables are added, the standard R-squared may increase marginally; however the adjusted R-squared reduces, indicating the weaker overall relationship. 86.23% of the change in Wholesale Purchases can be explained by the change in the 5 independent variables therefore the analysis is considered significant.

Table 3.14 - Equation Parameters

R Squared	0.8739
Adjusted R Squared	0.8684
Standard Error	431636.2813
F - Statistic	158.0200

The Durbin-Watson statistic, presented in the table below is used to determine if sequential (adjacent) residuals are correlated. One of the assumptions of regression analysis is that the residuals (errors) are independent of each other. Sometimes, however, the data set may unknowingly contain an 'order effect', meaning that a previous measurement could influence the outcome of the successive observations. If the residuals are not correlated, the Durbin-Watson statistic should be close to 2.

Table 3.15 - Autocorrelation

95% Confidence/Autocorrelation			
1.391	Durbin-Watson Statistic		
1.63 - 1.77	Positive autocorrelation detected		
2.290	Critical F-Statistic - 95% Confidence		
89.62%	Confidence to which analysis holds		

The table below summarizes the individual equation coefficient components with corresponding error margins. The sum of these error margins will differ to the overall standard error of the

equation due to the offsetting effect between the components. The t Stat represents a ratio of the estimated coefficient to its standard error. The t Stat can be interpreted as a measure of predictability of the variable with higher being better. The p Value represents the probability that the t Stat can be outside of the extremities of the standard error. The p Value can be interpreted as the probability that the error margin is due to change rather than a real difference with lower being better.

Table 3.16 - Multiple Regression Results

Multiple Regression Equation				
	Coefficients	**Standard Error**	**t Stat**	**p Value**
Intercept	-851,136.955	5,580,815.929	-0.153	87.91%
HDD	3,238.478	271.578	11.925	0.00%
CDD	5,608.447	3,617.086	1.551	12.38%
WinterFlag	21,184.907	173,268.028	0.122	90.29%
Cust Count	2,208.177	2,012.910	1.097	27.50%
ShutDWN	19,390.755	151,494.358	0.128	89.84%

The independent analysis presented in the table below displays a simple linear regression analysis of each of the independent variables against the dependent variable. The independent R-squared results displayed here are useful for determining which independent variables should be included in the analysis. Low R-squared results should normally be excluded (as a rule of thumb, below 50% indicates a weak relationship) however the use of CDD, the “shutdown” flag and CPI for Ontario did not negatively affect the Adjusted R-Square. In addition, using the Durbin-Watson statistic for each independent variable showed that even if the R-Square for those 3 variables were low, there was still correlation between the variables.

Table 3.17 - Independent Analysis

	Independent Analysis		
	R Squared	**Coefficient**	**Intercept**
Intercept			
HDD	86.87%	3053.17	5435182.00
CDD	28.55%	-37534.12	7293007.50
WinterFlag	67.74%	-1977937.88	8099864.50
Cust Count	0.02%	-756.20	9039920.00
ShutDWN	22.15%	1496050.73	5699358.50

To test the existence of autocorrelation for each of the independent variables, the Durbin-Watson statistic is employed to each independent variable as a function of time. Critical values based on the number of observations are displayed in the column heading with the calculated Durbin-Watson statistic for each independent variable below.

For ease of recognition, variables where positive autocorrelation has been detected are highlighted in bold green, and variables where negative autocorrelation has been detected are highlighted in bold red. In HPDC's case, there are no negative autocorrelation between variables.

Table 3.18 - Autocorrelation of each variable

	Auto Correlation
	Dl=1.69 Du=1.72
Intercept	**DW-Stat**
HDD	**0.35**
CDD	**0.95**
WinterFlag	**0.69**
Cust Count	**0.95**
ShutDWN	**1.20**

This tests each of the independent variables for multicollinearity, by running an adjusted r-squared analysis against all other independent variables. Those independent variables with a high level of multicollinearity should be omitted from the analysis (as a rule of thumb, higher than 90% indicates high multicollinearity - highlighted in bold red).

Table 3.19 - Multicollinearity

	Multicollinearity	
Intercept	**Adjusted R-Squared against other Indep**	**Variables With RSQ at > 90%**
HDD	83.35%	
CDD	56.84%	
WinterFlag	77.98%	
Cust Count	-1.34%	
ShutDWN	49.60%	

Once the utility has calculated its “optimal” Regression Results, the Load Forecast model then uses the coefficients from the regression results to adjust the wholesale purchases. Table 3.20 as seen below, demonstrates the results of this adjustment. The table shows a comparison of the actual and adjusted wholesale purchases.

Table 3.20 - kWh Purchased VS kWh Adjusted for Loss of Intermediate Cust and impact of FIT & Microfit						
Year	**kWh Purchased**	**year over year**	**Adjusted**	**year over year**	**Purch. VS Adj.**	
2004	117,625,717		82,813,506		-29.60%	29.60%
2005	116,962,701	-0.56%	83,596,959	0.95%	-28.53%	28.53%
2006	117,838,856	0.75%	83,001,434	-0.71%	-29.56%	29.56%
2007	111,111,959	-5.71%	87,408,154	5.31%	-21.33%	21.33%
2008	88,846,118	-20.04%	88,846,118	1.65%	0.00%	0.00%
2009	81,403,959	-8.38%	81,403,959	-8.38%	0.00%	0.00%
2010	79,483,246	-2.36%	79,509,530	-2.33%	0.03%	0.03%
2011	80,393,984	1.15%	80,704,953	1.50%	0.39%	0.39%
2012	81,056,217	0.82%	81,742,651	1.29%	0.85%	0.85%
2013	83,801,888	3.39%	84,500,806	3.37%	0.83%	0.83%

Reflects loss of Intermediate Customer.

Reflects impact of recession

Table 3.21 - kWh Purchased VS Weather Adjusted						
Year	**kWh Purchased**	**year over year**	**Adjusted**	**year over year**	**Purch. VS Adj.**	
2004	82,813,506		84,804,101		2.40%	2.40%
2005	83,596,959	0.95%	84,031,129	-0.91%	0.52%	0.52%
2006	83,001,434	-0.71%	82,229,212	-2.14%	-0.93%	0.93%
2007	87,408,154	5.31%	83,630,666	1.70%	-4.32%	4.32%
2008	88,846,118	1.65%	83,578,796	-0.06%	-5.93%	5.93%
2009	81,403,959	-8.38%	83,753,174	0.21%	2.89%	2.89%
2010	79,509,530	-2.33%	80,856,470	-3.46%	1.69%	1.69%
2011	80,704,953	1.50%	83,145,661	2.83%	3.02%	3.02%
2012	81,742,651	1.29%	82,451,558	-0.83%	0.87%	0.87%
2013	84,500,806	3.37%	85,047,305	3.15%	0.65%	0.65%
					Mean	**2.32%**
					Median	**2.05%**

Mean Average Percentage Error (Mape) :

in column A: Actual value

in column B: Forecast value

*in column C: =IF(ABS(A2-B2)=0,0,ABS(A2-B2)/A2*100)*

calculate an average of column C (=AVERAGE(C2:Cx) and you have the MAPE in percent.

Table 3.22 below displays 20 years of historical Heating Degree Days and Cooling Degree Days. Unfortunately, HPDC was unable to run the regression analysis without having 20 years of history for all variables – which is not readily available.

Table 3.22 - Forecast using a twenty year weather normalization

HDD

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Jan	1378.9	1027.6	1208	1148.6	1076.8	1155.8	1114.3	1011.7	1045	1144.5
Feb	998.3	1010.5	1029.1	972.1	658.2	797.2	844.8	986	918.5	1039.6
Mar	744.7	766	901.5	924	792.6	768.9	646.5	804.6	902.6	870.7
Apr	576.4	602.7	630	522.2	421.4	466.4	511.9	455	537.9	621
May	314.3	288.6	386.2	385.1	231.6	210.2	269.8	186.6	356.7	234.1
June	87.5	91.2	70.6	78.7	113.1	89.8	185.5	113.6	126.4	106.2
Jul	45.8	42.5	75.4	70.7	49.4	30.2	82.9	77	41.4	62.4
Aug	142.4	43.4	63.2	118.8	64	97.2	92.8	68.8	52.9	73
Sept	190.5	267	180.3	210.9	197	178.2	240	228.5	158.3	169.9
Oct	343.3	419.6	446.7	398.9	412.9	477.5	377.9	410.5	526.5	445.1
Nov	578.1	838.6	700.5	731.6	614.4	596.6	620.3	546.1	776.2	626.9
Dec	763.8	1053.5	931.2	890.1	921.3	855.2	1131.4	784.4	871.7	876.1

CDD

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Jan	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	1.4	0	0
May	0.2	6.9	0	0.4	9.1	5.2	3.9	1.3	0	1.6
June	16.2	55	27.9	24.4	25.8	47.4	5.4	25.6	23.1	27.5
Jul	19	35.6	11.7	59.2	30.1	60.3	21.9	46.1	75.3	15.1
Aug	5.8	56.5	36.4	17.5	21.1	23.2	8.9	53.6	31.4	44.9
Sept	2.5	0.1	15.9	0.9	1.6	10.2	0	5.6	26.8	14.7
Oct	0	0.3	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0

Ex. 3/Tab 1/Sch. 10 - Forecast Method (Average & linear)

Hearst used a combination of average and linear forecasting method to project each variable. A 10 year average was used to forecast the HDD, CDD, Shutdown Flag, Winter Flag while a linear forecast was used for the CPI variable. Using a historical average for the Ontario CPI would have yielded inaccurate projections.

Table 3.23 - Forecasting Method

Forecast Method for each variable			10 Year Avg	10 Year Avg	10 Year Avg	10 Year Avg	Linear
	Actual	Adjusted	HDD	CDD	Winter Flag	Shutdown Flag	CPI Ont
2004-January	10078475.00	9758740.69	1303.50	0.00	1.00	0.00	-103.40
2004-February	8279970.00	8426359.97	882.10	0.00	1.00	0.00	-103.60
2004-March	8085376.00	8033479.21	762.00	0.00	1.00	0.00	-104.00
2004-April	7012419.00	7444990.26	571.40	0.00	0.00	0.00	-104.10
2004-May	6535927.50	6732098.90	355.60	0.00	0.00	0.00	-105.00
2004-June	6049817.00	6101548.34	145.90	2.80	0.00	0.00	-104.80
2004-July	5550003.00	5965316.02	63.30	28.40	0.00	1.00	-104.90
2004-August	5938170.00	6029756.61	139.80	3.90	0.00	1.00	-104.70
2004-September	5933163.50	6150466.97	135.70	13.60	0.00	0.00	-104.80
2004-October	6427381.00	6866959.38	398.50	0.00	0.00	0.00	-105.00
2004-November	7112824.50	7424963.63	585.50	0.00	1.00	0.00	-105.40
2004-December	9005617.00	9028261.69	1094.30	0.00	1.00	0.00	-105.30
2005-January	9498131.00	9252522.82	1163.20	0.00	1.00	0.00	-105.10
2005-February	8074117.50	8284179.27	863.70	0.00	1.00	0.00	-105.80
2005-March	8367032.50	8232256.79	854.50	0.00	1.00	0.00	-106.40
2005-April	6802551.00	6872956.73	418.70	0.00	0.00	0.00	-106.50
2005-May	6588039.50	6373527.14	255.80	2.20	0.00	0.00	-106.60
2005-June	6208435.50	6084084.44	46.90	52.20	0.00	0.00	-106.80
2005-July	5375253.00	6222276.74	38.00	83.50	0.00	1.00	-106.90
2005-August	6022111.00	5865297.09	45.30	35.90	0.00	1.00	-107.50
2005-September	6035727.00	6119478.06	151.80	20.10	0.00	0.00	-108.20

2005-October	6739153.50	6697082.76	368.80	3.60	0.00	0.00	-107.70
2005-November	7930326.50	7659762.06	685.80	0.00	1.00	0.00	-107.50
2005-December	9151719.00	8563172.04	974.40	0.00	1.00	0.00	-107.60
2006-January	8979435.00	8401852.26	930.40	0.00	1.00	0.00	-108.20
2006-February	8513532.00	8482826.29	952.50	0.00	1.00	0.00	-107.90
2006-March	8273704.50	7651421.21	699.00	0.00	1.00	0.00	-108.80
2006-April	6643137.50	6780200.03	420.90	0.00	0.00	0.00	-109.10
2006-May	6626334.00	6221085.43	205.70	17.70	0.00	0.00	-109.50
2006-June	6215798.50	5970347.97	97.50	28.60	0.00	0.00	-109.30
2006-July	5725126.00	5963395.36	49.00	55.10	0.00	1.00	-109.00
2006-August	6191600.00	5858547.04	105.60	17.90	0.00	1.00	-109.10
2006-September	6130045.00	6192546.66	224.50	0.90	0.00	0.00	-108.50
2006-October	6675939.50	6883424.42	445.20	0.00	0.00	0.00	-108.40
2006-November	7656128.50	7305433.35	586.50	0.00	1.00	0.00	-108.60
2006-December	8566293.00	7901966.28	778.70	0.00	1.00	0.00	-108.80
2007-January	8684981.00	8590537.57	995.30	0.00	1.00	0.00	-108.60
2007-February	9099498.00	8751759.49	1060.00	0.00	1.00	0.00	-109.70
2007-March	8089431.00	7817121.55	776.10	0.00	1.00	0.00	-110.80
2007-April	7559213.00	6972621.08	506.50	0.00	0.00	0.00	-111.10
2007-May	6731161.00	6174586.71	235.60	9.70	0.00	0.00	-111.60
2007-June	6376066.50	6037565.22	107.20	42.70	0.00	0.00	-111.10
2007-July	6132115.50	5728909.70	45.10	36.20	0.00	1.00	-111.10
2007-August	6348193.00	5776679.52	73.60	29.60	0.00	1.00	-110.90
2007-September	6447104.50	6011962.79	184.90	6.20	0.00	0.00	-111.00
2007-October	6797564.00	6476368.82	346.20	0.00	0.00	0.00	-110.90
2007-November	7690313.50	7514462.48	684.70	0.00	1.00	0.00	-111.20
2007-December	9124580.00	8470492.74	987.60	0.00	1.00	0.00	-111.10
2008-January	8631307.00	8452696.65	979.50	0.00	1.00	0.00	-110.90
2008-February	8397536.00	8416239.03	974.00	0.00	1.00	0.00	-111.40
2008-March	8563699.00	8188144.30	905.10	0.00	1.00	0.00	-111.70

2008-April	6795318.50	6761456.70	456.40	0.00	0.00	0.00	-112.50
2008-May	6651869.50	6357773.41	341.40	0.00	0.00	0.00	-113.60
2008-June	5848758.00	5707698.14	113.30	12.00	0.00	0.00	-114.20
2008-July	5117406.50	5428568.65	50.10	14.50	0.00	1.00	-115.10
2008-August	6017902.50	5487436.68	69.70	12.60	0.00	1.00	-114.80
2008-September	5781802.00	5962381.41	207.20	11.20	0.00	0.00	-115.10
2008-October	6426926.00	6550224.61	400.50	1.40	0.00	0.00	-113.70
2008-November	7406442.50	7199322.37	612.50	0.00	1.00	0.00	-113.50
2008-December	8829177.00	8723768.98	1088.90	0.00	1.00	0.00	-112.80
2009-January	9240976.00	9059121.68	1190.70	0.00	1.00	0.00	-112.40
2009-February	7981826.50	8250787.62	942.10	0.00	1.00	0.00	-113.10
2009-March	6617979.00	7860928.18	825.40	0.00	1.00	0.00	-113.70
2009-April	6001005.00	6925752.90	517.20	0.00	0.00	0.00	-113.20
2009-May	6136316.50	6357214.06	346.10	0.00	0.00	0.00	-114.00
2009-June	5932717.00	5892754.51	124.70	31.90	0.00	0.00	-114.20
2009-July	4369802.50	5515448.57	77.60	7.40	0.00	1.00	-113.70
2009-August	5397620.50	5712439.31	105.20	22.10	0.00	1.00	-113.70
2009-September	5896429.50	5807586.53	149.50	8.10	0.00	0.00	-113.80
2009-October	6809130.00	6773488.01	477.30	0.00	0.00	0.00	-113.90
2009-November	5782420.00	6758858.90	485.80	0.00	1.00	0.00	-114.60
2009-December	7153500.00	8263064.10	958.20	0.00	1.00	0.00	-114.10
2010-January	7638281.00	8314688.46	979.50	0.00	1.00	0.00	-114.50
2010-February	6718652.00	7875474.24	847.10	0.00	1.00	0.00	-115.10
2010-March	5904811.00	7089451.31	599.50	0.00	1.00	0.00	-115.30
2010-April	6753376.00	6371576.69	371.40	0.00	0.00	0.00	-115.70
2010-May	5984868.50	6132361.14	217.20	35.30	0.00	0.00	-116.20
2010-June	5763807.50	5679650.23	134.20	8.70	0.00	0.00	-116.00
2010-July	5725740.50	5608376.69	27.90	57.50	0.00	1.00	-117.00
2010-August	5649629.00	5648946.59	48.20	54.40	0.00	1.00	-117.00
2010-September	5115729.00	5916154.54	243.60	0.00	0.00	0.00	-117.10

2010-October	6359707.00	6463341.06	426.20	0.00	0.00	0.00	-117.80
2010-November	7117945.00	7016438.21	609.20	0.00	1.00	0.00	-118.00
2010-December	8370446.50	7816231.63	862.40	0.00	1.00	0.00	-117.90
2011-January	8734761.00	8708446.82	1145.00	0.00	1.00	0.00	-117.80
2011-February	7737091.00	7978380.24	915.20	0.00	1.00	0.00	-118.00
2011-March	6593118.00	7800538.05	875.70	0.00	1.00	0.00	-119.40
2011-April	6982340.00	6698139.49	526.50	0.00	0.00	0.00	-119.90
2011-May	5562512.00	5869029.30	263.50	4.80	0.00	0.00	-120.90
2011-June	5710071.00	5429702.74	104.00	9.50	0.00	0.00	-120.20
2011-July	5452151.00	5520308.79	24.20	65.20	0.00	1.00	-120.50
2011-August	5634542.00	5328452.00	56.70	26.50	0.00	1.00	-120.60
2011-September	5747286.50	5586703.88	180.90	2.80	0.00	0.00	-121.10
2011-October	6053314.50	6132231.76	349.40	4.40	0.00	0.00	-121.00
2011-November	6808127.50	6790776.53	574.00	0.00	1.00	0.00	-121.00
2011-December	7249647.50	7901210.79	918.70	0.00	1.00	0.00	-120.30
2012-January	8182674.50	8122651.07	992.80	0.00	1.00	0.00	-120.60
2012-February	7620671.50	7610382.68	839.60	0.00	1.00	0.00	-121.40
2012-March	7300265.50	6820971.37	595.80	0.00	1.00	0.00	-122.00
2012-April	6379449.00	6538485.36	506.20	0.00	0.00	0.00	-122.40
2012-May	5970867.00	5765331.91	230.20	12.60	0.00	0.00	-122.40
2012-June	4866224.00	5377895.01	51.40	31.80	0.00	0.00	-121.60
2012-July	5395864.50	5417498.60	23.70	56.30	0.00	1.00	-121.40
2012-August	5856625.00	5341182.56	79.20	24.90	0.00	1.00	-121.80
2012-September	5782488.00	5711478.23	213.20	10.50	0.00	0.00	-122.00
2012-October	6512726.50	6197212.91	395.20	0.00	0.00	0.00	-122.20
2012-November	7215620.00	6961866.02	639.40	0.00	1.00	0.00	-121.90
2012-December	7988122.00	7837411.88	910.60	0.00	1.00	0.00	-121.30
2013-January	8717577.00	8345103.51	1072.10	0.00	1.00	0.00	-121.30
2013-February	7925286.50	7938660.32	961.10	0.00	1.00	0.00	-122.80
2013-March	7751037.50	7394572.70	792.90	0.00	1.00	0.00	-123.20

2013-April	5864927.00	6791553.36	592.80	0.00	0.00	0.00	-122.90
2013-May	5793452.00	5903424.81	311.50	0.00	0.00	0.00	-123.00
2013-June	5507988.00	5451765.39	138.30	13.40	0.00	0.00	-123.20
2013-July	5490860.00	5373253.09	62.40	44.40	0.00	1.00	-123.40
2013-August	5711346.00	5309971.92	66.60	34.20	0.00	1.00	-123.40
2013-September	5737634.00	5507967.92	191.80	0.00	0.00	0.00	-123.50
2013-October	6656402.50	6136181.88	389.20	0.00	0.00	0.00	-123.30
2013-November	7307826.00	6998417.29	668.10	0.00	1.00	0.00	-123.30
2013-December	8842430.00	8544563.20	1157.50	0.00	1.00	0.00	-123.10
2014-January		8241322.13	1075.20	0.00	1.00	0.00	-124.26
2014-February		7758534.14	923.74	0.00	1.00	0.00	-124.44
2014-March		7264177.71	768.60	0.00	1.00	0.00	-124.61
2014-April		6392454.82	488.80	0.00	0.00	0.00	-124.78
2014-May		5779367.96	276.26	8.23	0.00	0.00	-124.96
2014-June		5352000.75	106.34	23.36	0.00	0.00	-125.13
2014-July		5252510.36	46.13	44.85	0.00	1.00	-125.30
2014-August		5209304.72	78.99	26.20	0.00	1.00	-125.48
2014-September		5469582.05	188.31	7.34	0.00	0.00	-125.65
2014-October		6079302.52	399.65	0.94	0.00	0.00	-125.82
2014-November		6722239.82	613.15	0.00	1.00	0.00	-126.00
2014-December		7847215.36	973.13	0.00	1.00	0.00	-126.17
2015-January		8089656.13	1052.37	0.00	1.00	0.00	-126.35
2015-February		7691726.52	927.90	0.00	1.00	0.00	-126.52
2015-March		7186354.92	769.26	0.00	1.00	0.00	-126.69
2015-April		6286591.09	480.54	0.00	0.00	0.00	-126.87
2015-May		5680700.28	268.33	9.05	0.00	0.00	-127.04
2015-June		5275083.92	102.38	25.42	0.00	0.00	-127.21
2015-July		5179550.19	44.41	46.49	0.00	1.00	-127.39
2015-August		5127012.47	72.91	28.43	0.00	1.00	-127.56
2015-September		5401528.93	193.57	6.71	0.00	0.00	-127.73

2015-October		6000471.32	399.77	1.03	0.00	0.00	-127.91
2015-November		6651034.31	615.92	0.00	1.00	0.00	-128.08
2015-December		7729226.76	961.01	0.00	1.00	0.00	-128.26

1

2

Table 3.24 below shows historical and projected weather normalized Load Forecast by customer class. The projected load for 2015 reflects the utility's economic situation and shows a load that is consistent with the change in customer count.

Table 3.24 - Weather Adjusted Load Forecast

Weather Adjusted Load Forecast Results							
	Year	2010	2011	2012	2013	2014	2015
Residential	Cust/Conn	2,323	2,295	2,291	2,285	2,279	2,273
	kWh	25,155,910	25,365,927	24,020,357	25,464,009	24,920,921	24,876,357
	kW						
General Service < 50 kW	Cust/Conn	403	422	444	453	460	467
	kWh	11,694,669	12,171,991	11,120,070	11,433,325	11,189,478	11,169,469
	kW						
General Service > 50 to 4999 kW	Cust/Conn	39	39	40	40	40	40
	kWh	17,746,525	22,119,514	23,869,307	23,368,303	22,869,911	22,829,015
	kW	64,939	65,160	64,939	65,160	64,980	64,864
Intermediate	Cust/Conn	3	3	2	2	2	2
	kWh	18,965,408	19,113,182	20,375,091	21,805,339	21,090,215	21,090,215
	kW	61,632	60,417	62,501	61,716	62,109	62,109
Sentinel Lights	Cust/Conn	18	17	17	17	15	13
	kWh	21,979	21,276	21,276	21,276	19,125	17,042
	kW	72	72	72	72	58	51
Street Lighting	Cust/Conn	922	926	932	941	946	951
	kWh	1,008,500	1,008,758	1,021,182	1,026,377	1,098,123	1,103,982
	kW	11,064	11,093	11,167	11,288	11,350	11,411
Total	**Cust/Conn**	**3,707**	**3,700**	**3,725**	**3,738**	**3,742**	**3,747**
	kWh	**74,592,991**	**79,800,647**	**80,427,282**	**83,118,629**	**81,187,772**	**81,086,080**
	kW	**137,707**	**136,741**	**138,679**	**138,235**	**138,497**	**138,434**

Impact and Persistence from Historical CDM Programs

Ex. 3/Tab 2/Sch. 1 - Load Forecast CDM Adjustment Work Form

While the forecast as presented in the previous section assumes some level of embedded "natural conservation", it does not take into account the impacts on energy purchases arising from CDM programs undertaken by HPDC's customers. The load forecast is a projection of the expected level of electricity purchases that would occur over the specified period in the absence of any CDM initiatives. Therefore, in accordance with the filing requirements, the forecasted energy purchases are further adjusted to reflect CDM reductions.

The Sch. to achieve CDM targets are presented at Appendix 2-I below.

Appendix 2-I - Load Forecast CDM Adjustment Work Form

2011-2014 CDM Program - 2014, last year of the current CDM plan						
			4 Year (2011-2014) kWh Target:			
			6,400,000			
		2011	2012	2013	2014	Total
2011 CDM Programs		11.50%	11.50%	11.37%	10.10%	44.47%
2012 CDM Programs			11.18%	11.18%	11.11%	33.47%
2013 CDM Programs				10.43%	10.43%	20.86%
2014 CDM Programs					0.00%	0.00%
Total in Year		**11.50%**	**22.68%**	**32.98%**	**31.64%**	**98.80%**
			kWh			
2011 CDM Programs		798,000.00	798,000.00	789,000.00	701,000.00	3,086,000.00
2012 CDM Programs	-	16,000.00	776,000.00	776,000.00	771,000.00	2,307,000.00
2013 CDM Programs			99,000.00	724,000.00	724,000.00	1,547,000.00
2014 CDM Programs					-	-
Total in Year		**782,000.00**	**1,673,000.00**	**2,289,000.00**	**2,196,000.00**	**6,940,000.00**

Determination of 2015 Load Forecast Adjustment				
Net-to-Gross Conversion				
Is CDM adjustment being done on a "net" or "gross" basis?				**net**
Persistence of Historical CDM programs to 2014	**"Gross" kWh**	**"Net" kWh**	**Difference kWh**	**"Net-to-Gross" Conversion Factor ('g')**
2006-2010 CDM programs				
2011 CDM program				
2012 CDM program				
2013 CDM program				
2006 to 2013 OPA CDM programs: Persistence	0	0	0	0.00%

2015-2020 CDM Program - 2015, first year of the current CDM plan							
			6 Year (2015-2020) kWh Target:				
			3,200,000				
	2015	2016	2017	2018	2019	2020	Total
%							
2015 CDM Programs	16.67%						16.67%
2016 CDM Programs		16.67%					16.67%
2017 CDM Programs			16.67%				16.67%
2018 CDM Programs				16.67%			16.67%
2019 CDM Programs					16.67%		16.67%
2020 CDM Programs						16.67%	16.67%
Total in Year	**16.67%**	**16.67%**	**16.67%**	**16.67%**	**16.67%**	**16.67%**	**100.00%**
			kWh				
2015 CDM Programs	533,333.33						533,333.33
2016 CDM Programs		533,333.33					533,333.33
2017 CDM Programs			533,333.33				533,333.33
2018 CDM Programs				533,333.33			533,333.33
2019 CDM Programs					533,333.33		533,333.33
2020 CDM Programs						533,333.33	533,333.33
Total in Year	**533,333.33**	**533,333.33**	**533,333.33**	**533,333.33**	**533,333.33**	**533,333.33**	**3,200,000.00**

Weight Factor for Inclusion in CDM Adjustment to 2014 Load Forecast

	2011	2012	2013	2014	2015	
Weight Factor for each year's CDM program impact on 2014 load forecast ***Default Value selection rationale.***	**0**	**0**	**0.5**	**1**	**1**	Distributor can select "0", "0.5", or "1" from drop-down list

2011-2014 and 2015-2020 LRAMVA and 2015 CDM adjustment to Load Forecast							
	2011 kWh	2012	2013	2014	2015	Total for 2014	Total for 2015
Amount used for CDM threshold for LRAMVA (2014)	701,000.00	771,000.00	724,000.00	-		2,196,000.00	
2011 CDM adjustment (per Board Decision in 2011 Cost of Service Application)	100,000.00	100,000.00	100,000.00	100,000.00		400,000.00	
Amount used for CDM threshold for LRAMVA (2015)					533,333.33		533,333.33
Manual Adjustment for 2015 Load Forecast (billed basis)	-	-	362,000.00	-	533,333.33		**895,333.33**

Adjusted load from 2015 Forecast

The values entered in the 2015-2020 originate from the "Conservation First Framework LDC Tool Kit" published July 1, 2014 which shows HPDC's targets and budgets to be 10.0GWh and a budget of 2.6M.

Table 3.25 - CDM Adjustment

Weather Adjusted Load Forecast Results			
	Year	2014	2015
Residential	Cust/Conn	2,279	2,273
	kWh	24,920,921	24,876,357
	kW		
General Service < 50 kW	Cust/Conn	460	467
	kWh	11,189,478	11,169,469
	kW		
General Service > 50 to 4999 kW	Cust/Conn	40	40
	kWh	22,869,911	22,829,015
	kW	64,980	64,864
Intermediate	Cust/Conn	2	2
	kWh	21,090,215	21,090,215
	kW	62,109	62,109
Sentinel Lights	Cust/Conn	15	13
	kWh	19,125	17,042
	kW	58	51
Street Lighting	Cust/Conn	946	951
	kWh	1,098,123	1,103,982
	kW	11,350	11,411
Total	**Cust/Conn**	**3,742**	**3,747**
	kWh	**81,187,772**	**81,086,080**
	kW	**138,497**	**138,434**

Weather Adjusted Load Forecast Results			
Share	Target	Adjusted (kWh)	Final Adjusted (kWh)
30.68%	274,679	24,601,678	24,601,678
13.77%	123,331	11,046,139	11,046,139
28.15%	252,073	22,576,942	22,576,942
		64,148	64,148
26.01%	232,873	20,857,342	20,857,342
		61,423	61,423
0.02%	188	16,853	16,853
		50	50
1.36%	12,190	1,091,792	1,091,792
		11,285	11,285
	895,333.33		

Ex. 3/Tab 2/Sch. 2 – Final Weather Adjusted Load Forecast

Table 3.26 - Final Load Forecast

Final Load Forecast Results							
	Year	2010	2011	2012	2013	2014	2015
Residential	Cust/Conn	2,323	2,295	2,291	2,285	2,279	2,273
	kWh	25,155,910	25,365,927	24,020,357	25,464,009	24,920,921	24,601,678
	kW						
General Service < 50 kW	Cust/Conn	403	422	444	453	460	467
	kWh	11,694,669	12,171,991	11,120,070	11,433,325	11,189,478	11,046,139
	kW						
General Service > 50 to 4999 kW	Cust/Conn	39	39	40	40	40	40
	kWh	17,746,525	22,119,514	23,869,307	23,368,303	22,869,911	22,576,942
	kW	64,939	65,160	64,939	65,160	64,980	64,148
Intermediate	Cust/Conn	3	3	2	2	2	2
	kWh	18,965,408	19,113,182	20,375,091	21,805,339	21,090,215	20,857,342
	kW	61,632	60,417	62,501	61,716	62,109	61,423
Sentinel Lights	Cust/Conn	18	17	17	17	15	13
	kWh	21,979	21,276	21,276	21,276	19,125	16,853
	kW	72	72	72	72	58	50
Street Lighting	Cust/Conn	922	926	932	941	946	951
	kWh	1,008,500	1,008,758	1,021,182	1,026,377	1,098,123	1,091,792
	kW	11,064	11,093	11,167	11,288	11,350	11,285
Total	**Cust/Con**	**3,707**	**3,700**	**3,725**	**3,738**	**3,742**	**3,747**
	kWh	**74,592,991**	**79,800,647**	**80,427,282**	**83,118,629**	**81,187,772**	**80,190,746**
	kW	**137,707**	**136,741**	**138,679**	**138,235**	**138,497**	**136,906**

Accuracy of Load Forecast and Variance Analysis

Ex. 3/Tab 3/Sch. 1 - Variance Analysis of Load Forecast

The following section presents class specific adjusted historic and forecast values for those classes that have weather sensitive load. Historic class specific kWh consumption is allocated based on each class' share in wholesale kWh, exclusive of distribution losses. Forecast class values are allocated based on the class share for 2013.

Tables 3.27 to 3.29 show historical and forecasted details for each of the weather sensitive classes.

Table 3.27 - Load Analysis – Residential

Residential		
Year	**kWh**	**%chg**
2004	28,717,598	
2005	27,660,767	-4%
2006	26,448,668	-4%
2007	25,521,476	-4%
2008	24,957,018	-2%
2009	27,944,446	12%
2010	25,155,910	-10%
2011	25,365,927	1%
2012	24,020,357	-5%
2013	25,464,009	6%
2014	24,920,921	-2%
2015	24,876,357	0%

The residential class has not changed significantly over the last 10 years with the exception of a decrease in load from 2008 to 2010 due to the downturn in the economy. Although the load did not fully bounce back from the recession, it has remained stable since 2010. The utility doesn't anticipate any growth in the residential class in the next 5 years.

Table 3.28 - Load Analysis – GS<50

GS<50		
Year	**kWh**	**%chg**
2004	13,328,469	
2005	13,144,119	-1%
2006	12,861,153	-2%
2007	12,110,560	-6%
2008	11,750,190	-3%
2009	12,602,578	7%
2010	11,694,669	-7%
2011	12,171,991	4%
2012	11,120,070	-9%
2013	11,433,325	3%
2014	11,189,478	-2%
2015	11,169,469	0%

The GS<50 class has not changed significantly over the last 10 years. Much like the Residential Class, the trend shows a slight decrease in load during the economic downturn of 2008-2010. The slight reduction in weather normalized load for the bridge and test year is attributed to the embedded conservation initiatives applied by commercial consumers.

Table 3.29 - Load Analysis – GS > 50

GS>50				
Year	**kWh**	**%chg**	**kW**	**%chg**
2004	22,571,384		56,558	
2005	21,062,640	-7%	56,250	-1%
2006	19,998,094	-5%	56,079	0%
2007	19,907,316	0%	46,865	-16%
2008	19,437,888	-2%	50,867	9%
2009	18,244,050	-6%	59,643	17%
2010	17,746,525	-3%	64,939	9%
2011	22,119,514	25%	65,160	0%
2012	23,869,307	8%	64,939	0%
2013	23,368,303	-2%	65,160	0%
2014	22,869,911	-2%	64,980	0%
2015	22,829,015	0%	64,864	0%

The GS>50 class has not changed significantly either over the last 10 years except for the slight decrease in load during the 2008-2010 recession. The load in the GS>50 class has remained stable since 2012. The slight reduction in weather normalized load for the bridge and test year is attributed to the embedded conservation initiatives applied by commercial consumers. The utility does not project significant changes in the class in the next five years.

Ex. 3/Tab 3/Sch. 2 - Class specific Load Forecast- Non-Weather Sensitive

Table 3.30 to 3.32 presents actual and forecast kWh and kW for the non-weather sensitive Intermediate, Street Lighting and Sentinel Lights.

Street Lighting will see a marginal increase equivalent to the increase in connections and the forecasted throughput for Sentinel Lights is consistent with the reduction in connection.

With respect to the Intermediate Class, the utility used a two year average to predict the load, instead of a 10 year average. Using a 10 year average would have underestimated the load and would have caused an increase in rates for this particular class. HPDC feels that the demand for wood products is increasing and will continue to do so in the next 5 years. For the time being, the biggest struggle the town is facing is its difficulty in attracting staff to work in the wood mills.

Table 3.30 - Load Analysis - Intermediate

Intermediate				
Year	kWh	%chg	kW	%chg
2004	50,235,456		111,175	
2005	50,073,322	0%	111,663	0%
2006	54,335,266	9%	115,697	4%
2007	46,812,211	-14%	112,684	-3%
2008	24,295,464	-48%	70,620	-37%
2009	19,288,733	-21%	63,201	-11%
2010	18,965,408	-2%	61,632	-2%
2011	19,113,182	1%	60,417	-2%
2012	20,375,091	7%	62,501	3%
2013	21,805,339	7%	61,716	-1%
2014	21,090,215	-3%	62,109	1%
2015	21,090,215	0%	62,109	0%

Table 3.31 - Load Analysis – Sentinel Lights

Sentinel Lights				
Year	kWh	%chg	kW	%chg
2004	63,429		176	
2005	61,341	-3%	170	-3%
2006	60,966	-1%	168	-1%
2007	55,693	-9%	154	-8%
2008	46,364	-17%	134	-13%
2009	25,056	-46%	72	-46%

2010	21,979	-12%	72	0%
2011	21,276	-3%	72	0%
2012	21,276	0%	72	0%
2013	21,276	0%	72	0%
2014	19,125	-10%	58	-19%
2015	17,042	-11%	51	-12%

Table 3.32 - Load Analysis – Street Lights

Streetlight				
Year	**kWh**	**%chg**	**kW**	**%chg**
2004	1,119,277		10,756	
2005	1,087,640	-3%	10,821	1%
2006	1,091,032	0%	10,840	0%
2007	1,096,387	0%	10,920	1%
2008	1,168,303	7%	10,988	1%
2009	1,001,192	-14%	10,992	0%
2010	1,008,500	1%	11,064	1%
2011	1,008,758	0%	11,093	0%
2012	1,021,182	1%	11,167	1%
2013	1,026,377	1%	11,288	1%
2014	1,098,123	7%	11,350	1%
2015	1,103,982	1%	11,411	1%

Table 3.33 below presents the actual average use per customer, by customer class, and historical and adjusted forecast average use per customer generated using the load forecast. As can be seen from the results below, the predicted use per customer follows the trend created from its historical usage per customer.

Table 3.33 - Average per Customer

Average per customer									
	Residenttial	GS<50	GS>50		Sentinel		Streetlights		USL
Year	Per cust	Per cust	per cust kWh	per cust kWh	per cust kWh	per cust kW	per cust kWh	per cust kWh	per cust kWh
2005	12,275	33,829	557,318	1,396	16,745,152	37,058	1,321	4	897
2006	11,786	33,531	547,082	1,461	16,691,107	37,221	1,334	4	901
2007	11,349	31,993	499,952	1,402	18,111,755	38,566	1,325	4	904
2008	10,942	30,582	510,444	1,202	15,604,070	37,561	1,326	4	911
2009	10,776	30,480	492,098	1,288	8,098,488	23,540	1,204	3	915
2010	12,022	32,027	461,875	1,510	6,429,578	21,067	1,139	3	915
2011	10,831	29,055	460,949	1,687	6,321,803	20,544	1,221	4	922
2012	11,055	28,878	567,167	1,671	7,645,273	24,167	1,252	4	926
2013	10,487	25,045	604,286	1,644	10,187,546	31,251	1,252	4	932
2014	11,144	25,239	584,208	1,629	10,902,670	30,858	1,252	4	941
2015	10,906	24,701	571,748	1,627	11,031,046	32,485	1,263	4	946
0	10,887	24,657	570,725	1,626	11,539,378	33,982	1,263	4	951

Appendix 2-IA -Summary and Variances of Actual and Forecast Data

	2010 BA	2010	2011	2012	2013 Bridge	2014 Test	2015 Test
Residential							
# of Customers	2,322	2,323	2,295	2,291	2,285	2,279	2,273
kWh	27,043,280	24,736,853	24,621,320	23,813,833	25,300,382	24,920,921	24,257,123
kW	-						
Variance Analysis							
# of Customers	2,322	0.02%	-1.18%	-1.36%	-1.59%	-1.85%	-2.11%
kWh	27,043,280	-8.53%	-8.96%	-11.94%	-6.44%	-7.85%	-10.30%
kW	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Service < 50 kW							
# of Customers	391	403	422	444	453	460	467
kWh	12,897,126	11,499,854	11,814,687	11,024,461	11,359,856	11,189,478	10,891,433
kW	-						
Variance Analysis							
# of Customers	391	2.94%	7.80%	13.55%	15.86%	17.67%	19.51%
kWh	12,897,126	-10.83%	-8.39%	-14.52%	-11.92%	-13.24%	-15.55%
kW	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Service > 50 to 1499 kW							
# of Customers	38	39	39	40	40	40	40
kWh	20,927,356	17,450,896	21,470,204	23,664,082	23,218,142	22,869,911	22,260,744
kW	58,015	64,939	65,160	64,939	65,160	64,980	63,249
Variance Analysis							
# of Customers	38	1.32%	2.63%	3.95%	5.26%	5.12%	4.97%
kWh	20,927,356	-16.61%	2.59%	13.08%	10.95%	9.28%	6.37%
kW	58,015	11.93%	12.31%	11.93%	12.31%	12.01%	9.02%
Intermediate							
# of Customers	3	3	3	2	2	2	2
kWh	24,623,194	18,965,408	19,113,182	20,375,091	21,805,339	21,090,215	20,565,227
kW	70,701	61,632	60,417	62,501	61,716	62,109	60,563
Variance Analysis							
# of Customers	3	0.00%	-16.67%	-33.33%	-33.33%	-36.27%	-39.08%
kWh	24,623,194	-22.98%	-22.38%	-17.25%	-11.44%	-14.35%	-16.48%
kW	70,701	-12.83%	-14.55%	-11.60%	-12.71%	-12.15%	-14.34%
Sentinel Lighting							
# of Customers	10	18	17	17	17	15	13
kWh	31,710	21,979	21,276	21,276	21,276	19,125	16,617
kW	87	72	72	72	72	58	50
Variance Analysis							
# of Customers	10	80.00%	70.00%	70.00%	70.00%	50.00%	30.00%
kWh	31,710	-30.69%	-32.90%	-32.90%	-32.90%	-39.69%	-47.60%
kW	87	-17.24%	-17.24%	-17.24%	-17.24%	-33.33%	-42.84%
Street Lighting							
# of Customers	4,666	922	926	932	941	946	951
kWh	1,144,089	1,008,500	1,008,758	1,021,182	1,026,377	1,098,123	430,600
kW	3,190	11,064	11,093	11,167	11,288	11,350	4,451
Variance Analysis							
# of Customers	4,666	-80.24%	-80.17%	-80.04%	-79.83%	-79.73%	-79.62%
kWh	1,144,089	-11.85%	-11.83%	-10.74%	-10.29%	-4.02%	-62.36%
kW	3,190	246.83%	247.74%	250.06%	253.86%	255.80%	39.53%

Ex. 3/Tab 3/Sch. 3 - Normalized Average Use per Customer ("NAC") Approach

In its 2010 Cost of Service Application, the NAC approach was introduced during HPDC's interrogatories. The approach was accepted by the Board with the reason that, at the time, there was no basis on which to establish a more credible alternative forecast at this time. HPDC was encouraged to explore alternative approaches to load forecasting for use in its next cost of service-based application. HPDC has done so by proposing a Load Forecast based on a multiple regression analysis. However, in the interest of exploring results of alternate approaches, HPDC compared its proposed methodology with the NAC approach applied during the last Cost of Service.

This alternate scenario applies a normalized average use per customer to the weather sensitive classes namely Residential, GS< 50 and GS >50. The most recent 12 months was used for the Intermediate, Street Lights and Sentinel Light classes which are deemed to be non-weather sensitive.(identified in yellow)

Determination of the Annual Average Use per Customer and the 12-month historical used to determine the load forecast for the non- weather sensitive classes are presented at Table below. Finally for the GS>50 kW, a kWh/kW ratio on the 2013 Actuals to determine the 2015 Forecast.

HPDC has also provided a class by class comparison of the results under the Regression Analysis vs the NAC approach.

Table 3.34 - NAC Approach

(at next page)

Load Forecast using NAC approach (kWh)								
	2010 Approved	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Forecasted	2015 Forecasted
Residential	26,627,362	27,944,446	25,155,910	25,365,927	24,020,357	25,464,009	25,314,995	24,833,322
GS<50kW	12,405,535	12,602,578	11,694,669	12,171,991	11,120,070	11,433,325	12,904,652	12,734,529
GS>50kW	19,022,892	18,244,050	17,746,525	22,119,514	23,869,307	23,368,303	21,398,318	21,957,752
Intermediate Users	18,502,357	19,288,733	18,965,408	19,113,182	20,375,091	21,805,339	21,776,246	21,776,246
Sentinel Lights	23,544	25,056	21,979	21,276	21,276	21,276	19,125	16,853
Street Lights	1,006,025	1,001,192	1,008,500	1,008,758	1,021,182	1,026,377	1,026,377	1,026,377
TOTAL	77,587,715	79,106,055	74,592,991	79,800,647	80,427,282	83,118,629	82,439,713	82,345,078

Load Forecast using NAC approach (kW)								
	2010 Approved	2009 Act	2010 Act	2011 Act	2012 Act	2013 Actual	2014 Forecasted	2015 Forecasted
Residential								
GS<50kW								
GS>50kW	53,176	59,643	64,939	65,160	64,939	65,160	59,666	61,226
Intermediate Users	59,721	63,201	61,632	60,417	62,501	61,716	61,716	61,716
Sentinel Lights	72	72	72	72	72	72	72	72
Street Lights		10,992	11,064	11,093	11,167	11,288	11,350	11,285
TOTAL	112,969	133,907	137,707	136,741	138,679	138,235	132,804.40	134,298.87

Non weather sensitive, 2015 intermediate based on most recent actual 12-months

Ratios							
	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual
Residential							
GS<50kW							
GS>50kW	0.0033	0.0037	0.0029	0.0027	0.0028	0.0028	0.0028
Intermediate Users	0.0033	0.0032	0.0032	0.0031	0.0028	0.0028	0.0028
Sentinel Lights	0.0029	0.0033	0.0034	0.0034	0.0034	0.0038	0.0043
Street Lights	0.0110	0.0110	0.0110	0.0109	0.0110	0.0111	0.0110

Customers/Connections								
	2010 Approved	2009 Act	2010 Act	2011 Act	2012 Act	2013 Actual	2014 Forecasted	2015 Forecasted
Residential	2,322	2325	2323	2295	2291	2285	2279	2273
GS<50kW	391	394	403	422	444	453	460	467
GS>50kW	38	40	39	39	40	40	40	40
Intermediate Users	3	3	18	3	2	2	2	2
Sentinel Lights	10	22	18	17	17	17	15	13
Street Lights	922	915	922	926	932	941	946	951
TOTAL	**3,686**	**3,698**	**3,722**	**3,700**	**3,725**	**3,738**	**3,742**	**3,747**

Annual Average Use Per Customer (kWh)								
	2010 Approved	2009 Act	2010 Act	2011 Act	2012 Act	2013 Actual	2009-2013 Avg	2010-2014 Avg
Residential	11,467	12,022	10,831	11,055	10,487	11,144	11,108	10,925
GS<50kW	31,728	32,027	29,055	28,878	25,045	25,239	28,049	27,253
GS>50kW	500,602	461,875	460,949	567,167	604,286	584,208	535,697	550,461
Intermediate Users	6,167,452	6,429,578	1,053,634	7,645,273	10,187,546	10,902,670		
Sentinel Lights	2,354	1,139	1,221	1,252	1,252	1,252		
Street Lights	1,091	1,094	1,094	1,090	1,096	1,091		

Non-Weather Senstive (Average based on most recent 12 months of acutals)													
Month	**Jan-13**	**Feb-13**	**Mar-13**	**Apr-13**	**May-13**	**Jun-13**	**Jul-13**	**Aug-13**	**Sep-13**	**Oct-13**	**Nov-13**	**Dec-13**	**TOTAL**
Intermediate													
kWh	1,879,465	1,900,707	1,983,416	1,983,416	1,695,844	1,693,552	1,581,849	1,661,506	1,767,403	1,838,198	1,898,450	1,892,440	**21,776,246**
kW	5,376	5,419	5,387	5,087	5,000	4,948	4,946	5,127	4,964	5,100	4,995	5,369	**61,716**
Sentinel													
Month													
kWh	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773	**21,276**
kW	6	6	6	6	6	6	6	6	6	6	6	6	**72**
Street Light													
Month													
kWh	115,664	94,118	89,007	71,726	61,245	53,016	58,755	70,445	82,393	100,078	109,683	120,247	**1,026,377**
kWh	940	940	940	940	940	940	940	940	942	942	942	942	**11,288**

Weather Normalized kWh									
		2009	**2010**	**2011**	**2012**	**2013**		**2014**	**2015**
Residential		25,820,142	25,797,926	25,486,907	25,442,476	25,464,009		25,314,995	24,833,322
GS<50kW		11,037,209	11,289,649	11,822,576	12,453,675	11,433,325		12,904,652	12,734,529
GS>50kW		21,160,025	20,624,328	20,892,177	21,160,025	23,368,303		21,398,318	21,957,752
Intermediate Users		19,288,733	18,965,408	19,113,182	20,375,091	21,805,339		21,776,246	21,776,246
Sentinel Lights		25,056	21,979	21,276	21,276	21,276		21,276	21,276
Street Lights		1,001,192	1,008,500	1,008,758	1,021,182	1,026,377		1,026,377	1,026,377
TOTAL		78,332,357	77,707,790	78,344,876	80,473,725	83,118,629		82,441,864	82,349,501

Weather sensitive kWh load, weather normalized based on 5-yr average use per customer

Weather Normalized kW									
		2009	**2010**	**2011**	**2012**	**2013**		**2014**	**2015**
Residential									
GS<50kW									
GS>50kW		59,643	64,939	65,160	64,939	65,160		59,666	61,226
Intermediate Users		63,201	61,632	60,417	62,501	61,716		61,716	61,716
Sentinel Lights		72	72	72	72	72		72	72
Street Lights								11,288	11,288
TOTAL		122,915	126,643	125,648	127,512	126,947		132,742	134,302

Non weather sensitive, 2015 intermediate based on most recent actual 12-months

Table 3.35 - Comparison of NAC Approach and Multiple Regression

Regression vs NAC Analysis										
								Regression		NAC	
	Year	2010	2011	2012	2013	2014		2015 Weather Adjusted		2015 Weather Adjusted	Diff
Residential	Cust/Conn	2,323	2,295	2,291	2,285	2,279					
	kWh	25,155,910	25,365,927	24,020,357	25,464,009	24,920,921		24,876,357		24,833,322	- 43,035
	kW										
General Service < 50 kW	Cust/Conn	403	422	444	453	460					
	kWh	11,694,669	12,171,991	11,120,070	11,433,325	11,189,478		11,169,469		12,734,529	1,565,059
	kW										
General Service > 50 to 4999 kW	Cust/Conn	39	39	40	40	40					
	kWh	17,746,525	22,119,514	23,869,307	23,368,303	22,869,911		22,829,015		21,957,752	- 871,263
	kW	64,939	65,160	64,939	65,160	64,980		64,864		61,226	- 3,638
Intermediate	Cust/Conn	3	3	2	2	2					
	kWh	18,965,408	19,113,182	20,375,091	21,805,339	21,090,215		21,090,215		21,776,246	686,031
	kW	61,632	60,417	62,501	61,716	62,109		62,109		61,716	- 393
Sentinel Lights	Cust/Conn	18	17	17	17	15					
	kWh	21,979	21,276	21,276	21,276	19,125		17,042		16,853	- 188
	kW	72	72	72	72	58		51		72	21
Street Lighting	Cust/Conn	922	926	932	941	946					
	kWh	1,008,500	1,008,758	1,021,182	1,026,377	1,098,123		1,103,982		1,026,377	- 77,605
	kW	11,064	11,093	11,167	11,288	11,350		11,411		11,285	- 126
Total	**Cust/Conn**	**3,707**	**3,700**	**3,725**	**3,738**	**3,742**		**-**		**-**	**-**
	kWh	**74,592,991**	**79,800,647**	**80,427,282**	**83,118,629**	**81,187,772**		**81,086,080**		**82,345,078**	**1,258,999**
	kW	**137,707**	**136,741**	**138,679**	**138,235**	**138,497**		**138,434**		**134,299**	**- 4,135**

Although, the side by side comparison and the results of both methodologies are not particularly dissimilar, the utility feels that the regression method and results are more robust than the NAC approach.

As such, the utility maintains that its load forecast should be based on multiple regression approach.

Other Revenues

Ex. 3/Tab 4/Sch. 1 - Overview of Other Revenue

Any new proposed specific service charges, changes to rates or new rules for applying existing specific service charges; and

Any revenue from affiliate transactions, shared services or corporate cost allocations as described in section 2.7.3.2. For each affiliate transaction, identification of the service, the nature of the service provided to affiliated entities, accounts used to record the revenue and the associated costs to provide the service.

Other Distribution Revenues are revenues that are distribution related but that are sourced from means other than distribution rates. It includes items such as

- Specific Service Charges
- Late Payment Charges
- Other Distribution Revenues
- Other Income and Expenses

Details of these revenues are provided at the next section and variances on the revenue items will be explained at Ex. 3 Tab 4 Sch. 3.

OEB Appendix 2-F Other Operating Revenues

USoA #	USoA Description	2010	2011	2012	2013	2014	2015
							Test
	Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP
	4082-Retail Services Revenues	-$4,796.15	-$4,104.60	-$4,110.10	-$3,157.90	-$3,189.48	-$3,269.22
	4084-Service Transaction Requests (STR) Revenues	-$50.25	-$23.75	-$21.25	-$31.75	-$32.07	-$32.87
	4086-SSS Administration Revenue	-$7,689.75	-$7,899.00	-$8,140.25	-$9,817.00	-$10,955.00	-$10,956.00
	4210-Rent from Electric Property	-$29,298.84	-$22,413.21	-$22,182.57	-$22,965.36	-$29,676.00	-$29,676.00
	4225-Late Payment Charges	-$11,439.00	-$10,406.92	-$9,656.83	-$12,982.56	-$13,242.21	-$13,507.06
	4235-Miscellaneous Service Revenues	-$21,681.88	-$22,118.68	-$17,050.00	-$15,990.00	-$16,629.60	-$17,294.78
	4324-Special Purpose Charge Recovery	-$15,738.87	-$23,465.13	$0.00	$0.00	$0.00	$0.00
	4325-Revenues from Merchandise Jobbing, Etc.	-$62,035.76	-$62,163.88	-$102,824.10	-$95,252.05	-$99,062.13	-$100,000.00
	4390-Miscellaneous Non-Operating Income	$0.00	$32,751.00	$2,729.15	$0.00	$0.00	$0.00
	4405-Interest and Dividend Income	-$40,905.66	-$51,965.13	-$53,634.31	-$51,805.49	-$44,250.00	-$44,250.00
			$0.00	$0.00	$0.00	$0.00	$0.00
Specific Service Charges		-$21,681.88	-$22,118.68	-$17,050.00	-$15,990.00	-$16,629.60	-$17,294.78
Late Payment Charges		-$11,439.00	-$10,406.92	-$9,656.83	-$12,982.56	-$13,242.21	-$13,507.06
Other Operating Revenues		-$41,834.99	-$34,440.56	-$34,454.17	-$35,972.01	-$43,852.55	-$43,934.09
Other Income or Deductions		-$118,680.29	-$104,843.14	-$153,729.26	-$147,057.54	-$143,312.13	-$144,250.00
Total		-$193,636.16	-$171,809.30	-$214,890.26	-$212,002.11	-$217,036.49	-$218,985.92

Description	**Account(s)**
Specific Service Charges:	4235
Late Payment Charges:	4225
Other Distribution Revenues:	4080, 4082, 4084, 4090, 4205, 4210, 4215, 4220, 4240, 4245
Other Income and Expenses:	4305, 4310, 4315, 4320, 4325, 4330, 4335, 4340, 4345, 4350, 4355, 4360, 4365, 4370, 4375, 4380, 4385, 4390, 4395, 4398, 4405, 4415

Note: Add all applicable accounts listed above to the table and include all relevant information.

Account Breakdown Details

For each "Other Operating Revenue" and "Other Income or Deductions" Account, a detailed breakdown of the account components is required. See the example below for Account 4405, Interest and Dividend Income.

Account 4405 - Interest and Dividend Income

	2010	2011	2012	2013	2014	2015
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP
Short-term Investment Interest	-$ 40,906	-$ 51,965	-$ 53,634	-$ 51,805	-$ 44,250	-$ 44,250
Bank Deposit Interest						
Miscellaneous Interest Revenue						
etc.[1]						
Total	-$ 40,906	-$ 51,965	-$ 53,634	-$ 51,805	-$ 44,250	-$ 44,250

Details of these revenues are provided at the next section and variances on the revenue items will be explained at Ex. 3 Tab 4 Sch. 3.

Ex. 3/Tab 4/Sch. 3 - Other Revenue Variance Analysis

Comparison of actual revenues for historical years to forecast revenue for Bridge and Test Years, including explanations for significant variances in year-over-year comparisons;

Table 3.36 – Variance Analysis of Other Revenues BA vs 2010

USoA #	USoA Description	2010 BA	2010	Var
	Reporting Basis	**CGAAP**	**CGAAP**	**CGAAP**
	4080-Distribution Services Revenue	$0.00	$0.00	$0.00
	4082-Retail Services Revenues	$0.00	-$4,796.15	-$4,796.15
	4084-Service Transaction Requests (STR) Revenues	$0.00	-$50.25	-$50.25
	4086-SSS Administration Revenue	-$7,764.00	-$7,689.75	$74.25
	4210-Rent from Electric Property	-$15,853.00	-$29,298.84	-$13,445.84
	4225-Late Payment Charges	-$13,120.00	-$11,439.00	$1,681.00
	4235-Miscellaneous Service Revenues	-$32,170.00	-$21,681.88	$10,488.12
	4324-Special Purpose Charge Recovery	$0.00	-$15,738.87	-$15,738.87
	4325-Revenues from Merchandise Jobbing, Etc.	$0.00	-$62,035.76	-$62,035.76
	4390-Miscellaneous Non-Operating Income	$0.00	$0.00	$0.00
	4405-Interest and Dividend Income	$0.00	-$40,905.66	-$40,905.66
Specific Service Charges		-$32,170.00	-$21,681.88	$10,488.12
Late Payment Charges		-$13,120.00	-$11,439.00	$1,681.00
Other Operating Revenues		-$23,617.00	-$41,834.99	-$18,217.99
Other Income or Deductions		$0.00	-$118,680.29	-$118,680.29
Total		-$68,907.00	-$193,636.16	-$124,729.16

Much of the variances between 2010 Board Approved and 2010 actuals have to do with an internal review of the utility conducted in 2010 to review the accounting treatment of the revenue offset accounts. Following the internal review, certain changes were done which corrected the issues, however created a one-time year over year variance.

Table 3.37 – Variance Analysis of Other Revenues BA vs 2010

USoA #	USoA Description	2010	2011	Var
	Reporting Basis	**CGAAP**	**CGAAP**	**CGAAP**
	4080-Distribution Services Revenue	$0.00	$0.00	$0.00
	4082-Retail Services Revenues	-$4,796.15	-$4,104.60	-$691.55
	4084-Service Transaction Requests (STR) Revenues	-$50.25	-$23.75	-$26.50
	4086-SSS Administration Revenue	-$7,689.75	-$7,899.00	$209.25
	4210-Rent from Electric Property	-$29,298.84	-$22,413.21	-$6,885.63
	4225-Late Payment Charges	-$11,439.00	-$10,406.92	-$1,032.08
	4235-Miscellaneous Service Revenues	-$21,681.88	-$22,118.68	$436.80
	4324-Special Purpose Charge Recovery	-$15,738.87	-$23,465.13	$7,726.26
	4325-Revenues from Merchandise Jobbing, Etc.	-$62,035.76	-$62,163.88	$128.12
	4390-Miscellaneous Non-Operating Income	$0.00	$32,751.00	-$32,751.00
	4405-Interest and Dividend Income	-$40,905.66	-$51,965.13	$11,059.47
Specific Service Charges		-$21,681.88	-$22,118.68	$436.80
Late Payment Charges		-$11,439.00	-$10,406.92	-$1,032.08
Other Operating Revenues		-$41,834.99	-$34,440.56	-$7,394.43
Other Income or Deductions		-$118,680.29	-$104,843.14	-$13,837.15
Total		-$193,636.16	-$171,809.30	-$21,826.86

The year over year variance from 2010 to 2011 show a decrease of $21,826. The major contributor to this variance is $32,751 in account 4390-Miscellaneous Non-Operating Income. This entry was in as a result of an OEB audit which was conducted in 2013. As a result of the audit, the OEB instructed the utility to make the one-time adjustment in account 4390. The audit report and OEB summary spreadsheet is presented at Ex.9/Tab 3/Sch. 1

Table 3.38 – Variance Analysis of Other Revenues BA vs 2010

USoA #	USoA Description	2011	2012	Var
	Reporting Basis	**CGAAP**	**CGAAP**	**CGAAP**
	4080-Distribution Services Revenue	$0.00	$0.00	$0.00
	4082-Retail Services Revenues	-$4,104.60	-$4,110.10	$5.50
	4084-Service Transaction Requests (STR) Revenues	-$23.75	-$21.25	-$2.50
	4086-SSS Administration Revenue	-$7,899.00	-$8,140.25	$241.25
	4210-Rent from Electric Property	-$22,413.21	-$22,182.57	-$230.64
	4225-Late Payment Charges	-$10,406.92	-$9,656.83	-$750.09
	4235-Miscellaneous Service Revenues	-$22,118.68	-$17,050.00	-$5,068.68
	4324-Special Purpose Charge Recovery	-$23,465.13	$0.00	-$23,465.13
	4325-Revenues from Merchandise Jobbing, Etc.	-$62,163.88	-$102,824.10	$40,660.22
	4390-Miscellaneous Non-Operating Income	$32,751.00	$2,729.15	$30,021.85
	4405-Interest and Dividend Income	-$51,965.13	-$53,634.31	$1,669.18
Specific Service Charges		-$22,118.68	-$17,050.00	-$5,068.68
Late Payment Charges		-$10,406.92	-$9,656.83	-$750.09
Other Operating Revenues		-$34,440.56	-$34,454.17	$13.61
Other Income or Deductions		-$104,843.14	-$153,729.26	$48,886.12
Total		-$171,809.30	-$214,890.26	$43,080.96

The year over year variance from 2011 to 2012 show a decrease of $43,080. The major contributor to this variance is an increase of $40,660 in account 4325-Revenues from Merchandise Jobbing. During a change in executive management in 2011, numerous year end entries were not done and had to be reviewed and completed by the accounting firm Collins Barrow. This includes an entry for revenues and expenses which had been previously "netted" by the previous manager. As of 2012, Collins Barrow were aware that the netting in revenues needed to be reversed at year end so full revenues and expenses were recorded instead of the difference between both (netting) which was recorded before in revenues. The second contributor is the Special Purpose Charge Recovery which was mandated by the regulatory and outside of the utility's control.

Table 3.39 – Variance Analysis of Other Revenues BA vs 2010

USoA #	USoA Description	2012	2013	Var
	Reporting Basis	**CGAAP**	**CGAAP**	
	4080-Distribution Services Revenue	$0.00	$0.00	$0.00
	4082-Retail Services Revenues	-$4,110.10	-$3,157.90	-$952.20
	4084-Service Transaction Requests (STR) Revenues	-$21.25	-$31.75	$10.50
	4086-SSS Administration Revenue	-$8,140.25	-$9,817.00	$1,676.75
	4210-Rent from Electric Property	-$22,182.57	-$22,965.36	$782.79
	4225-Late Payment Charges	-$9,656.83	-$12,982.56	$3,325.73
	4235-Miscellaneous Service Revenues	-$17,050.00	-$15,990.00	-$1,060.00
	4324-Special Purpose Charge Recovery	$0.00	$0.00	$0.00
	4325-Revenues from Merchandise Jobbing, Etc.	-$102,824.10	-$95,252.05	-$7,572.05
	4390-Miscellaneous Non-Operating Income	$2,729.15	$0.00	$2,729.15
	4405-Interest and Dividend Income	-$53,634.31	-$51,805.49	-$1,828.82
Specific Service Charges		-$17,050.00	-$15,990.00	-$1,060.00
Late Payment Charges		-$9,656.83	-$12,982.56	$3,325.73
Other Operating Revenues		-$34,454.17	-$35,972.01	$1,517.84
Other Income or Deductions		-$153,729.26	-$147,057.54	-$6,671.72
Total		-$214,890.26	-$212,002.11	-$2,888.15

The year over year variance from 2012 to 2013 show an immaterial variance of $2,888.

Table 3.40 – Variance Analysis of Other Revenues BA vs 2010

USoA #	USoA Description	2013	2014	Var
	Reporting Basis	**CGAAP**	**CGAAP**	
	4080-Distribution Services Revenue	$0.00	$0.00	$0.00
	4082-Retail Services Revenues	-$3,157.90	-$3,189.48	$31.58
	4084-Service Transaction Requests (STR) Revenues	-$31.75	-$32.07	$0.32
	4086-SSS Administration Revenue	-$9,817.00	-$10,955.00	$1,138.00
	4210-Rent from Electric Property	-$22,965.36	-$23,195.01	$229.65
	4225-Late Payment Charges	-$12,982.56	-$13,242.21	$259.65
	4235-Miscellaneous Service Revenues	-$15,990.00	-$16,629.60	$639.60
	4324-Special Purpose Charge Recovery	$0.00	$0.00	$0.00
	4325-Revenues from Merchandise Jobbing, Etc.	-$95,252.05	-$99,062.13	$3,810.08
	4390-Miscellaneous Non-Operating Income	$0.00	$0.00	$0.00
	4405-Interest and Dividend Income	-$51,805.49	-$44,250.00	-$7,555.49
Specific Service Charges		-$15,990.00	-$16,629.60	$639.60
Late Payment Charges		-$12,982.56	-$13,242.21	$259.65
Other Operating Revenues		-$35,972.01	-$37,371.56	$1,399.55
Other Income or Deductions		-$147,057.54	-$143,312.13	-$3,745.41
Total		-$212,002.11	-$210,555.50	-$1,446.61

The year over year variance from 2013 to 2014 show an immaterial variance of $1,446.61.

Table 3.41 – Variance Analysis of Other Revenues BA vs 2010

USoA #	USoA Description	2014	2015	Var
			Test	
	Reporting Basis			
	4082-Retail Services Revenues	-$3,189.48	-$3,269.22	$79.74
	4084-Service Transaction Requests (STR) Revenues	-$32.07	-$32.87	$0.80
	4086-SSS Administration Revenue	-$10,955.00	-$10,956.00	$1.00
	4210-Rent from Electric Property	$29,676.00	$29,676.00	$0.00
	4225-Late Payment Charges	-$13,242.21	-$13,507.06	$264.84
	4240-Provision for Rate Refunds	-$16,629.60	-$17,294.78	$665.18
	4324-Special Purpose Charge Recovery	$0.00	$0.00	$0.00
	4325-Revenues from Merchandise Jobbing, Etc.	-$99,062.13	-$100,000.00	$937.87
	4390-Miscellaneous Non-Operating Income	$0.00	$0.00	$0.00
	4405-Interest and Dividend Income	-$44,250.00	-$44,250.00	$0.00
Specific Service Charges		$0.00	$0.00	$0.00
Late Payment Charges		-$13,242.21	-$13,507.06	$264.84
Other Operating Revenues		-$1,130.15	-$1,876.87	$746.72
Other Income or Deductions		-$143,312.13	-$144,250.00	
Total		-$157,684.49	-$159,633.92	$1,011.57

The year over year variance from 2013 to 2014 show an immaterial variance of $1,411.57.