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 $1,135,927 (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

Distribution Revenues at Current Rates

2014 Actual

2014 Actual Year Projected Revenue from Existing Variable Charges

Customer Class Name	Variable Distribution Rate	per	Bridge Year Volume	Gross Variable Revenue	Transform. Allowance Rate	Transform. Allowance kW's	Transform. Allowance $'s	Net Variable Revenue
Residential	$0.0160	kWh	25,241,629	403,866	($0.45)		0	403,866
General Service < 50 kW	$0.0067	kWh	11,110,938	74,443	($0.45)		0	74,443
General Service > 50 to 1499 kW	$2.3213	kW	66,539	154,457	($0.45)	14,090	-6,341	148,116
Intermediate	$1.0215	kW	62,667	64,014	($0.45)	61,760	-27,792	36,222
Sentinel Lighting	$3.1198	kW	72	225	($0.45)		0	225
Street Lighting	$2.2937	kW	11,311	25,944	($0.45)		0	25,944
Total Variable Revenue			**36,493,156**	**722,949**		**75,850**	**-34,132**	**688,817**

2014 Actual

2014 Actual Year Projected Revenue from Existing Variable Charges

Customer Class Name	Fixed Rate	Customers (Connections)	Fixed Charge Revenue	Variable Revenue	TOTAL	% Fixed Revenue	% Variable Revenue	% Total Revenue
Residential	$9.1900	2,279	251,328	403,866	655,194	38.36%	61.64%	55.94%
General Service < 50 kW	$19.7600	457	108,245	74,443	182,689	59.25%	40.75%	15.60%
General Service > 50 to 1499 kW	$54.8200	41	26,971	148,116	175,088	15.40%	84.60%	14.95%
Intermediate	$223.0100	2	5,352	36,222	41,575	12.87%	87.13%	3.55%
Sentinel Lighting	$7.0900	17	1,446	225	1,671	86.56%	13.44%	0.14%
Street Lighting	$7.8800	943	89,123	25,944	115,067	77.45%	22.55%	9.82%
Total Fixed Revenue		**3,738**	**482,466**	**688,817**	**1,171,283**			

2015 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	24,347,981	389,568	($0.45)		0	389,568
General Service < 50 kW	$0.0067	kWh	11,155,291	74,740	($0.45)		0	74,740
General Service > 50 to 1499 kW	$2.3213	kW	64,865	150,572	($0.45)	17,580	-7,911	142,661
Intermediate	$1.0215	kW	60,980	62,291	($0.45)	61,760	-27,792	34,499
Sentinel Lighting	$3.1198	kW	70	217	($0.45)		0	217
Street Lighting	$2.2937	kW	4,565	10,471	($0.45)		0	10,471
Total Variable Revenue			**35,633,752**	**687,859**		**79,340**	**-35,703**	**652,156**

2015 Test Year

Test Year Projected Revenue from Existing Fixed Charges

Customer Class Name	Fixed Rate	Customers (Connection	Fixed Charge	Variable Revenue	TOTAL	% Fixed Revenue	% Variable Revenue	% Total Revenue
Residential	$9.1900	2,272	250,508	389,568	640,076	39.14%	60.86%	56.35%
General Service < 50 kW	$19.7600	464	110,093	74,740	184,833	59.56%	40.44%	16.27%
General Service > 50 to 1499 kW	$54.8200	41	26,971	142,661	169,632	15.90%	84.10%	14.93%
Intermediate	$223.0100	2	5,352	34,499	39,851	13.43%	86.57%	3.51%
Sentinel Lighting	$7.0900	15	1,276	217	1,493	85.48%	14.52%	0.13%
Street Lighting	$7.8800	947	89,570	10,471	100,041	89.53%	10.47%	8.81%
Total Fixed Revenue		**3,741**	**483,771**	**652,156**	**1,135,927**			

Variance Analysis

	Bridge Year to Test Year Variance			
Customer Class Name	**2014**	**2015**	**Variance**	**% change**
Residential	$655,194.18	$640,076.12	-15,118	-2.31%
General Service < 50 kW	$182,688.56	$184,833.40	2,145	1.17%
General Service > 50 to 1499 kW	$175,087.90	$169,632.29	-5,456	-3.12%
Intermediate	$41,574.69	$39,851.34	-1,723	-4.15%
Sentinel Lighting	$1,670.99	$1,493.03	-178	-10.65%
Street Lighting	$115,066.84	$100,040.58	-15,026	-13.06%
Total Fixed Revenue	**1,171,283**	**1,135,927**	**-35,356**	-3.02%

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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 2015 Load Forecast (with CDM Adj)

	Year	2015 Final Weather Adjusted	2015 Final CDM Adjusted (kWh)
Residential	Cust/Conn	2,279	2,272
	kWh	24,872,947	24,347,981
	kW		
General Service < 50 kW	Cust/Conn	457	464
	kWh	11,395,810	11,155,291
	kW		
General Service > 50 to 4999 kW	Cust/Conn	41	41
	kWh	23,105,732	22,618,065
	kW	66,264	64,865
Intermediate	Cust/Conn	2	2
	kWh	21,793,907	21,333,927
	kW	62,295	60,980
Sentinel Lights	Cust/Conn	17	15
	kWh	19,559	19,146
	kW	71	70
Street Lighting	Cust/Conn	943	947
	kWh	1,029,688	441,593*
	kW	11,303	4,565

Note: the significant decrease in consumption for the Street Lighting class is due to the replacement of incandescent lighting with LED lighting.

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 2014 Actual and 2015 Test.

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;

$$Y=A+B1X1+B2X2\ldots+bNxN + E$$

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.

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

Where :

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 Specifics - 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. 5 - 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

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

	Residential		General Service < 50 kW		General Service > 50 to 4999 kW		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**
2005	2347		392		39		3		48		901
2006	2331	0.9930	402	1.0255	40	1.0390	3	1.0000	46	0.9583	904
2007	2333	1.0009	396	0.9851	39	0.9750	3	1.0000	46	1.0000	911
2008	2316	0.9929	386	0.9735	40	1.0128	3	1.0000	42	0.9130	915
2009	2312	0.9983	394	1.0220	40	1.0127	3	1.0000	39	0.9167	917
2010	2295	0.9926	391	0.9911	40	0.9875	3	1.0000	22	0.5714	922
2011	2295	0.9998	422	1.0794	39	0.9873	3	0.8333	18	0.8182	926
2012	2291	0.9983	444	1.0534	40	1.0128	2	0.8000	17	0.9444	932
2013	2285	0.9976	453	1.0203	40	1.0127	2	1.0000	17	1.0000	941
2014	2279	0.9974	457	1.0077	41	1.0250	2	1.0000	17	1.0000	943
Geomean		*0.9967*		*1.0171*		*1.0070*		*0.9559*		*0.8911*	
2014	2279		457		41		2		17		943
2015	2272		464		41		2		15		947
2014	2279	1.0000	457	1.0000	41	1.0000	2	1.0000	17	1.0000	943
2015	2272	0.9967	464	1.0171	41	1.0070	2	0.9559	15	0.8911	947

Table 3.3 - Customer Count Analysis – Residential

Residential		
Year	**Cust**	**%chg**
2005	2,347	
2006	2,331	-1%
2007	2,333	0%
2008	2,316	-1%
2009	2,312	0%
2010	2,295	-1%
2011	2,295	0%
2012	2,291	0%
2013	2,285	0%
2014	2,279	0%
2015	2,272	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
2005	392	
2006	402	3%
2007	396	-1%
2008	386	-3%
2009	394	2%
2010	391	-1%
2011	422	8%
2012	444	5%
2013	453	2%
2014	457	1%
2015	464	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 along the impacts of having added 52 MicroFit and one large Fit generation projects. 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
2005	39	
2006	40	4%
2007	39	-3%
2008	40	1%
2009	40	1%
2010	40	-1%
2011	39	-1%
2012	40	1%
2013	40	1%
2014	41	3%
2015	41	1%

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
2005	3	
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	0%
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

Streetlight		
Year	Cust	%chg
2005	901	
2006	904	0%
2007	911	1%
2008	915	0%
2009	917	0%
2010	922	1%
2011	926	0%
2012	932	1%
2013	941	1%
2014	943	0%
2015	947	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 4 connection per year increase in 2015.

Table 3.8 - Customer Count Analysis - Sentinel Lights

Sentinel Lights		
Year	Cust	%chg
2005	48	
2006	46	-4%
2007	46	0%
2008	42	-9%
2009	39	-8%
2010	22	-43%
2011	18	-18%
2012	17	-6%
2013	17	0%
2014	17	0%
2015	15	-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 2 connections from 2014. 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. 6 - 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)
  -
- Tested and Excluded
  - CPI Ontario (excluded)
  - Average Temperature (excluded)
  - CPI Canada (excluded)
  - Full Time Employment for North Bay (excluded)
  - Customer Count (included)

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 2005-2014

Month	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	12040115	11403923	11144240	9079341	9687027	7877934	8946669	8385129	8938428	8698192
February	10319632	11174429	11396537	8837021	8395038	6923499	7921364	7845578	8209750	8777587
March	10822381	11177732	10459243	9024592	7068217	6126461	6808616	7503491	8094362	8067658
April	9168123	9457861	9692973	7191861	6414184	6975021	7136876	6539070	6171276	7355167
May	9168836	9455389	8815221	6991462	6469952	6192325	5732243	6100225	5970163	6303616
June	8391313	8931355	8406333	6168427	6260939	5966146	5876887	5011748	5636891	6386105
July	7715191	7844343	8166977	5381918	4648945	5877652	5555950	5461517	5598405	5431065
August	8542170	8930085	8056499	6313812	5697613	5838235	5798395	6002405	5844163	5417147
September	8579568	8786642	8441906	6081323	6237383	5299732	5918461	5933883	5891223	5326981

October	9633073	9518805	8702807	6749178	7124815	6525309	6234104	6685854	6851089	6541069
November	10834098	10297709	8254635	7771702	6010367	7304633	7019349	7408803	7530000	6870430
December	11748201	10860583	9574588	9255481	7389479	8576299	7445070	8178514	9066138	8395195

The utility was slowly declining from 2005 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 and accurate 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 2011. The utility removed approximately 91,906,968 kWh between January 2005 and October 2008 to account for the loss of customer.

The utility has also removed 4,275,952 kWh in Fit and MicroFit generation between September 2010 and December 2014. The table below shows the adjusted monthly wholesale purchases after removal of the Intermediate customer.

Table 3.10 - Adjusted Wholesale Purchases 2005-2014

Month	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	9197784	8679087	8384634	9079341	9687027	7877934	8951168	8394826	8957366	8721336
February	7774648	8214062	8800029	8837021	8395038	6923499	7931630	7856980	8233713	8798840
March	8036639	7943311	7759037	9024592	7068217	6126461	6825459	7545392	8123150	8110358
April	6502163	6342750	7258825	7191861	6414184	6975021	7160592	6601091	6235992	7418104
May	6331361	6369655	6474482	6991462	6469952	6192325	5756556	6184934	6044729	6376331
June	5959868	5967231	6127499	6168427	6260939	5966146	5911849	5091905	5721701	6477628
July	5175337	5525210	5932199	5381918	4648945	5877652	5588924	5554382	5699502	5528860
August	5779475	5948964	6105556	6313812	5697613	5838235	5840459	6102119	5931245	5493076
September	5783367	5877685	6194745	6081323	6237383	5303794	5962697	6019098	5971234	6470689
October	6483514	6420299	6541924	6749178	7124815	6529782	6275513	6751614	6921144	7134224
November	7676467	7402269	8254635	7771702	6010367	7317834	7043385	7445269	7572978	7168134
December	8896336	8310910	9574588	9255481	7389479	8580847	7456721	8195041	9088052	8425979

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 2005 to 2014 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									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Jan	1163.2	930.4	995.3	979.5	1190.7	979.5	1145	992.8	1072.1	1163.00
Feb	863.7	952.5	1060	974	942.1	847.1	915.2	839.6	961.1	976.40
Mar	854.5	699	776.1	905.1	825.4	599.5	875.7	595.8	792.9	982.60
Apr	418.7	420.9	506.5	456.4	517.2	371.4	526.5	506.2	592.8	581.00
May	255.8	205.7	235.6	341.4	346.1	217.2	263.5	230.2	311.5	262.40
June	46.9	97.5	107.2	113.3	124.7	134.2	104	51.4	138.3	89.00
Jul	38	49	45.1	50.1	77.6	27.9	24.2	23.7	62.4	82.50
Aug	45.3	105.6	73.6	69.7	105.2	48.2	56.7	79.2	66.6	81.20
Sept	151.8	224.5	184.9	207.2	149.5	243.6	180.9	213.2	191.8	2.50
Oct	368.8	445.2	346.2	400.5	477.3	426.2	349.4	395.2	389.2	644.40
Nov	685.8	586.5	684.7	612.5	485.8	609.2	574	639.4	668.1	779.50
Dec	974.4	778.7	987.6	1088.9	958.2	862.4	918.7	910.6	1157.5	910.40

	CDD									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Jan	0	0	0	0	0	0	0	0	0	0.00
Feb	0	0	0	0	0	0	0	0	0	0.00
Mar	0	0	0	0	0	0	0	0	0	0.00
Apr	0	0	0	0	0	0	0	0	0	0.00
May	2.2	17.7	9.7	0	0	35.3	4.8	12.6	0	3.00
June	52.2	28.6	42.7	12	31.9	8.7	9.5	31.8	13.4	25.20
Jul	83.5	55.1	36.2	14.5	7.4	57.5	65.2	56.3	44.4	17.80
Aug	35.9	17.9	29.6	12.6	22.1	54.4	26.5	24.9	34.2	17.10
Sept	20.1	0.9	6.2	11.2	8.1	0	2.8	10.5	0	1.10
Oct	3.6	0	0	1.4	0	0	4.4	0	0	1.70
Nov	0	0	0	0	0	0	0	0	0	0.00
Dec	0	0	0	0	0	0	0	0	0	0.00

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 3.12a)- Winter Flag

	HDD									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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

Table 3.12b)- Winter Flag

Year	Month	Revised Wholesale	Year	Month	Revised Wholesale	Year	Month	Revised Wholesale	Year	Month	Revised Wholesale	Year	Month	Revised Wholesale
2009-	Jan	9,687,027	2012-	Dec	8,195,041	2014-	Oct	7,134,224	2006-	Apr	6,342,750	2006-	Aug	5,948,964
2007-	Dec	9,574,588	2013-	Mar	8,123,150	2009-	Oct	7,124,815	2005-	May	6,331,361	2007-	Jul	5,932,199
2008-	Dec	9,255,481	2014-	Mar	8,110,358	2009-	Mar	7,068,217	2008-	Aug	6,313,812	2013-	Aug	5,931,245
2005-	Jan	9,197,784	2005-	Mar	8,036,639	2011-	Nov	7,043,385	2011-	Oct	6,275,513	2011-	Jun	5,911,849
2013-	Dec	9,088,052	2006-	Mar	7,943,311	2008-	May	6,991,462	2009-	Jun	6,260,939	2006-	Sep	5,877,685
2008-	Jan	9,079,341	2011-	Feb	7,931,630	2010-	Apr	6,975,021	2009-	Sep	6,237,383	2010-	Jul	5,877,652
2008-	Mar	9,024,592	2010-	Jan	7,877,934	2010-	Feb	6,923,499	2013-	Apr	6,235,992	2011-	Aug	5,840,459
2013-	Jan	8,957,366	2012-	Feb	7,856,980	2013-	Oct	6,921,144	2007-	Sep	6,194,745	2010-	Aug	5,838,235
2011-	Jan	8,951,168	2005-	Feb	7,774,648	2011-	Mar	6,825,459	2010-	May	6,192,325	2005-	Sep	5,783,367
2005-	Dec	8,896,336	2008-	Nov	7,771,702	2012-	Oct	6,751,614	2012-	May	6,184,934	2005-	Aug	5,779,475
2008-	Feb	8,837,021	2007-	Mar	7,759,037	2008-	Oct	6,749,178	2008-	Jun	6,168,427	2011-	May	5,756,556
2007-	Feb	8,800,029	2005-	Nov	7,676,467	2012-	Apr	6,601,091	2007-	Jun	6,127,499	2013-	Jun	5,721,701
2014-	Feb	8,798,840	2013-	Nov	7,572,978	2007-	Oct	6,541,924	2010-	Mar	6,126,461	2013-	Jul	5,699,502
2014-	Jan	8,721,336	2012-	Mar	7,545,392	2010-	Oct	6,529,782	2007-	Aug	6,105,556	2009-	Aug	5,697,613
2006-	Jan	8,679,087	2011-	Dec	7,456,721	2005-	Apr	6,502,163	2012-	Aug	6,102,119	2011-	Jul	5,588,924
2010-	Dec	8,580,847	2012-	Nov	7,445,269	2005-	Oct	6,483,514	2008-	Sep	6,081,323	2012-	Jul	5,554,382
2014-	Dec	8,425,979	2014-	Apr	7,418,104	2014-	Jun	6,477,628	2013-	May	6,044,729	2014-	Jul	5,528,860
2009-	Feb	8,395,038	2006-	Nov	7,402,269	2007-	May	6,474,482	2012-	Sep	6,019,098	2006-	Jul	5,525,210
2012-	Jan	8,394,826	2009-	Dec	7,389,479	2014-	Sep	6,470,689	2009-	Nov	6,010,367	2014-	Aug	5,493,076
2007-	Jan	8,384,634	2010-	Nov	7,317,834	2009-	May	6,469,952	2013-	Sep	5,971,234	2008-	Jul	5,381,918
2006-	Dec	8,310,910	2007-	Apr	7,258,825	2006-	Oct	6,420,299	2006-	Jun	5,967,231	2010-	Sep	5,303,794
2007-	Nov	8,254,635	2008-	Apr	7,191,861	2009-	Apr	6,414,184	2010-	Jun	5,966,146	2005-	Jul	5,175,337
2013-	Feb	8,233,713	2014-	Nov	7,168,134	2014-	May	6,376,331	2011-	Sep	5,962,697	2012-	Jun	5,091,905
2006-	Feb	8,214,062	2011-	Apr	7,160,592	2006-	May	6,369,655	2005-	Jun	5,959,868	2009-	Jul	4,648,945

Winter
Spring
Summer
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 these did not yield significant results.

Ex. 3/Tab 1/Sch. 7 -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									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Jan	456.9	459.7	461.3	461.9	462.2	462.2	462.3	461.1	458.3	457.10
Feb	457	459.8	461.3	461.9	462.1	462.1	462.1	460.8	458	456.70
Mar	457.2	459.9	461.3	461.8	461.9	462	461.9	460.6	457.7	456.40
Apr	457.4	460	461.3	461.8	461.9	462	461.8	460.4	457.6	456.20
May	457.7	460.2	461.4	461.9	461.9	462	461.7	460.2	457.4	455.90
June	458.1	460.5	461.5	462	461.9	462.1	461.7	460	457.3	455.60
Jul	458.4	460.7	461.6	462.1	462	462.2	461.6	459.9	457.2	455.50
Aug	458.8	460.9	461.7	462.2	462.1	462.3	461.5	459.7	457.1	455.30
Sept	459.1	461	461.8	462.3	462.1	462.3	461.5	459.4	457	454.90
Oct	459.3	461.1	461.9	462.3	462.2	462.4	461.4	459.2	456.9	454.70
Nov	459.5	461.2	461.9	462.3	462.3	462.4	461.3	459	456.8	454.50
Dec	459.6	461.3	461.9	462.3	462.3	462.4	461.2	458.7	456.7	454.20

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. 8 - 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	0.8567
Adjusted R Squared	0.8517
Standard Error	450132.8750
F - Statistic	171.8102

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			
1.504	Durbin-Watson Statistic		
1.65 - 1.75	Positive autocorrelation detected		
2.448	Critical F-Statistic - 95% Confidence		
86.12%	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 chance 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	5,382,111.070	274,429.443	19.612	0.00%
HDD	3,013.966	284.676	10.587	0.00%
CDD	4,461.577	3,797.893	1.175	24.25%
WinterFlag	25,630.668	182,163.020	0.141	88.84%
ShutDWN	84,215.454	157,401.928	0.535	59.37%

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 event 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	85.48%	2959.98	5505984.50
CDD	30.79%	-38331.42	7333455.50
WinterFlag	67.12%	-1934142.95	8101901.00
ShutDWN	24.02%	1530572.31	5698174.00

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	**0.93**
WinterFlag	**0.69**
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	83.83 %	
CDD	57.69 %	
WinterFlag	78.52 %	
ShutDWN	49.66 %	

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.

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.	
2005	116,962,701		83,596,959		-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%
2014	83,570,212	-0.28%	86,123,559	1.92%	3.06%	3.06%

kWh Purchased VS Weather Adjsuted

Year	kWh Purchased	year over year	Adjusted	year over year	Purch. VS Adj.	
2005	116,962,701		83,811,871		-28.34%	28.34%
2006	117,838,856	0.75%	82,347,604	-1.75%	-30.12%	30.12%
2007	111,111,959	-5.71%	83,895,328	1.88%	-24.49%	24.49%
2008	88,846,118	-20.04%	84,161,106	0.32%	-5.27%	5.27%
2009	81,403,959	-8.38%	84,244,138	0.10%	3.49%	3.49%
2010	79,483,246	-2.36%	82,117,780	-2.52%	3.31%	3.31%
2011	80,393,984	1.15%	83,637,394	1.85%	4.03%	4.03%
2012	81,056,217	0.82%	82,363,689	-1.52%	1.61%	1.61%
2013	83,801,888	3.39%	84,960,880	3.15%	1.38%	1.38%
2014	83,570,212	-0.28%	85,298,336	0.40%	2.07%	2.07%
					Mean	**10.41%**
					Median	**3.76%**

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.

1

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. 9 - 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

Date	Actual Wholesale Purchases kWh	Adjusted Wholesale Purchases kWh	Predicted Wholesale Purchases kWh	hdd	cdd	Winter Flag	Shut Down
2005-January	12040115	9197784	8972172	1163	0	0	1
2005-February	10319632	7774648	8069489	864	0	0	1
2005-March	10822381	8036639	8041760	855	0	0	1
2005-April	9168123	6502164	6702643	419	0	1	1
2005-May	9168836	6331361	6221484	256	2	1	1
2005-June	8391313	5959869	5814945	47	52	1	1
2005-July	7715191	5175337	5843553	38	84	1	0
2005-August	8542170	5779475	5653184	45	36	1	0
2005-September	8579568	5783367	5987894	152	20	1	1
2005-October	9633073	6483514	6568308	369	4	1	1
2005-November	10834098	7676468	7533304	686	0	0	1
2005-December	11748201	8896336	8403135	974	0	0	1
2006-January	11403923	8679087	8270521	930	0	0	1
2006-February	11174429	8214062	8337129	953	0	0	1
2006-March	11177732	7943311	7573089	699	0	0	1
2006-April	9457861	6342750	6709274	421	0	1	1
2006-May	9455389	6369656	6139639	206	18	1	1
2006-June	8931355	5967232	5862159	98	29	1	1
2006-July	7844343	5525210	5749998	49	55	1	0
2006-August	8930085	5948964	5754617	106	18	1	0
2006-September	8786642	5877685	6121347	225	1	1	1
2006-October	9518805	6420300	6782514	445	0	1	1
2006-November	10297709	7402270	7234018	587	0	0	1
2006-December	10860583	8310911	7813302	779	0	0	1
2007-January	11144240	8384634	8466127	995	0	0	1
2007-February	11396537	8800029	8661130	1060	0	0	1
2007-March	10459243	7759038	7805465	776	0	0	1
2007-April	9692973	7258826	6967270	507	0	1	1
2007-May	8815221	6474483	6194064	236	10	1	1

2007-June	8406333	6127500	5954302	107	43	1	1
2007-July	8166977	5932200	5653919	45	36	1	0
2007-August	8056499	6105557	5710371	74	30	1	0
2007-September	8441906	6194745	6025640	185	6	1	1
2007-October	8702807	6541924	6484131	346	0	1	1
2007-November	8254635	8254635	7529989	685	0	0	1
2007-December	9574588	9574588	8442919	988	0	0	1
2008-January	9079341	9079341	8418506	980	0	0	1
2008-February	8837021	8837021	8401929	974	0	0	1
2008-March	9024592	9024592	8194267	905	0	0	1
2008-April	7191861	7191861	6816270	456	0	1	1
2008-May	6991462	6991462	6469664	341	0	1	1
2008-June	6168427	6168427	5835717	113	12	1	1
2008-July	5381918	5381918	5572173	50	15	1	0
2008-August	6313812	6313812	5622770	70	13	1	0
2008-September	6081323	6081323	6115159	207	11	1	1
2008-October	6749178	6749178	6654035	401	1	1	1
2008-November	7771702	7771702	7312381	613	0	0	1
2008-December	9255481	9255481	8748234	1089	0	0	1
2009-January	9687027	9687027	9055056	1191	0	0	1
2009-February	8395038	8395038	8305784	942	0	0	1
2009-March	7068217	7068217	7954054	825	0	0	1
2009-April	6414184	6414184	6999519	517	0	1	1
2009-May	6469952	6469952	6483829	346	0	1	1
2009-June	6260939	6260939	5958862	125	32	1	1
2009-July	4648945	4648945	5623380	78	7	1	0
2009-August	5697613	5697613	5772150	105	22	1	0
2009-September	6237383	6237383	5927423	150	8	1	1
2009-October	7124815	7124815	6879262	477	0	1	1
2009-November	6010367	6010367	6930511	486	0	0	1
2009-December	7389479	7389479	8354309	958	0	0	1
2010-January	7877934	7877934	8418506	980	0	0	1
2010-February	6923499	6923499	8019457	847	0	0	1
2010-March	6126461	6126461	7273199	600	0	0	1
2010-April	6975021	6975021	6560083	371	0	1	1
2010-May	6192325	6192325	6252823	217	35	1	1
2010-June	5966146	5966146	5883986	134	9	1	1
2010-July	5877652	5877652	5697111	28	58	1	0
2010-August	5838235	5838235	5744463	48	54	1	0
2010-September	5299732	5303794	6174898	244	0	1	1
2010-October	6525309	6529782	6725248	426	0	1	1

2010-November	7304633	7317834	7302435	609	0	0	1
2010-December	8576299	8580847	8065571	862	0	0	1
2011-January	8946669	8951168	8917318	1145	0	0	1
2011-February	7921364	7931630	8224708	915	0	0	1
2011-March	6808616	6825459	8105657	876	0	0	1
2011-April	7136876	7160592	7027549	527	0	1	1
2011-May	5732243	5756556	6256291	264	5	1	1
2011-June	5876887	5911849	5796533	104	10	1	1
2011-July	5555950	5588924	5720313	24	65	1	0
2011-August	5798395	5840459	5645604	57	27	1	0
2011-September	5918461	5962697	5998415	181	3	1	1
2011-October	6234104	6275513	6513406	349	4	1	1
2011-November	7019349	7043385	7196343	574	0	0	1
2011-December	7445070	7456721	8235257	919	0	0	1
2012-January	8385129	8394826	8458592	993	0	0	1
2012-February	7845578	7856980	7996852	840	0	0	1
2012-March	7503491	7545392	7262047	596	0	0	1
2012-April	6539070	6601091	6966365	506	0	1	1
2012-May	6100225	6184934	6190727	230	13	1	1
2012-June	5011748	5091905	5737492	51	32	1	1
2012-July	5461517	5554382	5679098	24	56	1	0
2012-August	6002405	6102119	5706280	79	25	1	0
2012-September	5933883	6019098	6130120	213	11	1	1
2012-October	6685854	6751614	6631815	395	0	1	1
2012-November	7408803	7445269	7393456	639	0	0	1
2012-December	8178514	8195041	8210844	911	0	0	1
2013-January	8938428	8957366	8697599	1072	0	0	1
2013-February	8209750	8233713	8363049	961	0	0	1
2013-March	8094362	8123150	7856100	793	0	0	1
2013-April	6171276	6235992	7227375	593	0	1	1
2013-May	5970163	6044729	6379546	312	0	1	1
2013-June	5636891	5721701	5917312	138	13	1	1
2013-July	5598405	5699502	5742646	62	44	1	0
2013-August	5844163	5931245	5709796	67	34	1	0
2013-September	5891223	5971234	6018775	192	0	1	1
2013-October	6851089	6921144	6613731	389	0	1	1
2013-November	7530000	7572978	7479957	668	0	0	1
2013-December	9066138	9088052	8954992	1158	0	0	1
2014-January	8698192	8721336	8971569	1163	0	0	1
2014-February	8777587	8798840	8409163	976	0	0	1
2014-March	8067658	8110358	8427849	983	0	0	1

2014-April	7355167	7418104	7191810	581	0	1	1
2014-May	6303616	6376331	6244945	262	3	1	1
2014-June	6386105	6477628	5821371	89	25	1	1
2014-July	5431065	5528860	5684549	83	18	1	0
2014-August	5417147	5493076	5677507	81	17	1	0
2014-September	5326981	6470689	5453139	3	1	1	1
2014-October	6541069	7134224	7390480	644	2	1	1
2014-November	6870430	7168134	7815713	780	0	0	1
2014-December	8395195	8425979	8210241	910	0	0	1
2015-January			8664596	1061	0	0	1
2015-February			8278869	933	0	0	1
2015-March			7849349	791	0	0	1
2015-April			6916816	490	0	1	1
2015-May			6283301	267	9	1	1
2015-June			5858268	101	26	1	1
2015-July			5696674	48	44	1	0
2015-August			5699674	73	28	1	0
2015-September			5995281	175	6	1	1
2015-October			6724293	424	1	1	1
2015-November			7372811	633	0	0	1
2015-December			8343880	955	0	0	1

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

	Year	2010	2011	2012	2013	2014	2015
Residential	Cust/Conn	2,295	2,295	2,291	2,285	2,279	2,272
	kWh	25,548,327	25,515,944	23,994,758	25,438,133	24,999,768	24,872,947
	kW						
General Service < 50 kW	Cust/Conn	391	422	444	453	457	464
	kWh	11,877,098	12,243,978	11,108,219	11,421,706	11,004,475	11,395,810
	kW						
General Service > 50 to 4999 kW	Cust/Conn	40	39	40	40	41	41
	kWh	18,023,359	22,250,331	23,843,869	23,344,556	23,383,148	23,105,732
	kW	64,939	65,160	66,539	65,160	66,539	66,264
Intermediate	Cust/Conn	3	3	2	2	2	2
	kWh	18,965,408	19,113,182	20,375,091	21,805,339	23,201,291	21,793,907
	kW	61,632	60,417	62,501	61,716	62,667	62,295
Sentinel Lights	Cust/Conn	22	18	17	17	17	15
	kWh	21,979	21,276	21,276	21,276	21,288	19,559
	kW	72	72	72	72	72	71
Street Lighting	Cust/Conn	922	926	932	941	943	947
	kWh	1,008,500	1,008,758	1,021,182	1,026,377	1,030,212	1,029,688
	kW	11,064	11,093	11,167	11,288	11,311	11,303

** (All years are weather adjusted)*

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%

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 3.18GWh and $843,903.

2011-2014 CDM Program - 2014, last year of the current CDM plan						
			4 Year (2011-2014) kWh Target:			
			3,310,000			
		2011	2012	2013	2014	Total
2011 CDM Programs		4.21%	4.21%	4.21%	4.21%	16.84%
2012 CDM Programs			6.61%	6.61%	6.61%	19.84%
2013 CDM Programs				10.97%	10.97%	21.93%
2014 CDM Programs					38.89%	38.89%
Total in Year		**4.21%**	**10.82%**	**21.79%**	**60.67%**	**97.49%**
			kWh			
2011 CDM Programs		139,344.00	139,344.00	139,344.00	139,344.00	557,376.00
2012 CDM Programs	-	16,000.00	218,857.00	218,857.00	218,857.00	640,571.00
2013 CDM Programs			99,000.00	362,961.00	362,961.00	824,922.00
2014 CDM Programs					1,287,131.00	1,287,131.00
Total in Year		**123,344.00**	**457,201.00**	**721,162.00**	**2,008,293.00**	**3,310,000.00**

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 to 2015	0	0	0	0.00%

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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	**0**	**0**	**0.5**	**1**	**0.5**	Distributor can select "0", "0.5", or "1" from drop-down list
Default Value selection rationale.						

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)	139,344.00	218,857.00	362,961.00	1,287,131.00		2,008,293.00	
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)	-	-	181,480.50	1,287,131.00	266,666.67		**1,735,278.17**

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Table 3.25 - CDM Adjustment

	Year	2015	Share	Target	Adjusted (kWh)	Manual Reallocation	2015 Final Adjusted (kWh)
Residential							
	kWh	24,872,947	30.25%	**524,966**	24,347,981		24,347,981
	kW						
General Service < 50 kW							
	kWh	11,395,810	13.86%	**240,519**	11,155,291		11,155,291
	kW						
General Service > 50 to 4999 kW							
	kWh	23,105,732	28.10%	**487,667**	22,618,065		22,618,065
	kW	66,264			64,865		64,865
Intermediate							
	kWh	21,793,907	26.51%	**459,980**	21,333,927		21,333,927
	kW	62,295			60,980		60,980
Sentinel Lights							
	kWh	19,559	0.02%	**413**	19,146		19,146
	kW	71			70		70
Street Lighting							
	kWh	1,029,688	1.25%	**21,733**	1,007,956	566,363	441,593
	kW	11,303			11,065	6,500	4,565
Total	kWh	82,217,644		**1,735,278**			79,916,003
	kW	139,933					130,480

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

Table 3.26 - Final Load Forecast

	Year	2010	2011	2012	2013	2014	2015 Weather Adjusted (kWh	2015 Weather/CDM Adjusted (kWh)
Residential	Cust/Conn	2,295	2,295	2,291	2,285	2,279	2,279	2,272
	kWh	25,548,327	25,515,944	23,994,758	25,438,133	24,999,768	24,872,947	24,347,981
	kW							
General Service < 50 kW	Cust/Conn	391	422	444	453	457	457	464
	kWh	11,877,098	12,243,978	11,108,219	11,421,706	11,004,475	11,395,810	11,155,291
	kW							
General Service > 50 to 4999 kW	Cust/Conn	40	39	40	40	41	41	41
	kWh	18,023,359	22,250,331	23,843,869	23,344,556	23,383,148	23,105,732	22,618,065
	kW	64,939	65,160	66,539	65,160	66,539	66,264	64,865
Intermediate	Cust/Conn	3	3	2	2	2	2	2
	kWh	18,965,408	19,113,182	20,375,091	21,805,339	23,201,291	21,793,907	21,333,927
	kW	61,632	60,417	62,501	61,716	62,667	62,295	60,980
Sentinel Lights	Cust/Conn	22	18	17	17	17	17	15
	kWh	21,979	21,276	21,276	21,276	21,288	19,559	19,146
	kW	72	72	72	72	72	71	70
Street Lighting	Cust/Conn	922	926	932	941	943	943	947
	kWh	1,008,500	1,008,758	1,021,182	1,026,377	1,030,212	1,029,688	441,593
	kW	11,064	11,093	11,167	11,288	11,311	11,303	4,565

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

Year	kWh	%chg
2005	27,517,850	
2006	26,697,050	-3%
2007	26,674,248	0%
2008	26,529,865	-1%
2009	27,160,625	2%
2010	24,736,853	-9%
2011	24,621,320	0%
2012	23,813,833	-3%
2013	25,300,382	6%
2014	25,241,629	0%
2015	24,872,947	-1%

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 bounced 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

Year	kWh	%chg
2005	13,076,206	
2006	12,981,933	-1%
2007	12,657,578	-2%
2008	12,490,713	-1%
2009	12,249,085	-2%
2010	11,499,854	-6%
2011	11,814,687	3%
2012	11,024,461	-7%
2013	11,359,856	3%
2014	11,110,938	-2%
2015	11,395,810	3%

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 2014 Actual and 2015 Test Year is attributed to the embedded conservation initiatives applied by commercial consumers.

Table 3.29 - Load Analysis – GS > 50

Year	kWh	%chg	kW	%chg
2005	20,953,814		56,250	
2006	20,185,898	-4%	56,079	0%
2007	20,806,504	3%	46,865	-16%
2008	20,662,907	-1%	50,867	9%
2009	17,732,318	-14%	59,643	17%
2010	17,450,896	-2%	64,939	9%
2011	21,470,204	23%	65,160	0%
2012	23,664,082	10%	66,539	2%
2013	23,218,142	-2%	65,160	-2%
2014	23,609,369	2%	66,539	2%
2015	23,105,732	-2%	66,264	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 the GS>50 class has remained stable since 2012. The slight reduction in weather normalized load for the 2014 Actual and 2015 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 increased 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 next few 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

Year	kWh	%chg	kW	%chg
2005	50,073,322		111,663	
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	23,201,291	6%	62,667	2%
2015	21,793,907	-6%	62,295	-1%

Table 3.31 - Load Analysis – Sentinel Lights

Year	kWh	%chg	kW	%chg
2005	61,341		170	
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	21,288	0%	72	0%
2015	19,559	-8%	71	-1%

Table 3.32 - Load Analysis – Street Lights

Year	kWh	%chg	kW	%chg
2005	1,087,640		10,821	
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	1,030,212	0%	11,311	0%
2015	1,029,688	0%	11,303	0%

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										
	Residential	GS<50	GS>50		Intermediate		Sentinel		StreetLights	
Year	kWh/cust	kWh/cust	kWh/cust	kW/cust	kWh/cust	kW/cust	kWh/conn	kW/conn	kWh/conn	kW/conn
2005	11,755	33,443	545,654	1,461	16,691,107	37,221	1,278	4	1,207	12
2006	11,365	32,039	500,672	1,402	18,111,755	38,566	1,325	4	1,207	12
2007	10,976	30,679	512,059	1,202	15,604,070	37,561	1,211	3	1,204	12
2008	10,851	30,693	495,527	1,288	8,098,488	23,540	1,104	3	1,277	12
2009	12,158	32,174	458,775	1,491	6,429,578	21,067	651	2	1,092	12
2010	11,132	30,415	456,288	1,644	6,321,803	20,544	999	3	1,094	12
2011	11,120	29,049	570,521	1,671	7,645,273	24,167	1,182	4	1,090	12
2012	10,476	25,019	603,642	1,685	10,187,546	31,251	1,252	4	1,096	12
2013	11,133	25,213	583,614	1,629	10,902,670	30,858	1,252	4	1,091	12
2014	10,970	24,106	570,321	1,623	11,600,646	31,334	1,252	4	1,093	12
2015	10,914	24,963	563,554	1,616	10,896,954	31,147	1,151	4	1,093	12

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

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	2010 BA	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Test
Residential							
# of Customers	2,322	2,295	2,295	2,291	2,285	2,279	2,272
kWh	27,043,280	24,736,853	24,621,320	23,813,833	25,300,382	25,241,629	24,347,981
kW	-						
Variance Analysis							
# of Customers	2,322	-1.16%	-1.18%	-1.36%	-1.59%	-1.85%	-2.17%
kWh	27,043,280	-8.53%	-8.96%	-11.94%	-6.44%	-6.66%	-9.97%
kW	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Service < 50 kW							
# of Customers	391	391	422	444	453	457	464
kWh	12,897,126	11,499,854	11,814,687	11,024,461	11,359,856	11,110,938	11,155,291
kW	-						
Variance Analysis							
# of Customers	391	-0.13%	7.80%	13.55%	15.86%	16.75%	18.74%
kWh	12,897,126	-10.83%	-8.39%	-14.52%	-11.92%	-13.85%	-13.51%
kW	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Service > 50 to 1499 kW							
# of Customers	38	40	39	40	40	41	41
kWh	20,927,356	17,450,896	21,470,204	23,664,082	23,218,142	23,609,369	22,618,065
kW	58,015	64,939	65,160	66,539	65,160	66,539	66,264
Variance Analysis							
# of Customers	38	3.95%	2.63%	3.95%	5.26%	7.89%	7.89%
kWh	20,927,356	-16.61%	2.59%	13.08%	10.95%	12.82%	8.08%
kW	58,015	11.93%	12.31%	14.69%	12.31%	14.69%	14.22%
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	23,201,291	21,333,927
kW	70,701	61,632	60,417	62,501	61,716	62,667	62,295
Variance Analysis							
# of Customers	3	0.00%	-16.67%	-33.33%	-33.33%	-33.33%	-33.33%
kWh	24,623,194	-22.98%	-22.38%	-17.25%	-11.44%	-5.77%	-13.36%
kW	70,701	-12.83%	-14.55%	-11.60%	-12.71%	-11.36%	-11.89%
Sentinel Lighting							
# of Customers	10	22	18	17	17	17	15
kWh	31,710	21,979	21,276	21,276	21,276	21,288	19,146
kW	87	72	72	72	72	72	71
Variance Analysis							
# of Customers	10	120.00%	80.00%	70.00%	70.00%	70.00%	50.00%
kWh	31,710	-30.69%	-32.90%	-32.90%	-32.90%	-32.87%	-39.62%
kW	87	-17.24%	-17.24%	-17.24%	-17.24%	-17.24%	-18.39%

kWh	31,710	-30.69%	-32.90%	-32.90%	-32.90%	-32.87%	-39.62%
kW	87	-17.24%	-17.24%	-17.24%	-17.24%	-17.24%	-18.39%

Street Lighting

# of Customers	4,663	922	926	932	941	943	947
kWh	1,144,089	1,008,500	1,008,758	1,021,182	1,026,377	1,030,212	441,593
kW	3,190	11,064	11,093	11,167	11,288	11,311	11,303

Variance Analysis

# of Customers	4,663	-80.23%	-80.15%	-80.02%	-79.82%	-79.79%	-79.68%
kWh	1,144,089	-11.85%	-11.83%	-10.74%	-10.29%	-9.95%	-61.40%
kW	3,190	246.83%	247.74%	250.06%	253.86%	254.58%	

Rate Class 7

Totals

Customers / Connections	7,427	3,672	3,701	3,725	3,738	3,738	3,741
kWh	86,666,755	73,683,490	78,049,427	79,919,925	82,731,372	84,214,727	79,916,003
kW from applicable classes	131,993	137,707	136,741	140,279	138,235	140,589	139,933

Totals - Variance

Customers / Connections	7,427	-50.56%	-50.16%	-49.85%	-49.67%	-49.67%	-49.63%
kWh	86,666,755	-14.98%	-9.94%	-7.78%	-4.54%	-2.83%	-7.79%
kW from applicable classes	131,993	4.33%	3.60%	6.28%	4.73%	6.51%	6.02%

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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 (more credible) 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	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual		2015 Forecasted
Residential	26,627,362	24,736,853	24,621,320	23,813,833	25,300,382	25,241,629		24,557,492
GS<50kW	12,405,535	11,499,854	11,814,687	11,024,461	11,359,856	11,110,938		12,099,909
GS>50kW	19,022,892	17,450,896	21,470,204	23,664,082	23,218,142	23,609,369		22,631,613
Intermediate Users	18,502,357	18,965,408	19,113,182	20,375,091	21,805,339	23,201,291		23,201,291
Sentinel Lights	23,544	21,979	21,276	21,276	21,276	21,288		21,288
Street Lights	1,006,025	1,008,500	1,008,758	1,021,182	1,026,377	1,030,212		1,026,377
TOTAL	77,587,715	73,683,490	78,049,427	79,919,925	82,731,372	84,214,727		83,537,970

Load Forecast using NAC approach (kW)

	2010 Approved	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual		2015 Forecasted
Residential								
GS<50kW								
GS>50kW	53,176	64,939	65,160	66,539	65,160	66,539		0
Intermediate Users	59,721	61,632	60,417	62,501	61,716	62,667		62,536
Sentinel Lights	72	72	72	72	72	72		72
Street Lights		11,064	11,093	11,167	11,288	11,311		4,565
TOTAL	112,969	137,707	136,741	140,279	138,235	140,589		67,173.00

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

Ratios

	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual		2015 Forecasted
Residential							
GS<50kW							
GS>50kW	0.0037	0.0030	0.0028	0.0028	0.0028		0.0000
Intermediate Users	0.0032	0.0032	0.0031	0.0028	0.0027		0.0027
Sentinel Lights	0.0033	0.0034	0.0034	0.0034	0.0034		0.0034
Street Lights	0.0110	0.0110	0.0109	0.0110	0.0110		0.0044

Customers/Connections

	2010 Approved	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual		2015 Forecasted
Residential	2,322	2295	2295	2291	2285	2279		2272
GS<50kW	391	391	444	444	453	457		464
GS>50kW	38	40	40	40	40	41		41
Intermediate Users	3	3	17	2	2	2		2
Sentinel Lights	10	22	17	17	17	17		15
Street Lights	922	922	932	932	941	943		947
TOTAL	**3,686**	**3,672**	**3,744**	**3,725**	**3,738**	**3,738**		**3,741**

Annual Average Use Per Customer (kWh)

	2010 Approved	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual		2010-2014 Avg
Residential	11,467	10,779	10,731	10,397	11,072	11,076		10,811
GS<50kW	31,728	29,449	26,610	24,830	25,077	24,339		26,061
GS>50kW	500,602	441,795	543,549	599,091	580,454	575,838		548,145
Intermediate Users	6,167,452	6,321,803	1,124,305	10,187,546	10,902,670	11,600,646		
Sentinel Lights	2,354	999	1,252	1,252	1,252	1,252		
Street Lights	1,091	1,094	1,083	1,096	1,091	1,093		

Non-Weather Senstive (Average based on most recent 12 months of acutals)													
Month	**Jan-14**	**Feb-14**	**Mar-14**	**Apr-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Sep-14**	**Oct-14**	**Nov-14**	**Dec-14**	**TOTAL**
Intermediate													
kWh	2,075,983	2,012,703	2,155,403	2,038,698	1,986,026	1,913,310	1,604,478	1,710,163	1,879,396	1,978,286	1,941,246	1,905,599	**23,201,291**
kW	5,437	5,336	5,182	5,182	5,034	5,135	5,020	4,955	5,182	5,235	5,430	5,408	**62,536**
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	1,785	**21,288**
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	942	942	942	942	942	943	943	943	943	943	943	943	**11,311**

Weather Normalized kWh									
		2010 Actual	**2011 Actual**	**2012 Actual**	**2013 Actual**	**2014 Actual**			**2015**
Residential		0	0	0	0	25,241,629			24,557,492
GS<50kW		0	0	0	0	11,110,938			12,099,909
GS>50kW		0	0	0	0	23,609,369			22,631,613
Intermediate Users		18,965,408	19,113,182	20,375,091	21,805,339	23,201,291			23,201,291
Sentinel Lights		21,979	21,276	21,276	21,276	21,288			21,288
Street Lights		1,008,500	1,008,758	1,021,182	1,026,377	1,030,212			1,026,377
TOTAL		19,995,887	20,143,216	21,417,549	22,852,992	84,214,727			83,537,970
Weather sensitive kWh load, weather normalized based on 5-yr average use per customer									

Weather Normalized kW									
		2010 Actual	**2011 Actual**	**2012 Actual**	**2013 Actual**	**2014 Actual**			**2015**
Residential									
GS<50kW									
GS>50kW		64,939	65,160	66,539	65,160	66,539			0
Intermediate Users		61,632	60,417	62,501	61,716	62,667			62,536
Sentinel Lights		72	72	72	72	72			72
Street Lights									11,311
TOTAL		126,643	125,648	129,112	126,947	129,278		0	73,919
Non weather sensitive, 2015 intermediate based on most recent actual 12-months									

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Table 3.35 - Comparison of NAC Approach and Multiple Regression

			Regression	NAC	
	Year	2014	2015 Weather Adjusted	2015 Weather Adjusted	Diff
Residential	Cust/Conn		***(No CDM)***		
	kWh	24,872,947	24,872,947	24,557,492	- 315,455
	kW				
General Service < 50 kW	Cust/Conn				
	kWh	11,395,810	11,395,810	12,099,909	704,099
	kW				
General Service > 50 to 4999 kW	Cust/Conn				
	kWh	23,105,732	23,105,732	22,631,613	- 474,119
	kW	66,264	66,264	-	- 66,264
Intermediate	Cust/Conn				
	kWh	21,793,907	21,793,907	23,201,291	1,407,384
	kW	62,295	62,295	62,536	241
Sentinel Lights	Cust/Conn				
	kWh	19,559	19,559	21,288	1,729
	kW	71	71	72	1
Street Lighting	Cust/Conn				
	kWh	1,029,688	1,029,688	1,026,377	- 3,311
	kW	11,303	11,303	4,565	- 6,738
Total	**Cust/Conn**	**-**			
	kWh	**82,217,644**	**82,217,644**	**83,537,970**	**1,320,327**
	kW	**139,933**	**139,933**	**67,173**	**- 72,760**

Although, the side by side comparison the result of both methodology 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

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	NewCGAAP	NewCGAAP	IFRS
	4082-Retail Services Revenues	-$4,796.15	-$4,104.60	-$4,110.10	-$3,157.90	-$3,847.53	-$3,943.72
	4084-Service Transaction Requests (STR) Revenues	-$50.25	-$23.75	-$21.25	-$31.75	-$28.50	-$29.21
	4086-SSS Administration Revenue	-$7,689.75	-$7,899.00	-$8,140.25	-$9,817.00	-$10,953.00	-$10,956.00
	4210-Rent from Electric Property	-$29,298.84	-$22,413.21	-$22,182.57	-$22,965.36	-$28,962.03	-$28,962.03
	4225-Late Payment Charges	-$11,439.00	-$10,406.92	-$9,656.83	-$12,982.56	-$13,253.82	-$13,518.90
	4235-Miscellaneous Service Revenues	-$21,681.88	-$22,118.68	-$17,050.00	-$15,990.00	-$20,869.60	-$21,704.38
	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	-$122,375.44	-$100,000.00
	4390-Miscellaneous Non-Operating Income	$0.00	$32,751.00	$2,729.15	$0.00	-$7,787.54	$0.00
	4405-Interest and Dividend Income	-$40,905.66	-$51,965.13	-$53,634.31	-$51,805.49	-$50,388.32	-$50,388.32
			$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	-$20,869.60	-$21,704.38
Late Payment Charges		-$11,439.00	-$10,406.92	-$9,656.83	-$12,982.56	-$13,253.82	-$13,518.90
Other Operating Revenues		-$41,834.99	-$34,440.56	-$34,454.17	-$35,972.01	-$43,791.06	-$43,890.96
Other Income or Deductions		-$118,680.29	-$104,843.14	-$153,729.26	-$147,057.54	-$180,551.30	-$150,388.32
Total		-$193,636.16	-$171,809.30	-$214,890.26	-$212,002.11	-$258,465.78	-$229,502.56

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	-$ 50,388	-$ 50,388
Bank Deposit Interest						
Miscellaneous Interest Revenue						
etc.[1]						
Total	-$ 40,906	-$ 51,965	-$ 53,634	-$ 51,805	-$ 50,388	-$ 50,388

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

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 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 2010 vs 2011

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 2011 vs 2012

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 increase 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 3.40 – Variance Analysis of Other Revenues 2013 vs 2014

USoA #	USoA Description	2013	2014	Var
		NewCGAAP	NewCGAAP	
	4082-Retail Services Revenues	$-3157.9	$3847.53	$-689.63
	4084-Service Transaction Requests (STR) Revenues	$-31.75	$-28.5	$3.25
	4086-SSS Administration Revenue	$-9817	$-10953	$-1136
	4210-Rent from Electric Property	$-22965.36	$-28962.03	$-5996.67
	4225-Late Payment Charges	$-12982.56	$-13253.82	$-271.26
	4235-Miscellaneous Service Revenues	$-15990	$-20869.6	$-4879.6
	4324-Special Purpose Charge Recovery	$0	$0	$0
	4325-Revenues from Merchandise Jobbing, Etc.	$-95252.05	$-122375.44	$-27123.39
	4390-Miscellaneous Non-Operating Income	$0	$-7787.54	$-7787.54
	4405-Interest and Dividend Income	$-51805.49	$-50388.32	$1417.17

Specific Service Charges		-$15,990.00	-$20,869.60	-$4,879.60
Late Payment Charges		-$12,982.56	-$13,253.82	-$271.26
Other Operating Revenues		-$35,972.01	-$43,791.06	-$7,819.05
Other Income or Deductions		-$147,057.54	-$180,551.30	-$33,493.76
Total		-$212,002.11	-$258,465.78	-$46,463.67

The year over year variance from 2013 to 2014 show an increase of $46,463. The major contributor to this variance is an increase of $27,123 in account 4325-Revenues from Merchandise Jobbing. Similarly to 2011, 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. 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

Table 3.41 – Variance Analysis of Other Revenues 2014 vs 2014

USoA #	USoA Description	2014	2015	Var
	Reporting Basis	NewCGAAP	IFRS	
	4082-Retail Services Revenues	-3847.53	-3943.71825	-96.18825
	4084-Service Transaction Requests (STR) Revenues	-28.5	-29.2125	-0.7125
	4086-SSS Administration Revenue	-10953	-10956	-3
	4210-Rent from Electric Property	-28962.03	-28962.03	0
	4225-Late Payment Charges	-13253.82	-13518.8964	-265.0764
	4235-Miscellaneous Service Revenues	-20869.6	-21704.384	-834.784
	4324-Special Purpose Charge Recovery	0	0	0
	4325-Revenues from Merchandise Jobbing, Etc.	-122375.44	-100000	22375.44
	4390-Miscellaneous Non-Operating Income	-7787.54	0	7787.54
	4405-Interest and Dividend Income	-50388.32	-50388.32	0

Specific Service Charges		-$20,869.60	-$21,704.38	-$834.78
Late Payment Charges		-$13,253.82	-$13,518.90	-$265.08
Other Operating Revenues		-$43,791.06	-$43,890.96	-$99.90
Other Income or Deductions		-$180,551.30	-$150,388.32	$30,162.98
Total		-$258,465.78	-$229,502.56	$28,963.22

The year over year variance from 2014 to 2015 show an increase of $28,963. The major contributor to this variance is an increase of $22,375 in account 4325-Revenues from Merchandise Jobbing. Similarly to previous years, this variance is due to a change in accounting methodology.

Table 3.39 – Variance Analysis of Other Revenues 2012 vs 2013

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 2013 vs 2014

USoA #	USoA Description	2013	2014	Var
		NewCGAAP	NewCGAAP	
	4082-Retail Services Revenues	$-3157.9	$3847.53	$-689.63
	4084-Service Transaction Requests (STR) Revenues	$-31.75	$-28.5	$3.25
	4086-SSS Administration Revenue	$-9817	$-10953	$-1136
	4210-Rent from Electric Property	$-22965.36	$-28962.03	$-5996.67
	4225-Late Payment Charges	$-12982.56	$-13253.82	$-271.26
	4235-Miscellaneous Service Revenues	$-15990	$-20869.6	$-4879.6
	4324-Special Purpose Charge Recovery	$0	$0	$0
	4325-Revenues from Merchandise Jobbing, Etc.	$-95252.05	$-122375.44	$-27123.39
	4390-Miscellaneous Non-Operating Income	$0	$-7787.54	$-7787.54
	4405-Interest and Dividend Income	$-51805.49	$-50388.32	$1417.17

Specific Service Charges		-$15,990.00	-$20,869.60	-$4,879.60
Late Payment Charges		-$12,982.56	-$13,253.82	-$271.26
Other Operating Revenues		-$35,972.01	-$43,791.06	-$7,819.05
Other Income or Deductions		-$147,057.54	-$180,551.30	-$33,493.76
Total		-$212,002.11	-$258,465.78	-$46,463.67

The year over year variance from 2013 to 2014 show an increase of $46,463. The major contributor to this variance is an increase of $27,123 in account 4325-Revenues from Merchandise Jobbing. Similarly to 2011, 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. 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

Table 3.41 – Variance Analysis of Other Revenues 2014 vs 2014

USoA #	USoA Description	2014	2015	Var
	Reporting Basis	NewCGAAP	IFRS	
	4082-Retail Services Revenues	$-3847.53	$-3943.71	$-96.18825
	4084-Service Transaction Requests (STR) Revenues	$-28.5	$-29.21	$-0.7125
	4086-SSS Administration Revenue	$-10953	$-10956	$-3
	4210-Rent from Electric Property	$-28962.03	$-28962.03	$0
	4225-Late Payment Charges	$-13253.82	$-13518.90	$-265.08
	4235-Miscellaneous Service Revenues	$-20869.60	$-21704.39	$-834.79
	4324-Special Purpose Charge Recovery	$0	$0	$0
	4325-Revenues from Merchandise Jobbing, Etc.	$-122375.44	$-100000	$22375.44
	4390-Miscellaneous Non-Operating Income	$-7787.54	0	$7787.54
	4405-Interest and Dividend Income	$-50388.32	$-50388.32	0

Specific Service Charges		-$20,869.60	-$21,704.38	-$834.78
Late Payment Charges		-$13,253.82	-$13,518.90	-$265.08
Other Operating Revenues		-$43,791.06	-$43,890.96	-$99.90
Other Income or Deductions		-$180,551.30	-$150,388.32	$30,162.98
Total		-$258,465.78	-$229,502.56	$28,963.22

The year over year variance from 2014 to 2015 show an decrease of $28,963. The major contributor to this variance is a decrease of $22,375 in account 4325-Revenues from Merchandise Jobbing. "Stable revenue have been forecasted for 2015 but contrary to 2014, no request for High Voltage connection is planned.