OPERATING REVENUE SUMMARY

1. This evidence shows a summary of EGD's distribution and other operating revenue for each of the 2007 Board Approved, 2011 estimate, 2012 bridge year and the 2013 test year.

Line No.	($millions)	2007 Board Approved (a)	2011 Estimate (b)	2012 Bridge Year (c)	2013 Test Year (d)
1.	Gas sales	2,377.1	1,976.8	2,158.8	2,217.7
2.	Transportation of gas	740.2	405.3	361.4	339.6
3.	Transmission, compression & storage	1.7	1.4	1.7	1.7
4.	Other operating revenue	34.9	40.5	40.0	38.3
5.	Other income	0.2	0.7	0.1	0.7
6.	Total operating revenue	3,154.1	2,424.7	2,562.0	2,598.0

2. Written evidence with respect to the above elements forecast for the 2013 test year is found at Exhibits C1, Tabs 2 through 5, Schedule 1.

3. Further details of each of these elements including the beginning EGD forecast total revenue, standard and accepted regulatory and non-utility adjustments, number of customers, volumes and revenue by rate class, other revenue and transactional services are found at Exhibits C3, C4 & C5, Tabs 1, 2, 3 & 4.

Witness: K. Culbert

REVENUE FORECAST

1. The purpose of this evidence is to summarize the revenue forecast provided in this application. Overall, the 2013 Budget of Utility Operating Revenues represents a $203.2 million decrease compared to the 2012 Estimate.

2. A summary of the revenue forecast in the 2013 filing is provided in Table 1 below.

Table 1

Revenue Forecast
($ millions)

	Col. 1	Col. 2	Col. 3	Col. 4
	2011 Actual Year	2012 Estimate Bridge Year	2013 Budget Year	2007 Budget Board Approved
1.0 Gas Sales	1,978.4	2,158.8	2,004.1	2,377.1
2.0 Transportation of Gas	411.2	361.4	313.9	740.2
3.0 Transmission, Compression and Storage	1.5	1.7	1.7	1.7
4.0 Other Operating Revenue	41.4	40.1	39.0	35.1
5.0 Total Operating Revenue	2,432.5	2,562.0	2,358.7	3,154.1

3. The 2013 Budget is $2,358.7 million as shown at Exhibit C3, Tab 1, Schedule 1. This represents a $203.2 million decrease over the 2012 Bridge Year Estimate ("2012 Estimate") of $2,562.0 million. A comparison of the 2013 Budget of Utility Operating Revenues to the 2012 Estimate is provided at Exhibit C3, Tab 1, Schedule 2.

Witnesses: R. Lei
S. Qian

4. The 2012 Estimate is $2,562.0 million as shown at Exhibit C4, Tab 1 Schedule 1. This represents a $129.5 million increase over the 2011 Actual of $2,432.5 million. A comparison of the 2012 Estimate of Utility Operating Revenues to the 2011 Historical is provided at Exhibit C4, Tab 1, Schedule 2.

5. The 2012 Estimate represents a $592.1 million decrease over the 2007 Board Approved Budget of $3,154.1 million. A comparison of the 2012 Estimate of Utility Operating Revenues to the 2007 Board Approved Budget is provided at Exhibit C4, Tab 1, Schedule 3.

6. The 2011 Actual represents a $721.6 million decrease over the 2007 Board Approved Budget of $3,154.1 million. A comparison of the 2011 Actual of Utility Operating Revenues to the 2007 Board Approved Budget is provided at Exhibit C5, Tab 1, Schedule 2.

7. The year over year variances are further explained by the revenue categories in the following paragraphs.

Gas Sales and Transportation of Gas Revenues

8. Gas sales and transportation of gas revenues for the 2013 Budget were developed on the basis of EB-2012-0054 commodity rates (April 2012 QRAM) and the 2012 final rates that can be found in the Decision and Order for EB-2011-0277. A breakdown of the 2013 Budget gas sales and transportation of gas revenues by rate class is provided at Exhibit C3, Tab 2, Schedule 3.

9. The decrease in gas sales and transportation of gas revenues of $202.2 million from the 2012 Estimate to the 2013 Budget is primarily due to lower gas demand

forecast resulting from a forecast of warmer weather, lower commodity rates, continuing decline in average use for general service customers, partially offset by general service customer growth. Please refer to Exhibit C1, Tab 3, Schedule 2 for the details of the updated 2013 volume forecast. Also refer to Exhibit C3, Tab 2, Schedule 3 for a comparison of the 2013 Budget volume forecast to the 2012 Estimate. The forecast for weather is described in the degree day forecast found at Exhibit C2, Tab 3, Schedules 1 and 2.

10. The increase in gas sales and transportation of gas revenues of $130.5 million from the 2011 Actual to the 2012 Estimate is primarily due to general service customer growth, partially offset by a lower gas demand forecast resulting from a lower forecast of weather and the continued decline in average use for general service customers. The 2012 approved rates can be found in the Decision and Order for EB-2011-0277. Please refer to Exhibit C4, Tab 2, Schedule 3 for a comparison of the 2012 Estimate volume forecast to the 2011 Actual.

11. The decrease in gas sales and transportation of gas revenues of $ 727.7 million from the 2011 Actual to the 2007 Board Approved is primarily due to much lower PGVA reference price compared to the 2007, partially offset by customer growth. Please refer to Exhibit C5, Tab 1, Schedule 2 for a comparison of the 2011 Historical to the 2007 Board Approved.

Transmission, Compression and Storage

12. Transmission, Compression and Storage revenues have no significant variances from the 2013 Budget of $1.7 million compared to the 2012 Estimate and the 2011 Actual.

Witnesses: R. Lei
S. Qian

Other Operating Revenues

13. Other Operating Revenues for the 2013 Budget of the revenue items identified at Exhibit C3, Tab 3, Schedule 1 were developed based on the Company's approved final rates set out in the Decision and Order for EB-2011-0277.

14. The decrease in Other Operating Revenues of $1.1 million from the 2012 Estimate to the 2013 Budget is primarily due to lower Transactional Services revenues and lower late payment penalties, partially offset by higher miscellaneous revenues. A comparison of the 2013 Budget of Other Operating Revenues to the 2012 Estimate is provided at Exhibit C3, Tab 3, Schedule 1.

15. The decrease in Other Operating Revenues of $1.3 million from the 2011 Actual to the 2012 Estimate is primarily due to lower miscellaneous revenues primarily resulting from interest income, lower Service Charges and DPAC revenues. A comparison of the 2012 Estimate of Other Operating Revenues to the 2011 Historical is provided at Exhibit C4, Tab 3, Schedule 1.

16. The increase in other Operating Revenues of $6.3 million from the 2007 Board Approved to the 2011 Actual is primarily due to higher late payment penalties, higher service charges & DPAC, higher miscellaneous revenues, partially offset by lower NGV revenues. A comparison of the 2011 Actual Other Operating Revenues to the 2007 Board Approved is provided at Exhibit C5, Tab 3, Schedule 1.

17. Evidence on the NGV program is presented at Exhibit C3, Tab 5, Schedule 1, Exhibit C4, Tab 5, Schedule 1 and Exhibit C5, Tab 5, Schedule 1. Evidence on Transactional Services is presented at Exhibit C1, Tab 4, Schedule 1.

Witnesses: R. Lei
S. Qian

GAS VOLUME BUDGET

1. The purpose of this evidence is to present the 2013 Test Year forecast of volumes and related information. The evidence describes the forecasting methodology and key assumptions used to develop the 2013 volumes for General Service and Large Volume Budget.

2. A summary of the volumes and customers is provided below. Further rate class detail and explanation for all gas volumes and related items are provided at Exhibit C3, Tab 2, Schedule 1; Exhibit C4, Tab 2, Schedule 1; Exhibit C5, Tab 2, Schedule 1; and Exhibit C5, Tab 2, Schedule 2.

Table 1
Summary of Gas Sales and Transportation
Volumes and Customers
(Volumes in 10^6m^3)

	2010 Actual	2011 Historical Year	2012 Bridge Year Estimate	2013 Budget
General Service Volumes	8 757.0	9 419.8	9 356.7	9 352.3
Contract Volumes	2 183.6	2 039.2	1 943.4	1 827.6
Total Volumes, Gas Sales and Transportation	10 940.6	11 459.0	11 300.1	11 179.9
Customers, Gas Sales and Transportation (Average)	1 926 294	1 957 733	1 984 734	2 013 352

Witnesses: R. Lei
S. Qian

3. As a consequence of the implementation of the result of Natural Gas Electricity Interface Review ("NGEIR") in 2007, Enbrisge Gas Distribution Inc. ("Enbridge" or the "Company") has experienced customer migration from bundled rate classes that bill distribution volumes volumetrically, reported in Table 1 on the previous page, to unbundled rate classes (e.g., Rate 125, Rate 300 Firm) that do not bill distribution volumes volumetrically. Unbundled customers incur monthly contract demand volumes and generate fixed contract demand revenues. Table 2 below presents a summary of these contract demand volumes.

Table 2
Summary of Unbundled Customers Contract Demand Volumes
(Volumes in 10^6m^3)

	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Historical Year	2012 Bridge Year Estimate	2013 Budget
Total Contract Demand Volumes	12.5	40.0	74.2	82.0	81.0	107.1	120.1

General Service Demand Forecast Methodology

4. The general service volumes are derived using the average use forecasting models and the customer budget. The average use models are Company developed regression models, which are described in detail in the evidence at Exhibit C2, Tab 2, Schedule 1.

5. Consistent with previous rate cases, the Company continues to report the results that the models would generate using the actual data and driver variable information to allow parties to compare the results to the prior year's forecast. The average in-sample forecast error for both Rate 1 and Rate 6 regression models is still less than one percent on average during 2001 to 2010. Overall, the regression

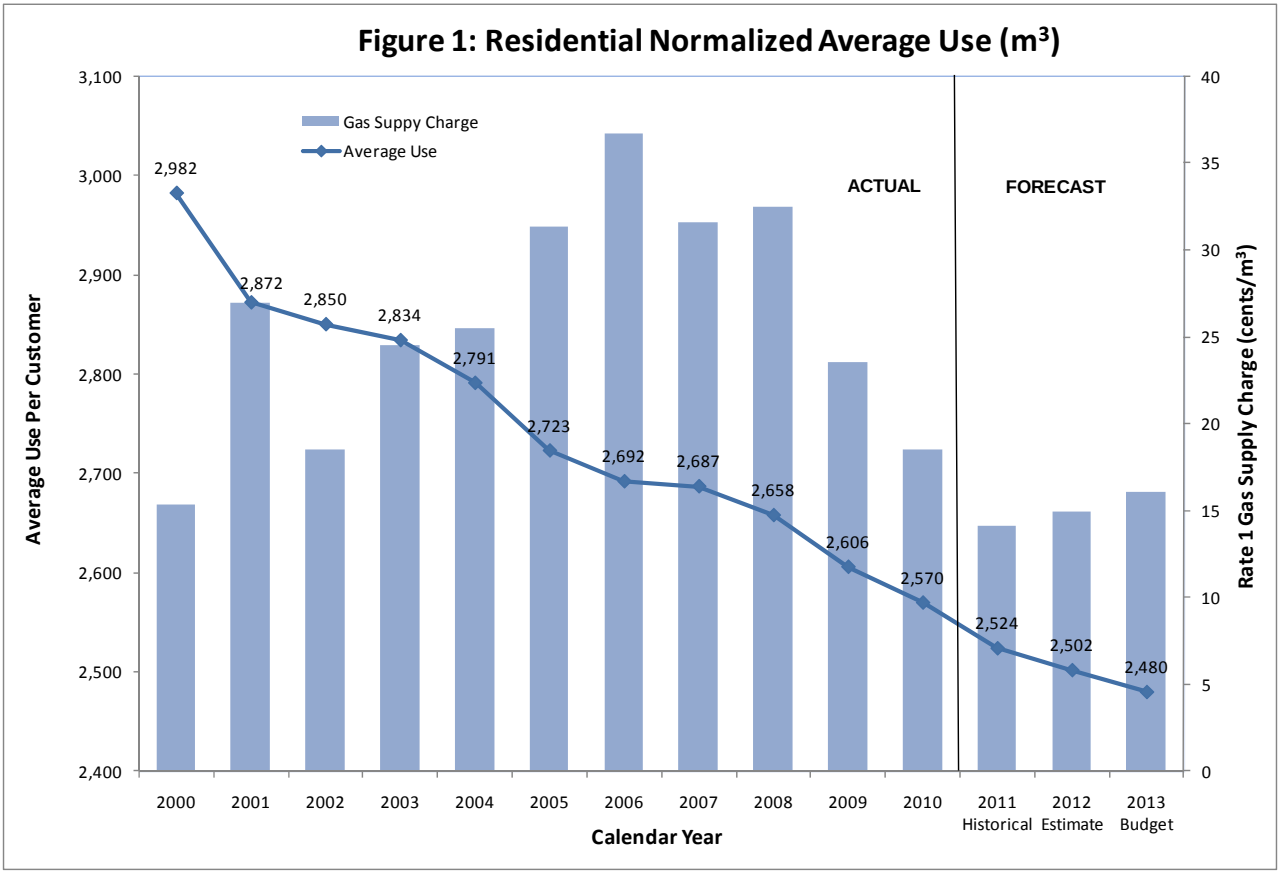
model has continued to be an excellent predictor of general service average use.

6. Annual econometric models are employed to model and quantify the impact of various driver variables on average use per customer. The forecast incorporated economic assumptions from *Economic Outlook, Spring 2011* filed at Exhibit C2, Tab 1, Schedule 1. The average use regression model includes 2010 actual billing consumption information.

7. The major driver variables in Rate 1 and Rate 6 models are heating degree days, vintage (Rate 1 only), employment, Ontario real gross domestic product, Ontario real gross domestic product by manufacturing industry, vacancy rates (Rate 6 only), real energy prices, and time trend. The vintage variable is constructed to reflect the impact of new homes associated with more energy efficient gas equipment over time and enhanced building codes. Gas equipment includes gas furnaces, water heaters, and stoves. The time trend, including the dynamic variable in the regression model, captures the historical actual average trend of sectoral average use, conservation initiatives originated by customers themselves or promoted by government programs, stock turnover and other historical impacts not reflected in the mentioned driver variables. Tables of these driver variable assumptions can be found at Exhibit C2, Tab 2, Schedule 1.

General Service Volumes: 2013 Budget

8. The 2013 Budget General Service volumes are 9,352.3 $10^6 m^3$. Residential usage per customer has declined steadily over the period of 2000 through 2010. The following Figure 1 on the following page shows a consistent downward trend in residential average use per customer from 2000 to the 2013 Test Year, on a weather normalized basis, as filed at Exhibit C5, Tab 2, Schedule 3.



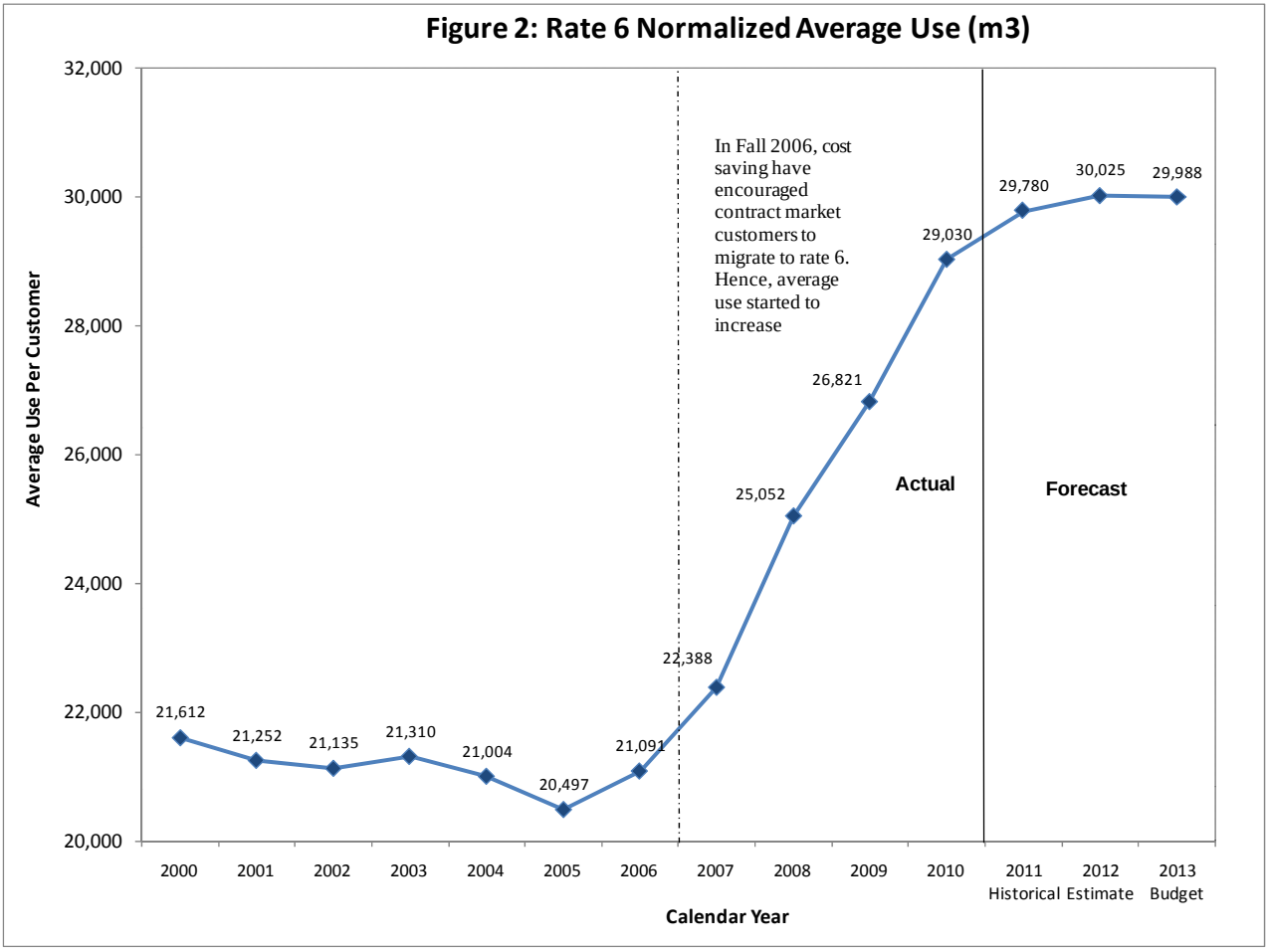
9. Residential average use is forecast to decline in 2013 due to reasons that include:

- Conservation initiatives originated by customers and also government policies and programs aimed at improving efficiencies (e.g., Green Energy Act, ecoENERGY Retrofit, Solar H2Ottawa, Ontario Home Energy Audit and Retrofit, and Ontario Solar Thermal Heating Incentive);
- Replacement of older, less efficient appliances with newer high efficient units by customers; and
- New homes with improved thermal envelopes based upon the historical 1997 Building Code, the new 2006 Building Code effective December 31, 2006, further changes to this 2006 Building Code effective December 31, 2008 and

requiring near-full-height basement insulation effective December 31, 2009. In 2012, new houses will be required to meet standards in accordance with the national guideline, EnerGuide 80.[1]

10. Although residential average use per customer has declined by an average of 1.2% per year from 2006 to 2010, small apartment, commercial and industrial (Rate 6) average use per customer has increased by an average of 7.2% per year during this period. The increase in actual usage is largely attributable to the rate switching from contract market customers to general service, which began in the fall of 2006. Figure 2 on the following page shows the normalized actual average use per customer for Rate 6 from 2000 to 2010, and the projection for 2011 to 2013, as filed at Exhibit C5, Tab 2, Schedule 3.

[1] Please refer to the Ministry of Municipal Affairs and Housing web site for further technical information, http://www.mah.gov.on.ca/Page7154.aspx.



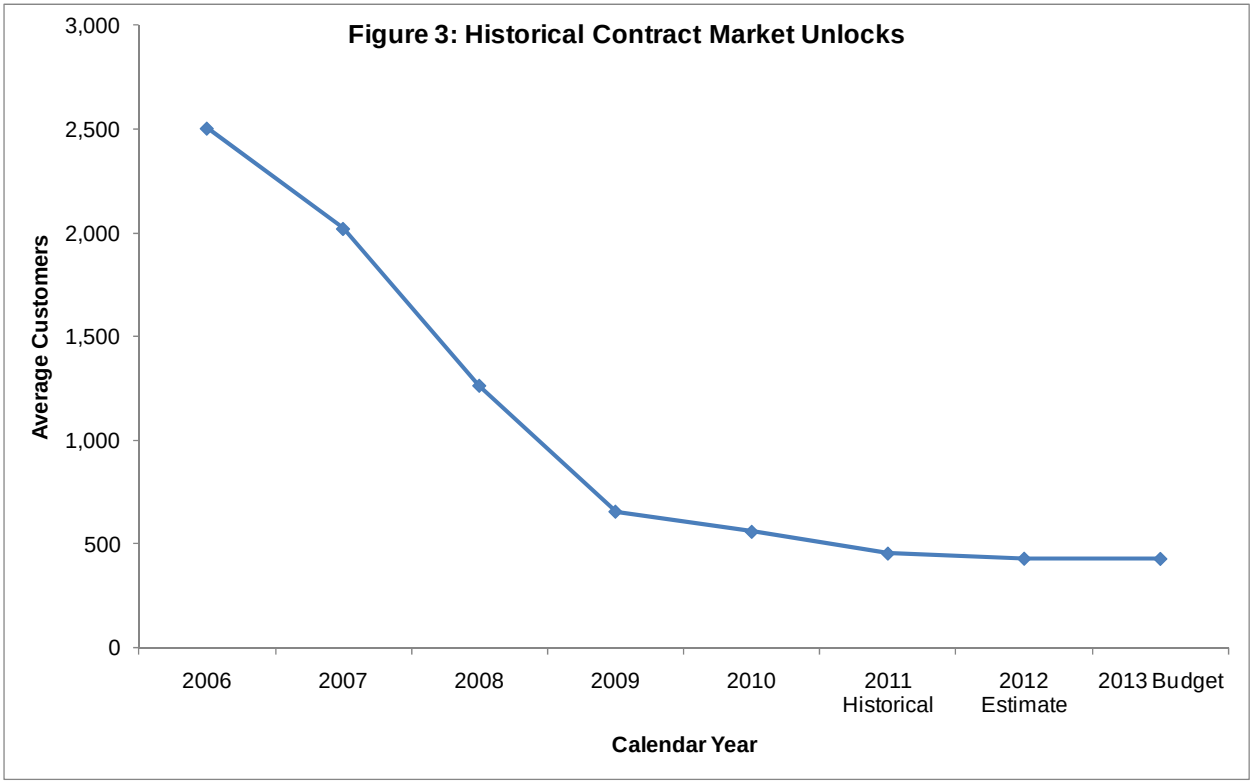
11. From the figure above, there is a clear upward trend in usage per customer from 2006 to 2010. It is largely attributable to the customer migration from the contract market to general service. Rate design changes to include contract demand charges for Rate 100 and Rate 145, which became effective April 1, 2007, prompted much of this rate migration. It is expected that the mass rate migration has come to an end, and, therefore, that the Rate 6 average use per customer will decrease slightly in 2013 compared to 2012.

12. Economic conditions and rate switching have always played a significant role in Rate 6 average uses. Rate 6 customers often switch between rate classes or gas service plan types if they are reasonably assured of meeting the minimum required volumes of 340,000 m^3 for requesting large volume contracts. The regression model cannot predict 2013 rate migration for a heterogeneous customer mix with different individual usage patterns. Therefore, the impact of rate migration is layered onto the regression model's average use forecast at a later stage.

Contract Market Volume Forecast Methodology

13. The volumes in the contract market are generated using the established and approved grass roots approach. Volumes are forecast on an individual customer basis by account executives in the consultation with customers during the budget process. Specifically, the account executive reviews the contract attributes (e.g., rate and plan type) for each contract in order to ensure that the customer can meet the contracted rate class minimum volume and load factor requirements. Current economic and industry conditions and budgeted degree days, are factored into the budget determination.

14. Figure 3 on the following page shows the declining trend of historical actual contract market unlocks between 2006 and 2011 and the projection for 2012 and 2013 as a result of rate migration.



15. As the graph illustrates, approximately 1,500 contract market customers migrated to general service over the period 2006 to 2011. This customer migration has directly driven up the average use per customer in Rate 6 as shown in Figure 2 on page 6 of this exhibit.

Comparison of 2013 Budget and 2012 Estimate - Summary

16. The 2013 Budget volumes reflect the meter reading heating degree days forecast for the Central Region of 3,513, a decrease of 19 degree days compared to the 2012 Estimate level of 3,532. Monthly meter reading heating degree days are determined by combining the Gas Supply heating degree day forecast with the billing schedules. Evidence related to the forecast of Gas Supply heating degree days is presented at Exhibit C2, Tab 3, Schedule 1.

Witnesses: R. Lei
S. Qian

17. The 2013 Budget volumes of 11 179.9 10^6m^3 are forecast to be 120.2 10^6m^3, or 1.1%, below the 2012 Bridge Year Estimate of 11 300.1 10^6m^3. This decrease is primarily attributable to the lower degree day forecast mentioned above and other factors discussed below. On a weather-normalized basis, the 2013 Budget volumes are forecast to be 89.0 10^6m^3 below the 2012 Bridge Year Estimate. The decrease on a normalized basis is made up of a decrease in the contract market of 115.3 10^6m^3, which is partially offset by an increase in general service volumes of 26.3 10^6m^3. Further rate class detail and explanations are provided at Exhibit C3, Tab 2, Schedule 3.

18. The increase in the general service volumes of 26.3 10^6m^3 on a weather-normalized basis is primarily due to contributions from customer growth of 83.9 10^6m^3, offset by lower average use per customer of 57.6 10^6m^3. Efficiency improvements are the primary driver of the decline in residential average use per customer. These would include government policies and initiatives aimed at improving efficiencies and improved building envelopes. More recently, economic conditions are also having an impact on declining average use.

19. Table 3 on the following page quantifies the volumetric factors influencing the changes in residential gas consumption. On a weather-normalized basis, the increase in residential volumes of 30.8 10^6m^3 is a result of customer growth, partially offset by the ongoing average use declines as shown in Figure 1 provided on page 4 of this exhibit.

Table 3

Factors Influencing the Changes in Residential Gas Consumption

Between 2013 Test Year Budget and 2012 Bridge Year Estimate (10^6m^3)

Factors	Total Volume (10^6m^3)
Customer Growth	70.8
DSM Initiatives	(7.5)
New Homes - historical trend (a)	(21.1)
Gas Prices	(16.8)
Other Conservation (b)	(0.6)
Gas Appliances (c)	6.0
Total	30.8

(a) Measured by vintage variable, reflecting the historical impacts of improved building envelopes for new homes along with more efficient new space heating furnaces and water heaters on average use based upon both historical building code, an the new 2006 Building Code for new homes effective December 31, 2006. Further changes to this 2006 Building Code effective December 31, 2008, require near-full-height basement insulation effective December 31, 2009.

(b) Other Conservation includes the expected ongoing technology improvements of furnaces and more energy efficient gas-fired storage water heaters for existing homes, and conservation initiatives originated by customers themselves or promoted by government programs, such as programmable thermostats, low-flow showerheads, home renovations, and other impacts not reflected in the variables mentioned.

(c) An employment variable is used as a proxy to determine the demand for gas appliances.

* Less than 50,000 m^3

20. Similarly, Table 4 on the following page illustrates the volumetric factors influencing the changes in Rate 6 gas consumption. On a weather-normalized basis, the decrease in Rate 6 volumes of 5.3 10^6m^3 is primarily due to lower average use per customer of 18.4 10^6m^3, partially offset by customer growth of 13.1 10^6m^3.

Witnesses: R. Lei
S. Qian

Table 4

Factors Influencing the Changes in Rate 6 Gas Consumption

Between 2013 Test Year Budget and 2012 Bridge Year Estimate (10^6m^3)

Factors	Apartment (10^6m^3)	Commercial (10^6m^3)	Industrial (10^6m^3)	Total Volume (10^6m^3)
Customer Growth	2.0	10.9	0.2	13.1
DSM Initiatives	(11.0)	(13.7)	(2.4)	(27.1)
Economics, Gas Appliances (a)	9.6	11.8	7.4	28.8
Rate Switching - change in rate design (b)	0.0	0.0	0.0	0.0
Other Conservation (c)	(1.9)	(3.7)	(1.0)	(6.6)
Gas Prices	(3.6)	(8.6)	(1.3)	(13.5)
Total	(4.9)	(3.3)	2.9	(5.3)

(a) Measured by economic variables as explained at Exhibit C2, Tab 1, Schedule 1, to reflect the demand for gas appliances or gas technologies, to capture the historical actual average trend of the rate 6 average use, such as transfer gains/losses impact on average uses, vacancy rate, etc

(b) Incremental impact of rate switching as a result of change in rate design that was accepted in the Incentive Regulation Settlement Agreement at EB-2007-0615, Exhibit N1, Tab 1, Schedule 1, Pages 33-34 which will not be captured from the historical business trend as mentioned in (a) above.

(c) Other Conservation includes the expected ongoing technology improvements of furnaces, and conservation initiatives originated by customers themselves or promoted by government programs, such as programmable thermostats, improved building envelopes, low-flow showerheads, building renovations, and other historical impacts not reflected in the mentioned driver variables mentioned.

21. The 2013 large volume budget is expected to see a decline of 115.3 10^6m^3 compared to the 2012 Estimate on a weather-normalized basis. The underage is mainly caused by a plant closure of one large distributed energy plant, that has a

distribution volume of 111.6 10^6m^3, effective January, 2013. Table 5 below illustrates the major variance drivers contributing to the reduction in contract market volumes between the 2013 Budget and the 2012 Estimate.

Table 5 - Comparison of Contract Market Volumes
2013 Budget and 2012 Bridge Year Estimate
(10^6m^3)

	Col. 1	Col. 2	Col. 3
	2013 Budget	2012 Bridge Year Estimate	2013 Budget Over (Under) 2012 Estimate (1-2)
Contract Market Total Gas Sales and Transportation Volumes	1,827.6	1,943.4	(115.8)
Major Variance Factors:			
Weather Normalization, Exhibit B, Tab 1, Schedule 5, Appendix A, Page 4, Col. 4, Item No. 4			(0.5)
Lost customers			(111.6)
Wholesale customer			0.9
Impact of price spread between Hydro and Gas on Distributed Energy customers			(0.7)
Pulp and Paper Industry			(0.3)
Food, Beverage, Drug & Tobacco			(0.2)
Others change in usage (e.g. change in production process, etc.)			(3.4)
Total Major Variance Factors:			**(115.8)**

Comparison of 2012 Estimate and 2011Historical Year

22. The 2012 Estimate volumes reflect the meter reading heating degree day forecast for the Central Region of 3,532, a decrease of 70 degree days compared to the 2011 Ontario Energy Board (the "Board") Approved level of 3,602. Monthly meter reading heating degree days are determined by combining the Gas Supply heating degree day forecast the with billing schedules. Evidence related to the forecast of Gas Supply heating degree days is presented at Exhibit C2, Tab 3, Schedule 1.

Witnesses: R. Lei
S. Qian

23. The 2012 Estimate volumes of 11 300.1 10^6m^3 are forecast to be 158.9 10^6m^3, or 1.4%, below the 2011 Historical Year of 11 459.0 10^6m^3. This decrease is primarily attributable to the lower degree day forecast mentioned above and other factors discussed below. On a weather-normalized basis, the 2012 Estimate volumes are forecast to be 16.3 10^6m^3 below the 2011 Historical Year. The decrease on a normalized basis is made up of a decrease in the contract market of 88.5 10^6m^3, which is partially offset by an increase in general service volumes of 72.2 10^6m^3. Further rate class detail and explanations are provided at Exhibit C4, Tab 2, Schedule 3.

24. The increase in the general service volumes of 72.2 10^6m^3 on a weather-normalized basis is primarily due to a net customer growth volumetric impact of 78.7 10^6m^3 and rate switching from contract rates to general service rates (or transfer gains) of 25.4 10^6m^3. The volumetric impact due to customer growth mitigates the lower average use per customer of 31.7 10^6m^3. Residential average use per customer in the 2012 Estimate is forecast to be 23.0 m^3 or 0.9% lower compared to the 2011 Historical Year.

25. The modest decrease in the large volume of 88.5 10^6m^3 is mainly caused by customer migration to general service (or transfer losses) of 25.4 10^6m^3. After removing the unfavourable rate switching volumetric impact, the 2012 contract market volume is expected to be 63.1 10^6m^3 lower than the 2011 Historical Year on a weather normalized basis. With some of the contract market customers being heavily dependent on the U.S. economy along with a strong Canadian dollar, declines in volumetric demand is anticipated. Table 6 on the following page illustrates the major variance drivers contributing to the reduction in contract market volumes between the 2012 Estimate and the 2011 Historical Year. Table 7

on page 15 of this exhibit, illustrates the migration to Rate 6 by trade group.

Table 6 - Comparison of Contract Market Volumes
2012 Estimate and 2011 Historical Year
($10^6 m^3$)

	Col. 1 2012 Bridge Year Estimate	Col. 2 2011 Historical Year	Col. 3 2012 Estimate Over (Under) 2011 Historical (1-2)
Contract Market Total Gas Sales and Transportation Volumes	1,943.4	2,039.2	(95.8)
Major Variance Factors:			
Weather Normalization, Exhibit B, Tab 1, Schedule 5, Appendix A, Page 4, Col. 4, Item No. 4			(7.3)
Lost customers			(1.2)
Transfer gains - migration of customers from general service rate 6 to contract rate 110			0.9
Transfer losses - net migration of customers from contract rates to general service rate 6			(26.3)
Wholesale customer			0.1
Pulp and Paper Industry			(20.6)
Impact of price spread between Hydro and Gas on Distributed Energy customers			(15.1)
Refined Petroleum Industry			(14.8)
Chemical and Chemical Products Industry			(2.9)
Impact of contruction projects of one Education Service customer			(2.7)
Others change in usage (e.g. change in production process, etc.)			(5.8)
Total Major Variance Factors:			**(95.8)**

Table 7 - Customer Migration from Contract Rate to Rate 6
Between 2012 Estimate and 2011 Historical Year

1. Customers that migrating to Rate 6 in 2011

	Number of Customers*	Standard Industrial Classification Trade Group	Volume (10^6m^3)
	(34)	Apartment	(9.5)
	(1)	Business & Financial Service Industries	(2.5)
	(3)	Chemical and Chemical Products	(0.5)
	(1)	Education Services	(0.8)
	(2)	Food, Beverage, Drug & Tobacco	(0.6)
	(2)	Government Services	(1.0)
	(5)	Greenhouses/Agriculture	(2.5)
	(1)	Health, Social & Other Services	(0.2)
	(1)	Hotels	(0.2)
	(1)	Non-Metallic Mineral Products	(0.3)
	(2)	Primary Metal & Machinery	(1.0)
	(2)	Pulp & Paper	(1.0)
	(1)	Refined Petroleum	(0.5)
	(2)	Transportation and Storage and Utilities	(1.1)
	(1)	Transportation Equipment	(1.2)
	(1)	Wholesale & Retail Trade	(0.8)
Total	(60)		(23.7)

2. Customers that will be migrated to Rate 6 in 2012

	Number of Customers	Standard Industrial Classification Trade Group	Volume (10^6m^3)
	(2)	Apartment	(2.0)
	(1)	Business & Financial Service Industries	(0.6)
Total	(3)		(2.6)
Grand Total	**(63)**		**(26.3)**

*The number here only counts the billing account number which is different from meter count. This count does not reflect the timing of the migration.

Witnesses: R. Lei
S. Qian

Comparison of 2011 Historical Year and 2010 Actual

26. The 2011 volumes of 11 459.0 10^6m^3 reflect the meter reading heating degree days forecast of 3,602 in the Central Region, an increase of 136 degree days compared to the 2010 Actual of 3,466. The colder weather forecasted is the main reason of the volume demand increase of 518.4 10^6m^3 or 4.7% above the 2010 Actual of 10 490.6 10^6m^3. On a weather-normalized basis the 2011 Historical Year volumes are 78.5 10^6m^3 or 0.7% above the 2010 Actual. The increase on a normalized basis is made up of an increase in general service volumes of 229.9 10^6m^3 and a decrease in the contract market of 151.4 10^6m^3. Further rate class detail and explanations are provided at Exhibit C5, Tab 2, Schedule 2.

27. The normalized general service volume increase in the general service of 229.9 10^6m^3 is primarily due to customer growth with a volumetric contribution of 182.7 10^6m^3, and customer migration from contract market customers of 62.2 10^6m^3. These are partially offset by a moderate decline in average use per customer of 15.0 10^6m^3. As illustrated in Figure 1 on page 4, residential normalized average use in 2011 is projected to decline by 46 m^3 per customer, which is mainly driven by efficiency improvements. However, Rate 6 average use per customer has been steadily increasing since 2006. Particularly in 2011, usage per customer in Rate 6 is projected to increase by 750.0 m^3 or 2.6% compared to 2010, which results in an increase in total general service volumetric demand in 2011.

28. The decrease in the contract market volumes of 151.4 10^6m^3 on a weather-normalized basis is primarily due to rate switching from contract rates to general service rates (or transfer losses) of 62.2 10^6m^3. Absent rate switching, the 2011 contract market volumes are projected to be 89.2 10^6m^3 below 2010 actual.

Witnesses: R. Lei
S. Qian

Table 8 provided below, illustrates major drivers contributing to these variances by trade group. Table 9 and 10 on the following pages, present customer migration between contract market rates and general service Rate 6 by trade group.

Table 8 - Comparison of Contract Market Volumes
2011 Historical Year and 2010 Actual
($10^6 m^3$)

	Col. 1	Col. 2	Col. 3
	2011 Historical Year	2010 Actual	2011 Historical Over (Under) 2010 Actual (1-2)
Contract Market Total Gas Sales and Transportation Volumes	2,039.2	2,183.6	(144.4)
Major Variance Factors:			
Weather Normalization, Exhibit B, Tab 1, Schedule 5, Appendix A, Page 4, Col. 4, Item No. 4			7.0
Lost customers			(5.5)
Transfer gains - migration of customers from general service rate 6 to contract rate 110			16.0
Transfer losses - migration of customers from contract rates to general service rate 6			(78.2)
Wholesale customer			(7.5)
Pulp & Paper Industry			(36.0)
Primary Metal & Machinery Industry			(12.4)
Transportation Equipment Industry and Asphalt Industry			(9.6)
Chemical and Chemical Products Industry			(7.5)
Non-Metallic Mineral Products Industry			(10.3)
Others change in usage (e.g. change in production process, etc.)			(0.4)
Total Major Variance Factors:			**(144.4)**

Table 9 - Customer Migration from Contract Rate to Rate 6
Between 2011 Historical Year and 2010 Actual

	Number of Customers*	Standard Industrial Classification Trade Group	Volume ($10^6 m^3$)
	(87)	Apartment	(38.1)
	(2)	Business & Financial Service Industries	(1.3)
	(5)	Chemical and Chemical Products	(1.2)
	(1)	Construction Industries	(0.9)
	(2)	Education Services	(1.0)
	(2)	Electronics/High Tech	(4.1)
	(5)	Food, Beverage, Drug & Tobacco	(4.4)
	(2)	Government Services	(0.9)
	(7)	Greenhouses/Agriculture	(1.6)
	(1)	Health, Social & Other Services	(0.1)
	(2)	Hotels	(0.9)
	(1)	Non-Metallic Mineral Products	(0.4)
	(5)	Primary Metal & Machinery	(7.7)
	(3)	Pulp & Paper	(1.7)
	(1)	Refined Petroleum	(1.6)
	(3)	Rubber Products	(1.4)
	(1)	Textile Products	(0.8)
	(3)	Transportation and Storage and Utilities	(0.6)
	(3)	Transportation Equipment	(6.2)
	(5)	Wholesale & Retail Trade	(2.4)
	(1)	Wood & Furniture Industries	(0.9)
Total	(142)		(78.2)

*The number here only counts the billing account number which is different from meter count. This count does not reflect the timing of the migration.

Table 10 - Customer Migration to Contract Rate from Rate 6 Between 2011 Historical Year and 2010 Actual

	Number of Customers*	Standard Industrial Classification Trade Group	Volume (10^6m^3)
	1	Chemical and Chemical Products	3.9
	6	Food, Beverage, Drug & Tobacco	5.0
	3	Pulp & Paper	5.3
	1	Rubber Products	1.8
Total	11		16.0

*The number here only counts the billing account number which is different from meter count. This count does not reflect the timing of the migration.

Evaluation of Forecast Accuracy – Historical Normalized Actual vs. Board Approved Budget

29. As historical Board Approved volumes for the periods prior to 2006 were developed and approved based upon fiscal year information (i.e., September 30 fiscal year end), the information for periods prior to 2006 shown in this section are presented on a fiscal-year basis whereas years beyond 2006 are presented on a calendar-year basis.

30. The key factor to evaluate the forecast accuracy of general service volumetric demand in general service is the normalized variance of residential average use per customer. Table 1 in Exhibit C5, Tab 2, Schedule 6, illustrates the 10-Year history of Normalized Actual vs. Board Approved volumes. The average normalized percentage error variances between 2001 and 2010 were less than

1.0% for Rate 1 average use per customer. Hence, the methodology that is consistent with the approach taken in prior years continues to be a reasonable predictor for general service average use.

31. As for the contract market, customer migration has had a significant impact since 2006. Table 2 in Exhibit C5, Tab 2, Schedule 6, illustrates the 10-Year history of Normalized Actual vs. Board Approved volumes for contract market customers to evaluate accuracy of forecast volumes.

Weather Normalization Methodology

32. The Company's weather normalization methodology has been approved by the Board and utilized for more than ten years. Consistent with previous rate cases, this section explains the Board approved normalization methodology of normalizing actual consumption for general service rate classes.

33. General Service normalization is carried out taking customers at a group level. The Company's General Service customers are grouped together into homogenous classes of gas usage within the three delivery areas (and six operating regions) of the Company's franchise area. Only the heat sensitive portion of consumption is normalized for heat sensitive or balance point degree days.

34. Firstly, the total load per customer of a customer group is calculated by dividing the group's consumption by the total customers within this group. Then, base-load per customer is calculated by taking an average of the two non-weather sensitive summer months' total load. Base-load represents non-weather sensitive load, such as water heating and other non-heating uses. Thereafter, heat-load per

customer is calculated by subtracting the base-load per customer from the total load per customer. This heat-load represents the heat sensitive portion of consumption. By dividing the heat-load per customer by Actual Heating Degree Days, an Actual Use per Degree Day is generated. The Actual Use per Degree Day is then adjusted to reflect normal weather by multiplying the Budget Heating Degree Days. Consequently, total normalized average use per customer is defined as an aggregate sum of base-load use per customer and normalized heat-load per customer.

35. In EBRO 487, the Company proposed to change from the traditional 18^{O}C balance point temperature assumption to a new temperature for purposes of normalizing average general service customer uses. This new normalizing technique has been very beneficial in reducing the volatility in residential normalized average use for the shoulder months of November and April and, to a lesser extent, October and May. Shoulder months have been important in the overall consideration of average use trends. Un-normalized average uses in the months leading into the winter period can fluctuate significantly depending on the length of a seasonably warm or cold cycle.

36. For contract market customers who consume more than 340,000 m^3 annually, a similar process is followed to determine the actual base-load for each contract. Actual heat-load is obtained by removing the base-load and the process load from the total consumption, which is then adjusted to reflect normal weather. The actual volumes are also adjusted, where necessary, to the budgeted level of curtailment.

AVERAGE NUMBER OF CUSTOMERS

1. The purpose of this exhibit is to present the calculation of the 2013 annual average customers underpinning the 2013 volume budget. The methodology to determine the annual average number of customers has been applied to calculate Board Approved annual average customer for more than ten years. The Test Year budget includes 2011 Historical and 2012 Bridge Year Estimate billing information.

2. The 2013 Customer Budget of 2,013,352 is forecast to be 28,618 or 1.4% above the 2012 Bridge Year Estimate of 1,984,734. The total customer additions forecast in the 2013 Budget are 38,896. The customer additions forecast underpins the new customer volumes of 83.9 $10^6 m^3$ added between the 2013 Budget and the 2012 Estimate as presented in Exhibit C3, Tab 2, Schedule 3.

3. Consistent with previous rate proceedings, each year's customer numbers are reported on an annual average of monthly customer numbers. Every month customer numbers are measured by the number of active meters (or unlock meters)[1]. As a result, each month's customer number is an aggregate sum of the total active meters for that particular month. Specifically, each year's annual average is calculated as follows:

annual average_customer = (1/12)(january_customer + february_customer + march_customer + april_customer + may_customer + june_customer + july_customer + august_customer + september_customer + october_customer + november_customer + december_customer)*

[1] Unlock meter is defined as customer whose gas meter is unlocked, allowing gas to flow through the meter to a premise.

Witnesses: R. Lei
S. Qian

4. Consistent with the contract demand forecast methodology discussed in the Gas Volume Budget Evidence, contract customer counts in the contract market are generated through an approved grass roots approach that takes place between account executives and customers. The formula for forecasting the total number of contract market customers is as follows:

   forecast contract market customers = year end customers (2012 Estimate)
   + forecast new customer additions
   + forecast replacement customer additions
   - forecast lost customers
   + forecast transfer gains (i.e., customer migration from general service Rate 6 to contract market rate class)
   – forecast transfer losses (i.e., customer migration from contract market rate class to general service Rate 6)

5. The forecast of total number of general service customers is obtained by adding the forecast customer additions along with a time lag between customer additions and unlock meters to the number of customers recorded at the end of the bridge year estimate. Historical average monthly change in actual lock meters or customers are then added to these numbers. Transfer gains or losses between contract rate class and general service Rate 6 obtained from account executives are then layered onto general service Rate 6 customers. The formula for forecasting the total number of general service customers is as follows:

forecast general service customers = year end customers (2012 Estimate)
*+ forecast new construction customer additions*new construction time lag*
*+ forecast replacement customer additions*replacement time lag*
+ historical average monthly change in actual lock customers
+ forecast transfer gains (i.e., customer migration from contract market rate class to general service Rate 6)
- forecast transfer losses (i.e., customer migration from general service Rate 6 to contract market rate class)

6. Lock meters are defined as customers whose gas meters are locked and no gas is flowing through the meter to a premise. These can result from vacant premises (e.g., new construction, move-in/move out, bankruptcies), customer switching off gas to an alternate energy source, payment or credit reasons or seasonal usage. The Company has experienced an increase in lock meters, which has resulted in lower net customer growth. Unfavourable economic conditions, for example due to vacancy or bankruptcy, may lead to an increase in lock meters and this factor is incorporated into the customer forecast. Table 1 below presents the historical annual actual lock customer data.

Table 1 - Historical Annual Average Locks Customers

Calendar Year	Lock Customers
2009	35,044
2010	40,518
2011	41,170

Witnesses: R. Lei
S. Qian

7. There is always a time lag between when the service line is installed (that underpins capital expenditures and customer additions) and the flow of gas. When the customer moves into the premise and calls to have the meter unlocked by field staff, gas service and the customer's account (that underpins billed revenues and volumes) will be activated. This time lag is incorporated into the customer number calculation.

8. Similar to lock customers, this time lag is challenging to predict. Therefore, the latest available historical actual data is used in order to obtain an objective forecast of locked meters for the budget. Table 2 below presents a summary of the 2013 budgeted time lag. It is expected the average time lag (i.e., number of months) for replacement customer additions will be shorter than new construction or subdivision customer additions. Also, the average time lag for commercial buildings or offices is anticipated to be longer than residential homes.

Table 2 - 2013 Budget Time Lag (i.e. Number of Months)

Sector	New Construction	Replacement
Residential	6	3
Apartment	7	7
Commercial	12	11
Industrial	7	7

Evaluation of Forecast Accuracy – Historical Actual vs. Board Approved Budget

9. As historical Board Approved customer numbers for the periods prior to 2006 were developed and approved based upon fiscal year information (i.e., September 30 fiscal year end), the information for periods prior to 2006 shown in this section are

presented on a fiscal-year basis whereas years beyond 2006 are presented on a calendar-year basis.

10. Table 3 on the following page, illustrates the 16-Year history of Historical Actual vs. Board Approved customer numbers and the projection for the 2012 estimate and the 2013 budget. The average percentage error variances over the past 16 years were 1,301 customers or less than 0.1%. Overall, the existing methodology has continued to be a good predictor of actual customers.

TABLE 3 - GENERAL SERVICE AND CONTRACT MARKET CUSTOMERS

	Test Year	Col. 1 Actual Customers	Col. 2 Board Approved Customers	Col. 3 Variance Customers (1-2)	Col. 4 %Variance Customers (3/2)*100
FISCAL YEAR	1995	1,222,293	1,216,511	5,782	0.5%
	1996	1,263,290	1,262,815	475	0.0%
	1997	1,312,434	1,309,752	2,682	0.2%
	1998	1,364,350	1,353,178	11,172	0.8%
	1999	1,414,788	1,417,832	(3,044)	-0.2%
	2000[a]	1,464,738	1,468,915	(4,177)	-0.3%
	2001	1,519,039	1,514,710	4,329	0.3%
	2002	1,566,710	1,565,017	1,693	0.1%
	2003	1,622,016	1,615,037	6,979	0.4%
	2004*	1,676,380	1,672,586	3,794	0.2%
	2005[b]	1,724,716	1,718,766	5,950	0.3%
CALENDAR YEAR	2006	1,782,813	1,792,615	(9,802)	-0.5%
	2007	1,824,789	1,823,258	1,531	0.1%
	2008	1,865,020	1,864,047	973	0.1%
	2009	1,887,605	1,906,437	(18,832)	-1.0%
	2010	1,926,294	1,931,528	(5,234)	-0.3%
	2011**	1,957,733	1,965,538	(7,805)	-0.4%
	2012		1,984,734		
	2013		2,013,352		

* 2004 Bridge Year Estimate from RP-2003-0203 was reported at column 2 because Board Approved numbers are not available since there was no 2004 Board Approved Volumes Budget due to the nature of the 2004 Rate Application. Please see RP-2003-0048, Exhibit A, Tab 3, Schedule 1 for the rationale for implementing this new approach.

**2011 Bridge Year Estimate was reported at column 1 because actual numbers are not available

a. In consequence of the ADR settlement agreement in capital expenditure, there was a reduction in customers of 2,251 to the board approved budget numbers.

b. In consequence of the ADR settlement agreement in capital expenditure, there was a reduction in customers of 1,022 to the board approved budget numbers.

Witnesses: R. Lei
S. Qian

2013 GAS VOLUME BUDGET UPDATE

1. As a result of the availability of 2011 actual data that was filed in the Company's 2011 ESM application, docket EB-2012-0055 and the update of the forecast of degree days for 2013, the 2013 Test Year forecast of volumes and customers have been updated to 11 230.7 10^6m^3 and 2,020,962 customers respectively. The following summarizes the update of the volume forecast and average number of customers, and the detail of the 2013 Test Year volumes forecast are provided at Exhibit C3, Tab 2, Schedule 1, updated 2012-06-01.

2. The updated 2013 Test Year volumes reflect the meter reading heating degree days forecast for the Central Region of 3,481, a decrease of 51 degree days compared to the 2012 Estimate level of 3,532. The 2013 Budget volumes of 11 230.7 10^6m^3 are forecast to be 69.4 10^6m^3 or 0.6% below the 2012 Bridge Year Estimate of 11 300.1 10^6m^3. On a weather-normalized basis, the 2013 Budget volumes are forecast to be 7.2 10^6m^3 below the 2012 Bridge Year Estimate.

3. The updated 2013 Customers Budget of 2,020,962 is forecast to be 36,228 or 1.8% above the 2012 Bridge Year Estimate of 1,984,734. The increase in customers is primarily attributable to the customer additions estimate for 2013 of 38,579. The customer additions forecast underpins the new customer volumes of 104.3 10^6m^3 added between 2013 Budget and 2012 Bridge Year Estimate.

4. The updated 2013 large volume Test Year forecast volume has been updated to include the distribution volume of one large distributed energy plant of 117.8 10^6m^3. The updated 2013 large volume budget of 1 945.5 10^6m^3 is

Witnesses: R. Lei
S. Qian

expected to have an increase of 2.6 10^6m^3 in comparison to the 2012 Estimate of 1 943.4 10^6m^3 on a weather-normalized basis.

5. The 2013 Test Year general service volume of 9 285.2 10^6m^3 is lower by 9.8 10^6m^3 on a weather-normalized basis than the 2012 Bridge Year General Service volumes of 9,356.7 10^6m^3. The decrease is mainly due to lower average use per customer of 114.1 10^6m^3 offset primarily by customer growth. Detailed rate class explanations are shown at Exhibit C3, Tab 2, Schedule 3, updated 2012-06-01.

TRANSACTIONAL SERVICES

1. The purpose of this evidence is to provide an update on the Company's Transactional Services ("TS") business, an overview of prevailing market forces impacting the business, as well as some proposed changes to the sharing mechanism as a result of these market forces.

Background

2. Since the TS function was first established in 1997, Enbridge has succeeded in meeting the gross margin thresholds and ratepayer guarantees as set out in the TS Sharing Methodology. However, TS optimization has been subject to not only the usage and requirements of the utility customers, but is also entirely dependent upon weather and market conditions. With no facility builds or services contracted on behalf of TS, TS revenue continues to be reactive to market conditions and unpredictable.

3. A number of market factors have arisen recently which directly impact the value attributable to TS business. Storage values have plummeted over the past couple of years and remain depressed into the foreseeable future. TransCanada PipeLines Limited ("TransCanada") has filed a business restructuring proposal with the National Energy Board for changes to its tolls and services. Significant uncertainty exists about the long-term stability and competitiveness of long-haul transportation tolls and the corresponding market reaction. The bottom line is that changes are happening in the market that are beyond the control of Enbridge, but that have an impact on the value of the Company's TS offerings.

Witnesses: V. Krauchek
J. Sarnovsky

Storage

4. Between 2006 through 2010, TS storage revenue ranged from $8 million to over $13 million. In 2011, TS storage revenue is estimated to be approximately $2.7 million; a reduction of up to 80 per cent from prior years' revenues. The utility's asset base for storage has undergone no fundamental change year over year; rather, the revenue shortfall of more than $5 to $10 million in 2011 is directly related to weakening storage spreads.

5. High demand for natural gas in the summer to meet gas-fired generation loads is keeping summer prices high. Conversely, the development of non-traditional gas supply (shale) located close to the market area is driving winter pricing down. With higher summer prices and lower winter prices, the storage spread has weakened. Increases in storage capacity in the U.S. northeast (Michigan, Ohio, New York, and Pennsylvania), as well as Ontario, over the past few years has also resulted in a slight oversupply of storage, which serves to flatten storage values. The five-year forward storage curve is showing this same low trend into the future for storage values. With TS storage transactions limited to inter/intra month, as well as seasonal transactions for one year or less, market indicators predict that over the next few years, TS storage revenues will be held to levels comparable or lower than those of 2011.

Transportation

6. For the same time period, 2006 through 2010, TS generated between $8 - 9 million by optimizing the Company's transportation assets. The estimate for 2011 shows transportation revenue at approximately $15 million, offsetting the dramatic reduction in storage revenue in 2011. It should be noted that this inverse swing in revenue between storage and transportation is coincidental, not causal, and that

poor economics/opportunities in one arena will never guarantee rising economics/opportunities in the other.

7. The majority of transportation revenue generated by TS is related to the optimization of capacity on the TransCanada system. The outcome of TransCanada's current Mainline Tolls Application for 2012-2013 could have a significant impact on the value of transportation optimization going forward. There is a great deal of reluctance in the market to predict either the decision of this proceeding or the subsequent market reactions.

8. Despite the TransCanada mainline operating at around 50 per cent of its capacity, the pipeline remains an integral piece of the North American grid for eastern utilities, including Enbridge. Marketing companies and producers have increasingly de-contracted capacity on TransCanada which, as a cost of service pipeline, has translated into significant toll increases for the parties still captive to the service. If TransCanada's application to reduce long haul tolls (and subsequently increase short haul tolls) is approved and shippers are enticed to return to contracting on the pipeline, the margins once available to TS could be squeezed with increased market participation and stabilized demand. Alternatively, if TransCanada's application is met with a decision which acts to compound and/or accelerate the tolling increases, TS opportunities could be restricted as marketers may find smaller and smaller margins to extract on TransCanada.

9. One aspect of TransCanada's filing that could negatively impact TS revenue is the proposed elimination of Firm Transportation – Risk Alleviation Mechanism ("FT-RAM"). FT-RAM was introduced by TransCanada as a means of mitigating the unutilized demand charges of shippers; a service relied upon by TS customers (gas

marketers) as it provides both incremental optionality and revenue potential. In 2011, marketers have been able to leverage FT-RAM with TS offerings, resulting in over $3 million of TS transportation revenue. This is the revenue we are able to directly link to FT-RAM; however, there could be additional revenue associated with the use of FT-RAM that is indirect, and as such, we cannot explicitly identify. To the extent that FT-RAM is eliminated, TS stands to lose a sizable portion of its transportation revenue if such services are removed from the portfolios of marketing parties.

10. TransCanada's Central Delivery Area ("CDA") has been a critical trading area for TS over the last few years, both in terms of volume and revenue. With US regulators approving a project that will allow 320,000dth/day of Marcellus shale gas to flow into Niagara and 10 year firm commitments to bring that gas into the CDA starting in 2012, this key receipt and delivery point will be saturated and in all likelihood, devalued. The negative impact to TS revenue could be significant.

Proposal

11. The Company is proposing a change to one element of the current TS Sharing Methodology. Given the uncertainty and unpredictability of repeating the level of TS revenue achieved historically, Enbridge has reduced its TS revenue projections going forward. As a result, Enbridge is proposing to remove the annual $8 million revenue guarantee that is included in rates and replace this with a $6 million revenue forecast. Any negative variances from forecast will be captured in the Transactional Services Deferral Account and recovered from ratepayers in the subsequent year. The current sharing ratios for TS-related storage and transportation revenue will remain the same: storage - 90 per cent to ratepayers, 10 per cent to shareholders and transportation - 75 per cent to ratepayers, 25 per

cent to shareholders. The new revenue threshold is intended to reflect the increasingly unpredictable economics, marketplace and asset base to which TS is held. The North American market is experiencing significant changes, such as new supply sources, pipeline flows and patterns, and underlying economics. How these changes will affect the TS business is becoming increasingly unclear.

OTHER SERVICE AND LATE PAYMENT PENALTY REVENUE

1. Other Service Revenue is the product of charges billed by the Company to customers in order to recover costs that are not recovered through the application of the Company's gas distribution rates schedules. Typically, these charges apply to the delivery of one-time customer specific services. As such, it is more appropriate to recover the costs associated with such services from those customers requiring them from time to time, as opposed to recovering these costs from all customers as a component of gas distribution rates.

2. The purpose of this evidence is to present the Company's forecast of revenue generated through the delivery of a number of services provided to customers that relate to the provision of gas distribution services. The Company's evidence with respect to policies and service charge schedules can be found at Exhibit A1, Tab 14, Schedules 1 and 2.

Nature of Other Service Revenues

3. Other Service Revenues are the product of service charges that pertain to non-routine customer specific services provided by the Company. Some of these services are provided at the customer's request, such as street service alterations and meter relocations, while other charges arise as a result of ongoing business activities, such as charges for NSF cheques and restoration of gas service after the termination of service for non-payment. The Direct Purchase Administration Charge ("DPAC") is also included in this revenue category. The rationale for separate charges for such services is that the cost of providing these services are more reasonably recovered from those customers that give rise to such costs.

Witnesses: S. McGill
M. Torriano

2013 Budget and 2012 Estimate

4. Budgeted other revenue for the 2013 Budget and 2012 Estimate are set-out in Table 1. In total the Company's 2013 Budget for other revenue is forecast to increase by $0.1 million in 2013. Small increases in several revenue items totaling $0.2 million are offset by a $0.1 million decline in DPAC revenue. The decline in DPAC revenue is due to loss of ABC customers as low commodity price has customers switching from ABC to system gas.

Line No.	Particulars ($ 000's)	Budget 2013 (a)	Estimate 2012 (b)	Variance (c)
1.1	New Account Charge	$ 5,576	$ 5,471	$ 105
1.2	Statement of Account & Lawyer Letters Charge	52	51	1
1.3	Cheques Returned Non-Negotiable Charge	159	156	3
1.4	Gas Termination Charge for Collection	2,638	2,588	50
1.	Total Credit to Customer Support O&M	$ 8,425	$ 8,266	$ 159
2.1	Safety Inspection Revenue	489	474	15
2.2	Meter Testing Revenue	813	789	24
2.3	Street Service Alteration Revenue	936	909	27
2.		$ 2,238	$ 2,172	$ 66
3.	Total	$ 10,663	$ 10,438	$ 225
4.	DPAC	2,125	2,254	(129)
5.	Total Service Charge & DPAC	$ 12,788	$ 12,692	$ 96

Witnesses: S. McGill
M. Torriano

2012 Estimate and 2011 Historical

5. The 2012 Estimate other revenue and 2011 Historical other revenue are presented in Table 2. In total the Company's estimate of other revenues for 2012 is forecast to decline by $0.2 million as compared to 2011 Historical. Small increases and decreases across several revenues offset each other but DPAC revenue is lower by $0.3 million. The decline in DPAC revenue is due to loss of ABC customers as low commodity price has customers switching from ABC to system gas.

Table 2
Other Service Revenues
Variance between 2012 Estimate and 2011 Historical

Line No.	Particulars ($ 000's)	Estimate 2012 (a)	Historic 2011 (b)	Variance (c)
1.1	New Account Charge	$ 5,471	$ 5,534	(63)
1.2	Statement of Account & Lawyer Letters Charge	51	27	24
1.3	Cheques Returned Non-Negotiable Charge	156	146	10
1.4	Gas Termination Charge for Collection	2,588	2,409	179
1.	Total Credit to Customer Support O&M	$ 8,266	$ 8,116	150
2.1	Safety Inspection Revenue	474	487	(13)
2.2	Meter Testing Revenue	789	854	(65)
2.3	Street Service Alteration Revenue	909	943	(34)
2.		$ 2,172	$ 2,284	$ (112)
3.	Total	$ 10,438	$ 10,400	$ 38
4.	DPAC	2,254	2,520	(266)
5.	Total Service Charge & DPAC	$ 12,692	$ 12,920	$ (228)

Witnesses: S. McGill
M. Torriano

Late Payment Penalty ("LPP") Revenues

6. LPP is calculated at the prescribed monthly interest payment of 1.5%. Please refer to Table 3 below for the LPP revenue amounts.

7. 2013 Budget LPP applicable to utility revenues is $0.2 million lower than 2012 Estimate. This is primarily due to the forecasted full year impact of Customer Service Rule changes in 2013, whereas the impact is only part year effective in 2012. The 2012 impact applicable to utility revenue is $0.35 million whereas the 2013 impact is $0.5 million.

8. 2012 Estimate is flat versus 2011 Historic. An increase in 2012 Estimate LPP is being offset by a reduction due to the impact of Customer Service Rules of $0.35 million

Table 3
Late Payment Penalty Revenues
2013 Budget, 2012 Estimate, 2011 Historic

Line No.	Particulars ($ 000's)		Budget 2013 (a)		Estimate 2012 (b)		Historic 2011 (c)
1	Late Payment Penalty Revenues	$	12,942	$	13,157	$	13,145

Witnesses: S. McGill
M. Torriano

KEY ECONOMIC ASSUMPTIONS

ECONOMIC OUTLOOK: CANADA & U.S.

CALENDAR YEAR	2006	2007	2008	2009	2010	2011	2012F	2013F
REAL GDP (% CHANGE)								
CANADA	2.8	2.2	0.7	-2.8	3.2	2.5	2.1	2.4
U.S.	2.7	1.9	-0.3	-3.5	3.0	1.7	2.6	2.7
CANADA REAL EXPORTS (% CHANGE)	0.6	1.2	-4.7	-13.8	6.4	4.4	5.7	4.8
CANADA REAL IMPORTS (% CHANGE)	4.9	5.9	1.5	-13.4	13.1	6.5	3.6	3.9
CANADA HOUSING STARTS (000's)	227.4	228.3	211.1	149.1	189.9	194.0	197.2	192.8
CANADA UNEMPLOYMENT RATE (%)	6.3	6.0	6.1	8.3	8.0	7.6	7.4	7.1
CANADA EMPLOYMENT GROWTH (% CHANGE)	1.8	2.4	1.7	-1.6	1.4	1.6	0.9	1.3
CONSUMER PRICES (% CHANGE)								
CANADA	2.0	2.1	2.4	0.3	1.8	2.9	2.0	1.9
U.S.	3.2	2.9	3.8	-0.4	1.7	3.1	2.1	2.0

ECONOMIC OUTLOOK: ONTARIO

CALENDAR YEAR	2006	2007	2008	2009	2010	2011	2012F	2013F
REAL GDP (% CHANGE)	2.4	2.0	-0.7	-3.8	3.0	2.1	2.0	2.2
REAL MANUFACTURING OUTPUT (% CHANGE)	-2.1	-4.2	-8.9	-15.7	6.5	2.2	4.5	3.5
HOUSING STARTS (000's)	73.4	68.1	75.1	50.4	60.4	67.8	66.1	63.5
UNEMPLOYMENT RATE (%)	6.3	6.4	6.5	9.0	8.6	7.8	7.8	7.5
EMPLOYMENT GROWTH (% CHANGE)	1.2	1.8	1.5	-2.4	1.6	1.8	0.8	1.3
CONSUMER PRICES (% CHANGE)	1.8	1.8	2.3	0.4	2.4	3.1	1.8	1.7
RETAIL SALES (% CHANGE)	4.0	3.8	3.9	-2.5	5.4	3.0	3.6	3.8
WAGE RATE (% CHANGE)	5.7	6.0	5.8	6.5	5.3	3.1	3.9	5.3
REAL RESIDENTIAL NATURAL GAS PRICE (% CHANGE)	8.9	-11.4	1.5	-17.8	-13.2	-11.5	-11.2	16.2
REAL COMMERCIAL NATURAL GAS PRICE (% CHANGE)	0.0	-12.7	1.6	-19.8	-14.5	-12.8	-13.2	19.7

* The forecasts have been updated to reflect the Spring 2012 Economic Outlook.

Witnesses: H. Sayyan
M. Suarez

ECONOMIC OUTLOOK: REGIONS

CALENDAR YEAR	2006	2007	2008	2009	2010	2011	2012F	2013F
FRANCHISE HOUSING STARTS (000's)	46.4	43.8	50.8	32.7	38.8	47.9	40.8	41.0
GTA								
HOUSING STARTS (000's)	38.8	35.7	42.4	25.8	30.9	40.5	33.9	34.0
SINGLES	15.9	16.1	11.9	8.4	12.0	12.1	13.7	13.3
MULTIPLES	22.9	19.7	30.4	17.4	18.9	28.5	20.1	20.7
CONSUMER PRICES (% CHANGE)	1.6	1.9	2.4	0.5	2.5	3.0	1.8	1.7
UNEMPLOYMENT RATE (%)	6.3	6.5	6.6	9.0	9.1	8.2	7.9	7.8
EMPLOYMENT GROWTH (% CHANGE)	1.5	2.2	1.8	-1.7	2.1	2.1	1.1	2.2
COMMERCIAL VACANCY RATE (%)	7.3	6.3	5.4	6.9	7.9	7.0	7.0	7.0
INDUSTRIAL VACANCY RATE (%)	5.1	5.4	5.9	7.0	6.5	6.3	6.3	6.3
VINTAGE METRO REGION CENTRAL WEATHER ZONE (% CHANGE)	-1.1	-1.8	-0.9	-0.9	-1.1	-1.0	-1.0	-1.0
VINTAGE WESTERN REGION CENTRAL WEATHER ZONE (% CHANGE)	-2.5	-2.7	-2.1	-2.1	-3.3	-2.9	-2.8	-2.7
VINTAGE CENTRAL REGION CENTRAL WEATHER ZONE (% CHANGE)	-3.8	-3.1	-2.7	-2.7	-2.9	-2.0	-1.8	-1.7
VINTAGE NORTHERN REGION CENTRAL WEATHER ZONE (% CHANGE)	-3.8	-3.6	-3.1	-3.1	-5.0	-3.8	-3.6	-3.5
CENTRAL HEATING DEGREE DAYS**	2635	2866	2919	2922	2659	2856	2655	2616
EASTERN								
HOUSING STARTS (000's)	6.1	6.8	7.2	6.0	6.6	6.0	5.7	5.8
SINGLES	2.7	3.1	3.1	2.6	2.4	2.2	2.5	2.5
MULTIPLES	3.4	3.6	4.1	3.4	4.2	3.8	3.2	3.3
CONSUMER PRICES (% CHANGE)	1.7	1.9	2.2	0.6	2.5	3.0	1.8	1.7
UNEMPLOYMENT RATE (%)	5.5	5.6	4.9	6.0	6.9	6.3	6.3	6.3
EMPLOYMENT GROWTH (% CHANGE)	3.2	2.0	4.0	-1.4	1.3	0.1	1.9	1.6
VINTAGE EASTERN WEATHER ZONE (% CHANGE)	-2.7	-2.8	-3.1	-3.1	-2.0	-2.6	-2.6	-2.6
EASTERN HEATING DEGREE DAYS	3210	3482	3458	3526	3092	3261	3372	3318
NIAGARA								
HOUSING STARTS (000's)	1.4	1.3	1.3	1.0	1.3	1.3	1.2	1.3
SINGLES	0.9	0.9	0.8	0.7	0.9	0.7	0.8	0.9
MULTIPLES	0.4	0.4	0.5	0.3	0.4	0.6	0.4	0.4
UNEMPLOYMENT RATE (%)	6.5	6.8	7.2	10.1	9.6	8.4	7.9	7.3
EMPLOYMENT GROWTH (% CHANGE)	-1.5	1.5	2.9	-6.0	1.8	2.5	1.5	1.9
VINTAGE NIAGARA WEATHER ZONE (% CHANGE)	-1.2	-1.1	-1.1	-1.1	-0.3	-0.9	-0.8	-0.8
NIAGARA HEATING DEGREE DAYS	2506	2700	2761	2821	2650	2737	2667	2690

* The forecasts have been updated to reflect the Spring 2012 Economic Outlook.

**Balance Point Heating Degree Days adjusted for billing cycles. The 2013 Degree Day forecast reflects the 2013 Updated Filing for Degree Days (Ex C2 T3 S2).

Witnesses: H. Sayyan
M. Suarez

AVERAGE USE FORECASTING MODEL

1. The purpose of this evidence is to present the forecasting methodology used to forecast average use for Rate 1 revenue class 20 and Rate 6 revenue classes 12, 48 and 73[1]. Rate 1 is the Company's residential rate class while Rate 6 is the Company's small apartment, commercial and industrial rate class. The forecasting methodology for the other revenue classes in Rate 1 and Rate 6 are very similar to the models presented in this exhibit.

2. In 2013[2] revenue class 20 is forecast to comprise 86% of Rate 1 volumes while revenue classes 12, 48 and 73 are forecast to collectively comprise 90% of Rate 6 volumes. Volumes for the remaining revenue classes in Rate 1 are forecast to comprise 14% of Rate 1 volumes while the remaining revenue classes in Rate 6 are forecast to comprise 10% of Rate 6 volumes. /u /u

3. For the 2001 budget the Company moved to a more objective forecasting methodology in order to address the Board's concern with the systematic bias attributed to the grassroots forecasting process. This forecasting methodology would remove systematic or subjective bias by developing regression models to forecast average use for the Company's Rate 1 general service customers and Rate 6 general service customers. The econometric methodology has been in place since 2001 and the forecasts produced and accepted in settlement proposals

[1] Rate 1 is comprised of: revenue class 10 - residential heating, revenue class 20 - residential space heating and water heating, revenue class 50 - space heating, water heating and pool heating, revenue class 60 – residential general service and revenue class 61 – residential water heating. Rate 6 is comprised of: revenue class 12 – apartment heating and other uses, revenue class 48 commercial heating and other uses, revenue class 73 industrial heating and other uses, revenue class 79 commercial general service, revenue class 83 – industrial general service, revenue class 86 – apartment general service, revenue class 90 – commercial air conditioning and space heating.
[2] All data, models and forecasts are calculated using a calendar (i.e., December) year end.

Witnesses: H. Sayyan
M. Suarez

and Board decisions since. As shown in Tables 1 to 3, 5 and 8, the models exhibit a high R^2 and low Root Mean Squared Percentage Error ("RMSPE") indicating the regression model is a good predictor of average use.

4. The year-over-year growth rates in average use for all revenue classes are used to compute the average use forecast for Rate 1 and Rate 6. Factors influencing overall average use include new customers (both new construction and replacement customers), the timing of new customer additions to the system, rate migration, gas prices, economic conditions and the Company's DSM programs. Refer to Exhibit C1, Tab 3, Schedule 1 for a summary of the Company's gas volume budget.

5. Average use is defined as gas volume per unlock customer. The econometric models presented here utilize historical data and relationships to derive a top down forecast of average use. The models presented in the exhibit incorporate updated driver variables and historical data obtained from federal and provincial statistical agencies and the Company's database. Maintaining an econometric model is an ongoing process; consequently, the models must be monitored and refined to ensure they are valid and produce accurate forecasts of general service average use.

Error Correction Model

6. The Company uses the Error Correction Model ("ECM") to forecast the average use for Rate 1 and Rate 6. The Error Correction Model and the two step estimation procedure are described more fully in Engle and Granger (1987).[3] The ECM uses the concept of cointegration or long-run association between variables. In

[3] Engle, R.F. and Granger, C.W.J (1987), "Cointegration and Error Correction: Representation, Estimation and Testing," *Econometrica*, Vol. 55, No.2.

other words, variables hypothesized to be linked by some theoretical economic relationship should not diverge from each other in the long run. Such variables may drift apart in the short run, however, if they were to diverge without bound, an equilibrium relationship among such variables could not be said to exist. The ECM methodology has been used extensively in the energy field for modeling electricity sales[4] and natural gas prices[5].

7. The major difference between the ECM approach and the standard dynamic single-equation model is the ECM approach explicitly takes into account both long-run equilibrium and short-run dynamic relationships in the determination of average use. It is known that economic theory can provide useful information about the variables relevant in the long-run. However, it is relatively silent on the short-run dynamics between variables. The ECM approach allows the historical data to determine the lag structures and short run dynamics.

8. The estimated models are used to generate a normalized forecast of average use. The main purpose of the normalized forecast is to compute average use such that the weather impact has been taken out. Using the estimated coefficients, weather normalized average use data are obtained by replacing actual degree days in the model with budgeted degree days for 2013.

Average Use Forecasting Methodology

9. The model's specification is based on an objective criterion: to minimize both in-sample and out-of-sample forecast error. The discrepancy between actual average use and the model's forecast can be segregated into three major sources

[4] Engle, R.F., Granger, C.W.J. and Hallman, J.J. (1989), "Merging Short- and Long-Run Forecasts: An Application to Monthly Electricity Sales Forecasting," *Journal of Econometrics*, Vol.40.
[5] Bopp, A.E. (1990), "An Analytical Approach to Forecasting Natural Gas Prices," *AGA Forecasting Review*: American Gas Association.

of uncertainty: (1) model specification, (2) forecast error from the driver variables used in the model, and (3) unexpected shocks or structural breaks. Sources (2) and (3) are not within the Company's control and will inevitably occur regardless of which forecasting methodology is adopted. Therefore the objective of the modeling procedure, described below, is to minimize the controllable source of error, the model's specification.

10. The main criteria for assessing the model's predictive ability is the model's forecast accuracy. A comparison of actual un-normalized average use versus the forecasts produced by the model is used to assess predictive ability. Forecast accuracy is measured using both in-sample and out-of-sample Mean Percentage Error ("MPE") and RMSPE. In-sample, or ex-post, means that the estimated model incorporates the entire sample, in this case 1985 to 2010. Out-of-sample, or ex-ante, means that the model incorporates only a portion of the sample, in this case 1985 to 2007. Forecasts of average use are produced under both approaches and measured against actual average use from 2008 to 2010 quantitatively via MPE and RMSPE. A three year "hold out" sample is used to compute the out-of-sample forecast accuracy statistics since the forecasting horizon for budgeting purposes in this instance is three years. Table 1 presents the forecast accuracy statistics for Rate 1 and Rate 6. The smaller the MPE and RMSPE, the better model's forecast performance.

TABLE 1
FORECAST ERRORS - PERCENT VARIANCE & ROOT MEAN SQUARED PERCENTAGE ERROR

Col 1.	Col 2.	Col 3.
Forecast Error Method	Rate 1	Rate 6
In-Sample % Variance (2 Years)	0.21%	-0.53%
In-Sample RMSPE (2 Years)	0.21%	0.80%
Out-of-Sample % Variance (2 Years)	1.71%	-2.48%
Out-of-Sample RMSPE (2 Years)	1.75%	2.67%

/u

$$MPE = \frac{1}{N}\sum_{i=1}^{N}\left(\frac{Forecast_i - Actual_i}{Actual_i}\right)$$

$$RMSPE = \sqrt{\frac{1}{N}\sum_{i=1}^{N}\left(\frac{Forecast_i - Actual_i}{Actual_i}\right)^2}$$

11. Consistent with the settlement of Issue 1.1 in the RP-2000-0040 Settlement Agreement, Tables 2 and 3 report the results that the models would generate using actual data to allow parties to compare results to the prior year's forecast. Tables 2 and 3 show the results that the models would have produced had all actual data been available at the time the forecast was produced. The tables are not updated for 2004 since there are no Board approved average use forecasts for this particular test year. In order to compare the variance between actual and Board Approved average use on the same basis, the actual results for each year have been normalized to the corresponding Board Approved degree days for each respective test year. The results in Tables 2 and 3 show the regression model is a good predictor of general service average use.

Witnesses: H. Sayyan
M. Suarez

TABLE 2

RATE 1 IN-SAMPLE FORECAST COMPARISON

Col 1.	Col 2.	Col 3.	Col 4.	Col 5.	Col 6.	Col 7.	Col 8.
Fiscal Year	Actual Normalized Average Use Per Customer	Board Approved Normalized Average Use Per Customer[1,3]	Variance Normalized Average Use Per Customer	% Variance Normalized Average Use Per Customer	Model's Normalized Average Use Per Customer[2]	Variance Normalized Average Use Per Customer	% Variance Normalized Average Use Per Customer
	(m3)	m(3)	(2-3)	100*((2-3)/3)	(m3)	(2-6)	100*((2-6)/6)
2001	3,014	3,044	(30)	-1.0%	3,022	(8)	-0.26%
2002	2,980	2,970	10	0.3%	2,963	17	0.57%
2003	2,877	2,892	(15)	-0.5%	2,897	(20)	-0.69%
2004	2,843	n/a	n/a	n/a	2,864	(21)	-0.73%
2005	2,890	2,953	(63)	-2.1%	2,929	(39)	-1.33%
2006	2,796	2,850	(54)	-1.9%	2,816	(20)	-0.71%
2007	2,726	2,687	39	1.5%	2,695	31	1.15%
2008	2,636	2,647	(11)	-0.4%	2,611	25	0.97%
2009	2,616	2,637	(21)	-0.8%	2,623	(6)	-0.24%
2010	2,579	2,622	(43)	-1.6%	2,550	29	1.15%
2011	2,594	2643	(49)	-1.9%	2,607	(13)	-0.51%

/u

[1]Board approved normalized average use from RP-2000-0040, RP-2001-0032, RP-2002-0133, RP-2003-0203, EB-2005-000, EB-2006-0034, EB-2007-0615, EB-2008-0219, EB-2009-0172 and EB-2010-0146 for 2001, 2002, 2003, 2005, 2006, 2007, 2008, 2009, 2010 and 2011 respectively.

[2]Model's normalized average use is generated by running the model using actual data and driver variable information.

[3]There is no Board approved normalized average use for 2004.

Witnesses: H. Sayyan
M. Suarez

TABLE 3
RATE 6 IN-SAMPLE FORECAST COMPARISON

Col 1.	Col 2.	Col 3.	Col 4.	Col 5.	Col 6.	Col 7.	Col 8.
Fiscal Year	Actual Normalized Average Use Per Customer	Board Approved Normalized Average Use Per Customer[1,3]	Variance Normalized Average Use Per Customer	% Variance Normalized Average Use Per Customer	Model's Normalized Average Use Per Customer[2]	Variance Normalized Average Use Per Customer	% Variance Normalized Average Use Per Customer
	(m3)	m(3)	(2-3)	100*((2-3)/3)	(m3)	(2-6)	100*((2-6)/6)
2001	22,510	22,643	(133)	-0.6%	22,706	(196)	-0.86%
2002	22,097	22,125	(28)	-0.1%	21,957	140	0.64%
2003	21,593	21,685	(92)	-0.4%	21,613	(20)	-0.09%
2004	21,472	n/a	n/a	n/a	21,377	95	0.44%
2005	22,241	22,507	(266)	-1.2%	22,334	(93)	-0.42%
2006	22,272	21,999	273	1.2%	22,149	123	0.55%
2007	22,783	21,010	1773	8.4%	22,973	(190)	-0.83%
2008	24,869	24,204	665	2.7%	25,273	(404)	-1.60%
2009	27,654	28,165	(512)	-1.8%	27,875	(222)	-0.79%
2010	29,106	27,949	1157	4.1%	29,691	(585)	-1.97%
2011	29,471	28,029	1442	5.1%	30,240	(769)	-2.54%

/u

[1]Board approved normalized average use from RP-2000-0040, RP-2001-0032, RP-2002-0133, RP-2003-0203, EB-2005-000, EB-2006-0034, EB-2007-0615, EB-2008-0219, EB-2009-0172 and EB-2010-0146 for 2001, 2002, 2003, 2005, 2006, 2007, 2008, 2009, 2010 and 2011 respectively.

[2]Model's normalized average use is generated by running the model using actual data and driver variable information.

[3]There is no Board approved normalized average use for 2004.

12. The primary goal of the average use forecast is to be accurate and objective. Ideally, the forecast error should be small in magnitude and distributed in a random fashion. Although the forecast errors in Tables 1, 2, and 3 are small in magnitude, forecast accuracy is conditional on driver variable forecast accuracy and the absence of any structural break between the historical period and the upcoming forecast period. Consequently, besides testing forecast accuracy, the models were subjected to a battery of diagnostic tests. These tests were run on the model to check for incorrect functional forms, parameter instability, structural breaks, omitted variables and randomness of residuals. Overall the models have been thoroughly tested and are statistically valid. The following diagnostic tests were run on each model (results are shown in Tables 6 and 9):

Witnesses: H. Sayyan
M. Suarez

Breusch-Godfrey Serial Correlation LM Test[6]

This test is used to test for autocorrelation in the residuals. Autocorrelation occurs when disturbances in a regression equation are serially correlated. The test is set up as follows:

Null Hypothesis: No serial correlation

Alternative Hypothesis: Serial correlation

ARCH Test

This test is used to test for Autoregressive Conditional Heteroskedasticity ("ARCH"). ARCH occurs when the variance of disturbances in a regression equation are not constant and are serially correlated. The test is set up as follows:

Null Hypothesis: No ARCH

Alternative Hypothesis: ARCH

Chow Forecast Test

This test is used to test for stability of a regression model. A regression model is not stable if the estimated coefficients change (and consequently the model's predictions) when estimated over various sample ranges. The test is set up as follows:

Null Hypothesis: No structural change

Alternative Hypothesis: Structural change

[6] The Durbin-Watson test is not used since it is not valid when there are lagged dependent variables in a regression equation. The Durbin Watson test is biased toward the finding of no serial correlation if there are lagged values of the dependent variable in the regression equation.

Ramsey RESET Test

This is a general test which tests for omitted variables, incorrect functional form and correlation between the independent variables and disturbances. The test is set up as follows:

Null Hypothesis: Normally distributed disturbances (zero mean, constant variance)

Alternative Hypothesis: Non- normally distributed disturbances (non-zero mean, constant variance)

13. The remainder of this section shows the following: Tables 4 and 7 show the mnemonics of the models; Tables 5 and 8 show the regression equations for each model; Tables 6 and 9 show the results of the diagnostic tests run on the models.

TABLE 4 - RATE 1 MODEL MNEMONICS

Mnemonic	Definition
C	Constant Term
LOG(X)	Logarithm of Variable X
DLOG(X)	$LOG(X_t) - LOG(X_{t-1})$, First Difference of Logarithm of Variable X
CDD, EDD, NDD	Balance Point Heating Degree Days for Central, Eastern and Niagara Weather Zones
MET20VINT	Vintage Variable for the Metro Region, Central Weather Zone
WES20VINT	Vintage Variable for the Western Region, Central Weather Zone
CEN20VINT	Vintage Variable for the Central Region, Central Weather Zone
NOR20VINT	Vintage Variable for the Northern Region, Central Weather Zone
ERC20VINT	Vintage Variable for the Eastern Weather Zone
NRC20VINT	Vintage Variable for the Niagara Weather Zone
REALCRCRPG	Real Residential Natural Gas Price for the Central Weather Zone
REALERCRPG	Real Residential Natural Gas Price for the Eastern Weather Zone
REALNRCRPG	Real Residential Natural Gas Price for the Niagara Weather Zone
TIME	Time Trend
DUM2008-DUM2009	Dummy Variables for Recession Impact
CENTEMP	Central Weather Zone Employment
AR(1)	First-order Autoregressive Process Term
ECM_Region	Error Correction Term for Each Region

Witnesses: H. Sayyan
M. Suarez

TABLE 5 - RATE 1 REVENUE CLASS 20 REGRESSION EQUATIONS

Metro Region - Central Weather Zone

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	2.48	6.60	0.00
LOG(CDD)	0.72	15.35	0.00
LOG(REALCRCRPG)	-0.03	-1.47	0.16
LOG(MET20VINT)	0.61	10.28	0.00
DUM2008	-0.06	-5.35	0.00
R-squared	0.98		
Adjusted R-squared	0.98		
S.E. of regression	0.02		
F-statistic	333.86		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	0.00	-0.33	0.74
DLOG(CDD)	0.76	25.87	0.00
DLOG(MET20VINT)	0.68	1.70	0.10
ECM_MET20(-1)	-0.32	-1.77	0.09
R-squared	0.97		
Adjusted R-squared	0.97		
S.E. of regression	0.01		
F-statistic	254.30		0.00

Western Region - Central Weather Zone

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	1.02	1.14	0.27
LOG(CDD)	0.72	19.14	0.00
LOG(REALCRCRPG)	-0.09	-5.41	0.00
LOG(WES20VINT)	0.26	5.10	0.00
LOG(CENTEMP)	0.16	1.63	0.12
DUM2008	-0.06	-6.65	0.00
R-squared	0.99		
Adjusted R-squared	0.99		
S.E. of regression	0.01		
F-statistic	395.67		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	0.00	-2.34	0.03
DLOG(CDD)	0.72	36.22	0.00
DLOG(REALCRCRPG)	-0.08	-4.79	0.00
DUM2008	-0.02	-3.01	0.01
ECM_WES20(-1)	-0.69	-4.18	0.00
R-squared	0.99		
Adjusted R-squared	0.98		
S.E. of regression	0.01		
F-statistic	360.88		0.00

Central Region - Central Weather Zone

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	0.37	0.41	0.69
LOG(CDD)	0.72	16.52	0.00
LOG(REALCRCRPG)	-0.06	-3.11	0.01
LOG(CEN20VINT)	0.33	7.95	0.00
LOG(CENTEMP)	0.23	2.48	0.02
DUM2008	-0.07	-6.15	0.00
R-squared	0.99		
Adjusted R-squared	0.99		
S.E. of regression	0.01		
F-statistic	352.45		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	0.00	0.17	0.87
DLOG(CDD)	0.71	21.46	0.00
DLOG(REALCRCRPG)	-0.05	-1.83	0.08
DLOG(CEN20VINT)	0.24	1.55	0.14
DUM2008	-0.02	-2.02	0.06
ECM_CEN20(-1)	-0.79	-3.23	0.00
R-squared	0.96		
Adjusted R-squared	0.96		
S.E. of regression	0.01		
F-statistic	107.94		0.00

Updated: 2012-06-01
EB-2011-0354
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TABLE 5 CONTINUED - RATE 1 REVENUE CLASS 20 REGRESSION EQUATIONS

Northern Region - Central Weather Zone

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	0.98	1.12	0.28
LOG(CDD)	0.71	18.39	0.00
LOG(REALCRCRPG)	-0.10	-5.75	0.00
LOG(NOR20VINT)	0.26	7.42	0.00
LOG(CENTEMP)	0.18	1.92	0.07
DUM2009	-0.07	-6.31	0.00
R-squared	0.99		
Adjusted R-squared	0.99		
S.E. of regression	0.01		
F-statistic	544.00		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	0.00	0.06	0.95
DLOG(CDD)	0.70	21.04	0.00
DLOG(REALCRCRPG)	-0.05	-1.71	0.10
DLOG(NOR20VINT)	0.25	1.89	0.07
ECM_NOR20(-1)	-0.63	-2.38	0.03
R-squared	0.96		
Adjusted R-squared	0.95		
S.E. of regression	0.02		
F-statistic	121.01		0.00

Eastern Weather Zone

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	1.38	3.78	0.00
LOG(EDD)	0.81	18.18	0.00
LOG(REALERCRPG)	-0.04	-2.91	0.01
LOG(ERC20VINT)	0.24	15.87	0.00
DUM2008	-0.06	-6.32	0.00
R-squared	0.99		
Adjusted R-squared	0.99		
S.E. of regression	0.01		
F-statistic	534.83		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	-0.01	-2.77	0.01
DLOG(EDD)	0.79	23.91	0.00
DLOG(REALERCRPG)	-0.06	-2.18	0.04
DUM2008	-0.01	-1.82	0.08
ECM_ERC20(-1)	-0.68	-2.96	0.01
R-squared	0.97		
Adjusted R-squared	0.96		
S.E. of regression	0.01		
F-statistic	154.45		0.00

Niagara Weather Zone

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	2.33	4.53	0.00
LOG(NDD)	0.71	11.05	0.00
LOG(TIME)	-0.01	-0.91	0.37
LOG(REALNRCRPG)	-0.05	-1.47	0.16
LOG(NRC20VINT)	0.67	3.49	0.00
DUM2008	-0.09	-4.39	0.00
R-squared	0.98		
Adjusted R-squared	0.97		
S.E. of regression	0.02		
F-statistic	175.94		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	-0.01	-2.95	0.01
DLOG(NDD)	0.72	21.52	0.00
DLOG(REALNRCRPG)	-0.04	-1.53	0.14
DUM2008	-0.02	-1.73	0.10
ECM_NRC20(-1)	-0.56	-3.48	0.00
R-squared	0.96		
Adjusted R-squared	0.95		
S.E. of regression	0.02		
F-statistic	129.85		0.00

Witnesses: H. Sayyan
M. Suarez

TABLE 6 - RATE 1

Model Diagnostic Tests

Col 1.	Col 2.	Col 3.	Col 4.	Col 5.	Col 6.	Col 7.	Col 8.
Test		Metro Region	Western Region	Central Region	Northern Region	Eastern Weather Zone	Niagara Weather Zone
Breusch-Godfrey Serial Correlation LM Test	Test Statistic	0.01	0.70	0.39	0.45	1.37	0.26
	P Value	0.91	0.40	0.53	0.50	0.24	0.61
ARCH Test	Test Statistic	0.57	0.06	0.82	0.22	0.02	0.23
	P Value	0.45	0.80	0.36	0.64	0.89	0.63
Chow Forecast Test: Forecast from 2011 to 2011	Test Statistic	0.23	0.48	0.03	0.03	0.32	3.81
	P Value	0.64	0.50	0.86	0.85	0.58	0.07
Ramsey RESET Test	Test Statistic	2.60	0.69	0.77	0.43	1.09	0.00
	P Value	0.12	0.42	0.39	0.52	0.31	0.96

TABLE 7 - RATE 6 MODEL MNEMONICS

Mnemonic	Definition
C	Constant Term
LOG(X)	Logarithm of Variable X
DLOG(X)	$LOG(X_t) - LOG(X_{t-1})$, First Difference of Logarithm of Variable X
CDD, EDD, NDD	Balance Point Heating Degree Days for Central, Eastern and Niagara Weather Zones
CENTEMP	Central Weather Zone Employment
EASTEMP	Eastern Weather Zone Employment
NIAGEMP	Niagara Weather Zone Employment
REALCRCCPG	Real Commercial Gas Price for the Central Weather Zone
REALERCCPG	Real Commercial Gas Price for the Eastern Weather Zone
REALNRCCPG	Real Natural Gas Price for the Niagara Weather Zone
ONTGDP	Ontario Real Gross Domestic Product
MANUFACTURING	Ontario Manufacturing Industry Real Domestic Product
CRCCOMVAC	GTA Commercial Vacancy Rate
TIME	Time Trend
DUMRegion	Dummy Variable for Migration Impact
DUMXXXX	Dummy Variable for the Break in the Year XXXX
AR(p)	pth-order Autoregressive Process Term
ECM_Region	Error Correction Term for Each Region

Witnesses: H. Sayyan
M. Suarez

TABLE 8 - RATE 6 REVENUE CLASS 12 REGRESSION EQUATIONS

Central Revenue Class 12 (Apartment)

Single Equation Model

Variable	Coefficient	t-Statistic	p-Value
C	0.68	0.47	0.65
LOG(CDD)	0.68	6.64	0.00
LOG(REALCRCCPG)	-0.06	-1.16	0.26
LOG(CENTEMP)	0.67	5.29	0.00
DUM1996	-0.09	-4.95	0.00
DUMCRC12	0.23	5.49	0.00
AR(4)	-0.69	-2.83	0.01
R-squared	0.97		
Adjusted R-squared	0.95		
S.E. of regression	0.04		
F-statistic	75.790		0.00

Eastern Revenue Class 12 (Apartment)

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	7.31	13.79	0.00
LOG(EDD)	0.45	6.89	0.00
LOG(TIME)	-0.03	-5.32	0.00
DUMERC12	0.32	27.06	0.00
DUM2011	-0.10	-3.41	0.00
LOG(REALERCCPG)	-0.03	-2.44	0.02
AR(1)	-0.48	-2.34	0.03
R-squared	0.96		
Adjusted R-squared	0.95		
S.E. of regression	0.02		
F-statistic	74.27		0.00

Niagara Revenue Class 12 (Apartment)

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	3.39	3.80	0.00
LOG(NDD)	0.64	11.05	0.00
LOG(TIME)	-0.03	-4.58	0.00
LOG(REALNRCCPG)	-0.07	-3.12	0.01
LOG(NIAGEMP)	0.43	3.89	0.00
DUMNRC12	-0.08	-8.54	0.00
AR(1)	-0.84	-4.61	0.00
R-squared	0.88		
Adjusted R-squared	0.84		
S.E. of regression	0.02		
F-statistic	23.18		0.00

TABLE 8 CONTINUED - RATE 6 REVENUE CLASS 48 REGRESSION EQUATIONS

Central Revenue Class 48 (Commercial)

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	-0.01	-0.01	0.99
LOG(CDD)	0.87	14.90	0.00
LOG(TIME)	-0.12	-8.92	0.00
LOG(CRCCOMVAC)	-0.07	-4.36	0.00
LOG(ONTGDP)	0.26	4.24	0.00
DUMCRC48	0.10	8.00	0.00
R-squared	0.97		
Adjusted R-squared	0.96		
S.E. of regression	0.02		
F-statistic	130.94		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	0.00	0.18	0.86
DLOG(CDD)	0.86	29.44	0.00
DLOG(TIME)	-0.06	-3.36	0.00
DLOG(CRCCOMVAC)	-0.06	-4.69	0.00
DUMCRC48	0.03	3.69	0.00
ECM_CRC48(-1)	-0.83	-5.33	0.00
R-squared	0.98		
Adjusted R-squared	0.97		
S.E. of regression	0.01		
F-statistic	176.19		0.00

Eastern Revenue Class 48 (Commercial)

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	1.62	1.77	0.09
LOG(EDD)	0.75	10.76	0.00
LOG(TIME)	-0.16	-14.67	0.00
LOG(ONTGDP)	0.20	4.19	0.00
DUMERC48	0.10	5.75	0.00
DUM2010	0.14	6.56	0.00
R-squared	0.97		
Adjusted R-squared	0.97		
S.E. of regression	0.02		
F-statistic	151.28		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	0.01	1.41	0.17
DLOG(EDD)	0.70	9.10	0.00
DLOG(TIME)	-0.13	-2.96	0.01
ECM_ERC48(-1)	-0.57	-1.66	0.11
R-squared	0.81		
Adjusted R-squared	0.79		
S.E. of regression	0.03		
F-statistic	31.60		0.00

Niagara Revenue Class 48 (Commercial)

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	-1.58	-0.97	0.34
LOG(NDD)	0.71	11.02	0.00
LOG(TIME)	-0.10	-4.81	0.00
LOG(REALNRCCPG)	-0.19	-4.52	0.00
LOG(ONTGDP)	0.44	3.89	0.00
DUMNRC48	0.11	4.56	0.00
DUM2010	-0.10	-3.34	0.00
R-squared	0.92		
Adjusted R-squared	0.89		
S.E. of regression	0.02		
F-statistic	37.80		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	-0.01	-1.77	0.09
DLOG(NDD)	0.75	10.93	0.00
DLOG(ONTGDP)	0.36	1.71	0.11
DUM2009	0.13	3.74	0.00
DUM2010	-0.14	-3.15	0.01
ECM_NRC48(-1)	-0.96	-2.65	0.02
AR(1)	-0.50	-1.58	0.13
R-squared	0.91		
Adjusted R-squared	0.88		
S.E. of regression	0.03		
F-statistic	30.86		0.00

TABLE 8 CONTINUED - RATE 6 REVENUE CLASS 73 REGRESSION EQUATIONS

Central Revenue Class 73 (Industrial)

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	1.93	0.55	0.59
LOG(CDD)	0.38	1.79	0.09
LOG(TIME)	-0.18	-2.89	0.01
LOG(ONTGDP)	0.50	2.31	0.03
DUMCRC73	0.45	8.99	0.00
AR(1)	0.15	0.63	0.54
R-squared	0.88		
Adjusted R-squared	0.85		
S.E. of regression	0.07		0.00
F-statistic	28.466		

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	-0.02	-1.92	0.07
DLOG(CDD)	0.49	5.55	0.00
DLOG(ONTGDP)	0.62	1.88	0.07
DUMCRC73	0.24	5.30	0.00
DUM2009	-0.11	-2.29	0.03
ECM_CRC73(-1)	-0.43	-2.96	0.01
R-squared	0.81		
Adjusted R-squared	0.76		
S.E. of regression	0.04		
F-statistic	17.25		0.00

Eastern Revenue Class 73 (Industrial)

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	76,867.32	1.37	0.19
EDD	8.47	0.55	0.59
DUM2003	89,980.16	5.01	0.00
DUM2004	-178,942.10	-9.88	0.00
DUMERC73	60,134.01	3.13	0.01
AR(1)	0.79	5.10	0.00
R-squared	0.88		
Adjusted R-squared	0.85		
S.E. of regression	19,310.69		
F-statistic	28.70		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	2,136.94	0.37	0.71
D(EDD)	5.91	0.30	0.76
DUM2003	85,437.36	3.14	0.01
DUM2004	-265,415.30	-7.01	0.00
DUMERC73	32,925.96	2.19	0.04
ECM_ERC73(-1)	-0.50	-1.54	0.14
R-squared	0.78		
Adjusted R-squared	0.72		
S.E. of regression	25,721.67		
F-statistic	13.89		0.00

Niagara Revenue Class 73 (Industrial)

Long Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	-8.87	-1.79	0.09
LOG(NDD)	0.63	1.92	0.07
LOG(TIME)	-0.21	-3.52	0.00
LOG(REALNRCCPG)	-0.22	-1.93	0.07
LOG(MANUFACTURING)	1.36	4.32	0.00
DUM2002	-0.38	-3.29	0.00
DUMNRC73	0.63	6.24	0.00
DUM2009	0.59	5.39	0.00
R-squared	0.93		
Adjusted R-squared	0.90		
S.E. of regression	0.11		
F-statistic	33.61		0.00

Short Run Equation

Variable	Coefficient	t-Statistic	p-Value
C	-0.02	-0.83	0.42
DLOG(NDD)	0.71	2.67	0.02
DLOG(MANUFACTURING)	1.26	3.13	0.01
DUM2002	-0.23	-2.01	0.06
DUMNRC73	0.38	5.26	0.00
ECM_NRC73(-1)	-0.50	-1.84	0.08
DUM2010	-0.23	-2.38	0.03
AR(1)	-0.43	-1.88	0.08
R-squared	0.80		
Adjusted R-squared	0.72		
S.E. of regression	0.11		
F-statistic	9.95		0.00

TABLE 9-RATE 6
Model Diagnostic Tests

Col 1.	Col 2.	Col 3.	Col 4.	Col 5.	Col 6.	Col 7.	Col 8.	Col 9.	Col 10.	Col 11.
		Revenue Class 12 (Apartment) Model Diagnostic Tests			**Revenue Class 48 (Commercial) Model Diagnostic Tests**			**Revenue Class 73 (Industrial) Model Diagnostic Tests**		
Test		Central Weather Zone	Eastern Weather Zone	Niagara Weather Zone	Central Weather Zone	Eastern Weather Zone	Niagara Weather Zone	Central Weather Zone	Eastern Weather Zone	Niagara Weather Zone
Breusch-Godfrey Serial Correlation LM Test	Test Statistic	1.73	1.07	0.03	1.25	1.24	0.01	1.29	0.84	0.43
	P Value	0.19	0.30	0.86	0.26	0.27	0.92	0.26	0.36	0.51
ARCH Test	Test Statistic	0.01	0.44	0.48	0.22	0.11	2.60	1.46	0.10	0.33
	P Value	0.94	0.51	0.49	0.64	0.74	0.11	0.23	0.75	0.57
Chow Forecast Test: Forecast from 2011 to 2011	Test Statistic	2.46	11.62*	0.18	1.41	0.01	17.74	2.25	3.99	0.06
	P Value	0.14	0.00	0.67	0.25	0.91	0.00	0.15	0.06	0.81
Ramsey RESET Test	Test Statistic	2.12	0.43	4.02	0.24	0.99	0.52	2.31	1.27	0.87
	P Value	0.17	0.52	0.06	0.63	0.33	0.48	0.15	0.27	0.36

14. Driver variable assumptions are presented in Table 10 in year over year growth rates. Major driver variables in the models are balance point heating degree days adjusted for billing cycles, vintage, time trend, real natural gas prices and economic variables. The driver variable assumptions are based on economic assumptions from the Economic Outlook, which can be found in Exhibit C2, Tab 3, Schedule 1.

15. Natural gas prices have an important impact on average use. Sharp increases typically have two effects. First, they influence customers' fuel use habits, for example, the lowering of thermostat settings. Second, price increases likely factor in customers' decision-making around the purchase of more efficient furnaces and other appliances. In addition, homeowners may also respond by retrofitting older residences in order to reduce energy consumption. In the models, real natural gas prices are used. The Consumer Price Index ("CPI") is used to convert nominal gas prices to real gas prices. Nominal energy price forecasts are based on the Fekete's Henry Hub price forecast produced in April 2011.

16. A linear time trend is used as a proxy measure for energy conservation. However, a linear time trend only reflects constant annual changes in appliance efficiency; it will not be able to reflect the time varying impact of new residential construction on appliance efficiency. Consequently, a vintage variable serves as either a supplementary or complementary variable to the time trend in the model.

17. The vintage variable (for revenue class 20 only) is employed as a proxy measure of gas space heating and gas water heating efficiency gains and residential thermal efficiency. Newer homes with improved thermal envelope characteristics and older homes adding insulation and storm windows/doors reduce the typical amount of gas needed for space heating. Residential thermal efficiency will continue to

improve as newer, better-insulated residences account for a larger portion of the housing stock. The vintage variable captures the impact of both furnace efficiency and new home thermal efficiency on average use.

18. Vintage is defined as the fiscal year in which the customer became a customer (new gas service main date) and is not based on the age of the building. This data includes both new construction and conversion customer additions. As space heating efficiency gains have a greater impact on average use than thermal improvements to homes, customers by vintage is a better variable than age of the building in terms of explaining the percentage decline in residential average use.

19. An illustration of the vintage ratio for 1992 follows:

$$V_{1992} = \frac{\sum_{y=1987}^{1991} V_y}{\sum_{yy=1987}^{1992} V_{yy}}$$ where V denotes vintage.

20. Calendar 1992 is used as the reference year for the vintage ratio since the Energy Efficiency Act prohibited selling of the conventional low-efficiency furnace in January 1992.[7] Consequently, this ratio will capture the increasing market share of both mid-efficiency and high-efficiency furnaces at the expense of declining market share of conventional furnaces over time. Table 10 shows that regions with stronger new construction additions, such as Western and Northern, experience a

[7] During the 1970s natural gas furnaces averages about 65% Annual Fuel Utilization Efficiency ("AFUE"). The Energy Efficiency Act imposed 78% AFUE as a minimum for gas furnaces manufactured after January 1, 1992.

sharper decline in the ratio than established regions like Metro. As more new customers are added to the revenue class the declining ratio leads to lower average use over time. Thus the sign of this variable's coefficient is positive.

21. Economic variables such as employment, vacancy rates, and gross domestic product can impact demand for new gas appliances as well as impact demand for natural gas for space heating and manufacturing processes. Stronger employment and demand for products both domestically and abroad will generally increase natural gas demand.

Risks to the Forecast

22. The impact of customer mix on average use is not static and changes over time. New customers may have different gas use characteristics than existing customers and may be influenced by builder specifications for inclusion/exclusion of new gas appliances. Thus, aggregate average use will be affected even if customers take no actions that could affect their average use. Advances in the future penetration of gas appliances above historical penetration levels implicit in the model could result in increased average use. Conversely, builder specification of non-gas water and/or space heating equipment represents a risk to the forecast as it could result in lower gas consumption than forecast.

23. Use of more efficient water heaters across the franchise area and/or the loss of natural gas water heating to other fuels could result in a permanent decrease in baseload usage and natural gas consumption relative to the forecast.

24. Gas consumption for space heating is very sensitive to thermostat settings. Customers may set their thermostats lower under extremely warm weather like that experienced in 1998, 1999, 2002, and 2006.

25. Economic activity can impact both demand for appliances and natural gas. If the economy slows more significantly and natural gas prices are higher than indicated in the Economic Outlook (Exhibit C2, Tab 3, Schedule 1), average use will decline further.

26. A structural break in the historical estimated relationship between average use and the driver variables will increase forecast risk as will forecast uncertainty in the driver variables.

Conclusion

27. Developing a forecasting model is an ongoing process. The model employed by the Company passes a battery of statistical tests and is valid given current and historical information. Continual evaluation and testing is required, as new information becomes available. The model has been estimated over a volatile period in history – recent years of unexpected warm weather, historically high energy prices and increased energy price volatility. In light of these increasingly volatile economic and weather conditions the model will be evaluated continuously.

Witnesses: H. Sayyan
M. Suarez

BUDGET DEGREE DAYS

1. The purpose of this evidence is to provide the forecast of degree days for 2013 for the Central, Eastern and Niagara weather zones within the Company's franchise area[1].

2. For the 2007 Test Year (EB-2006-0034), the Board approved the Company's request to change from the de Bever weather forecasting to a more appropriate methodology. On the basis of the analytical evaluation framework that the Company presented in respect to the performance of various forecasting methodologies, the Board approved the use of the 20-Year Trend methodology for the Central region, the Energy Probe methodology for the Eastern region, and the 50/50 methodology for the Niagara region. This evidence presents updates to the evaluation framework and the updated degree day forecasts for each of the weather zones for the 2013 Test Year.

Degree Day Forecast Methodology and the Review Criterion

3. The nine methods evaluated by the Company in EB-2006-0034 were: the Naïve, 10-Year Moving Average, 20-Year Moving Average, 20-Year Trend, 30-Year Moving Average, 50/50 (Average of 20-Year Trend and 30-Year Moving Average), de Bever, de Bever with Trend, and the Energy Probe.

4. For 2013, the Company used the same nine methods and the same evaluation criteria, namely: Accuracy (as represented by Mean Absolute Percent Error ("MAPE") and Root Mean Percent Squared Error ("RMPSE")), Symmetry (as represented by Mean Percent Error ("MPE") and Percent Over-Forecast ("POF")) and Stability (as represented by Standard Deviation or "STDEV").

[1] All degree day data, models and forecasts are calculated using a calendar (i.e., December) year end.

5. Accuracy measures the difference between forecast and actual degree days. The MAPE is the average of the yearly absolute percent errors, where the absolute percent error in any year is the absolute error divided by the actual value. The RMPSE is similar but it squares each percentage error, thus penalizing large forecasting errors, adding another dimension to the evaluation. For both the MAPE and RMPSE, smaller statistics signify better/more desirable results.

6. Symmetry measures the bias of a particular forecasting method (i.e., whether it consistently forecasts low or high). The MPE is the average of the yearly percent errors, where the percent error is the error divided by the actual value. If the forecasting approach is unbiased, the MPE produces a percentage that is close to zero. The POF measure is equal to the number of over-forecasts divided by the number of years under consideration. The closer this statistic is to fifty percent, the less biased (more symmetrical) the method.

7. Stability measures the variability of the forecasts over time and is measured by standard deviation. The analysis assigns a high ranking to methods that produce forecasts with a relatively low standard deviation to recognize the notion that steady forecasts are attractive from the perspective of rate stability.

8. This evidence includes updated forecast accuracy comparisons for the nine alternative forecasting methodologies that utilize each of the three weather zones' degree day data up to and including Calendar Year 2010. Each method was ranked from one to nine based on its relative performance for each metric, and then the relative rankings were summed to arrive at a score that determined the overall rank. Finally, the methodologies that were ranked best for each of the three weather zones are selected as the degree day forecasting methodology.

9. As a result of the analysis, the forecasting methodologies used for the Eastern and Niagara weather zones are the de Bever with Trend and 10-Year Moving Average, respectively. The methodology that ranks best for the Central region remains the 20-Year Trend methodology.

Forecast Accuracy Comparison

Central weather zone

10. Table 1 provides the Central weather zone's out of sample degree day forecast that each method generates for each relevant year. That is, for each methodology for each year, a forecast is produced. Tables 2 through 4 summarize the relative performance of these forecasts against actual weather observations.[2] Table 2 measures performance by considering all available years, while the other two tables measure performance for the most recent ten- and five-year periods.

[2] $MAPE = \frac{1}{N}\sum_{i=1}^{N}\left(\frac{|Forecast_i - Actual_i|}{Actual_i}\right)$; $RMSPE = \sqrt{\frac{1}{N}\sum_{i=1}^{N}\left(\frac{Forecast_i - Actual_i}{Actual_i}\right)^2}$; $MPE = \frac{1}{N}\sum_{i=1}^{N}\left(\frac{Forecast_i - Actual_i}{Actual_i}\right)$; $POF = \frac{O}{N}$; $STDEV = \sqrt{\frac{N\sum_{i=1}^{N} Forecast_i^2 - \left(\sum_{i=1}^{N} Forecast_i\right)^2}{N(N-1)}}$; O is the number of over-forecasts and N is the number of years.

Table 1

Actual and Forecast Central weather zone Environment Canada Degree Days ('out-of-sample'), 1990 to 2010

Col. 1	*Col. 2*	*Col. 3*	*Col. 4*	*Col. 5*	*Col. 11*	*Col. 6*	*Col. 7*	*Col. 8*	*Col. 9*	*Col. 10*
Calendar Year	Actual	Naïve	10-yr MA	20-yr MA	20-yr Trend	30-yr MA	50/50	de Bever	de Bever with Trend	Energy Probe
1990	3,631	4,076	4,110	4,188	4,003	4,179	4,091	4,019	3,964	3,981
1991	3,686	4,250	4,111	4,186	4,029	4,187	4,108	4,088	4,098	4,176
1992	4,112	3,631	4,036	4,152	3,927	4,174	4,050	3,984	3,878	3,918
1993	4,180	3,686	3,990	4,128	3,829	4,166	3,997	3,930	3,692	3,689
1994	4,115	4,112	3,982	4,105	3,883	4,166	4,025	3,996	3,831	3,830
1995	4,040	4,180	3,994	4,117	3,879	4,168	4,023	4,067	3,962	3,943
1996	4,177	4,115	3,991	4,111	3,894	4,166	4,030	4,087	4,017	4,019
1997	4,026	4,040	3,984	4,113	3,865	4,155	4,010	4,109	4,032	4,029
1998	3,220	4,177	4,003	4,098	3,926	4,152	4,039	4,140	4,067	4,074
1999	3,539	4,026	4,029	4,090	3,922	4,143	4,032	4,120	4,037	4,031
2000	3,826	3,220	3,944	4,027	3,787	4,107	3,947	3,928	3,829	3,768
2001	3,420	3,539	3,873	3,992	3,710	4,082	3,896	3,834	3,768	3,688
2002	3,630	3,826	3,892	3,964	3,727	4,065	3,896	3,814	3,779	3,762
2003	3,982	3,420	3,866	3,928	3,634	4,041	3,837	3,693	3,557	3,570
2004	3,798	3,630	3,817	3,900	3,604	4,009	3,807	3,640	3,548	3,603
2005	3,797	3,982	3,797	3,896	3,644	4,010	3,827	3,813	3,711	3,775
2006	3,378	3,798	3,766	3,878	3,656	3,996	3,826	3,848	3,737	3,802
2007	3,722	3,797	3,741	3,863	3,668	3,989	3,828	3,860	3,739	3,831
2008	3,837	3,378	3,662	3,832	3,581	3,952	3,766	3,748	3,655	3,650
2009	3,836	3,722	3,631	3,830	3,548	3,937	3,742	3,745	3,670	3,648
2010	3,501	3,837	3,693	3,818	3,582	3,915	3,749	3,777	3,703	3,716

Table 2

The Central Degree Day: Out-of-sample forecast performance, all available years (1990 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	8.9%	9	11.3%	8	1.8%	3	57%	3	291	9	32	***8***
10-yr MA	6.4%	2	8.7%	2	3.6%	5	57%	3	143	4	16	***1***
20-yr MA	6.9%	5	10.1%	7	6.5%	8	71%	8	128	3	31	***7***
20-yr Trend	**6.8%**	**3**	**8.1%**	**1**	**0.3%**	**1**	**38%**	**6**	**151**	**5**	**16**	***1***
30-yr MA	8.5%	8	11.4%	9	8.5%	9	90%	9	91	1	36	***9***
50/50	6.3%	1	9.0%	3	4.4%	7	57%	3	120	2	16	***1***
de Bever	6.9%	4	9.5%	6	4.0%	6	62%	6	153	6	28	***6***
de Bever with Trend	7.2%	6	9.3%	4	1.6%	2	52%	1	168	7	20	***4***
Energy Probe	7.3%	7	9.4%	5	1.9%	4	48%	1	171	8	25	***5***

Witnesses: H.Sayyan
M. Suarez

Table 3
The Central Degree Day: Out-of-sample forecast performance, recent ten year period (2001 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	7.1%	8	8.3%	7	0.4%	2	60%	3	196	9	29	***7***
10-yr MA	5.1%	1	6.7%	2	2.6%	5	70%	6	91	8	22	***5***
20-yr MA	6.0%	7	8.3%	8	5.7%	8	70%	6	58	4	33	***8***
20-yr Trend	**5.5%**	**3**	**6.1%**	**1**	**1.2%**	**4**	**40%**	**3**	**58**	**3**	**14**	***1***
30-yr MA	8.7%	9	10.6%	9	8.7%	9	100%	9	54	2	38	***9***
50/50	5.3%	2	7.1%	5	3.8%	7	70%	6	54	1	21	***4***
de Bever	5.9%	5	7.2%	6	2.7%	6	60%	3	71	5	25	***6***
de Bever with Trend	6.0%	6	6.9%	4	0.3%	1	50%	1	81	6	18	***2***
Energy Probe	5.9%	4	6.8%	3	0.7%	3	50%	1	87	7	18	***2***

Table 4
The Central Degree Day: Out-of-sample forecast performance, recent five year period (2006 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	7.8%	8	9.0%	8	1.8%	4	60%	1	188	9	30	***8***
10-yr MA	5.5%	3	6.5%	3	1.5%	2	60%	1	55	7	16	***3***
20-yr MA	5.6%	5	7.9%	7	5.5%	8	60%	1	25	1	22	***5***
20-yr Trend	**5.2%**	**2**	**5.9%**	**1**	**1.0%**	**1**	**40%**	**1**	**52**	**5**	**10**	***1***
30-yr MA	8.6%	9	10.4%	9	8.6%	9	100%	9	34	2	38	***9***
50/50	5.5%	4	7.0%	4	3.8%	6	60%	1	42	4	19	***4***
de Bever	6.0%	6	7.5%	6	4.2%	7	60%	1	55	6	26	***6***
de Bever with Trend	5.2%	1	6.1%	2	1.6%	3	60%	1	38	3	10	***1***
Energy Probe	6.3%	7	7.1%	5	2.4%	5	60%	1	85	8	26	***6***

11. The 20-Year Trend methodology continues to outperform all of the other methodologies for the Central weather zone.

Eastern weather zone

12. The next series of tables present the same analysis for the Easter weather zone. Table 5 provides the Eastern weather zone's out-of-sample degree day forecast that each method generates for each year. Tables 6 through 8 summarize the relative performance of these forecasts against actual weather observations.

Table 6 measures performance by considering all available years, while the other two tables consider the performance for the most recent ten- and five-year periods.

Table 5
Actual and Forecast Eastern weather zone Environment Canada Degree Days ('out-of-sample'), 1990 to 2010

Col. 1	*Col. 2*	*Col. 3*	*Col. 4*	*Col. 5*	*Col. 11*	*Col. 6*	*Col. 7*	*Col. 8*	*Col. 9*	*Col. 10*
Calendar Year	Actual	Naïve	10-yr MA	20-yr MA	20-yr Trend	30-yr MA	50/50	de Bever	de Bever with Trend	Energy Probe
1990	4,250	4,640	4,579	4,670	4,483	4,688	4,585	4,620	4,490	4,472
1991	4,303	4,931	4,613	4,682	4,543	4,695	4,619	4,674	4,639	4,648
1992	4,861	4,250	4,546	4,649	4,479	4,688	4,583	4,599	4,524	4,525
1993	4,780	4,303	4,533	4,625	4,424	4,679	4,551	4,538	4,453	4,453
1994	4,730	4,861	4,554	4,617	4,526	4,680	4,603	4,628	4,549	4,548
1995	4,585	4,780	4,579	4,635	4,535	4,675	4,605	4,665	4,585	4,579
1996	4,603	4,730	4,598	4,635	4,567	4,680	4,624	4,687	4,567	4,533
1997	4,786	4,585	4,591	4,639	4,540	4,673	4,607	4,687	4,538	4,531
1998	3,828	4,603	4,601	4,618	4,581	4,670	4,626	4,673	4,541	4,546
1999	4,137	4,786	4,647	4,628	4,614	4,667	4,641	4,678	4,604	4,611
2000	4,543	3,828	4,566	4,572	4,484	4,635	4,559	4,512	4,515	4,417
2001	4,115	4,137	4,486	4,550	4,392	4,617	4,504	4,570	4,420	4,395
2002	4,381	4,543	4,515	4,531	4,440	4,605	4,522	4,566	4,446	4,447
2003	4,715	4,115	4,497	4,515	4,338	4,582	4,460	4,408	4,341	4,357
2004	4,637	4,381	4,449	4,501	4,327	4,561	4,444	4,380	4,339	4,412
2005	4,421	4,715	4,442	4,510	4,377	4,571	4,474	4,538	4,430	4,530
2006	4,037	4,637	4,433	4,516	4,408	4,568	4,488	4,586	4,436	4,525
2007	4,447	4,421	4,416	4,504	4,406	4,565	4,485	4,572	4,427	4,503
2008	4,488	4,037	4,360	4,480	4,306	4,532	4,419	4,490	4,394	4,357
2009	4,534	4,447	4,326	4,486	4,279	4,527	4,403	4,506	4,426	4,401
2010	3,973	4,488	4,392	4,479	4,299	4,512	4,406	4,510	4,430	4,430

Table 6
The Eastern Degree Day: Out-of-sample forecast performance, all available years (1990 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	8.6%	9	10.4%	9	1.7%	4	57.0%	4	292	9	35	***8***
10-yr MA	5.6%	1	7.4%	3	2.1%	5	48.0%	1	90	7	17	***2***
20-yr MA	5.6%	1	7.7%	6	3.5%	7	62.0%	5	69	2	21	***6***
20-yr Trend	5.8%	5	7.3%	1	0.6%	1	38.0%	5	101	8	20	***4***
30-yr MA	5.9%	6	8.3%	7	4.6%	9	67.0%	9	62	1	32	***7***
50/50	5.6%	1	7.5%	5	2.6%	6	62.0%	5	79	3	20	***4***
de Bever	6.3%	8	8.4%	8	3.6%	8	62.0%	5	89	6	35	***8***
de Bever with Trend	**5.6%**	**1**	**7.3%**	**1**	**1.4%**	**2**	**48.0%**	**1**	**83**	**5**	**10**	***1***
Energy Probe	5.9%	6	7.4%	3	1.6%	3	48.0%	1	81	4	17	***2***

Table 7
The Eastern Degree Day: Out-of-sample forecast performance, recent ten year period (2001 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	7.0%	9	8.6%	9	0.8%	2	50.0%	1	228	9	30	***7***
10-yr MA	5.0%	1	6.0%	1	1.6%	4	50.0%	1	60	6	13	***2***
20-yr MA	5.0%	1	6.8%	6	3.3%	7	60.0%	4	22	1	19	***4***
20-yr Trend	5.2%	5	6.0%	1	0.1%	1	40.0%	4	55	5	16	***3***
30-yr MA	5.6%	7	7.5%	7	4.6%	9	70.0%	8	33	2	33	***8***
50/50	5.1%	4	6.3%	3	2.3%	6	60.0%	4	42	4	21	***5***
de Bever	6.1%	8	7.7%	8	3.5%	8	70.0%	8	70	8	40	***9***
de Bever with Trend	**5.0%**	**1**	**6.3%**	**3**	**1.1%**	**3**	**50.0%**	**1**	**39**	**3**	**11**	***1***
Energy Probe	5.4%	6	6.6%	5	1.7%	5	60.0%	4	64	7	27	***6***

Table 8
The Eastern Degree Day: Out-of-sample forecast performance, recent five year period (2006 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	8.1%	9	9.9%	9	3.1%	3	40.0%	1	223	9	31	***7***
10-yr MA	5.7%	5	6.9%	2	2.4%	2	40.0%	1	43	5	15	***3***
20-yr MA	5.4%	2	7.8%	6	4.9%	7	60.0%	1	16	1	17	***4***
20-yr Trend	5.6%	4	6.3%	1	1.4%	1	40.0%	1	62	7	14	***2***
30-yr MA	6.1%	6	8.5%	7	6.0%	9	80.0%	8	24	3	33	***8***
50/50	5.5%	3	7.1%	4	3.7%	5	60.0%	1	43	4	17	***4***
de Bever	6.1%	7	8.7%	8	5.9%	8	80.0%	8	43	6	37	***9***
de Bever with Trend	**5.3%**	**1**	**6.9%**	**3**	**3.3%**	**4**	**40.0%**	**1**	**17**	**2**	**11**	***1***
Energy Probe	6.1%	8	7.7%	5	3.8%	6	60.0%	1	70	8	28	***6***

Witnesses: H.Sayyan
M. Suarez

13. For the Eastern weather zone, the de Bever with Trend method yields the best composite results over the three time periods examined.

Niagara weather zone

14. The next series of tables present the same analysis for the Niagara weather zone. Table 9 presents the Niagara weather zone's out-of-sample degree day forecast that each method generates. Tables 10 through 12 summarize the relative performance of the out-of-sample forecasts against actual weather observations. Table 10 measures performance considering all available years, while the other two tables consider the performance for the most recent ten- and five-year periods.

Table 9
Actual and Forecast Niagara weather zone Environment Canada Degree Days ('out-of-sample'), 1990 to 2010

Col. 1	*Col. 2*	*Col. 3*	*Col. 4*	*Col. 5*	*Col. 11*	*Col. 6*	*Col. 7*	*Col. 8*	*Col. 9*	*Col. 10*
Calendar Year	Actual	Naïve	10-yr MA	20-yr MA	20-yr Trend	30-yr MA	50/50	de Bever	de Bever with Trend	Energy Probe
1990	3,307	3,693	3,693	3,703	3,685	3,705	3,695	3,633	3,651	3,679
1991	3,343	3,845	3,697	3,721	3,686	3,711	3,698	3,683	3,733	3,827
1992	3,759	3,307	3,635	3,697	3,607	3,697	3,652	3,619	3,585	3,623
1993	3,878	3,343	3,596	3,681	3,526	3,687	3,607	3,582	3,462	3,464
1994	3,780	3,759	3,600	3,677	3,562	3,692	3,627	3,640	3,568	3,568
1995	3,703	3,878	3,623	3,699	3,576	3,693	3,635	3,688	3,661	3,670
1996	3,786	3,780	3,630	3,701	3,598	3,701	3,650	3,697	3,693	3,731
1997	3,669	3,703	3,635	3,711	3,571	3,693	3,632	3,705	3,705	3,727
1998	2,980	3,786	3,653	3,704	3,615	3,704	3,659	3,708	3,754	3,736
1999	3,338	3,669	3,676	3,701	3,612	3,699	3,656	3,694	3,740	3,710
2000	3,596	2,980	3,605	3,649	3,500	3,670	3,585	3,624	3,639	3,539
2001	3,239	3,338	3,554	3,626	3,453	3,665	3,559	3,613	3,577	3,492
2002	3,415	3,596	3,583	3,609	3,486	3,659	3,573	3,617	3,580	3,586
2003	3,799	3,239	3,573	3,584	3,423	3,645	3,534	3,602	3,488	3,553
2004	3,632	3,415	3,538	3,569	3,405	3,631	3,518	3,575	3,468	3,589
2005	3,653	3,799	3,530	3,577	3,464	3,642	3,553	3,626	3,547	3,657
2006	3,163	3,632	3,516	3,573	3,494	3,639	3,566	3,636	3,558	3,633
2007	3,296	3,797	3,511	3,863	3,668	3,989	3,828	3,860	3,739	3,831
2008	3,480	3,163	3,448	3,551	3,437	3,619	3,528	3,607	3,511	3,484
2009	3,565	3,296	3,411	3,544	3,368	3,604	3,486	3,576	3,490	3,414
2010	3,344	3,480	3,461	3,533	3,374	3,586	3,480	3,564	3,483	3,464

Table 10

The Niagara Degree Day: Out-of-sample forecast performance, all available years (1990 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	9.2%	9	11.2%	9	1.4%	2	57.0%	3	254	9	32	***8***
10-yr MA	**6.2%**	**1**	**8.0%**	**1**	**2.5%**	**3**	**48.0%**	**1**	**80**	**5**	**11**	***1***
20-yr MA	6.2%	1	8.5%	4	4.1%	8	57.0%	3	66	4	20	***4***
20-yr Trend	6.6%	6	8.0%	1	0.8%	1	43.0%	3	94	6	17	***3***
30-yr MA	6.4%	4	8.9%	6	4.9%	9	62.0%	8	37	1	28	***6***
50/50	6.3%	3	8.2%	3	2.9%	5	48.0%	1	64	3	15	***2***
de Bever	6.5%	5	8.7%	5	4.0%	7	62.0%	8	46	2	27	***5***
de Bever with Trend	6.9%	8	9.0%	7	2.9%	4	57.0%	3	96	7	29	***7***
Energy Probe	6.8%	7	9.2%	8	3.3%	6	57.0%	3	110	8	32	***8***

Table 11

The Niagara Degree Day: Out-of-sample forecast performance, recent ten year period (2001 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	8.0%	9	8.9%	9	0.5%	2	60.0%	3	206	9	32	***7***
10-yr MA	**5.3%**	**1**	**6.1%**	**1**	**1.9%**	**3**	**50.0%**	**1**	**56**	**7**	**13**	***2***
20-yr MA	5.7%	5	7.0%	5	3.7%	7	60.0%	3	28	2	22	***4***
20-yr Trend	5.5%	2	6.3%	2	0.1%	1	50.0%	1	51	6	12	***1***
30-yr MA	6.3%	8	8.1%	8	5.4%	9	70.0%	7	24	1	33	***9***
50/50	5.6%	4	6.7%	3	2.6%	5	60.0%	3	35	4	19	***3***
de Bever	6.2%	7	7.7%	7	4.6%	8	70.0%	7	29	3	32	***7***
de Bever with Trend	5.8%	6	6.9%	4	2.2%	4	60.0%	3	43	5	22	***4***
Energy Probe	5.5%	2	7.2%	6	3.0%	6	70.0%	7	87	8	29	***6***

Table 12

The Niagara Degree Day: Out-of-sample forecast performance, recent five year period (2006 to 2010)

Col. 1	*Col. 2*	*C3*	*Col. 4*	*C5*	*Col. 6*	*C7*	*Col. 8*	*C9*	*Col. 10*	*C11*	*Col. 12*	*Col. 13*
	Accuracy				Symmetry				Stability			
	MAPE		RMSPE		MPE		Percent Overforecast		Standard Deviation		Score	Overall Rank
Naïve	9.3%	9	9.9%	9	2.6%	2	60.0%	1	213	9	30	***6***
10-yr MA	**5.3%**	**2**	**6.3%**	**2**	**3.2%**	**3**	**60.0%**	**1**	**44**	**5**	**13**	***2***
20-yr MA	5.9%	5	7.4%	5	5.7%	7	80.0%	4	18	1	22	***4***
20-yr Trend	5.0%	1	6.2%	1	2.3%	1	60.0%	1	69	7	11	***1***
30-yr MA	7.6%	8	9.0%	8	7.6%	9	100.0%	8	24	2	35	***9***
50/50	5.8%	4	7.2%	4	4.9%	5	80.0%	4	46	6	23	***5***
de Bever	7.3%	7	8.9%	7	7.3%	8	100.0%	8	37	4	34	***8***
de Bever with Trend	5.5%	3	6.9%	3	4.6%	4	80.0%	4	33	3	17	***3***
Energy Probe	6.8%	6	8.7%	6	5.1%	6	80.0%	4	110	8	30	***6***

15. For the Niagara weather zone, the 10-Year Moving Average provides the best results for all years and the 20-Year Trend method yields the best results for the ten- and five-year periods. In such a case where the composite rankings yield mixed results, a weighted average approach was used to combine the scores based on the number of years in each period. The 10-Year Moving Average outperforms the 20-Year Trend on the basis of the combined weighted average.

2013 Degree Day Forecast

16. The Calendar Year 2013 degree day forecast incorporates actual Calendar Year 2010 degree days. Using the 20-Year Trend, de Bever with Trend and 10-Year Moving Average methods for the Central, Eastern and Niagara weather zones respectively, the degree day forecasts are as follows:

Table 13
2013 degree day forecast

Col. 1	*Col. 2*	*Col. 3*
Weather zone	Environment Canada Degree Day Forecast	Gas Supply Degree Day Forecast
Central	3,536	3,513
Eastern	4,344	4,307
Niagara	3,458	3,403

17. The degree day forecast for the Central weather zone was prepared using the 20-Year Trend method.

- This method regresses actual Central Environment Canada degree days[3] on a constant and trend. Table 14 displays the actual Environment Canada degree day data for the Central weather zone and trend data used to estimate the model and the resultant degree day forecast for 2013. Fitted values in the table are calculated using the 20-year Trend regression equation. The model is estimated using data covering the period 1991 to 2010, a period of 20 years.

- Figure 1 graphs the actual, in-sample and out-of-sample forecast values for the Central Degree Days associated with the 20-Year Trend method.

18. The degree day forecast for the Eastern weather zone was prepared using the de Bever with Trend method.

- This method regresses actual Eastern Environment Canada degree days[4] on a constant, a five year weighted average of Environment Canada degree days and a trend. Table 15 displays the actual Environment Canada degree day data for the Eastern weather zone, the five year weighted averages and the trend data used to estimate the model. The resultant degree day forecast for 2013 is presented in Table 15 as well. Fitted values in the table are calculated using the de Bever with Trend regression equation. The model is estimated over the period 1950 to 2010 a total of 61 years as indicated by the cycle length.

- Figure 2 graphs the actual, in-sample and out-of-sample forecast values for the Eastern Degree Days associated with the de Bever with Trend method.

[3] Environment Canada heating degree day observations from Pearson International Airport
[4] Environment Canada heating degree day observations from MacDonald-Cartier Airport

19. The degree day forecast for the Niagara weather zone was prepared using the 10-Year Moving Average method.

- Table 16 displays the actual Environment Canada degree day data for the Niagara weather zone[5] and the 10-Year moving averages and the resultant degree day forecasts for the moving average.

- Figure 3 graphs the actual, in-sample and out-of-sample forecast values for the Niagara Degree Days associated with the 10-Year Moving Average method.

[5] Environment Canada heating degree day observations from St. Catherines Airport until August 2008. Effective September 2008 Environment Canada is no longer able to provide degree day data for St.Catherines Airport. Data from September 2008 and thereafter are now obtained from the Vineland Climate Station.

Table 14
Environment Canada Degree Day Forecast – Central

Col. 1	*Col. 2*	*Col. 3*	*Col. 4*
Calendar Year	Actual	Trend	Fitted
1991	3,686	1	3,985
1992	4,112	2	3,964
1993	4,180	3	3,944
1994	4,115	4	3,923
1995	4,040	5	3,903
1996	4,177	6	3,883
1997	4,026	7	3,862
1998	3,220	8	3,842
1999	3,539	9	3,822
2000	3,826	10	3,801
2001	3,420	11	3,781
2002	3,630	12	3,760
2003	3,982	13	3,740
2004	3,798	14	3,720
2005	3,797	15	3,699
2006	3,378	16	3,679
2007	3,722	17	3,659
2008	3,837	18	3,638
2009	3,836	19	3,618
2010	3,501	20	3,598
2013 Forecast		23	3,536

Table 15
Environment Canada Degree Day Forecast – Eastern

Col. 1	*Col. 2*	*Col. 3*	*Col.4*	*Col. 5*
Calendar Year	Actual	Trend	5-year Weighted MA	Fitted
1950	4,824	1	4,665	4,735
1951	4,587	2	4,594	4,711
1952	4,404	3	4,661	4,733
1953	4,059	4	4,641	4,715
1954	4,707	5	4,556	4,694
1955	4,689	6	4,385	4,635
1956	4,799	7	4,465	4,656
1957	4,405	8	4,523	4,688
1958	4,736	9	4,626	4,723
1959	4,718	10	4,584	4,697
1960	4,451	11	4,652	4,686
1961	4,586	12	4,669	4,689
1962	4,826	13	4,596	4,662
1963	4,921	14	4,584	4,665
1964	4,569	15	4,667	4,676
1965	4,810	16	4,753	4,704
1966	4,683	17	4,709	4,686
1967	4,882	18	4,755	4,683
1968	4,780	19	4,735	4,663
1969	4,698	20	4,775	4,675
1970	4,899	21	4,778	4,680
1971	4,797	22	4,762	4,660
1972	5,014	23	4,805	4,671
1973	4,420	24	4,808	4,661
1974	4,725	25	4,876	4,683
1975	4,514	26	4,736	4,630
1976	5,008	27	4,723	4,617
1977	4,597	28	4,637	4,593
1978	4,939	29	4,741	4,628
1979	4,589	30	4,695	4,625
1980	4,920	31	4,790	4,637
1981	4,438	32	4,735	4,613
1982	4,647	33	4,798	4,616
1983	4,536	34	4,674	4,584
1984	4,535	35	4,658	4,568
1985	4,659	36	4,601	4,559
1986	4,501	37	4,570	4,542
1987	4,328	38	4,585	4,561
1988	4,640	39	4,564	4,542
1989	4,931	40	4,482	4,516
1990	4,250	41	4,524	4,526
1991	4,303	42	4,657	4,564
1992	4,861	43	4,537	4,524
1993	4,780	44	4,461	4,493
1994	4,730	45	4,585	4,519
1995	4,585	46	4,646	4,536
1996	4,603	47	4,681	4,561
1997	4,786	48	4,680	4,537
1998	3,828	49	4,664	4,506
1999	4,137	50	4,689	4,518
2000	4,543	51	4,399	4,426
2001	4,115	52	4,276	4,395
2002	4,381	53	4,328	4,419
2003	4,715	54	4,240	4,400
2004	4,637	55	4,273	4,436
2005	4,421	56	4,444	4,464
2006	4,037	57	4,531	4,473
2007	4,447	58	4,511	4,466
2008	4,488	59	4,373	4,397
2009	4,534	60	4,376	4,390
2010	3,973	61	4,388	4,405
2013 Forecast		64	4,293	4,344

Witnesses: H.Sayyan
M. Suarez

Table 16
Environment Canada Degree Day Forecast – Niagara

Col. 1	*Col. 2*	*Col.3*
Calendar Year	Actual	10-Year Moving Average
2001	3,239	3,605
2002	3,415	3,554
2003	3,799	3,583
2004	3,632	3,573
2005	3,653	3,538
2006	3,163	3,530
2007	3,296	3,516
2008	3,480	3,511
2009	3,565	3,448
2010	3,344	3,411
2013 Forecast		3,458

Figure 1
Central weather zone Environment Canada Degree Days:
Actual, In-sample and Out-of- sample Forecast

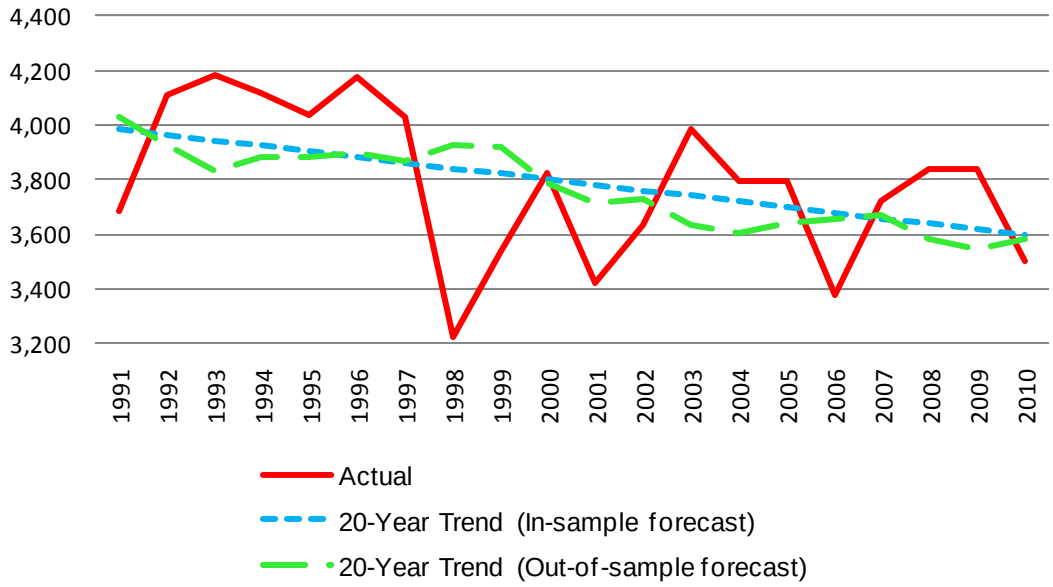
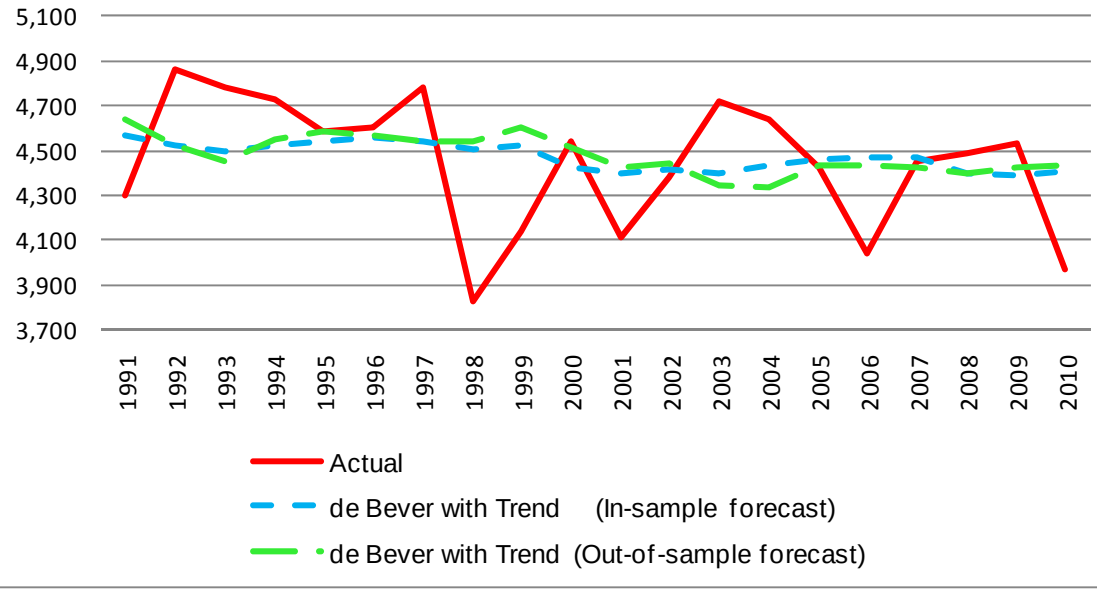
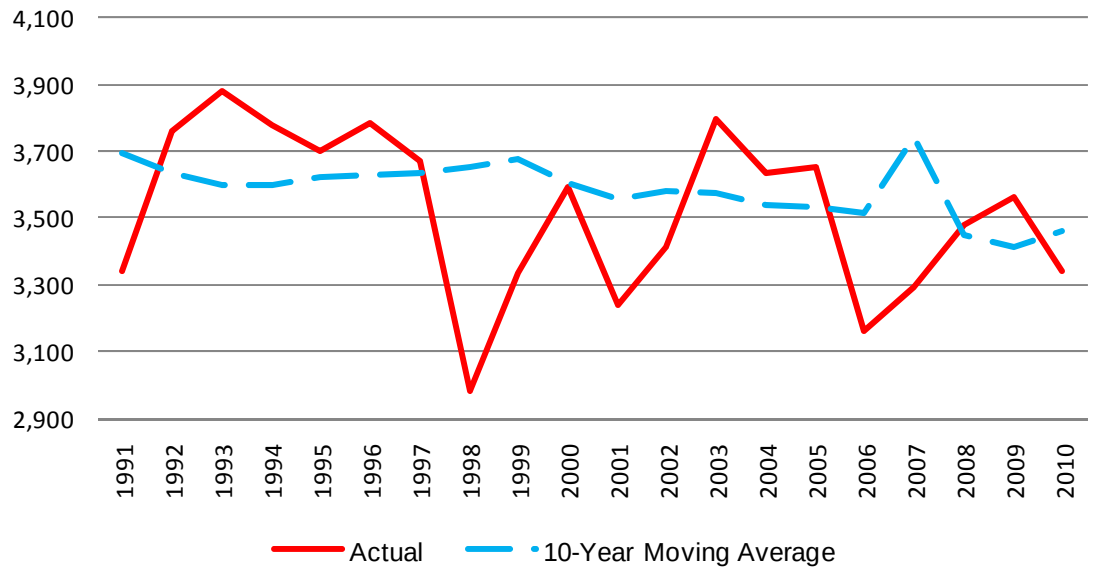


Figure 2
Eastern weather zone Environment Canada Degree Days:
Actual, In-sample and Out-of- sample Forecast



Witnesses: H.Sayyan
M. Suarez

Figure 3
Niagara weather zone Environment Canada Degree Days:
Actual, In-sample and Out-of- sample Forecast



20. The final step in the degree day forecast involves the conversion of Environment Canada degree days to Gas Supply degree days. Gas Supply and Environment Canada determine daily average temperature using different methods. Gas Supply determines its daily average temperature by using the average temperature over a 24-hour period. Environment Canada determines its daily average temperature by averaging the daily minimum and maximum temperatures over a 24-hour period. Gas Supply's method of calculating the mean of 24 hourly temperature readings, versus Environment Canada's method of averaging the daily minimum and maximum temperatures, will give a more representative daily average temperature and is a more relevant measure for heating demand and the distribution of gas. Therefore, gas supply degree days are used in the development of volumetric planning and budget setting. However, to conduct the Board-approved degree day forecasting methods, Environment Canada degree days are relied upon because

they offer a longer data history than Gas Supply degree days. The longer data history Environment Canada publishes is essential in being able to forecast degree days since some degree day forecasting methodologies require a longer data history than Gas Supply can provide.

21. The conversion is accomplished by regressing actual Gas Supply degree days onto actual Environment Canada degree days. The resultant equation (one for each weather zone) is used to convert the Environment Canada degree day forecast to the Gas Supply degree day forecast. Tables 17, 18 and 19 display actual Environment Canada degree days, actual Gas Supply degree days and the resultant Gas Supply degree day forecasts for the 2013 Test Year.

Table 17
Determination of Gas Supply Equivalent Degree Days - Central

Col. 1	*Col. 2*	*Col. 3*	*Col. 4*
Calendar Year	**Actual Environment Canada Degree Days**	**Actual Gas Supply Degree Days**	**Fitted Gas Supply Degree Days[1]**
1991	3,686	3,649	3,650
1992	4,112	3,989	4,041
1993	4,180	4,040	4,104
1994	4,115	4,084	4,044
1995	4,040	3,991	3,975
1996	4,177	4,133	4,100
1997	4,026	3,966	3,962
1998	3,220	3,202	3,223
1999	3,539	3,497	3,516
2000	3,826	3,784	3,779
2001	3,420	3,400	3,407
2002	3,630	3,597	3,599
2003	3,982	3,949	3,921
2004	3,798	3,766	3,753
2005	3,797	3,750	3,752
2006	3,378	3,355	3,368
2007	3,722	3,659	3,683
2008	3,837	3,801	3,788
2009	3,836	3,767	3,788
2010	3,501	3,466	3,481
2013 Forecast	3,536		3,513

[1]Fitted and forecast Gas Supply degree days are calculated using the following regression equation:

Gas Supply degree days = 271.2545+0.9167(Environment Canada degree days)

Table 18
Determination of Gas Supply Equivalent Degree Days - Eastern

Col. 1	*Col. 2*	*Col. 3*	*Col. 4*
Calendar Year	**Actual Environment Canada Degree Days**	**Actual Gas Supply Degree Days**	**Fitted Gas Supply Degree Days[1]**
1970	4,899	5,018	4,839
1971	4,797	4,584	4,742
1972	5,014	4,816	4,950
1973	4,420	4,480	4,379
1974	4,725	4,858	4,672
1975	4,514	4,229	4,470
1976	5,008	4,901	4,944
1977	4,597	4,604	4,549
1978	4,939	4,920	4,878
1979	4,589	4,550	4,542
1980	4,920	4,853	4,860
1981	4,438	4,361	4,397
1982	4,647	4,617	4,598
1983	4,536	4,515	4,491
1984	4,535	4,504	4,490
1985	4,659	4,648	4,609
1986	4,501	4,507	4,458
1987	4,328	4,268	4,291
1988	4,640	4,601	4,590
1989	4,931	4,883	4,870
1990	4,250	4,225	4,217
1991	4,303	4,270	4,268
1992	4,861	4,746	4,803
1993	4,780	4,715	4,726
1994	4,730	4,700	4,677
1995	4,585	4,530	4,538
1996	4,603	4,561	4,555
1997	4,786	4,711	4,731
1998	3,828	3,802	3,812
1999	4,137	4,112	4,108
2000	4,543	4,506	4,498
2001	4,115	4,071	4,087
2002	4,381	4,317	4,342
2003	4,715	4,663	4,663
2004	4,637	4,598	4,588
2005	4,421	4,397	4,380
2006	4,037	4,012	4,013
2007	4,447	4,411	4,406
2008	4,488	4,431	4,445
2009	4,534	4,472	4,489
2010	3,973	3,947	3,951
2013 Forecast	4,344		4,307

[1]Fitted and forecast Gas Supply degree days are calculated using the following regression equation:

Gas Supply degree days = 140.4521+0.9591(Environment Canada degree days)

Table 19
Determination of Gas Supply Equivalent Degree Days - Niagara

Col. 1	*Col. 2*	*Col. 3*	*Col. 4*
Calendar Year	**Actual Environment Canada Degree Days**	**Actual Gas Supply Degree Days**	**Fitted Gas Supply Degree Days[1]**
2001	3,239	3,162	3,206
2002	3,415	3,304	3,363
2003	3,799	3,688	3,708
2004	3,632	3,485	3,558
2005	3,653	3,580	3,577
2006	3,163	3,079	3,138
2007	3,296	3,349	3,257
2008	3,480	3,510	3,422
2009	3,565	3,547	3,498
2010	3,344	3,322	3,300
2013 Forecast	3,458		3,403

[1]Fitted and forecast Gas Supply degree days are calculated using the following regression equation:

Gas Supply degree days = 302.1398+0.8965(Environment Canada degree days)

UPDATED 2013 BUDGET DEGREE DAYS

1. The purpose of this evidence is to provide an update to the forecast of degree days for 2013 that includes the latest actual data for 2011. Degree day evidence submitted on January 31, 2012 contained data up to the end of 2010 to generate the original 2013 forecast.

2. In its Decision with Reasons for EB-2006-0034 dated July 5, 2007, the Board stated that it "believes that given the sole purpose of a forecasting methodology is to accurately forecast weather it is simply appropriate to select a method based on the empirical findings" (page 9). It also "accepted the analysis presented by the Company as part of its review of the nine comparable methodologies" and it decided to "accept the Company's … proposal to apply the 20-Year Trend method in the Central region, the Energy Probe method in the Eastern region and the 50/50 method in the Niagara region" (p. 10).

3. The Company used the same approach that underlies the Board-Approved methodology from the 2007 Test Year (EB-2006-0034) to update its 2013 forecasts for each of the weather zones. This process represents the evaluation of the same nine forecasting methods, forecasts of which were measured using accuracy statistics, and ranked based on how well each method met the criteria of accuracy, symmetry, and stability. Please see the description of the Degree Day Forecast Methodology and the review criteria as contained in paragraphs 3 to 8, EB-2011-0354, Exhibit C2, Tab 3, Schedule 1, page 3, filed January 31, 2012. The same process was carried out in this update.

Witnesses: H. Sayyan
M. Suarez

4. The updated analysis for the 2013 Test Year continues to support the use of the 20-Year Trend methodology for the Central Zone, the de Bever with Trend methodology for Eastern and the 10-Year Moving Average methodology for Niagara, as the most consistently accurate methodologies over time. While the forecast performance of the 10-Year Moving Average and the 50/50 Method have shown improvement in the Central zone since the 2007 Test Year, they do not show superior results over the 20-Year Trend method.

5. Applying the proposed methods result in the following 2013 degree days using actual degree day data to 2011:

Table 1
Summary of 2013 Proposed Degree Days & Methodology

	2013 Updated Filing Degree Day Methodology *Actuals to 2011*	**Environment Canada Degree Days**	**Gas Supply Degree Days**
Central	20-year Trend	3,512	3,481
Eastern	de Bever with Trend	4,334	4,297
Niagara	10-year Moving Average	3,480	3,420

6. For comparison, in the pre-filed 2013 evidence, the proposed methodologies with actual degree day data to 2010 provided:

Table 2
Summary of 2013 Original Degree Days & Methodology

	2013 Original Filing Degree Day Methodology ***Actuals to 2010***	**Environment Canada Degree Days**	**Gas Supply Degree Days**
Central	20-year Trend	3,536	3,513
Eastern	de Bever with Trend	4,344	4,307
Niagara	10-year Moving Average	3,458	3,403

UTILITY OPERATING REVENUE
2013 TEST YEAR

Line No.		Col. 1 Utility Revenue ($Millions)	Col. 2 Normalizing and Other Adjustments ($Millions)	Col. 3 Adjusted Utility Revenue ($Millions)
1.	Gas sales	2,217.7	(80.2)	2,137.5
2.	Transportation of gas	339.6	(19.0)	320.6
3.	Transmission, compression & storage	1.7	-	1.7
4.	Other operating revenue	38.3	-	38.3
5.	Interest and property rental	-	-	-
6.	Other income	0.7	-	0.7
7.	Total operating revenue	2,598.0	(99.2)	2,498.8

EXPLANATION OF ADJUSTMENTS TO UTILITY REVENUE
2013 TEST YEAR

Line No. Adjusted	Adjustment Increase (Decrease) ($Millions)	Explanation
1.	(80.2)	Gas sales To remove Customer Care and CIS impacts which were previously approved in EB-2011-0226.
2.	(19.0)	Transportation of gas To remove Customer Care and CIS impacts which were previously approved in EB-2011-0226.

UTILITY REVENUE
2013 TEST YEAR

Line No.		Col. 1 EGDI Ont. Corporate Revenue ($Millions)	Col. 2 Adjustment ($Millions)	Col. 3 Utility Revenue ($Millions)
1.	Residential	1,377.6		1,377.6
2.	Commercial	696.2	-	696.2
3.	Industrial	115.3	-	115.3
4.	Wholesale	28.6	-	28.6
5.	Gas sales	2,217.7	-	2,217.7
6.	Transportation of gas	339.6	-	339.6
7.	Transmission, compression & storage	1.7	-	1.7
8.	Service charges & DPAC	12.9	-	12.9
9.	Rent from NGV rentals	0.3	0.5	0.8
10.	Late payment penalties	12.9	-	12.9
11.	Transactional services	7.8	(1.8)	6.0
12.	Open bill revenue	6.7	(1.3)	5.4
13.	Dow Moore recovery	0.3	-	0.3
14.	Affiliate asset use revenue	0.1	(0.1)	-
15.	ABC T-service (net)	4.6	(4.6)	-
16.	Other operating revenue	45.6	(7.3)	38.3
17.	Income from investments	-	-	-
18.	Interest during construction	5.0	(5.0)	-
19.	Interest income from affiliates	-	-	-
20.	Interest on (net) deferral accounts	-	-	-
21.	Property/asset use revenue 3rd party	1.4	(1.4)	-
22.	Interest and property rental	6.4	(6.4)	-
23.	Miscellaneous	16.2	(15.5)	0.7
24.	Dividend income	63.2	(63.2)	-
25.	Profit on sale of property	-	-	-
26.	NGV merchandising revenue (net)	-	-	-
27.	Other income	79.4	(78.7)	0.7
28.	Total revenue	2,690.4	(92.4)	2,598.0

EXPLANATION OF ADJUSTMENTS TO EGDI CORPORATE REVENUE
2013 TEST YEAR

Line No. Adjusted	Adjustment Increase (Decrease) ($Millions)	Explanation	
9.	0.5	Rent from NGV rentals	
		NGV revenue imputation to equate the program's overall return to the required regulated return.	
11.	(1.8)	Transactional services	
		To eliminate transactional services revenues above the proposed base amount to be included in rates. Ratepayer and shareholder amounts above the base will be treated outside of utility results and returns.	
12.	(1.3)	Open bill revenue	
		To eliminate net ex-franchise revenues to be shared equally between ratepayers and shareholders.	(0.2)
		To eliminate the Open Bill shareholder incentive.	(1.1)
			(1.3)
14.	(0.1)	Affiliate asset use revenue	
		To reflect the elimination of asset use revenue in conjunction with the removal of affiliate use asset values from rate base and all related cost of service elements. (RP-2002-0133)	
15.	(4.6)	ABC T-Service (net)	
		To eliminate the net revenue from ABC T-Service considered to be non-utility. (RP-1999-0001)	

EXPLANATION OF ADJUSTMENTS TO EGDI CORPORATE REVENUE
2013 TEST YEAR

Line No. Adjusted	Adjustment Increase (Decrease) ($Millions)	Explanation	
18.	(5.0)	Interest during construction	
		To eliminate interest calculated on funds used for purposes of construction during the year.	
21.	(1.4)	Property/asset use revenue 3rd party	
		To eliminate asset use revenue (RP-2002-0133) and rental revenue from Tecumseh farm properties considered to be non-utility. (EBRO 464 & 365)	
23.	(15.5)	Miscellaneous	
		To eliminate net revenue from the Company's oil & gas and unregulated storage divisions.	(10.9)
		To eliminate Electric CDM net revenues. Ratepayer amounts will be transferred to the 2013 EPESDA and shareholder amounts are eliminated from utility results.	(1.1)
		To eliminate the shareholders' incentive income recorded as a result of calculating the SSMVA/DSMIVA amount.	(3.5)
			(15.5)
24.	(63.2)	Dividend income	
		To eliminate non-utility inter-company dividend income from the financing transaction (EBO 179-16).	

COMPARISON OF UTILITY OPERATING REVENUE
UPDATED 2013 BUDGET AND 2012 ESTIMATE

Item No.		Col. 1 Updated 2013 Budget ($Millions)	Col. 2 2012 Estimate ($Millions)	Col. 3 2013 Budget Over/(Under) 2012 Estimate ($Millions)
1.1	Gas Sales	2,004.1	2,158.8	(154.7)
1.2	Transportation of Gas	313.9	361.4	(47.5)
1.3	Transmission, Compression and Storage	1.7	1.7	-
1.4	Other Revenue	39.0	40.1	(1.1)
1.1	Total Operating Revenue	2,358.7	2,562.0	(203.3)

Witnesses: R. Lei
S. Qian

CUSTOMER METERS AND VOLUMES BY RATE CLASS
UPDATED 2013 BUDGET

Item No.		Col. 1 Customers (Average)	Col. 2 Volumes ($10^6 m^3$)	Col. 3 Revenues ($Millions)	
General Service					
1.1.1	Rate 1 - Sales	1 590 583	3 962.5	1 281.5	
1.1.2	Rate 1 - T-Service	271 451	675.0	129.0	
1.1	Total Rate 1	1 862 034	4 637.5	1 410.5	
1.2.1	Rate 6 - Sales	132 728	2 712.5	672.2	
1.2.2	Rate 6 - T-Service	25 767	1 933.2	150.3	
1.2	Total Rate 6	158 495	4 645.7	822.5	
1.3.1	Rate 9 - Sales	8	1.8	0.5	
1.3.2	Rate 9 - T-Service	1	0.2	0.0	**
1.3	Total Rate 9	9	2.0	0.5	
1.	Total General Service Sales & T-Service	2 020 538	9 285.2	2 233.5	
Contract Sales					
2.1	Rate 100	0	0.0	0.0	
2.2	Rate 110	36	66.8	11.8	
2.3	Rate 115	2	2.8	0.5	
2.4	Rate 135	1	0.6	0.1	
2.5	Rate 145	13	24.8	4.2	
2.6	Rate 170	6	54.8	8.1	
2.7	Rate 200	1	163.1	23.7	
2.	Total Contract Sales	59	312.9	48.4	
Contract T-Service					
3.1	Rate 100	0	0.0	0.0	
3.2	Rate 110	165	420.8	13.1	
3.3	Rate 115	28	536.6	6.9	
3.4	Rate 125	5	0.0	* 10.9	
3.5	Rate 135	37	54.6	1.6	
3.6	Rate 145	95	128.0	3.3	
3.7	Rate 170	32	461.6	(0.6)	
3.8	Rate 300	3	31.0	0.2	
3.9	Rate 315	0	0.0	0.0	
3.	Total Contract T-Service	365	1 632.6	35.4	
4.	Total Contract Sales & T-Service	424	1 945.5	83.8	
5.	Total	2 020 962	11 230.7	2 317.3	

* There is no distribution volume for Rate 125 customers.
** Less than $50,000.

Witnesses: R. Lei
S. Qian

COMPARISON OF AVERAGE CUSTOMER METERS BY RATE CLASS
UPDATED 2013 BUDGET AND 2012 BRIDGE YEAR ESTIMATE

Item No.		Col. 1 Updated 2013 Budget	Col. 2 2012 Bridge Year Estimate	Col. 3 2013 Budget Over (Under) 2012 Estimate (1-2)
General Service				
1.1.1	Rate 1 - Sales	1 590 583	1 467 726	122 857
1.1.2	Rate 1 - T-Service	271 451	359 070	(87 619)
1.1	Total Rate 1	1 862 034	1 826 796	35 238
1.2.1	Rate 6 - Sales	132 728	127 809	4 919
1.2.2	Rate 6 - T-Service	25 767	29 691	(3 924)
1.2	Total Rate 6	158 495	157 500	995
1.3.1	Rate 9 - Sales	8	8	0
1.3.2	Rate 9 - T-Service	1	1	0
1.3	Total Rate 9	9	9	0
1.	Total General Service Sales & T-Service	2 020 538	1 984 305	36 233
Contract Sales				
2.1	Rate 100	0	0	0
2.2	Rate 110	36	34	2
2.3	Rate 115	2	0	2
2.4	Rate 135	1	1	0
2.5	Rate 145	13	11	2
2.6	Rate 170	6	5	1
2.7	Rate 200	1	1	0
2.	Total Contract Sales	59	52	7
Contract T-Service				
3.1	Rate 100	0	0	0
3.2	Rate 110	165	167	(2)
3.3	Rate 115	28	30	(2)
3.4	Rate 125	5	5	0
3.5	Rate 135	37	37	0
3.6	Rate 145	95	97	(2)
3.7	Rate 170	32	33	(1)
3.8	Rate 300	3	8	(5)
3.9	Rate 315	0	0	0
3.	Total Contract T-Service	365	377	(12)
4.	Total Contract Sales & T-Service	424	429	(5)
5.	Total	2 020 962	1 984 734	36 228

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2013 BUDGET AND 2012 BRIDGE YEAR ESTIMATE
($10^6 m^3$)

Item No.		Col. 1 Updated 2013 Budget		Col. 2 2012 Bridge Year Estimate		Col. 3 2013 Budget Over (Under) 2012 Estimate (1-2)
General Service						
1.1.1	Rate 1 - Sales	3 962.5		3 693.2		269.3
1.1.2	Rate 1 - T-Service	675.0		890.1		(215.1)
1.1	Total Rate 1	4 637.5		4 583.3		54.2
1.2.1	Rate 6 - Sales	2 712.5		2 620.6		91.9
1.2.2	Rate 6 - T-Service	1 933.2		2 151.6		(218.4)
1.2	Total Rate 6	4 645.7		4 772.2		(126.5)
1.3.1	Rate 9 - Sales	1.8		1.0		0.8
1.3.2	Rate 9 - T-Service	0.2		0.2		0.0
1.3	Total Rate 9	2.0		1.2		0.8
1.	Total General Service Sales & T-Service	9 285.2		9 356.7		(71.5)
Contract Sales						
2.1	Rate 100	0.0		0.0		0.0
2.2	Rate 110	66.8		64.3		2.5
2.3	Rate 115	2.8		0.0		2.8
2.4	Rate 135	0.6		0.6		0.0
2.5	Rate 145	24.8		21.4		3.4
2.6	Rate 170	54.8		49.7		5.1
2.7	Rate 200	163.1		162.2		0.9
2.	Total Contract Sales	312.9		298.2		14.7
Contract T-Service						
3.1	Rate 100	0.0		0.0		0.0
3.2	Rate 110	420.8		423.8		(3.0)
3.3	Rate 115	536.6		532.5		4.1
3.4	Rate 125	0.0	*	0.0	*	0.0
3.5	Rate 135	54.6		54.6		0.0
3.6	Rate 145	128.0		133.0		(5.0)
3.7	Rate 170	461.6		470.3		(8.7)
3.8	Rate 300	31.0		31.0		0.0
3.9	Rate 315	0.0		0.0		0.0
3.	Total Contract T-Service	1 632.6		1 645.2		(12.6)
4.	Total Contract Sales & T-Service	1 945.5		1 943.4		2.1
5.	Total	11 230.7		11 300.1		(69.4)

* There is no distribution volume for Rate 125 customers.

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2013 BUDGET AND 2012 BRIDGE YEAR ESTIMATE
($10^6 m^3$)

Item No.		Col. 1 2013 Budget	Col. 2 2012 Bridge Year Estimate	Col. 3 2013 Budget Over (Under) 2012 Estimate (1-2)	Col. 4 2012* Adjustments	Col. 5 2013 Budget Over (Under) 2012 Estimate with Adjustments (3-4)
General Service						
1.1.1	Rate 1 - Sales	3 962.5	3 693.2	269.3	(26.9)	296.2
1.1.2	Rate 1 - T-Service	675.0	890.1	(215.1)	(6.0)	(209.1)
1.1	Total Rate 1	4 637.5	4 583.3	54.2	(32.9)	87.1
1.2.1	Rate 6 - Sales	2 712.5	2 620.6	91.9	(18.3)	110.2
1.2.2	Rate 6 - T-Service	1 933.2	2 151.6	(218.4)	(10.5)	(207.9)
1.2	Total Rate 6	4 645.7	4 772.2	(126.5)	(28.8)	(97.7)
1.3.1	Rate 9 - Sales	1.8	1.0	0.8	0.0	0.8
1.3.2	Rate 9 - T-Service	0.2	0.2	0.0	0.0	0.0
1.3	Total Rate 9	2.0	1.2	0.8	0.0	0.8
1.	Total General Service Sales & T-Service	9 285.2	9 356.7	(71.5)	(61.7)	(9.8)
Contract Sales						
2.1	Rate 100	0.0	0.0	0.0	0.0	0.0
2.2	Rate 110	66.8	64.3	2.5	0.0 **	2.5
2.3	Rate 115	2.8	0.0	2.8	0.0	2.8
2.4	Rate 135	0.6	0.6	0.0	0.0	0.0
2.5	Rate 145	24.8	21.4	3.4	0.0 **	3.4
2.6	Rate 170	54.8	49.7	5.1	0.0 **	5.1
2.7	Rate 200	163.1	162.2	0.9	0.0	0.9
2.	Total Contract Sales	312.9	298.2	14.7	0.0	14.7
Contract T-Service						
3.1	Rate 100	0.0	0.0	0.0	0.0	0.0
3.2	Rate 110	420.8	423.8	(3.0)	(0.1)	(2.9)
3.3	Rate 115	536.6	532.5	4.1	0.0 **	4.1
3.4	Rate 125	0.0	0.0	0.0	0.0	0.0
3.5	Rate 135	54.6	54.6	0.0	0.0	0.0
3.6	Rate 145	128.0	133.0	(5.0)	(0.1)	(4.9)
3.7	Rate 170	461.6	470.3	(8.7)	(0.3)	(8.4)
3.8	Rate 300	31.0	31.0	0.0	0.0	0.0
3.9	Rate 315	0.0	0.0	0.0	0.0	0.0
3.	Total Contract T-Service	1 632.6	1 645.2	(12.6)	(0.5)	(12.1)
4.	Total Contract Sales & T-Service	1 945.5	1 943.4	2.1	(0.5)	2.6
5.	Total	11 230.7	11 300.1	(69.4)	(62.2)	(7.2)

*Note: Weather normalization adjustments have been made to the 2012 Bridge Year Estimate utilizing the 2013 Budget degree days in order to place the two years on a comparable basis.

** Less than 50,000 m^3.

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2013 BUDGET AND 2012 BRIDGE YEAR ESTIMATE
($10^6 m^3$)

Item No.		Col. 1 2013 Budget	Col. 2 2012 Bridge Year Estimate	Col. 3 2013 Budget Over (Under) 2012 Estimate (1-2)	Col. 4 Change in Use	Col. 5 Weather	Col. 6 New Customers	Col. 7 Transfer Gains	Col. 8 Transfer Losses	Col. 9 Lost Customers	Col. 10 Added Load
General Service											
1.1.1	Rate 1 - Sales	3 962.5	3 693.2	269.3	(11.7)	(26.9)	89.1	218.8	0.0	0.0	0.0
1.1.2	Rate 1 - T-Service	675.0	890.1	(215.1)	9.7	(6.0)	0.0	0.0	(218.8)	0.0	0.0
1.1	Total Rate 1	4 637.5	4 583.3	54.2	(2.0)	(32.9)	89.1	218.8	(218.8)	0.0	0.0
1.2.1	Rate 6 - Sales	2 712.5	2 620.6	91.9	(26.6)	(18.3)	15.2	121.6	0.0	0.0	0.0
1.2.2	Rate 6 - T-Service	1 933.2	2 151.6	(218.4)	(86.3)	(10.5)	0.0	0.0	(121.6)	0.0	0.0
1.2	Total Rate 6	4 645.7	4 772.2	(126.5)	(112.9)	(28.8)	15.2	121.6	(121.6)	0.0	0.0
1.3.1	Rate 9 - Sales	1.8	1.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
1.3.2	Rate 9 - T-Service	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.3	Total Rate 9	2.0	1.2	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
1.	Total General Service	9 285.2	9 356.7	(71.5)	(114.1)	(61.7)	104.3	340.4	(340.4)	0.0	0.0
Contract Sales											
2.1	Rate 100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.2	Rate 110	66.8	64.3	2.5	0.0	0.0 *	0.0	2.5	0.0	0.0	0.0
2.3	Rate 115	2.8	0.0	2.8	0.0	0.0	0.0	2.8	0.0	0.0	0.0
2.4	Rate 135	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5	Rate 145	24.8	21.4	3.4	(0.1)	0.0 *	0.0	3.5	0.0	0.0	0.0
2.6	Rate 170	54.8	49.7	5.1	(0.4)	0.0 *	0.0	5.5	0.0	0.0	0.0
2.7	Rate 200	163.1	162.2	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
2.	Total Contract Sales	312.9	298.2	14.7	0.4	0.0	0.0	14.3	0.0	0.0	0.0
Contract T-Service											
3.1	Rate 100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.0	0.0
3.2	Rate 110	420.8	423.8	(3.0)	(0.4)	(0.1)	0.0	0.0	(2.5)	0.0	0.0
3.3	Rate 115	536.6	532.5	4.1	6.9	0.0 *	0.0	0.0	(2.8)	0.0	0.0
3.4	Rate 125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.5	Rate 135	54.6	54.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.6	Rate 145	128.0	133.0	(5.0)	(1.4)	(0.1)	0.0	0.0	(3.5)	0.0	0.0
3.7	Rate 170	461.6	470.3	(8.7)	(2.9)	(0.3)	0.0	0.0	(5.5)	0.0	0.0
3.8	Rate 300	31.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.9	Rate 315	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.	Total Contract T-Service	1 632.6	1 645.2	(12.6)	2.2	(0.5)	0.0	0.0	(14.3)	0.0	0.0
4.	Total Contract Sales & T-Service	1 945.5	1 943.4	2.1	2.6	(0.5)	0.0	14.3	(14.3)	0.0	0.0
5.	Total	11 230.7	11 300.1	(69.4)	(111.5)	(62.2)	104.3	354.7	(354.7)	0.0	0.0

* Less than 50,000 m^3.

Witnesses: R. Lei
S. Qian

The principal reasons for the variances contributing to the weather normalized decrease of 7.2 10^6m^3 in the 2013 Budget over the 2012 Estimate are as follows:

1. The volumetric increase of 87.1 10^6m^3 in Rate 1 is due to customer growth of 89.1 10^6m^3; partially offset by a lower average use per customer totaling 2.0 10^6m^3;

2. The volumetric decrease of 97.7 10^6m^3 in Rate 6 is due to a lower average use per customer totaling 112.9 10^6m^3; partially offset by a customer growth of 15.2 10^6m^3

3. The volumetric increase of 0.8 10^6m^3 in Rate 9 is due to a higher average use per station of 0.8 10^6m^3;

4. The volumetric increase for Contract Sales and T-Service of 2.6 10^6m^3 is due to increase in the commercial sector of 3.9 10^6m^3 and rate 200 of 0.9 10^6m^3; partially offset by the decrease in the industrial sector of 2.2 10^6m^3.

COMPARISON OF GAS SALES AND
TRANSPORTATION REVENUE BY RATE CLASS
UPDATED 2013 BUDGET AND 2012 BRIDGE YEAR ESTIMATE
($ MILLIONS)

Item No.		Col. 1 Updated 2013 Budget	Col. 2 2012 Bridge Year Estimate	Col. 3 2013 Budget Over (Under) 2012 Estimate (1-2)
General Service				
1.1.1	Rate 1 - Sales	1 281.5	1 333.0	(51.5)
1.1.2	Rate 1 - T-Service	129.0	168.1	(39.1)
1.1	Total Rate 1	1 410.5	1 501.1	(90.6)
1.2.1	Rate 6 - Sales	672.2	751.7	(79.5)
1.2.2	Rate 6 - T-Service	150.3	164.1	(13.8)
1.2	Total Rate 6	822.5	915.8	(93.3)
1.3.1	Rate 9 - Sales	0.5	0.3	0.2
1.3.2	Rate 9 - T-Service	0.0	0.0	0.0
1.3	Total Rate 9	0.5	0.3	0.2
1.	Total General Service Sales & T-Service	2 233.5	2 417.2	(183.7)
Contract Sales				
2.1	Rate 100	0.0	0.0	0.0
2.2	Rate 110	11.8	13.9	(2.1)
2.3	Rate 115	0.5	0.0	0.5
2.4	Rate 135	0.1	0.1	0.0 *
2.5	Rate 145	4.2	4.5	(0.3)
2.6	Rate 170	8.1	9.4	(1.3)
2.7	Rate 200	23.7	28.5	(4.8)
2.	Total Contract Sales	48.4	56.4	(8.0)
Contract T-Service				
3.1	Rate 100	0.0	0.0	0.0
3.2	Rate 110	13.1	15.0	(1.9)
3.3	Rate 115	6.9	7.1	(0.2)
3.4	Rate 125	10.9	9.7	1.2
3.5	Rate 135	1.6	1.6	0.0 *
3.6	Rate 145	3.3	3.6	(0.3)
3.7	Rate 170	(0.6)	(0.8)	0.2
3.8	Rate 300	0.2	0.4	(0.2)
3.9	Rate 315	0.0	0.0	0.0
3.	Total Contract T-Service	35.4	36.6	(1.2)
4.	Total Contract Sales & T-Service	83.8	93.0	(9.2)
5.	Total	2 317.3	2 510.2	(192.9)

* Less than $50,000.

Witnesses: R. Lei
S. Qian

DETAILS OF OTHER REVENUE
2013 TEST YEAR AND 2013 BRIDGE YEAR

Item No.		Col. 1 2013 Test Year ($Millions)	Col. 2 2012 Bridge Year ($Millions)	Col. 3 2013 Budget Over/(Under) 2012 Bridge ($Millions)
1.1	Service Charges & DPAC	12.9	12.7	0.2
1.2	Rental Revenue - NGV Program	0.8	0.4	0.4
1.3	Late Payment Penalties	12.9	13.2	(0.3)
1.4	Dow Moore Recovery	0.3	0.3	-
1.5	Transactional Services (net)	6.0	8.0	(2.0)
1.6	Miscellaneous	0.7	0.1	0.6
1.7	Open Bill Revenue	5.4	5.4	-
1.8	Total Other Revenue	39.0	40.1	(1.1)

Witnesses: R. Lei
S. Qian

TRANSACTIONAL SERVICES REVENUE
FISCAL 2007

Item #	Units - $(000)	Col. 1 Forecast 2013
1.	Total Transactional Services	6,000.00

RATE OF RETURN ON CAPITAL EMPLOYED IN THE NATURAL GAS VEHICLES PROGRAM
YEAR ENDED DECEMBER 31, 2013

Item No.		Total 2013
		($000)
	Operating Income	
1.1.1	Gas Distribution Margin	781.8
1.1.2	Other Revenue	311.0
1.1	Total Revenue	1,092.8
	Expenses	
1.2.1	O&M	486.8
1.2.2	Depreciation	711.4
1.2	Total Expenses	1,198.2
1.3	Operating Income before Income Tax	(105.4)
1.4	Income Tax Provision (Recovery)	40.6
1	Operating Income after Income Taxes	(146.0)
	Investment	
2.1	Average Net Plant & Equipment	2,552.0
2.2	Allocated Capital	282.8
2.3	Working Capital	28.0
2	Net Utility Investment	2,862.9
3	Rate of Return on Investment	-5.10%
4	Requested Rate of Return	7.31%
5.1	After Tax Sufficiency / (Deficiency)	(355.2)
5.2	Pre Tax Sufficiency / (Deficiency)	(476.8)

Witnesses: F. Ahmad
K. Culbert

UTILITY OPERATING REVENUE
2012 BRIDGE YEAR

Line No.		Col. 1 Utility Revenue ($Millions)	Col. 2 Normalizing and Other Adjustments ($Millions)	Col. 3 Adjusted Utility Revenue ($Millions)
1.	Gas sales	2,158.8	-	2,158.8
2.	Transportation of gas	361.4	-	361.4
3.	Transmission, compression & storage	1.7	-	1.7
4.	Other operating revenue	40.0	-	40.0
5.	Interest and property rental	-	-	-
6.	Other income	0.1	-	0.1
7.	Total operating revenue	2,562.0	-	2,562.0

UTILITY REVENUE
2012 BRIDGE YEAR

Line No.		Col. 1 EGDI Ont. Corporate Revenue ($Millions)	Col. 2 Adjustment ($Millions)	Col. 3 Utility Revenue ($Millions)
1.	Residential	1,350.3		1,350.3
2.	Commercial	670.2	-	670.2
3.	Industrial	109.8	-	109.8
4.	Wholesale	28.5	-	28.5
5.	Gas sales	2,158.8	-	2,158.8
6.	Transportation of gas	361.4	-	361.4
7.	Transmission, compression & storage	1.7	-	1.7
8.	Service charges & DPAC	12.7	-	12.7
9.	Rent from NGV rentals	0.3	0.1	0.4
10.	Late payment penalties	13.2	-	13.2
11.	Transactional services	10.4	(2.4)	8.0
12.	Open bill revenue	6.9	(1.5)	5.4
13.	Dow Moore recovery	0.3	-	0.3
14.	Affiliate asset use revenue	0.1	(0.1)	-
15.	ABC T-service (net)	5.4	(5.4)	-
16.	Other operating revenue	49.3	(9.3)	40.0
17.	Income from investments	-	-	-
18.	Interest during construction	3.8	(3.8)	-
19.	Interest income from affiliates	-	-	-
20.	Interest on (net) deferral accounts	-	-	-
21.	Property/asset use revenue 3rd party	1.4	(1.4)	-
22.	Interest and property rental	5.2	(5.2)	-
23.	Miscellaneous	18.7	(18.6)	0.1
24.	Dividend income	63.2	(63.2)	-
25.	Profit on sale of property	-	-	-
26.	NGV merchandising revenue (net)	-	-	-
27.	Other income	81.9	(81.8)	0.1
28.	Total revenue	2,658.3	(96.3)	2,562.0

EXPLANATION OF ADJUSTMENTS TO EGDI CORPORATE REVENUE
2012 BRIDGE YEAR

Line No. Adjusted	Adjustment Increase (Decrease) ($Millions)	Explanation	
9.	0.1	Rent from NGV rentals	
		NGV revenue imputation to equate the program's overall return to the required regulated return.	
11.	(2.4)	Transactional services	
		To adjust transactional services to the base amount included in approved rates. Ratepayer and shareholder amounts above the base are treated outside of utility results and returns.	
12.	(1.5)	Open bill revenue	
		To eliminate the shareholder portion of OBSDA and OBAVA write-off.	0.2
		To eliminate net ex-franchise revenues to be shared equally between ratepayers and shareholders.	(0.2)
		To eliminate the Open Bill shareholder incentive.	(1.5)
			(1.5)
14.	(0.1)	Affiliate asset use revenue	
		To reflect the elimination of asset use revenue in conjunction with the removal of affiliate use asset values from rate base and all related cost of service elements. (RP-2002-0133)	
15.	(5.4)	ABC T-Service (net)	
		To eliminate the net revenue from ABC T-Service considered to be non-utility. (RP-1999-0001)	

EXPLANATION OF ADJUSTMENTS TO EGDI CORPORATE REVENUE
2012 BRIDGE YEAR

Line No. Adjusted	Adjustment Increase (Decrease) ($Millions)	Explanation	
18.	(3.8)	Interest during construction	
		To eliminate interest calculated on funds used for purposes of construction during the year.	
21.	(1.4)	Property/asset use revenue 3rd party	
		To eliminate asset use revenue (RP-2002-0133) and rental revenue from Tecumseh farm properties considered to be non-utility. (EBRO 464 & 365)	
23.	(18.6)	Miscellaneous	
		To eliminate net revenue from the Company's oil & gas and unregulated storage divisions.	(11.0)
		To eliminate Electric CDM net revenues. Ratepayer amounts will be transferred to the 2012 EPESDA and shareholder amounts are eliminated from utility results.	(1.8)
		To eliminate the shareholders' incentive income associated with the calculationg of the SSMVA.	(5.8)
			(18.6)
24.	(63.2)	Dividend income	
		To eliminate non-utility inter-company dividend income from the financing transaction (EBO 179-16).	

COMPARISON OF UTILITY OPERATING REVENUE
2012 ESTIMATE AND 2011 ACTUAL

Item No.		Col. 1 2012 Estimate Bridge Year ($Millions)	Col. 2 2011 Actual ($Millions)	Col. 3 2012 Estimate Over/(Under) 2011 Actual ($Millions)
1.1	Gas Sales	2,158.8	1,978.4	180.4
1.2	Transportation of Gas	361.4	411.2	(49.8)
1.3	Transmission, Compression and Storage	1.7	1.5	0.2
1.4	Other Revenue	40.1	41.4	(1.3)
1.1	Total Operating Revenue	2,562.0	2,432.5	129.5

Witnesses: R. Lei
S. Qian

COMPARISON OF UTILITY OPERATING REVENUE
2012 ESTIMATE AND BOARD APPROVED 2007 BUDGET

Item No.		Col. 1 2012 Estimate (Bridge Year) ($Millions)	Col. 2 Board Approved 2007 Budget ($Millions)	Col. 3 2012 Estimate Over/(Under) OEB Approved 2007 Budget ($Millions)
1.1	Gas Sales	2,158.8	2,377.1	(218.3)
1.2	Transportation of Gas	361.4	740.2	(378.8)
1.3	Transmission, Compression and Storage	1.7	1.7	-
1.4	Other Revenue	40.1	35.1	5.0
1.1	Total Operating Revenue	2,562.0	3,154.1	(592.1)

Witnesses: R. Lei
S. Qian

CUSTOMER METERS AND VOLUMES BY RATE CLASS
2012 BRIDGE YEAR ESTIMATE

Item No.		Col. 1 Customers (Average)	Col. 2 Volumes (10^6m^3)	Col. 3 Revenues ($Millions)	
General Service					
1.1.1	Rate 1 - Sales	1 467 726	3 693.2	1 333.0	
1.1.2	Rate 1 - T-Service	359 070	890.1	168.1	
1.1	Total Rate 1	1 826 796	4 583.3	1 501.1	
1.2.1	Rate 6 - Sales	127 809	2 620.6	751.7	
1.2.2	Rate 6 - T-Service	29 691	2 151.6	164.1	
1.2	Total Rate 6	157 500	4 772.2	915.8	
1.3.1	Rate 9 - Sales	8	1.0	0.3	
1.3.2	Rate 9 - T-Service	1	0.2	0.0	**
1.3	Total Rate 9	9	1.2	0.3	
1.	Total General Service Sales & T-Service	1 984 305	9 356.7	2 417.2	
Contract Sales					
2.1	Rate 100	0	0.0	0.0	
2.2	Rate 110	34	64.3	13.9	
2.3	Rate 115	0	0.0	0.0	
2.4	Rate 135	1	0.6	0.1	
2.5	Rate 145	11	21.4	4.5	
2.6	Rate 170	5	49.7	9.4	
2.7	Rate 200	1	162.2	28.5	
2.	Total Contract Sales	52	298.2	56.4	
Contract T-Service					
3.1	Rate 100	0	0.0	0.0	
3.2	Rate 110	167	423.8	15.0	
3.3	Rate 115	30	532.5	7.1	
3.4	Rate 125	5	0.0	* 9.7	
3.5	Rate 135	37	54.6	1.6	
3.6	Rate 145	97	133.0	3.6	
3.7	Rate 170	33	470.3	(0.8)	
3.8	Rate 300	8	31.0	0.4	
3.9	Rate 315	0	0.0	0.0	
3.	Total Contract T-Service	377	1 645.2	36.6	
4.	Total Contract Sales & T-Service	429	1 943.4	93.0	
5.	Total	1 984 734	11 300.1	2 510.2	

* There is no distribution volume for Rate 125 customers.
** Less than $50,000.

Witness: R. Lei
S. Qian

COMPARISON OF AVERAGE CUSTOMER METERS BY RATE CLASS
2012 BRIDGE YEAR ESTIMATE AND 2011 ACTUAL YEAR

Item No.		Col. 1 2012 Bridge Year Estimate	Col. 2 2011 Actual Year	Col. 3 2012 Estimate Over (Under) 2011 Historic (1-2)
General Service				
1.1.1	Rate 1 - Sales	1 467 726	1 399 998	67 728
1.1.2	Rate 1 - T-Service	359 070	402 580	(43 510)
1.1	Total Rate 1	1 826 796	1 802 578	24 218
1.2.1	Rate 6 - Sales	127 809	121 783	6 026
1.2.2	Rate 6 - T-Service	29 691	35 540	(5849)
1.2	Total Rate 6	157 500	157 323	177
1.3.1	Rate 9 - Sales	8	10	(2)
1.3.2	Rate 9 - T-Service	1	1	0
1.3	Total Rate 9	9	11	(2)
1.	Total General Service Sales & T-Service	1 984 305	1 959 912	24 393
Contract Sales				
2.1	Rate 100	0	5	(5)
2.2	Rate 110	34	34	0
2.3	Rate 115	0	1	(1)
2.4	Rate 135	1	2	(1)
2.5	Rate 145	11	12	(1)
2.6	Rate 170	5	5	0
2.7	Rate 200	1	1	0
2.	Total Contract Sales	52	60	(8)
Contract T-Service				
3.1	Rate 100	0	10	(10)
3.2	Rate 110	167	171	(4)
3.3	Rate 115	30	27	3
3.4	Rate 125	5	4	1
3.5	Rate 135	37	40	(3)
3.6	Rate 145	97	114	(17)
3.7	Rate 170	33	32	1
3.8	Rate 300	8	8	0
3.9	Rate 315	0	0	0
3.	Total Contract T-Service	377	406	(29)
4.	Total Contract Sales & T-Service	429	466	(37)
5.	Total	1 984 734	1 960 378	24 356

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2012 BRIDGE YEAR ESTIMATE AND 2011 ACTUAL YEAR
(10^6m^3)

Item No.		Col. 1 2012 Bridge Year Estimate	Col. 2 2011 Actual Year	Col. 3 2012 Estimate Over (Under) 2011 Actual (1-2)
General Service				
1.1.1	Rate 1 - Sales	3 693.2	3 601.7	91.5
1.1.2	Rate 1 - T-Service	890.1	1 098.2	(208.1)
1.1	Total Rate 1	4 583.3	4 699.9	(116.6)
1.2.1	Rate 6 - Sales	2 620.6	2 323.2	297.4
1.2.2	Rate 6 - T-Service	2 151.6	2 396.8	(245.2)
1.2	Total Rate 6	4 772.2	4 720.0	52.2
1.3.1	Rate 9 - Sales	1.0	0.8	0.2
1.3.2	Rate 9 - T-Service	0.2	0.1	0.1
1.3	Total Rate 9	1.2	0.9	0.3
1.	Total General Service Sales & T-Service	9 356.7	9 420.8	(64.1)
Contract Sales				
2.1	Rate 100	0.0	2.3	(2.3)
2.2	Rate 110	64.3	66.6	(2.3)
2.3	Rate 115	0.0	0.1	(0.1)
2.4	Rate 135	0.6	1.4	(0.8)
2.5	Rate 145	21.4	22.8	(1.4)
2.6	Rate 170	49.7	48.5	1.2
2.7	Rate 200	162.2	168.7	(6.5)
2.	Total Contract Sales	298.2	310.4	(12.2)
Contract T-Service				
3.1	Rate 100	0.0	8.0	(8.0)
3.2	Rate 110	423.8	479.5	(55.7)
3.3	Rate 115	532.5	558.5	(26.0)
3.4	Rate 125	0.0 *	0.0 *	0.0
3.5	Rate 135	54.6	60.0	(5.4)
3.6	Rate 145	133.0	161.5	(28.5)
3.7	Rate 170	470.3	474.1	(3.8)
3.8	Rate 300	31.0	30.5	0.5
3.9	Rate 315	0.0	0.0	0.0
3.	Total Contract T-Service	1 645.2	1 772.1	(126.9)
4.	Total Contract Sales & T-Service	1 943.4	2 082.5	(139.1)
5.	Total	11 300.1	11 503.3	(203.2)

* There is no distribution volume for Rate 125 customers.

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2012 BRIDGE YEAR ESTIMATE AND 2011 ACTUAL YEAR
($10^6 m^3$)

Item No.		Col. 1 2012 Bridge Year Estimate	Col. 2 2011 Actual Year	Col. 3 2012 Estimate Over (Under) 2011 Actual (1-2)	Col. 4 2011* Adjustments	Col. 5 2012 Estimate Over (Under) 2011 Actual with Adjustments (3-4)
General Service						
1.1.1	Rate 1 - Sales	3 693.2	3 601.7	91.5	(88.8)	180.3
1.1.2	Rate 1 - T-Service	890.1	1 098.2	(208.1)	(28.7)	(179.4)
1.1	Total Rate 1	4 583.3	4 699.9	(116.6)	(117.5)	0.9
1.2.1	Rate 6 - Sales	2 620.6	2 323.2	297.4	(61.6)	359.0
1.2.2	Rate 6 - T-Service	2 151.6	2 396.8	(245.2)	(39.9)	(205.3)
1.2	Total Rate 6	4 772.2	4 720.0	52.2	(101.5)	153.7
1.3.1	Rate 9 - Sales	1.0	0.8	0.2	0.0	0.2
1.3.2	Rate 9 - T-Service	0.2	0.1	0.1	0.0	0.1
1.3	Total Rate 9	1.2	0.9	0.3	0.0	0.3
1.	Total General Service Sales & T-Service	9 356.7	9 420.8	(64.1)	(219.0)	154.9
Contract Sales						
2.1	Rate 100	0.0	2.3	(2.3)	0.0 **	(2.3)
2.2	Rate 110	64.3	66.6	(2.3)	0.0 **	(2.3)
2.3	Rate 115	0.0	0.1	(0.1)	0.0	(0.1)
2.4	Rate 135	0.6	1.4	(0.8)	0.0	(0.8)
2.5	Rate 145	21.4	22.8	(1.4)	0.1	(1.5)
2.6	Rate 170	49.7	48.5	1.2	0.0 **	1.2
2.7	Rate 200	162.2	168.7	(6.5)	(1.9)	(4.6)
2.	Total Contract Sales	298.2	310.4	(12.2)	(1.8)	(10.4)
Contract T-Service						
3.1	Rate 100	0.0	8.0	(8.0)	(0.1)	(7.9)
3.2	Rate 110	423.8	479.5	(55.7)	(0.4)	(55.3)
3.3	Rate 115	532.5	558.5	(26.0)	0.1	(26.1)
3.4	Rate 125	0.0	0.0	0.0	0.0	0.0
3.5	Rate 135	54.6	60.0	(5.4)	0.0	(5.4)
3.6	Rate 145	133.0	161.5	(28.5)	(1.0)	(27.5)
3.7	Rate 170	470.3	474.1	(3.8)	(1.6)	(2.2)
3.8	Rate 300	31.0	30.5	0.5	0.0	0.5
3.9	Rate 315	0.0	0.0	0.0	0.0	0.0
3.	Total Contract T-Service	1 645.2	1 772.1	(126.9)	(3.0)	(123.9)
4.	Total Contract Sales & T-Service	1 943.4	2 082.5	(139.1)	(4.8)	(134.3)
5.	Total	11 300.1	11 503.3	(203.2)	(223.8)	20.6

*Note: Weather normalization adjustments have been made to the 2011 Historical Year utilizing the 2012 Budget degree days in order to place the two years on a comparable basis.

** Less than 50,000 m^3.

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2012 BRIDGE YEAR ESTIMATE AND 2011 ACTUAL YEAR
($10^6 m^3$)

Item No.		Col. 1 2012 Bridge Year Estimate	Col. 2 2011 Actual Year	Col. 3 2012 Estimate Over (Under) 2011 Actual (1-2)	Col. 4 Change in Use	Col. 5 Weather	Col. 6 New Customers	Col. 7 Transfer Gains	Col. 8 Transfer Losses	Col. 9 Lost Customers	Col. 10 Added Load
General Service											
1.1.1	Rate 1 - Sales	3 693.2	3 601.7	91.5	(15.2)	(88.8)	59.0	136.5	0.0	0.0	0.0
1.1.2	Rate 1 - T-Service	890.1	1 098.2	(208.1)	(42.9)	(28.7)	0.0	0.0	(136.5)	0.0	0.0
1.1	Total Rate 1	4 583.3	4 699.9	(116.6)	(58.1)	(117.5)	59.0	136.5	(136.5)	0.0	0.0
1.2.1	Rate 6 - Sales	2 620.6	2 323.2	297.4	178.0	(61.6)	13.2	168.7	(0.9)	0.0	0.0
1.2.2	Rate 6 - T-Service	2 151.6	2 396.8	(245.2)	(68.9)	(39.9)	0.0	28.5	(164.9)	0.0	0.0
1.2	Total Rate 6	4 772.2	4 720.0	52.2	109.1	(101.5)	13.2	197.2	(165.8)	0.0	0.0
1.3.1	Rate 9 - Sales	1.0	0.8	0.2	0.4	0.0	0.0	0.0	0.0	(0.2)	0.0
1.3.2	Rate 9 - T-Service	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
1.3	Total Rate 9	1.2	0.9	0.3	0.5	0.0	0.0	0.0	0.0	(0.2)	0.0
1.	Total General Service	9 356.7	9 420.8	(64.1)	51.5	(219.0)	72.2	333.7	(302.3)	(0.2)	0.0
Contract Sales											
2.1	Rate 100	0.0	2.3	(2.3)	0.0	0.0 *	0.0	0.0	(2.3)	0.0	0.0
2.2	Rate 110	64.3	66.6	(2.3)	(2.9)	0.0 *	0.0	0.9	(0.2)	(0.1)	0.0
2.3	Rate 115	0.0	0.1	(0.1)	(1.9)	0.0	0.0	1.8	0.0	0.0	0.0
2.4	Rate 135	0.6	1.4	(0.8)	(0.8)	0.0	0.0	0.0	0.0	0.0	0.0
2.5	Rate 145	21.4	22.8	(1.4)	(0.2)	0.1	0.0	0.0	(1.3)	0.0	0.0
2.6	Rate 170	49.7	48.5	1.2	1.2	0.0 *	0.0	0.0	0.0	0.0	0.0
2.7	Rate 200	162.2	168.7	(6.5)	(4.6)	(1.9)	0.0	0.0	0.0	0.0	0.0
2.	Total Contract Sales	298.2	310.4	(12.2)	(9.2)	(1.8)	0.0	2.7	(3.8)	(0.1)	0.0
Contract T-Service											
3.1	Rate 100	0.0	8.0	(8.0)	0.0	(0.1)	0.0	0.0	(7.9)	0.0	0.0
3.2	Rate 110	423.8	479.5	(55.7)	(19.4)	(0.4)	0.0	21.8	(57.2)	(0.5)	0.0
3.3	Rate 115	532.5	558.5	(26.0)	(59.5)	0.1	0.0	49.3	(15.9)	0.0	0.0
3.4	Rate 125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.5	Rate 135	54.6	60.0	(5.4)	(5.4)	0.0	0.0	0.0	0.0	0.0	0.0
3.6	Rate 145	133.0	161.5	(28.5)	(6.4)	(1.0)	0.0	0.0	(20.5)	(0.6)	0.0
3.7	Rate 170	470.3	474.1	(3.8)	(4.8)	(1.6)	0.0	4.9	(2.3)	0.0	0.0
3.8	Rate 300	31.0	30.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3.9	Rate 315	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.	Total Contract T-Service	1 645.2	1 772.1	(126.9)	(95.0)	(3.0)	0.0	76.0	(103.8)	(1.1)	0.0
4.	Total Contract Sales & T-Service	1 943.4	2 082.5	(139.1)	(104.2)	(4.8)	0.0	78.7	(107.6)	(1.2)	0.0
5.	Total	11 300.1	11 503.3	(203.2)	(52.7)	(223.8)	72.2	412.4	(409.9)	(1.4)	0.0

* Less than 50,000 m^3.

Witnesses: R. Lei
S. Qian

The principal reasons for the variances contributing to the weather normalized increase of 20.6 10^6m^3 in the 2012 Bridge Year Estimate over the 2011 Actual Year are as follows:

1. The volumetric increase of 0.9 10^6m^3 in Rate 1 is due to customer growth of 59.0 10^6m^3; partially offset by a lower average use per customer totaling 58.1 10^6m^3;

2. The volumetric increase of 153.7 10^6m^3 in Rate 6 is due to net customer migration from Contract Sales and T-Service of 31.4 10^6m^3, a customer growth of 13.2 10^6m^3, and a higher average use per customer totaling 109.1 10^6m^3;

3. The volumetric increase of 0.3 10^6m^3 in Rate 9 is due to a higher average use per station of 0.5 10^6m^3; partially offset by the loss of stations of 0.2 10^6m^3;

4. The volumetric decrease for Contract Sales and T-Service of 134.3 10^6m^3 is due to decreases in the apartment sector of 21.5 10^6m^3, the industrial sector of 139.7 10^6m^3, and of Rate 200 of 4.6 10^6m^3; partially offset by the increase of the commercial sector of 31.5 10^6m^3.

COMPARISON OF GAS SALES AND
TRANSPORTATION REVENUE BY RATE CLASS
2012 BRIDGE YEAR ESTIMATE AND 2011 ACTUAL YEAR
($ MILLIONS)

Item No.		Col. 1 2012 Bridge Year Estimate	Col. 2 2011 Actual Year	Col. 3 2012 Estimate Over (Under) 2011 Actual (1-2)
General Service				
1.1.1	Rate 1 - Sales	1 333.0	1 264.0	69.0
1.1.2	Rate 1 - T-Service	168.1	194.9	(26.8)
1.1	Total Rate 1	1 501.1	1 458.9	42.2
1.2.1	Rate 6 - Sales	751.7	675.2	76.5
1.2.2	Rate 6 - T-Service	164.1	178.2	(14.1)
1.2	Total Rate 6	915.8	853.4	62.4
1.3.1	Rate 9 - Sales	0.3	0.2	0.1
1.3.2	Rate 9 - T-Service	0.0	0.0	0.0
1.3	Total Rate 9	0.3	0.2	0.1
1.	Total General Service Sales & T-Service	2 417.2	2 312.5	104.7
Contract Sales				
2.1	Rate 100	0.0	0.6	(0.6)
2.2	Rate 110	13.9	14.1	(0.2)
2.3	Rate 115	0.0	0.0	0.0
2.4	Rate 135	0.1	0.3	(0.2)
2.5	Rate 145	4.5	4.5	0.0
2.6	Rate 170	9.4	9.4	0.0
2.7	Rate 200	28.5	28.3	0.2
2.	Total Contract Sales	56.4	57.2	(0.8)
Contract T-Service				
3.1	Rate 100	0.0	0.5	(0.5)
3.2	Rate 110	15.0	13.8	1.2
3.3	Rate 115	7.1	7.7	(0.6)
3.4	Rate 125	9.7	7.8	1.9
3.5	Rate 135	1.6	2.2	(0.6)
3.6	Rate 145	3.6	5.4	(1.8)
3.7	Rate 170	(0.8)	5.0	(5.8)
3.8	Rate 300	0.4	0.5	(0.1)
3.9	Rate 315	0.0	0.4	(0.4)
3.	Total Contract T-Service	36.6	43.3	(6.7)
4.	Total Contract Sales & T-Service	93.0	100.5	(7.5)
5.	Total	2 510.2	2 413.0	97.2

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2012 BRIDGE YEAR ESTIMATE AND 2007 BOARD APPROVED BUDGET
($10^6 m^3$)

Item No.		Col. 1 2012 Bridge Year Estimate	Col. 2 2007 Budget	Col. 3 2012 Estimate Over (Under) 2007 Budget (1-2)
General Service				
1.1.1	Rate 1 - Sales	3 693.2	2 763.1	930.1
1.1.2	Rate 1 - T-Service	890.1	1 723.0	(832.9)
1.1	Total Rate 1	4 583.3	4 486.1	97.2
1.2.1	Rate 6 - Sales	2 620.6	1 446.4	1 174.2
1.2.2	Rate 6 - T-Service	2 151.6	1 702.3	449.3
1.2	Total Rate 6	4 772.2	3 148.7	1 623.5
1.3.1	Rate 9 - Sales	1.0	5.4	(4.4)
1.3.2	Rate 9 - T-Service	0.2	2.0	(1.8)
1.3	Total Rate 9	1.2	7.4	(6.2)
1.	Total General Service Sales & T-Service	9 356.7	7 642.2	1 714.5
Contract Sales				
2.1	Rate 100	0.0	218.7	(218.7)
2.2	Rate 110	64.3	50.0	14.3
2.3	Rate 115	0.0	41.7	(41.7)
2.4	Rate 135	0.6	5.2	(4.6)
2.5	Rate 145	21.4	41.3	(19.9)
2.6	Rate 170	49.7	57.5	(7.8)
2.7	Rate 200	162.2	150.7	11.5
2.	Total Contract Sales	298.2	565.1	(266.9)
Contract T-Service				
3.1	Rate 100	0.0	1 169.9	(1169.9)
3.2	Rate 110	423.8	570.4	(146.6)
3.3	Rate 115	532.5	864.5	(332.0)
3.4	Rate 125	0.0 *	0.0 *	0.0
3.5	Rate 135	54.6	50.2	4.4
3.6	Rate 145	133.0	210.5	(77.5)
3.7	Rate 170	470.3	672.5	(202.2)
3.8	Rate 300	31.0	0.0	31.0
3.9	Rate 305	0.0	31.2	(31.2)
3.	Total Contract T-Service	1 645.2	3 569.2	(1924.0)
4.	Total Contract Sales & T-Service	1 943.4	4 134.3	(2190.9)
5.	Total	11 300.1	11 776.5	(476.4)

* There is no distribution volume for Rate 125 customers.

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2012 BRIDGE YEAR ESTIMATE AND 2007 BOARD APPROVED BUDGET
(10^6m^3)

Item No.		Col. 1 2012 Bridge Year Estimate	Col. 2 2007 Budget	Col. 3 2012 Estimate Over (Under) 2007 Budget (1-2)	Col. 4 2007* Adjustments	Col. 5 2012 Estimate Over (Under) 2007 Budget with Adjustments (3-4)
General Service						
1.1.1	Rate 1 - Sales	3 693.2	2 763.1	930.1	(41.4)	971.5
1.1.2	Rate 1 - T-Service	890.1	1 723.0	(832.9)	(25.0)	(807.9)
1.1	Total Rate 1	4 583.3	4 486.1	97.2	(66.4)	163.6
1.2.1	Rate 6 - Sales	2 620.6	1 446.4	1 174.2	(9.5)	1 183.7
1.2.2	Rate 6 - T-Service	2 151.6	1 702.3	449.3	(29.9)	479.2
1.2	Total Rate 6	4 772.2	3 148.7	1 623.5	(39.4)	1 662.9
1.3.1	Rate 9 - Sales	1.0	5.4	(4.4)	0.0	(4.4)
1.3.2	Rate 9 - T-Service	0.2	2.0	(1.8)	0.0	(1.8)
1.3	Total Rate 9	1.2	7.4	(6.2)	0.0	(6.2)
1.	Total General Service Sales & T-Service	9 356.7	7 642.2	1 714.5	(105.8)	1 820.3
Contract Sales						
2.1	Rate 100	0.0	218.7	(218.7)	(2.7)	(216.0)
2.2	Rate 110	64.3	50.0	14.3	(0.1)	14.4
2.3	Rate 115	0.0	41.7	(41.7)	0.0	(41.7)
2.4	Rate 135	0.6	5.2	(4.6)	0.0	(4.6)
2.5	Rate 145	21.4	41.3	(19.9)	(0.3)	(19.6)
2.6	Rate 170	49.7	57.5	(7.8)	(0.1)	(7.7)
2.7	Rate 200	162.2	150.7	11.5	(6.2)	17.7
2.	Total Contract Sales	298.2	565.1	(266.9)	(9.4)	(257.5)
Contract T-Service						
3.1	Rate 100	0.0	1 169.9	(1169.9)	(13.1)	(1156.8)
3.2	Rate 110	423.8	570.4	(146.6)	(1.1)	(145.5)
3.3	Rate 115	532.5	864.5	(332.0)	(0.2)	(331.8)
3.4	Rate 125	0.0	0.0	0.0	0.0	0.0
3.5	Rate 135	54.6	50.2	4.4	0.0	4.4
3.6	Rate 145	133.0	210.5	(77.5)	(2.1)	(75.4)
3.7	Rate 170	470.3	672.5	(202.2)	(2.8)	(199.4)
3.8	Rate 300	31.0	0.0	31.0	0.0	31.0
3.9	Rate 315	0.0	31.2	(31.2)	0.0	(31.2)
3.	Total Contract T-Service	1 645.2	3 569.2	(1924.0)	(19.3)	(1904.7)
4.	Total Contract Sales & T-Service	1 943.4	4 134.3	(2190.9)	(28.7)	(2162.2)
5.	Total	11 300.1	11 776.5	(476.4)	(134.5)	(341.9)

*Note: Weather normalization adjustments have been made to the 2007 Budget utilizing the 2012 Budget degree days in order to place the two years on a comparable basis.

Witnesses: R. Lei
S. Qian

The principal reasons for the variances contributing to the weather normalized decrease of 341.9 10^6m^3 in the 2012 Bridge Year Estimate over the 2007 Board Approved Budget are as follows:

1. The volumetric increase of 163.6 10^6m^3 in Rate 1 is due to a favourable customer variance of 390.9 10^6m^3; partially offset by lower average use per customer totalling 227.3 10^6m^3;

2. The volumetric increase of 1,662.9 10^6m^3 in Rate 6 is due to net customer migration from Contract Sales and T-Service of 1,303.0 10^6m^3, customer growth of 338.0 10^6m^3 and a higher average use per customer totalling 21.9 10^6m^3;

3. The volumetric decrease of 6.2 10^6m^3 in Rate 9 is due to a lower average use per station totalling 3.1 10^6m^3 and the loss of stations of 3.1 10^6m^3;

4. The volumetric decrease for Contract Sales and T-Service of 2,162.2 10^6m^3 is due to decreases in the appartment sector of 670.2 10^6m^3, in the commercial sector of 517.1 10^6m^3 and in the industrial sector of 992.6 10^6m^3; partially offset by increase in Rate 200 17.7 10^6m^3. The decreases are primarily attributable to net customer migration to General Service of 1,303.0 10^6m^3 as stated above, and one large distributed energy customer with distribution volume of 202.0 10^6m^3 migrating from Rate 115 to Rate 125 that has no distribution volume effective July 1, 2008.

DETAILS OF OTHER REVENUE
2012 BRIDGE YEAR AND 2011 ACTUAL YEAR

Item No.		Col. 1 2012 Bridge Year ($Millions)	Col. 2 2011 Actualal Year ($Millions)	Col. 3 2012 Bridge Over/(Under) 2011 Actualal ($Millions)
1.1	Service Charges & DPAC	12.7	13.2	(0.5)
1.2	Rental Revenue - NGV Program	0.4	0.5	(0.1)
1.3	Late Payment Penalties	13.2	13.2	-
1.4	Dow Moore Recovery	0.3	0.3	-
1.5	Transactional Services (net)	8.0	8.0	-
1.6	Miscellaneous	0.1	0.8	(0.7)
1.7	Open Bill Revenue	5.4	5.4	-
1.9	Total Other Revenue	40.1	41.4	(1.3)

Witnesses: R. Lei
S. Qian

Details of Other Revenue
2012 Bridge Year and 2007 Board Approved

Item No.		Col. 1 2012 Bridge Year ($Millions)	Col. 2 2007 Board Approved ($Millions)	Col. 3 2012 Bridge Over/(Under) 2007 Board Approved ($Millions)
1.1	Service Charges & DPAC	12.7	11.9	0.8
1.2	Rental Revenue - NGV Program	0.4	1.3	(0.9)
1.3	Late Payment Penalties	13.2	8.0	5.2
1.4	Dow Moore Recovery	0.3	0.3	-
1.5	NGV merchandising revenue (net)	-	0.1	
1.6	Transactional Services (net)	8.0	8.0	-
1.7	Miscellaneous	0.1	0.1	-
1.8	Open Bill Revenue	5.4	5.4	-
1.9	Total Other Revenue	40.1	35.1	5.0

Witnesses: R. Lei
S. Qian

Transactional Services Revenue
Fiscal 2007 and 2012

Item #		Col. 1 Actual 2007	Col. 2 Board Approved* 2007	Col. 3 Variance	Col. 4 Estimate 2012	Col. 5 Board Approved* 2012	Variance
1.1	Transportation Services	10,300.0	n/a	n/a	n/a	n/a	n/a
1.2	Storage Services	9,900.0	n/a	n/a	n/a	n/a	n/a
1.	Total Transactional Services	20,200.0	8,000.0	12,200.0	13,700.0	8,000.0	5,700.0

*The 2007 and 2012 Board Approved budgets were not segmented by transaction type

Witnesses: V. Krauchek
J. Sarnovsky

RATE OF RETURN ON CAPITAL EMPLOYED IN THE
NATURAL GAS VEHICLES PROGRAM
YEAR ENDED DECEMBER 31, 2012

Item No.		Total 2012
		($000)
	Operating Income	
1.1.1	Gas Distribution Margin	760.4
1.1.2	Other Revenue	311.0
1.1	Total Revenue	1,071.4
	Expenses	
1.2.1	O&M	469.5
1.2.2	Depreciation	435.3
1.2	Total Expenses	904.7
1.3	Operating Income before Income Tax	166.6
1.4	Income Tax Provision (Recovery)	44.8
1	Operating Income after Income Taxes	121.8
	Investment	
2.1	Average Net Plant & Equipment	2,821.3
2.2	Allocated Capital	304.9
2.3	Working Capital	28.0
2	Net Utility Investment	3,154.2
3	Rate of Return on Investment	3.86%
4	Requested Rate of Return	6.29%
5.1	After Tax Sufficiency / (Deficiency)	(76.6)
5.2	Pre Tax Sufficiency / (Deficiency)	(103.8)

Witnesses: F. Ahmad
K. Culbert

UTILITY OPERATING REVENUE
2011 HISTORICAL YEAR

Line No.		Col. 1 Utility Revenue ($Millions)	Col. 2 Normalizing and Other Adjustments ($Millions)	Col. 3 Adjusted Utility Revenue ($Millions)
1.	Gas sales	1,979.5	(1.1)	1,978.4
2.	Transportation of gas	412.6	(1.4)	411.2
3.	Transmission, compression & storage	1.5	-	1.5
4.	Other operating revenue	40.6	-	40.6
5.	Interest and property rental	-	-	-
6.	Other income	0.8	-	0.8
7.	Total operating revenue	2,435.0	(2.5)	2,432.5

EXPLANATION OF ADJUSTMENTS TO UTILITY REVENUE
2011 HISTORICAL YEAR

Line No. Adjusted	Adjustment Increase (Decrease) ($Millions)	Explanation
1.	(1.1)	Gas sales Adjustment to gas sales revenue required to reflect normal weather.
2.	(1.4)	Transportation of gas Adjustment to gas transportation revenue required to reflect normal weather.

UTILITY REVENUE
2011 HISTORICAL YEAR

Line No.		Col. 1 EGDI Ont. Corporate Revenue ($Millions)	Col. 2 Adjustment ($Millions)	Col. 3 Utility Revenue ($Millions)
1.	Residential	1,246.8	0.2	1,247.0
2.	Commercial	622.1	-	622.1
3.	Industrial	82.1	-	82.1
4.	Wholesale	28.3	-	28.3
5.	Gas sales	1,979.3	0.2	1,979.5
6.	Transportation of gas	412.6	-	412.6
7.	Transmission, compression & storage	1.5	-	1.5
8.	Service charges & DPAC	13.2	-	13.2
9.	Rent from NGV rentals	0.4	0.1	0.5
10.	Late payment penalties	13.2	-	13.2
11.	Transactional services	12.4	(4.4)	8.0
12.	Open bill revenue	7.0	(1.6)	5.4
13.	Dow Moore recovery	0.3	-	0.3
14.	Affiliate asset use revenue	0.1	(0.1)	-
15.	ABC T-service (net)	5.9	(5.9)	-
16.	Other operating revenue	52.5	(11.9)	40.6
17.	Income from investments	0.5	(0.5)	-
18.	Interest during construction	5.2	(5.2)	-
19.	Interest income from affiliates	-	-	-
20.	Interest on (net) deferral accounts	-	-	-
21.	Property/asset use revenue 3rd party	1.2	(1.2)	-
22.	Interest and property rental	6.9	(6.9)	-
23.	Miscellaneous	14.4	(13.7)	0.7
24.	Dividend income	62.7	(62.7)	-
25.	Profit on sale of property	-	-	-
26.	NGV merchandising revenue (net)	0.1	-	0.1
27.	Other income	77.2	(76.4)	0.8
28.	Total revenue	2,530.0	(95.0)	2,435.0

Witness: K. Culbert

EXPLANATION OF ADJUSTMENTS TO EGDI CORPORATE REVENUE
2011 HISTORICAL YEAR

Line No. Adjusted	Adjustment Increase (Decrease) ($Millions)	Explanation	
1.	0.2	Residential Gas Sales Remove adjustment related to the updated 2010 tax saving sharing agreement included in the 2011 financials, but already reflected in the 2010 ESM calculation.	
9.	0.1	Rent from NGV rentals NGV revenue imputation to equate the program's overall return to the required regulated return.	
11.	(4.4)	Transactional services To eliminate transactional services revenues above the base amount included in approved rates. Ratepayer amounts above the base have been transferred to the 2011 TSDA, and shareholder amounts are eliminated from utility returns.	
12.	(1.6)	Open bill revenue To eliminate the shareholder portion of OBSDA and OBAVA write-off To eliminate the shareholder portion of net ex-franchise revenues To eliminate the Open Bill shareholder incentive	0.2 (0.2) (1.6) (1.6)
14.	(0.1)	Affiliate asset use revenue To reflect the elimination of asset use revenue in conjunction with the removal of affiliate use asset values from rate base and all related cost of service elements. (RP-2002-0133)	
15.	(5.9)	ABC T-Service (net) To eliminate the net revenue from ABC T-Service considered to be non-utility. (RP-1999-0001)	

EXPLANATION OF ADJUSTMENTS TO EGDI CORPORATE REVENUE
2011 HISTORICAL YEAR

Line No. Adjusted	Adjustment Increase (Decrease) ($Millions)	Explanation	
17.	(0.5)	Income from investments	
		To eliminate interest income from investments not included in Utility rate base.	
18.	(5.2)	Interest during construction	
		To eliminate interest calculated on funds used for purposes of construction during the year.	
21.	(1.2)	Property/asset use revenue 3rd party	
		To eliminate asset use revenue (RP-2002-0133) and rental revenue from Tecumseh farm properties considered to be non-utility. (EBRO 464 & 365)	
23.	(13.7)	Miscellaneous	
		To eliminate net revenue from the Company's oil & gas and unregulated storage divisions.	(13.4)
		To eliminate Electric CDM net revenues. Ratepayer amounts were transferred to the 2011 EPESDA and shareholder amounts are eliminated from utility results.	(0.3)
		To eliminate the shareholders' incentive income recorded as a result of calculating the SSMVA amount.	-
			(13.7)
24.	(62.7)	Dividend income	
		To eliminate non-utility inter-company dividend income.	-
		To eliminate non-utility inter-company dividend income from the financing transaction (EBO 179-16).	(62.7)
			(62.7)

Witness: K. Culbert

COMPARISON OF UTILITY OPERATING REVENUE
2011 ACTUAL AND BOARD APPROVED 2007 BUDGET

Item No.		Col. 1 2011 Actual ($Millions)	Col. 2 Board Approved 2007 Budget ($Millions)	Col. 3 2011 Actual Over/(Under) OEB Approved 2007 Budget ($Millions)
1.1	Gas Sales	1,978.4	2,377.1	(398.7)
1.2	Transportation of Gas	411.2	740.2	(329.0)
1.3	Transmission, Compression and Storage	1.5	1.7	(0.2)
1.4	Other Revenue	41.4	35.1	6.3
1.1	Total Operating Revenue	2,432.5	3,154.1	(721.6)

Witnesses: R. Lei
S. Qian

CUSTOMER METERS AND VOLUMES BY RATE CLASS
2011 ACTUAL YEAR

Item No.		Col. 1 Customers (Average)	Col. 2 Volumes (10^6m^3)	Col. 3 Revenues ($Millions)	
General Service					
1.1.1	Rate 1 - Sales	1 399 998	3 601.7	1 264.0	
1.1.2	Rate 1 - T-Service	402 580	1 098.2	194.9	
1.1	Total Rate 1	1 802 578	4 699.9	1 458.9	
1.2.1	Rate 6 - Sales	121 783	2 323.2	675.2	
1.2.2	Rate 6 - T-Service	35 540	2 396.8	178.2	
1.2	Total Rate 6	157 323	4 720.0	853.4	
1.3.1	Rate 9 - Sales	10	0.8	0.2	
1.3.2	Rate 9 - T-Service	1	0.1	0.0	**
1.3	Total Rate 9	11	0.9	0.2	
1.	Total General Service Sales & T-Service	1 959 912	9 420.8	2 312.5	
Contract Sales					
2.1	Rate 100	5	2.3	0.6	
2.2	Rate 110	34	66.6	14.1	
2.3	Rate 115	1	0.1	0.0	**
2.4	Rate 135	2	1.4	0.3	
2.5	Rate 145	12	22.8	4.5	
2.6	Rate 170	5	48.5	9.4	
2.7	Rate 200	1	168.7	28.3	
2.	Total Contract Sales	60	310.4	57.2	
Contract T-Service					
3.1	Rate 100	10	8.0	0.5	
3.2	Rate 110	171	479.5	13.8	
3.3	Rate 115	27	558.5	7.7	
3.4	Rate 125	4	0.0	* 7.8	
3.5	Rate 135	40	60.0	2.2	
3.6	Rate 145	114	161.5	5.4	
3.7	Rate 170	32	474.1	5.0	
3.8	Rate 300	8	30.5	0.5	
3.9	Rate 315	0	0.0	0.4	
3.	Total Contract T-Service	406	1 772.1	43.3	
4.	Total Contract Sales & T-Service	466	2 082.5	100.5	
5.	Total	1 960 378	11 503.3	2 413.0	

* There is no distribution volume for Rate 125 customers.
** Less than $50,000.

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2011 ACTUAL YEAR AND 2010 HISTORIC YEAR
(10^6m^3)

Item No.		Col. 1 2011 Actual Year	Col. 2 2010 Historic Year	Col. 3 2011 Actual Over (Under) 2010 Historic (1-2)
General Service				
1.1.1	Rate 1 - Sales	3 601.7	3 119.2	482.5
1.1.2	Rate 1 - T-Service	1 098.2	1 294.7	(196.5)
1.1	Total Rate 1	4 699.9	4 413.9	286.0
1.2.1	Rate 6 - Sales	2 323.2	1 959.3	363.9
1.2.2	Rate 6 - T-Service	2 396.8	2 382.7	14.1
1.2	Total Rate 6	4 720.0	4 342.0	378.0
1.3.1	Rate 9 - Sales	0.8	1.0	(0.2)
1.3.2	Rate 9 - T-Service	0.1	0.1	0.0
1.3	Total Rate 9	0.9	1.1	(0.2)
1.	Total General Service Sales & T-Service	9 420.8	8 757.0	663.8
Contract Sales				
2.1	Rate 100	2.3	4.8	(2.5)
2.2	Rate 110	66.6	69.1	(2.5)
2.3	Rate 115	0.1	(2.1)	2.2
2.4	Rate 135	1.4	5.6	(4.2)
2.5	Rate 145	22.8	22.0	0.8
2.6	Rate 170	48.5	37.8	10.7
2.7	Rate 200	168.7	169.6	(0.9)
2.	Total Contract Sales	310.4	306.8	3.6
Contract T-Service				
3.1	Rate 100	8.0	17.8	(9.8)
3.2	Rate 110	479.5	493.3	(13.8)
3.3	Rate 115	558.5	480.1	78.4
3.4	Rate 125	0.0 *	0.0 *	0.0
3.5	Rate 135	60.0	67.4	(7.4)
3.6	Rate 145	161.5	211.2	(49.7)
3.7	Rate 170	474.1	579.4	(105.3)
3.8	Rate 300	30.5	27.6	2.9
3.9	Rate 315	0.0	0.0	0.0
3.	Total Contract T-Service	1 772.1	1 876.8	(104.7)
4.	Total Contract Sales & T-Service	2 082.5	2 183.6	(101.1)
5.	Total	11 503.3	10 940.6	562.7

* There is no distribution volume for Rate 125 customers.

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2011 ACTUAL YEAR AND 2010 HISTORIC YEAR
(10^6m^3)

Item No.		Col. 1 2011 Actual Year	Col. 2 2010 Historic Year	Col. 3 2011 Actual Over (Under) 2010 Historic (1-2)	Col. 4 2010* Adjustments	Col. 5 2011 Actual Over (Under) 2010 Historic with Adjustments (3-4)
General Service						
1.1.1	Rate 1 - Sales	3 601.7	3 119.2	482.5	146.8	335.7
1.1.2	Rate 1 - T-Service	1 098.2	1 294.7	(196.5)	51.6	(248.1)
1.1	Total Rate 1	4 699.9	4 413.9	286.0	198.4	87.6
1.2.1	Rate 6 - Sales	2 323.2	1 959.3	363.9	92.0	271.9
1.2.2	Rate 6 - T-Service	2 396.8	2 382.7	14.1	60.5	(46.4)
1.2	Total Rate 6	4 720.0	4 342.0	378.0	152.5	225.5
1.3.1	Rate 9 - Sales	0.8	1.0	(0.2)	0.0	(0.2)
1.3.2	Rate 9 - T-Service	0.1	0.1	0.0	0.0	0.0
1.3	Total Rate 9	0.9	1.1	(0.2)	0.0	(0.2)
1.	Total General Service Sales & T-Service	9 420.8	8 757.0	663.8	350.9	312.9
Contract Sales						
2.1	Rate 100	2.3	4.8	(2.5)	0.1	(2.6)
2.2	Rate 110	66.6	69.1	(2.5)	0.2	(2.7)
2.3	Rate 115	0.1	(2.1)	2.2	0.0	2.2
2.4	Rate 135	1.4	5.6	(4.2)	0.0	(4.2)
2.5	Rate 145	22.8	22.0	0.8	1.0	(0.2)
2.6	Rate 170	48.5	37.8	10.7	0.7	10.0
2.7	Rate 200	168.7	169.6	(0.9)	2.4	(3.3)
2.	Total Contract Sales	310.4	306.8	3.6	4.4	(0.8)
Contract T-Service						
3.1	Rate 100	8.0	17.8	(9.8)	0.2	(10.0)
3.2	Rate 110	479.5	493.3	(13.8)	1.1	(14.9)
3.3	Rate 115	558.5	480.1	78.4	0.1	78.3
3.4	Rate 125	0.0	0.0	0.0	0.0	0.0
3.5	Rate 135	60.0	67.4	(7.4)	0.0	(7.4)
3.6	Rate 145	161.5	211.2	(49.7)	2.9	(52.6)
3.7	Rate 170	474.1	579.4	(105.3)	6.8	(112.1)
3.8	Rate 300	30.5	27.6	2.9	0.0	2.9
3.9	Rate 315	0.0	0.0	0.0	0.0	0.0
3.	Total Contract T-Service	1 772.1	1 876.8	(104.7)	11.1	(115.8)
4.	Total Contract Sales & T-Service	2 082.5	2 183.6	(101.1)	15.5	(116.6)
5.	Total	11 503.3	10 940.6	562.7	366.4	196.3

*Note: Weather normalization adjustments have been made to the 2011 Actual utilizing 2010 Actual Degree Days in order to place the two years on a comparable basis.

Witnesses: R. Lei
S. Qian

The principal reasons for the variances contributing to the weather normalized increase of 196.3 10^6m^3 in the 2011 Actual over the 2010 Historic are as follows:

1. The volumetric increase of 87.6 10^6m^3 in Rate 1 is due to a higher average use per customer totaling 11.5 10^6m^3 and a favorable customer variance of 76.1 10^6m^3;

2. The volumetric increase of 225.5 10^6m^3 in Rate 6 is due to a customer growth of 184.6 10^6m^3 and net customer migration from Contract Sales and T-Service of 61.9 10^6m^3; partially offset by a lower average use per customer of 21.0 10^6m^3;

3. The volumetric decrease of 0.2 10^6m^3 in Rate 9 was due to the loss of 12 stations of 1.0 10^6m^3; partially offset by a higher average use per station of 0.8 10^6m^3;

4. The volumetric decrease for Contract Sales and T-Service of 116.6 10^6m^3 was due to decreases in the apartment sector of 35.6 10^6m^3, the commercial sector of 84.1 10^3m^3 and Rate 200 of 3.3 10^6m^3; partially offset by an increase in the industrial sector of 6.4 10^6m^3.

Witnesses: R. Lei
S. Qian

GENERAL SERVICE
SYSTEM-WIDE TOTAL NORMALIZED AVERAGE USE*

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11	Col. 12	Col. 13	Col. 14
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 Actual Year	2012 Bridge Year Estimate	2013 Budget
Residential		2,975	2,869	2,844	2,831	2,786	2,716	2,680	2,670	2,640	2,593	2,562	2,523	2,492	2,491
	Change		(106)	(25)	(13)	(45)	(70)	(36)	(10)	(30)	(47)	(31)	(39)	(31)	(1)
	% Change		-3.56%	-0.87%	-0.46%	-1.59%	-2.51%	-1.33%	-0.37%	-1.12%	-1.78%	-1.20%	-1.52%	-1.23%	-0.04%
Apartment		79,237	79,588	80,512	81,828	81,783	78,307	85,577	99,377	123,734	141,644	161,844	150,684	159,642	151,222
	Change		351	924	1,316	(45)	(3,476)	7,270	13,800	24,357	17,910	20,200	(11,160)	8,958	(8,420)
	% Change		0.44%	1.16%	1.63%	-0.05%	-4.25%	9.28%	16.13%	24.51%	14.47%	14.26%	-6.90%	5.94%	-5.27%
Commercial		17,249	17,042	17,001	17,000	16,877	16,470	16,614	17,066	17,931	18,530	19,203	19,461	19,772	19,648
	Change		(207)	(41)	(1)	(123)	(407)	144	452	865	599	673	258	311	(124)
	% Change		-1.20%	-0.24%	-0.01%	-0.72%	-2.41%	0.87%	2.72%	5.07%	3.34%	3.63%	1.34%	1.60%	-0.63%
Industrial		57,075	54,320	51,791	54,856	50,563	51,424	53,620	58,779	73,938	88,264	106,163	108,872	113,866	108,350
	Change		(2,755)	(2,529)	3,065	(4,293)	861	2,196	5,159	15,159	14,326	17,899	2,709	4,994	(5,516)
	% Change		-4.83%	-4.66%	5.92%	-7.83%	1.70%	4.27%	9.62%	25.79%	19.38%	20.28%	2.55%	4.59%	-4.84%

* All historical average uses are on a calendar-year basis and have been normalized to the 2013 Budget degree days.

Updated: 2012-06-01
EB-2011-0354
Exhibit C5
Tab 2
Schedule 3
Page 1 of 2

Witnesses: R. Lei
S. Qian

GENERAL SERVICE
SYSTEM-WIDE TOTAL NORMALIZED AVERAGE USE*

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11	Col. 12	Col. 13	Col. 14
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 Actual Year	2012 Bridge Year Estimate	2013 Budget
Rate 1		2,975	2,869	2,844	2,831	2,786	2,716	2,680	2,670	2,640	2,593	2,562	2,523	2,492	2,491
	Change		(106)	(25)	(13)	(45)	(70)	(36)	(10)	(30)	(47)	(31)	(39)	(31)	(1)
	% Change		-3.56%	-0.87%	-0.46%	-1.59%	-2.51%	-1.33%	-0.37%	-1.12%	-1.78%	-1.20%	-1.52%	-1.23%	-0.04%
Rate 6		21,565	21,221	21,093	21,275	20,970	20,447	20,960	22,243	24,871	26,685	28,873	29,007	29,941	29,132
	Change		(344)	(128)	182	(305)	(523)	513	1,283	2,628	1,814	2,188	134	934	(809)
	% Change		-1.60%	-0.60%	0.86%	-1.43%	-2.49%	2.51%	6.12%	11.81%	7.29%	8.20%	0.46%	3.22%	-2.70%

* All historical average uses are on a calendar-year basis and have been normalized to the 2013 Budget degree days.

Updated: 2012-06-01
EB-2011-0354
Exhibit C5
Tab 2
Schedule 3
Page 2 of 2

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2011 ACTUAL YEAR AND 2007 BOARD APPROVED BUDGET
(10^6m^3)

Item No.		Col. 1 2011 Actual Year	Col. 2 2007 Budget	Col. 3 2011 Actual Over (Under) 2007 Budget (1-2)
General Service				
1.1.1	Rate 1 - Sales	3 601.7	2 763.1	838.6
1.1.2	Rate 1 - T-Service	1 098.2	1 723.0	(624.8)
1.1	Total Rate 1	4 699.9	4 486.1	213.8
1.2.1	Rate 6 - Sales	2 323.2	1 446.4	876.8
1.2.2	Rate 6 - T-Service	2 396.8	1 702.3	694.5
1.2	Total Rate 6	4 720.0	3 148.7	1 571.3
1.3.1	Rate 9 - Sales	0.8	5.4	(4.6)
1.3.2	Rate 9 - T-Service	0.1	2.0	(1.9)
1.3	Total Rate 9	0.9	7.4	(6.5)
1.	Total General Service Sales & T-Service	9 420.8	7 642.2	1 778.6
Contract Sales				
2.1	Rate 100	2.3	218.7	(216.4)
2.2	Rate 110	66.6	50.0	16.6
2.3	Rate 115	0.1	41.7	(41.6)
2.4	Rate 135	1.4	5.2	(3.8)
2.5	Rate 145	22.8	41.3	(18.5)
2.6	Rate 170	48.5	57.5	(9.0)
2.7	Rate 200	168.7	150.7	18.0
2.	Total Contract Sales	310.4	565.1	(254.7)
Contract T-Service				
3.1	Rate 100	8.0	1 169.9	(1161.9)
3.2	Rate 110	479.5	570.4	(90.9)
3.3	Rate 115	558.5	864.5	(306.0)
3.4	Rate 125	0.0 *	0.0 *	0.0
3.5	Rate 135	60.0	50.2	9.8
3.6	Rate 145	161.5	210.5	(49.0)
3.7	Rate 170	474.1	672.5	(198.4)
3.8	Rate 300	30.5	0.0	30.5
3.9	Rate 305	0.0	31.2	(31.2)
3.	Total Contract T-Service	1 772.1	3 569.2	(1797.1)
4.	Total Contract Sales & T-Service	2 082.5	4 134.3	(2051.8)
5.	Total	11 503.3	11 776.5	(273.2)

* There is no distribution volume for Rate 125 customers.

Witnesses: R. Lei
S. Qian

COMPARISON OF GAS SALES AND
TRANSPORTATION VOLUME BY RATE CLASS
2011 ACTUAL YEAR AND 2007 BOARD APPROVED BUDGET
($10^6 m^3$)

Item No.		Col. 1 2011 Actual Year	Col. 2 2007 Budget	Col. 3 2011 Actual Over (Under) 2007 Budget (1-2)	Col. 4 2007* Adjustments		Col. 5 2011 Actual Over (Under) 2007 Budget with Adjustments (3-4)
General Service							
1.1.1	Rate 1 - Sales	3 601.7	2 763.1	838.6	45.9		792.7
1.1.2	Rate 1 - T-Service	1 098.2	1 723.0	(624.8)	31.5		(656.3)
1.1	Total Rate 1	4 699.9	4 486.1	213.8	77.4		136.4
1.2.1	Rate 6 - Sales	2 323.2	1 446.4	876.8	33.4		843.4
1.2.2	Rate 6 - T-Service	2 396.8	1 702.3	694.5	37.2		657.3
1.2	Total Rate 6	4 720.0	3 148.7	1 571.3	70.6		1 500.7
1.3.1	Rate 9 - Sales	0.8	5.4	(4.6)	0.0		(4.6)
1.3.2	Rate 9 - T-Service	0.1	2.0	(1.9)	0.0		(1.9)
1.3	Total Rate 9	0.9	7.4	(6.5)	0.0		(6.5)
1.	Total General Service Sales & T-Service	9 420.8	7 642.2	1 778.6	148.0		1 630.6
Contract Sales							
2.1	Rate 100	2.3	218.7	(216.4)	2.8		(219.2)
2.2	Rate 110	66.6	50.0	16.6	0.1		16.5
2.3	Rate 115	0.1	41.7	(41.6)	0.0	**	(41.6)
2.4	Rate 135	1.4	5.2	(3.8)	0.0		(3.8)
2.5	Rate 145	22.8	41.3	(18.5)	0.1		(18.6)
2.6	Rate 170	48.5	57.5	(9.0)	0.0	**	(9.0)
2.7	Rate 200	168.7	150.7	18.0	10.0		8.0
2.	Total Contract Sales	310.4	565.1	(254.7)	13.0		(267.7)
Contract T-Service							
3.1	Rate 100	8.0	1 169.9	(1161.9)	18.9		(1180.8)
3.2	Rate 110	479.5	570.4	(90.9)	0.9		(91.8)
3.3	Rate 115	558.5	864.5	(306.0)	0.1		(306.1)
3.4	Rate 125	0.0	0.0	0.0	0.0		0.0
3.5	Rate 135	60.0	50.2	9.8	0.0	**	9.8
3.6	Rate 145	161.5	210.5	(49.0)	1.9		(50.9)
3.7	Rate 170	474.1	672.5	(198.4)	2.7		(201.1)
3.8	Rate 300	30.5	0.0	30.5	0.0		30.5
3.9	Rate 305	0.0	31.2	(31.2)	0.0		(31.2)
3.	Total Contract T-Service	1 772.1	3 569.2	(1797.1)	24.5		(1821.6)
4.	Total Contract Sales & T-Service	2 082.5	4 134.3	(2051.8)	37.5		(2089.3)
5.	Total	11 503.3	11 776.5	(273.2)	185.5		(458.7)

*Note: Weather normalization adjustments have been made to the 2007 Budget utilizing the 2011 Actual degree days in order to place the two years on a comparable basis.

** Less than 50,000 m^3.

Witnesses: R. Lei
S. Qian

The principal reasons for the variances contributing to the weather normalized decrease of 458.7 10^6m^3 in the 2011 Actual Year over the 2007 Board Approved Budget are as follows:

1. The volumetric increase of 136.4 10^6m^3 in Rate 1 is due to a favourable customer variance of 343.1 10^6m^3; partially offset by lower average use per customer totaling 206.7 10^6m^3;

2. The volumetric increase of 1,500.7 10^6m^3 in Rate 6 is due to net customer migration from Contract Sales and T-Service of 1,275.0 10^6m^3, customer growth of 315.2 10^6m^3; partially offset by a lower average use per customer totaling 89.5 10^6m^3;

3. The volumetric decrease of 6.5 10^6m^3 in Rate 9 is due to a lower average use per station totaling 4.7 10^6m^3 and the loss of stations of 1.8 10^6m^3;

4. The volumetric decrease for Contract Sales and T-Service of 2,089.3 10^6m^3 is due to decreases in the apartment sector of 670.4 10^6m^3, in the commercial sector of 673.2 10^6m^3 and in the industrial sector of 753.7 10^6m^3; partially offset by increase in Rate 200 8.0 10^6m^3. The decreases are primarily attributable to net customer migration to General Service of 1,275.0 10^6m^3 as stated above, and one large distributed energy customer with distribution volume of 202.0 10^6m^3 migrating from Rate 115 to Rate 125 that has no distribution volume effective July 1, 2008.

Witnesses: R. Lei
S. Qian

GENERAL SERVICE AVERAGE USES
HISTORICAL NORMALIZED ACTUAL AND BOARD APPROVED
FISCAL AND CALENDAR YEARS

1. In order to compare the year over year variance between actual and Board Approved normalized average uses on the same basis, each year actual results have to be normalized to the corresponding Board Approved degree days for that year. As both of historical Board Approved degree days and average uses were developed based upon a fiscal year ended September 30 up to 2005, they are presented on a fiscal-year basis up to 2005 in this exhibit. From 2006 onwards, they are presented on a calendar year basis.

2. The actual average uses on page 3 of this exhibit have been normalized to the corresponding Board Approved Conventional degree days for that year as indicated in Table 1.

3. The average uses on page 3 of this exhibit are different from those presented at Exhibit C5, Tab 2, Schedule 3. The average uses filed at Exhibit C5, Tab 2, Schedule 3 are all normalized to the test year degree days instead of each year's corresponding Board Approved degree days and they are all presented on a calendar-year basis.

Witnesses: R. Lei
S. Qian

Table 1
Summary of Actual and Board Approved Degree Days

	Test Year	Col. 1 Actual Degree Days	Col. 2 Budget Degree Days	Col. 3 Variance Degree Days (1)-(2)
FISCAL YEAR	2000	3,526	3,929	(403)
	2001	3,766	3,808	(42)
	2002	3,362	3,700	(338)
	2003	4,029	3,565	464
	2004	3,774	3,565	209
	2005	3,728	3,752	(24)
CALENDAR YEAR	2006	3,448	3,745	(297)
	2007	3,613	3,617	(4)
	2008	3,750	3,543	207
	2009	3,764	3,514	250
	2010	3,454	3,546	(92)
	2011	3,597	3,602	(5)

Witnesses: R. Lei
S. Qian

GENERAL SERVICE AVERAGE USES

	Test Year	Rate Classes	Col. 1 Actual Normalized Average Use (m^3)	Col. 2 Board Approved Normalized Average Use (m^3)	Col. 3 Variance Normalized Average Use (1-2)	Col. 4 %Variance Normalized Average Use (3/2)*100
FISCAL YEAR	2000	Rate 1	3,238	3,218	20	0.6%
		Rate 6	23,560	22,842	718	3.1%
		Total General Service	5,149	5,092	57	1.1%
	2001	Rate 1	3,014	3,044	(30)	-1.0%
		Rate 6	22,510	22,643	(133)	-0.6%
		Total General Service	4,817	4,861	(44)	-0.9%
	2002	Rate 1	2,980	2,970	10	0.3%
		Rate 6	22,097	22,125	(28)	-0.1%
		Total General Service	4,710	4,756	(46)	-1.0%
	2003	Rate 1	2,877	2,892	(15)	-0.5%
		Rate 6	21,593	21,685	(92)	-0.4%
		Total General Service	4,541	4,579	(38)	-0.8%
	2004*	Rate 1	2,843	2,857	(14)	-0.5%
		Rate 6	21,472	21,612	(140)	-0.6%
		Total General Service	4,461	4,502	(41)	-0.9%
	2005	Rate 1	2,890	2,953	(63)	-2.1%
		Rate 6	22,241	22,507	(266)	-1.2%
		Total General Service	4,547	4,646	(99)	-2.1%
CALENDAR YEAR	2006	Rate 1	2,796	2,850	(54)	-1.9%
		Rate 6	22,272	21,999	273	1.2%
		Total General Service	4,444	4,438	6	0.1%
	2007	Rate 1	2,726	2,687	39	1.5%
		Rate 6	22,783	21,010	1,773	8.4%
		Total General Service	4,412	4,200	212	5.0%
	2008	Rate 1	2,636	2,647	(11)	-0.4%
		Rate 6	24,869	24,204	665	2.7%
		Total General Service	4,493	4,449	44	1.0%
	2009	Rate 1	2,604	2,637	(33)	-1.3%
		Rate 6	27,281	28,165	(884)	-3.1%
		Total General Service	4,659	4,770	(111)	-2.3%
	2010	Rate 1	2,579	2,622	(43)	-1.6%
		Rate 6	29,106	27,949	1,157	4.1%
		Total General Service	4,403	4,705	(302)	-6.4%
	2011	Rate 1	2,594	2,643	(49)	-1.9%
		Rate 6	29,471	28,029	1,442	5.1%
		Total General Service	4,807	4,726	81	1.7%

* 2004 Bridge Year Estimate from RP-2003-0203 was reported at column 2 because Board Approved numbers are not available due to the nature of the 2004 Rate Application. Please see RP-2003-0048, Exhibit A, Tab 3, Schedule 1 for the rationale for implementing this new approach.

Witnesses: R. Lei
S. Qian

LARGE VOLUME (CONTRACT) CUSTOMER DEMAND
HISTORICAL NORMALIZED ACTUAL AND BOARD APPROVED
FISCAL AND CALENDAR YEARS

1. In order to compare the year over year variance between actual and Board Approved normalized average use, each year's actual results have to be normalized to the corresponding Board Approved degree days for that year. As both of historical Board Approved degree days and average uses were developed based upon a fiscal year ended September 30 up to 2005, they are presented on a fiscal year basis up to 2005 in this exhibit. From 2006 onwards, they are presented on a calendar year basis.

2. The actual average consumption on page 3 of this exhibit has been normalized to the corresponding Board Approved Conventional degree days for that year as indicated in Table 1. Contract market customers' volumes are much less weather sensitive than General Service customer's as illustrated in Exhibit C5, Tab 2, Schedule 6.

Witnesses: R. Lei
S. Qian

Table 1
Summary of Actual and Board Approved Degree Days

	Test Year	Col. 1 Actual Degree Days	Col. 2 Budget Degree Days	Col. 3 Variance Degree Days (1)-(2)
FISCAL YEAR	2000	3,526	3,929	(403)
	2001	3,766	3,808	(42)
	2002	3,362	3,700	(338)
	2003	4,029	3,565	464
	2004	3,774	3,565	209
	2005	3,728	3,752	(24)
CALENDAR YEAR	2006	3,448	3,745	(297)
	2007	3,613	3,617	(4)
	2008	3,750	3,543	207
	2009	3,764	3,514	250
	2010	3,454	3,546	(92)
	2011	3,597	3,602	(5)

Witnesses: R. Lei
S. Qian

Table 2
CONTRACT CUSTOMERS NORMALIZED VOLUME

	Test Year	Col. 1 Actual Normalized Consumption (10^6m^3)	Col. 2 Board Approved Normalized Consumption (10^6m^3)	Col. 3 Variance Normalized Consumption (1-2)	Col. 4 %Variance Normalized Consumption (3/2)*100
FISCAL YEAR	2001	4,292.5	4,517.1	(224.6)	-5.0%
	2002	4,433.6	4,355.6	78.0	1.8%
	2003	4,380.7	4,400.2	(19.5)	-0.4%
	2004*	4,275.7	4,309.7	(34.0)	-0.8%
	2005	4,199.2	4,334.2	(135.0)	-3.1%
CALENDAR YEAR	2006	4,119.1	4,387.9	(268.8)	-6.1%
	2007	3,739.8	4,134.3	(394.5)	-9.5%
	2008	3,099.6	3,355.2	(255.6)	-7.6%
	2009	2,191.4	2,316.6	(125.2)	-5.4%
	2010	2,175.7	2,008.6	167.1	8.3%
	2011	2,082.5	2,022.9	59.6	2.9%

* 2004 Bridge Year Estimate from RP-2003-0203 was reported at Column 2 because Board Approved numbers are not available due to the nature of the 2004 Rate Application. Please see RP-2003-0048, Exhibit A, Tab 3, Schedule 1 for the rationale for implementing this new approach.

Witnesses: R. Lei
S. Qian

DETAILS OF OTHER REVENUE
2011 ACTUAL YEAR AND 2007 BOARD APPROVED

Item No.		Col. 1 2011 Actual Year ($Millions)	Col. 2 2007 Board Approved ($Millions)	Col. 3 2011 Actual Over/(Under) 2007 Board Approved ($Millions)
1.1	Service Charges & DPAC	13.2	11.9	1.3
1.2	Rental Revenue - NGV Program	0.5	1.3	(0.8)
1.3	Late Payment Penalties	13.2	8.0	5.2
1.4	Dow Moore Recovery	0.3	0.3	-
1.5	NGV merchandising revenue (net)	-	0.1	
1.6	Transactional Services (net)	8.0	8.0	-
1.7	Miscellaneous	0.8	0.1	0.7
1.8	Open Bill Revenue	5.4	5.4	-
1.9	Total Other Revenue	41.4	35.1	6.3

Witnesses: R. Lei
S. Qian

TRANSACTIONAL SERVICES REVENUE
FISCAL 2007 AND 2011

Item #		Col. 1 Actual 2007	Col. 2 Board Approved* 2007	Col. 3 Variance	Col. 4 Estimate 2011	Col. 5 Board Approved* 2011	Variance
1.1	Transportation Services	10,300.0	n/a	n/a	15,000.0	n/a	n/a
1.2	Storage Services	9,900.0	n/a	n/a	2,700.0	n/a	n/a
1.	Total Transactional Services	20,200.0	8,000.0	12,200.0	17,700.0	8,000.0	9,700.0

*The 2007 and 2011 Board Approved budgets were not segmented by transaction type

Witnesses: J. Denomy
V. Krauchek

RATE OF RETURN ON CAPITAL EMPLOYED IN THE
NATURAL GAS VEHICLES PROGRAM
YEAR ENDED DECEMBER 31, 2011

Item No.		Total 2011
		($000)
	Operating Income	
1.1.1	Gas Distribution Margin	752.9
1.1.2	Other Revenue	391.0
1.1	Total Revenue	1,143.9
	Expenses	
1.2.1	O&M	530.9
1.2.2	Depreciation	440.5
1.2	Total Expenses	971.4
1.3	Operating Income before Income Tax	172.5
1.4	Income Tax Provision (Recovery)	50.8
1	Operating Income after Income Taxes	121.7
	Investment	
2.1	Average Net Plant & Equipment	3,013.9
2.2	Allocated Capital	225.5
2.3	Working Capital	27.2
2	Net Utility Investment	3,266.6
3	Rate of Return on Investment	3.73%
4	Allowed Rate of Return	6.50%
5.1	After Tax Sufficiency / (Deficiency)	(90.6)
5.2	Pre Tax Sufficiency / (Deficiency)	(126.3)

Witnesses: F. Ahmad
K. Culbert