

RATE BASE EVIDENCE AND SUMMARIES

1. This evidence deals with information with respect to EGD's utility rate base and the levels of gross plant, accumulated depreciation and working capital elements within rate base.
2. The following table shows each of these elements within EGD's Rate Base for each of the 2011 Estimate, the 2012 Bridge Year and the 2013 Test Year.

Table 1
Utility Rate Base Summary

Line No.	(\$millions)	2011 Estimate	2012 Bridge	2013 Test Including CIS & Customer Care
1.	Gross Plant	6,072.3	6,406.3	6,759.0
2.	Accumulated Depreciation	(2,399.9)	(2,594.2)	(2,823.7)
3.	Net Plant	3,672.4	3,812.1	3,935.3
4.	Working Capital	302.2	256.6	255.5
5.	Rate Base	3,974.6	4,068.7	4,190.8

3. More details of each of the components of rate base are found at Exhibit B1, Tab 1, Schedule 2.
4. The 2013 Test Year rate base of \$4,190.8 million is higher by \$122.1 million than the 2012 Bridge Year rate base of \$4,068.7 million. This increase is mainly due to property, plant and equipment costs and amounts closing into service offset partly by increases in accumulated depreciation. Such costs are required in order to continue to meet existing customer needs and to service new customers.

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5. Gross Plant – the following table shows the continuity of gross plant from the 2011 Estimate through the 2013 Test Year.
6. EGD's average gross plant for the 2013 Test Year is \$6,759.0 million, an increase of \$352.7 million over the 2012 Bridge Year average gross plant of \$6,406.3 million. The increase is due to capital expenditures, the level of capital closing into service along with offsetting retirements during the year.

Table 2
Gross Plant Continuity Summary

Line No.	(\$millions)	2011 Estimate	2012 Bridge	2013 Test Including CIS & Customer Care
1.	Opening balance	5,981.1	6,255.5	6,632.5
2.	Capital expenditures	398.0	404.5	483.9
3.	Transfers - WIP	(57.4)	27.2	(103.5)
4.	Retirements / adjustments	(66.2)	(54.7)	(45.7)
5.	Closing balance	6,255.5	6,632.5	6,967.2
6.	Unadjusted average of averages	6,081.4	6,415.4	6,768.1
7.	Shared asset adjustments	(9.1)	(9.1)	(9.1)
8.	Utility average of averages	6,072.3	6,406.3	6,759.0

7. Details of the average of averages balances shown above, and plant continuities by function and by individual plant account, are found at Exhibit B3, Tab 1, Schedule 2; Exhibit B4, Tab 1, Schedule 2; and Exhibit B5, Tab 1, Schedule 2; for the 2013 Test Year budget to the 2011 Estimate results respectively. A summary of capital expenditures for all years is found at Exhibit B1, Tab 2, Schedule 3.

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8. Accumulated Depreciation – the following table shows the continuity of accumulated depreciation from the 2011 estimate through the 2013 Test Year.
9. EGD's average accumulated depreciation for the 2013 Test Year is \$2,823.7 million, an increase of \$229.5 million over the 2012 Bridge Year average accumulated depreciation of \$2,594.2 million. The increase is due to the normal additional year of depreciation on gross plant, with an offsetting depreciation decline of \$5.8 million as a result of the proposed changes in depreciation rates as indicated in evidence found at Exhibit D1, Tab 5, Schedule 1.

Table 3
Accumulated Depreciation Continuity Summary

Line No.	(\$millions)	2011 Estimate	2012 Bridge	2013 Test Including CIS & Customer Care
1.	Opening balance	(2,303.1)	(2,487.1)	(2,698.3)
2.	Provision	(276.2)	(291.7)	(302.4)
3.	Costs net proceeds	26.0	25.8	19.1
4.	Retirements	66.2	54.7	45.7
5.	Unadjusted closing balance	(2,487.1)	(2,698.3)	(2,935.9)
6.	Adjustment to approved CIS balance	-	-	(9.0)
7.	Closing balance	(2,487.1)	(2,698.3)	(2,944.9)
8.	Unadjusted average of averages	(2,400.8)	(2,595.1)	(2,815.6)
9.	Adjustment to approved CIS balance	-	-	(9.0)
10.	Shared asset adjustments	0.9	0.9	0.9
11.	Utility Average of averages	(2,399.9)	(2,594.2)	(2,823.7)

10. Details of the average of averages balances shown above, and accumulated depreciation by function and individual plant account, are found at Exhibit B3,

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Tab 1, Schedule 2; Exhibit B4, Tab 1, Schedule 2; and Exhibit B5, Tab 1, Schedule 2 for the 2013 Test Year budget to 2011 Estimate results respectively. The provision for depreciation for the 2011 estimate and 2012 bridge year results are based on the current Board Approved depreciation rates. EGD has based the 2013 depreciation provision on newly proposed rates, the details of which are found at Exhibit D1, Tab 5, Schedule 1, and at Exhibit D2, Tab 2, Schedules 1 & 2.

11. Working Capital – the following table shows the average of averages balances for all working capital components included within rate base from the 2011 Estimate through the 2013 Test Year.
12. EGD's average total working capital for the 2013 Test Year is \$255.5 million, a decrease of \$1.1 million from the 2012 Bridge Year average working capital of \$256.6 million. This is mainly the result of a decrease in the value of gas in storage due to an anticipated decrease in average storage volumes for the year offset slightly by a higher working cash allowance requirement.

Table 4
Average Balance of Working Capital Components

Line No.	(\$millions)	2011 Estimate	2012 Bridge	2013 Test Including CIS & Customer Care
1.	Accounts receivable merchandise finance plan	-	-	-
2.	Accounts receivable rebillable projects	1.7	0.3	1.3
3.	Materials & supplies	28.3	31.2	31.9
4.	Mortgages receivable	0.5	0.3	0.2
5.	Customer security deposits	(74.7)	(70.5)	(68.7)
6.	Prepaid expenses	1.5	1.8	1.8
7.	Gas in storage	348.5	302.0	288.6
8.	Working cash allowance	(3.6)	(8.5)	0.4
9.	Total average of averages	302.2	256.6	255.5

13. Details of the average of monthly averages shown above are shown at Exhibit B3, Tab 1, Schedule 3; Exhibit B4, Tab 1, Schedule 3; and Exhibit B5, Tab 1, Schedule 3 for the 2013 Test Year budget to 2011 Estimate results respectively.

14. The 2012 Bridge Year budget versus 2011 Estimate

EGD's rate base for the 2012 Bridge Year forecast of \$4,068.7 million is up \$94.1 million from the 2011 Estimate. The increase is mainly due to an increase in plant due to higher capital expenditures with a slightly offsetting lower gas in storage value.

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UTILITY RATE BASE
YEAR TO YEAR SUMMARY

	Col. 1	Col. 2	Col. 3	Col. 4
Line No.	2007 Board Approved	2011 Historical Year (Estimate)	2012 Bridge Year	2013 Test Year Incl. CIS & Customer Care
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
<u>Property, Plant, and Equipment</u>				
1. Cost or redetermined value	4,979.3	6,072.3	6,406.3	6,759.0
2. Accumulated depreciation	<u>(1,839.1)</u>	<u>(2,399.9)</u>	<u>(2,594.2)</u>	<u>(2,823.7)</u>
3.	<u>3,140.2</u>	<u>3,672.4</u>	<u>3,812.1</u>	<u>3,935.3</u>
<u>Allowance for Working Capital</u>				
4. Accounts receivable merchandise finance plan	0.1	-	-	-
5. Accounts receivable rebillable projects	6.9	1.7	0.3	1.3
6. Materials and supplies	21.0	28.3	31.2	31.9
7. Mortgages receivable	0.9	0.5	0.3	0.2
8. Customer security deposits	(42.8)	(74.7)	(70.5)	(68.7)
9. Prepaid expenses	2.7	1.5	1.8	1.8
10. Gas in storage	613.1	348.5	302.0	288.6
11. Working cash allowance	<u>3.6</u>	<u>(3.6)</u>	<u>(8.5)</u>	<u>0.4</u>
12. Total Working Capital	<u>605.5</u>	<u>302.2</u>	<u>256.6</u>	<u>255.5</u>
13. <u>Utility Rate Base</u>	<u>3,745.7</u>	<u>3,974.6</u>	<u>4,068.7</u>	<u>4,190.8</u>

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RATE BASE - CAPITAL BUDGET

1. The purpose of this evidence is to present the 2013 Budget for capital expenditures. The “B” series of exhibits provide the Ontario Energy Board (the “Board”) with information and variance explanations concerning, 2011 Historic Year, 2012 Estimate Year, and 2013 Test Year capital expenditures and customer additions. Appendix 1 provides a detailed breakdown of 2007 Board Approved Budget, 2011 Historic, 2012 Estimate and 2013 Budget.

2013 Budget

2. The 2013 Capital Budget is a consolidation of the traditional ‘grassroots’ budget prepared by all departments within Enbridge Gas Distribution (“Enbridge” or the “Company”) in accordance with the guidelines and assumptions setout in the Budget Letter. The budget was developed in consideration of the Company’s key business objectives of a continued focus on safety and reliability, customer service, and adherence to legislative and regulatory requirements. The Capital Budget was reviewed and approved by the Executive Management Team (the “EMT”).
3. At Exhibit B1, Tab 3, Schedule 1, the Company describes how it has undertaken the development of an Asset Plan which, when filed as Exhibit B2, Tab 2, Schedule 1, will identify the distribution system capital requirements to address customer growth, reinforcement, integrity and reliability, and relocation needs over a ten year period. As described in the Asset Plan evidence, the plan is a rolling plan and will be updated each year. The to be filed Asset Plan covers the period from 2012 to 2021. The Company expects to file the Asset Plan in March 2012.

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4. The key function and utility of a methodologically developed Asset Plan is the prioritization of capital requirements . The Asset Plan sets out the nature, timing and anticipated cost of the capital requirements for the distribution system for each year of the Asset Plan's ten year term. It will fully detail the capital requirements associated with the distribution assets for the Test Year and the Bridge Year. As management of distribution assets are the Company's core business, the Asset Plan identifies the majority of the Company's capital requirements.
5. Capital requirements that are not included in the Asset Plan include those required for Information Technology, Storage, Facilities and other non-distribution asset capital needs. This Asset Plan however will certainly inform the decision making in respect of these other capital requirements.
6. While a detailed Asset Plan was not prepared for 2011 the capital requirement needs of the Company in 2011 can be identified by asset category and consequently can be categorized in a fashion similar to the Asset Plan for ease of reference. Table 1 on the following page has characterized the 2011 capital budget in this fashion.
7. Table 1 on the following page shows the planned expenditures for the Company are \$398.0 million in 2011, \$404.5 million in 2012 and \$483.9 million in 2013. These expenditures are those required to meet the needs identified and prioritized by the Asset Plan which responds to customer needs including safety which continues to be a primary focus for the Company. This includes ensuring and maintaining pipeline integrity and compliance with applicable technical legislation, establishing policies and procedures to ensure a safe work environment for employees and a safe and reliable distribution system for customers and the public all in conformance with utility best practices. In addition to ongoing safety

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initiatives, the Company has included other initiatives that support the Asset Plan and Integrity Management in its capital requirements. These initiatives are included in Exhibit B1, Tab 2, Schedule 1.

Table 1
Summary of Capital Expenditures and Customer Additions

Exhibit References	Col 1 B5-T2-S1	Col 2 B5-T2-S1 B5-T2-S3	Col 3 B4-T2-S1 B4-T2-S3	Col 4 B3-T2-S1 B3-T2-S3
	<u>Board Approved</u>	<u>Historic</u>	<u>Estimate</u>	<u>Test Year</u>
(\$Millions)	Budget 2007	Year 2011	Year 2012	Budget 2013
Customer Related Distribution Plant	134.2	133.4	118.8	138.6
NGV Rental Equipment	0.2	0.2	0.3	0.3
System Improvements and Upgrades	149.1	165.5	188.2	257.5
General and Other Plant	30.0	68.8	71.2	67.4
Underground Storage Plant	4.5	30.1	26.0	20.1
Total Capital Expenditures	<u>318.0</u>	<u>398.0</u>	<u>404.5</u>	<u>483.9</u>
Customer Additions	46,228	36,753	37,927	38,896
Average (\$Dollars) Cost per Customer Addition including Power Generation	\$ 2,903	\$ 3,630	\$ 3,132	\$ 3,563
Average (\$Dollars) Cost per Customer Addition excluding Power Generation	\$ 2,276	\$ 3,085	\$ 3,088	\$ 3,201

8. As shown in Appendix 1 of this schedule, customer related plant includes the cost of mains, services and meters associated with the customer growth the Company continues to experience. It also includes estimates to supply Power Generation projects totaling \$20.0 million in 2011, \$1.8 million in 2012 and \$14.0 million in 2013.
9. In addition to the Power Generation projects, the figures in Table 1 above, include estimates for projects which also have or will require specific Leave to Construct ("LTC") applications. These LTC Projects total \$5.0 million in 2011, \$26.9 million in 2012 and \$57.1 million in 2013. The LTC projects, which include potential power generation facilities and large reinforcement and replacement mains projects, will

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need to receive separate approval by the Board. These projects are discussed at Exhibit B1, Tab 3, Schedule 3, LTC Projects and are also included in Exhibit B1, Tab 2, Schedule 2, Listing of Projects over \$500,000.

10. System Improvements and Upgrades includes relocation and replacement mains as well as reinforcements. It also includes all safety and integrity programs associated with the Company's assets. These can be associated with services, regulators and/or meters as shown in Appendix 1. Additional details of these requirements are contained in the Asset Plan at Exhibit B2, Tab 2, Schedule 1. The capital requirement for System Improvements and Upgrades is \$165.5 million in 2011, \$188.2 million in 2012 and \$257.5 million in 2013. Projects costing more than \$500,000 are listed at Exhibit B1, Tab 2, Schedule 2.

2011 Historic Comparison to 2007 Board Approved

11. The 2011 Historic year is \$398.0 million, which was \$80.0 million higher than the 2007 Fiscal Board Approved Budget of \$318.0 million. The Board in its EB-2006-0034 ADR settlement of 2007 capital expenditures allowed for a \$300.0 million capital envelope, plus \$18.0 million for the Portland Energy Centre. It was left to Company management to determine which projects it would pursue in 2007 except for the \$18.0 million allocated to Portland's Energy Centre. The division of the \$300.0 million capital amount in the ADR settlement has been created for internal purposes and not specifically approved by the Board at the individual capital element level.
12. Explanations of the major variances have been provided at Exhibit B5, Tab 2, Schedule 1. The major variances contributing to this variance are as follows on Table 2:

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<u>Table 2 - 2011 Historic vs. 2007 Board Approved: Major Variance</u>		
2011 vs 2007 Board Approved (\$Millions)		Related evidence
Storage requirements	25.6	B1-2-2 and B1-5-1
Technical Training Facility	18.0	B1-2-2
Computer and communication requirements	16.7	B1-2-2 and B1-4-1
System improvement requirements	12.5	B1-2-2
General plant including furniture, fleet, tools	4.1	
Technical Training Initiatives	3.9	B1-2-2
Customer related distribution plant	(0.8)	
Overall increase	<u>80.0</u>	

- i. Storage Operations capital requirements in 2011 increased relative to 2007 primarily due to requirements to enhance the integrity of gas inventory measurement and to comply with mandated regulations. These include the storage pool metering replacement project. The intent of this project is to replace and upgrade all storage pool metering to include bi-directional, ultrasonic flow measurement, on-line gas composition analysis and moisture measurement to meet current accepted standards of the AGA and/or Measurement Canada. Additional projects include observation wells, 3D Seismic survey of storage wells, and modifications required to comply with air and noise emissions standards;
- ii. Capital expenditures in 2011 include the requirement for a new multipurpose facility to meet the joint needs of Technical Training and Central Region East Operations. This facility will allow the Company to actively develop and cross-train its employees through various initiatives such as the Operations Technician Training program. Furthermore, it will provide a better environment for learning, help the Company satisfy its long term training needs; and allow us to train all our workers (employees and contractors). Furthermore, the training

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facility will enable the company to achieve several objectives. This includes providing employees with job specific training. Secondly, it will provide a controlled and safe environment for the evaluation of technical competency. And, thirdly, it will enable the organization to demonstrate compliance with increased scrutiny on employee qualifications e.g. Operator Qualification. This project to be completed mid-2012 will see the consolidation of several existing facilities into one site. The site will include a one acre "Streetscape" where employees are trained on real life simulations in a safe and controlled environment and will be provided with comprehensive, theoretical and practical training on critical tools and equipment. Construction of this facility supports the Company's objective of enhancing its strong safety culture;

- iii. Computer and communication equipment capital expenditures are essential to support required upgrades to IT systems and infrastructure. These upgrades are necessary to sustain the reliability, security, availability, and supportability of systems and infrastructure that are critical to the operations for the Company;
- iv. Capital expenditures for system improvement and upgrades were higher primarily due to higher levels of cast iron replacement and relocation activity. The cast iron replacement program is required to ensure the safety and reliability of the distribution system. Replacements are prioritized using several factors; the Company begins with a determination of the highest priority section of main, and then designs a replacement project for that neighbourhood. Projects are further prioritized by coordinating the replacement projects with the City's capital works, primarily Toronto Transportation and Toronto Water. Relocation projects are necessary to meet the needs of other utilities and municipalities, they require the Company to relocate the main to accommodate their requirements;

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- v. Other general plant requirements including structures and improvements, office furniture, transportation fleet and tools increased in 2011 compared to 2007, primarily due to new office furniture and equipment to replace aging items and to meet new requirements and on-going improvements to structures;
- vi. Capital requirements for the Technical Training Initiative; including the development of training materials for Field and Office staff, utilizing new tools and technology such as eLearning modules (Computer based training), instruction led courses and practical hands on scenarios. Gap analysis has identified over 300 training modules required to be developed to respond to development needs, remedial training requirements, changes resulting from projects and continuous improvement to ensure a safe and competent workforce; and
- vii. Capital expenditures for customer related distribution plant decreased in 2011 as compared to 2007, due to lower customer additions.

2012 Estimate Comparison to 2011 Historic

- 13. The 2012 Estimate of capital expenditures is \$404.5 million which is \$6.5 million, or 1.6% over the 2011 Historic of \$398.0 million. Detailed explanations of the variances have been provided at Exhibit B4, Tab 2, Schedule 1. The major drivers contributing to this variance are as follows on Table 3:

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Table 3 - 2012 Estimate vs. 2011 Historic: Major Variance

2012 Estimate vs. 2011 Historic (\$Millions)		Related evidence
LTC (Reinforcement projects)	22.1	B1-2-2 and B2-2-1
Other system improvement and upgrades	16.3	B1-2-2/B1-3-1/ B2-2-1
Computer and communication requirements	6.7	B1-2-2 and B1-4-1
Storage requirements	(4.1)	B1-2-2 and B1-5-1
General plant including structures, furniture, fleet, tools	(4.3)	
Customer related plant (including LTC power generation)	(14.6)	B1-2-2/B1-3-3/B4-2-3
Cast iron replacement program	(15.6)	B1-2-2 and B2-2-1
Overall increase	<u>6.5</u>	

- i. Capital expenditures for system improvement capital increased in 2012 Estimate as compared to 2011 Historic primarily due to several Leave to Construct projects. These projects include the Greater Toronto Area ("GTA"), and the Angus and Alliston Reinforcement projects. The GTA project will address operational flexibility, pipeline integrity, security of supply and future growth requirements for the City of Toronto and GTA. The Angus and Alliston reinforcement projects will ensure that the Company meets the future capacity requirements for their respective areas;
- ii. Other system improvements are higher in 2012, primarily due to integrity management projects including Records and GPS Strategy, Asset Risk Mitigation and the Revision of Damage Prevention Standards and Process. In addition, in 2012 the Company is required to complete additional relocation and reinforcement projects;
- iii. Computers and Communication Equipment expenditures are essential to provide enhancements and required upgrades to existing hardware and software. This includes upgrades to desktop and laptop hardware, due to obsolesce, and upgrades to software as required by the vendor to ensure continued support. Infrastructure replacement of Nortel to CISCO due to

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technology obsolesce, email archiving for compliance and records management and Envision upgrades, to extend and enhance it's functionality to meet evolving business needs, maintain data integrity and improve data management governance;

- iv. Storage Operations are lower in 2012 due to the completion of the pool metering upgrade for gas inventory measurement in 2011;
- v. Other general plant including office furniture, transportation, fleet and tools is also lower in 2012, primarily due to lower requirements for transportation and heavy work equipment ;
- vi. Customer related distribution plant is lower in 2012, primarily due to the completion of the York Energy Centre power generation project in 2011, this was partially offset by increased customer additions in 2012 relative to 2011. Customer additions are anticipated to increase 1,174 over 2011 levels given positive trends in the housing market and continued economic recovery;
- vii. The Cast Iron replacement program is expected to be complete in 2012, the remainder of the program will install 41 kilometres of new main, 5,200 new services and abandon 60 kilometres of old main. In addition, all of the remaining Bare Steel mains located in the Niagara region are scheduled to be completed by the end of 2012.

2013 Test Comparison to 2012 Estimate

- 14. The 2013 Capital Budget is \$483.9 million, which is \$79.4 million more than the 2012 Estimate level. Detailed explanations of the variances have been provided at Exhibit B3, Tab 2 Schedule 1. The major elements of the 2013 Capital Budget are customer related distribution plant, system improvements and upgrades, general and other plant, and underground storage facilities. The major drivers contributing to the \$79.4 million increase are shown as follows on Table 4 on the following page.

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<u>Table 4 - 2013 Budget vs. 2012 Estimate: Major Variance</u>		
2013 Test vs. 2012 Estimate (\$Millions)		Related evidence
Other system improvement and upgrades	39.3	B1-2-2/B1-3-1/B2-2-1
LTC (Reinforcement and Replacement projects)	30.0	B1-2-2 and B1-3-3
Customer related plant (including LTC power generation)	19.8	B1-2-2 /B1-3-3/B3-2-3
General plant including structures,furniture, fleet, tools	(1.3)	
Computer and communication requirements	(2.5)	B1-2-2 and B1-4-1
Storage requirements	(5.9)	B1-2-2 and B1-5-1
Overall increase	<u>79.4</u>	

- i. Other system improvements include safety and integrity programs that are essential to maintain a safe and reliable distribution system. The projects reflect the continuous commitment to meeting governing codes and standards as well as industry best practices. Capital expenditures for 2013 includes the on-going integrity management initiatives such as Records and GPS Strategy, Asset Risk Mitigation and Revision of Damage Prevention Standards. This category also includes asset plan initiatives that will assist management in making optimal decisions with respect to Enbridge's distribution system assets by balancing risks, operational performance and financial performance. These initiatives include Low Pressure Delivery Meter Set Program, Records Integrity Program, Don River Bridge Crossing Replacement, and the Isolation Valve Study & Installation Program. As well, the Company expects to complete additional relocation and replacement projects;
- ii. Capital requirements increased due to three System Improvement Leave to Construct projects; the Ottawa Reinforcement, the GTA Reinforcement and Ottawa Innes Road Replacement Main. The Ottawa Reinforcement project allows Enbridge to meet the capacity requirements for this significant growth area, as well as pressure requirements at the Ottawa Gate Station. The GTA

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project will enhance network integrity, flexibility and the ability to dual-feed critical parts of the GTA. The Ottawa Innes Road Replacement project is a much needed replacement required to remove an existing system bottleneck, this replacement will facilitate other improvements in the system;

- iii. Customer related capital has increased primarily due to several potential Power Generation projects which the Company will bring forward to the Board in LTC applications. In addition, the increase is partially due to the anticipated growth of almost one thousand customer additions in 2013 over 2012 levels. The customer growth is driven by stronger housing starts. Customer related capital is derived from the customer addition forecast that was prepared utilizing EBO 188 approved investment portfolio feasibility guidelines. Forecasts of customer additions are developed at a regional level based on a review of the Company's economic forecast and business plans, consultations between field personnel and building industry representatives, and the experience of the Company's regional management;
- iv. Other general plant decrease in 2013 primarily due to the completion of the Technical Training and Operations Centre in 2012;
- v. Computer and communication requirements decrease in 2013 primarily due to timing of expenditures. These expenditures are driven by information technology enhancements and necessary upgrades to existing software and hardware. The 2013 budget reflects the Company's requirements needed to support critical functions such as; EnVision systems, Customer Care applications, asset management and other technologies;
- vi. Storage Operations decrease in 2013 primarily due to the completion of several projects in 2012. These include Observation Wells, Pool Metering and Sombra Station By-Pass. Storage Operations initiatives are crucial to ensure safety, environmental compliance and to increase system reliability.

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The following tables have been updated to reflect 2011 Actual which replaces 2011 Historic year data.

Updated Table 1
Summary of Capital Expenditures and Customer Additions

Exhibit References	Col 1 B5-T2-S1	Col 2 B5-T2-S1 B5-T2-S3	Col 3 B4-T2-S1 B4-T2-S3	Col 4 B3-T2-S1 B3-T2-S3
(Millions)	<u>Board Approved</u> Budget 2007	<u>Actual</u> Year 2011	<u>Estimate</u> Year 2012	<u>Test Year</u> Budget 2013
Customer Related Distribution Plant	134.2	135.6	118.8	138.6
NGV Rental Equipment	0.2	-	0.3	0.3
System Improvements and Upgrades	149.1	160.5	188.2	257.5
General and Other Plant	30.0	73.0	71.2	67.4
Underground Storage Plant	4.5	30.1	26.0	20.1
Total Capital Expenditures	<u>318.0</u>	<u>399.2</u>	<u>404.5</u>	<u>483.9</u>
Customer Additions	46,228	35,657	37,927	38,896
Average (\$Dollars) Cost per Customer Addition including Power Generation	\$ 2,903	\$ 3,803	\$ 3,132	\$ 3,563
Average (\$Dollars) Cost per Customer Addition excluding Power Generation	\$ 2,276	\$ 3,247	\$ 3,088	\$ 3,201

Updated Table 2 - 2011 Actual vs. 2007 Board Approved: Major Variance

2011 vs 2007 Board Approved (\$Millions)		Related evidence
Storage requirements	25.6	B1-2-2 and B1-5-1
Technical Training Facility	16.2	B1-2-2
Computer and communication requirements	20.4	B1-2-2 and B1-4-1
System improvement requirements	9.4	B1-2-2
General plant including furniture, fleet, tools	6.4	
Technical Training Initiatives	3.9	B1-2-2
Customer related distribution plant	(0.7)	
Overall increase	<u>81.2</u>	

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<u>Updated Table 3 - 2012 Estimate vs. 2011 Actual: Major Variance</u>		
2012 Estimate vs. 2011 Actual (\$Millions)		Related evidence
LTC (Reinforcement projects)	24.1	B1-2-2 and B2-2-1
Other system improvement and upgrades	16.4	B1-2-2/B1-3-1/ B2-2-1
Computer and communication requirements	3.0	B1-2-2 and B1-4-1
Storage requirements	(4.1)	B1-2-2 and B1-5-1
General plant including structures, furniture, fleet, tools	1.2	
Customer related plant (including LTC power generation)	(16.5)	B1-2-2/B1-3-3/B4-2-3
Cast iron replacement program	(18.8)	B1-2-2 and B2-2-1
Overall increase	<u>5.3</u>	

Other exhibits which have also been updated to reflect 2011 Actual capital expenditure data are as follows:

<u>Schedule</u>	<u>Content</u>
B1-2-2	Details of Capital Expenditures and Justification for Major Capital Projects over \$500,000
B1-2-3	Capital Expenditures by Year (2007-2013 Table & 2008-2010 by initiative)
B4-2-1	Comparison of Utility Capital Expenditures 2012 Estimate and 2011 Actual
B4-2-2	2012 Capital Expenditures by Project (Projects Exceeding \$500,000) Comparison of 2012 Estimate and 2011 Actual
B4-2-3	Gross Customer Additions and Average Cost per Customer Addition 2012 Estimate and 2011 Actual

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R. Lei

- B5-2-1 Comparison of Utility Capital Expenditures 2011 Actual and 2007 Board Approved
- B5-2-2 2011 Capital Expenditures by Project (Projects Exceeding \$500,000)
- B5-2-3 Gross Customer Additions and Average Cost per Customer Addition 2011 Actual and 2011 Board Approved

Witnesses: L. Au
S. Kancharla
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R. Lei

UPDATED APPENDIX 1

COMPARISON OF CAPITAL EXPENDITURES
2007 BOARD APPROVED BUDGET, 2011 ACTUAL, 2012 ESTIMATE, AND 2013 BUDGET
(EXPRESSED IN \$MILLION)

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
Item	Board			Estimate 2012		Budget 2013
No.	Approved	Actual	Estimate	Over/(Under)	Budget	Over/(Under)
	<u>2007</u>	<u>2011</u>	<u>2012</u>	<u>Actual 2011</u>	<u>2013</u>	<u>Estimate 2012</u>
A. <u>Customer Related</u>						
1.1.1 Sales Mains	76.5	72.1	47.2	(24.9)	61.9	14.7
1.1.2 Services	46.2	55.9	58.9	3.0	64.1	5.2
1.1.3 Meters and Regulation	11.5	7.6	12.7	5.1	12.6	(0.1)
1.1.4 Customer Related Distribution Plant	134.2	135.6	118.8	(16.8)	138.6	19.8
1.1.5 NGV Rental Equipment	0.2	-	0.3	0.3	0.3	-
1.1 TOTAL CUSTOMER RELATED CAPITAL	134.4	135.6	119.1	(16.5)	138.9	19.8
B. <u>System Improvements and Upgrades</u>						
1.2.1 Mains - Relocations	7.7	15.5	20.0	4.6	23.4	3.4
1.2.2 - Replacement	58.1	54.6	23.5	(31.1)	49.1	25.6
1.2.3 - Reinforcement	26.6	9.8	62.4	52.6	111.6	49.2
1.2.4 Total Improvement Mains	92.4	79.8	105.9	26.1	184.1	78.2
1.2.5 Services - Relays	17.3	45.9	43.2	(2.7)	20.2	(23.0)
1.2.6 Regulators - Refits	3.5	5.6	5.4	(0.2)	6.8	1.4
1.2.7 Measurement and Regulation	15.7	11.4	17.6	6.2	25.7	8.1
1.2.8 Meters	20.2	17.8	16.1	(1.7)	20.7	4.6
1.2 TOTAL SYSTEM IMPROVEMENTS AND UPGRADES	149.1	160.5	188.2	27.7	257.5	69.3
C. <u>General and Other Plant</u>						
1.3.1 Land, Structures and Improvements	3.1	20.9	22.8	1.9	19.0	(3.8)
1.3.2 Office Furniture and Equipment	0.7	5.1	1.3	(3.8)	3.9	2.6
1.3.3 Transp/Heavy Work/NGV Compressor Equipment	7.7	7.4	4.2	(3.2)	4.7	0.5
1.3.4 Tools and Work Equipment	1.2	1.9	2.2	0.3	1.6	(0.6)
1.3.5 Computers and Communication Equipment	17.3	37.7	40.7	3.0	38.2	(2.5)
1.3 TOTAL GENERAL AND OTHER PLANT	30.0	73.0	71.2	(1.8)	67.4	(3.8)
D. <u>Underground Storage Plant</u>	4.5	30.1	26.0	(4.1)	20.1	(5.9)
E. <u>TOTAL CAPITAL EXPENDITURES</u>	318.0	399.2	404.5	5.3	483.9	79.4

Note:

Variance explanations relating to 2011 Historic vs. 2007 Board Approved are found at Exhibit B5, Tab 2, Schedule 1, variance explanations related to 2012 Estimate vs. 2011 Historice are found at Exhibit B4, Tab 2, Schedule 1, and variance explanations relating to 2012 Estimate vs. 2013 Budget are found at Exhibit B3, Tab 2, Schedule 1.

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Details of Capital Expenditures and Justification for Projects over \$500,000
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Line No.	Function / Project Name	In Service Date	Col 1 Actual 2011	Col 2 Forecast 2011	Col 3 Estimate 2012	Col 4 Test Year Budget 2013	Description/Justification
	Customer Related Distribution Plant						
1.	Power Generation Project A	Q2 2014					Enbridge has been asked to supply a proposed new gas fired cogeneration plant. The customer has submitted the proposal to the Ontario Power Authority (OPA) Combined Heat and Power (CHP IV) procurement program. If the proposal is accepted by the OPA, Enbridge will execute a service contract with the customer and file a LTC application with the Board in 2012. The requested gas in-service date is Q2 2014.
2.	Power Generation Project B	Q1 2014					Enbridge has been asked to supply a proposed new gas fired cogeneration plant. The customer has submitted the proposal to the Ontario Power Authority (OPA) Combined Heat and Power (CHP IV) procurement program. If the proposal is accepted by the OPA, Enbridge will execute a service contract with the customer and file a LTC application with the Board in 2012. The requested gas in-service date is Q1 2014.
3.	Power Generation Project C	Q1 2014					Enbridge has been asked to supply gas for a potential generation project. Pending a decision from the customer, Enbridge will execute a service contract and file a LTC application with the Board in 2012. The requested gas in-service date is Q1 2014.
4.	Sum of Power Generation Projects A, B and C York Energy Centre Power Generation	Nov-11	20,049	20,029	1,460 250	14,040	Relates to a 396MW energy plant (LTC EB-2009-0187 application). Project involves 16.7 km of NPS 16XHP pipeline and associated facilities to deliver gas to the York Energy Center generating facility located in King Township.
5.	Everett Expansion Phase 1 Sales Main	Jul-11	1,376	1,113			The Everett Expansion project is complete and it was done to supply gas for 2 subdivisions that are estimated to be constructed in 2012/2013. There were 4 separate projects that totaled 6,889 m. The expansion was also completed to supply gas for subdivision further north into the town of Tioga. This will be a future project and currently there are no drawings or work request for this project.
	System Improvement Distribution Plant						
6.	Ottawa Reinforcement	Q1 2014	79	400	1,500	30,000	Approximately 20 km of NPS 24 XHP pipeline required to reinforce the Ottawa Distribution System. Required to allow the Company to meet area growth as well as pressure requirements at the Ottawa Gate Station.
7.	GTA Reinforcement	Dec 2015?	1,441	1,850	11,627	21,117	This project will address operational flexibility, pipeline integrity, security of supply and future growth needs of the City of Toronto and Greater Toronto Area. Required for pre-engineering, assessments, planning, network analysis and regulatory approval. Required to allow the Company to service area growth and to increase supply diversity and reliability. It will enhance the network integrity, flexibility and ability to dual feed critical parts of the GTA.
8.	Records and GPS Strategy	on going			3,000	12,500	Implement GPS gathering on critical mains during stand by work. Resurvey mains, headers and services which have inadequate or no records.
9.	Asset Risk Mitigation Initiative	on going			5,700	6,300	Required to mitigate risks related to our assets via in-line inspections and alternative current cathodic protection mitigation.
10.	Ottawa Innes Rd Replacement	Q4 2013				6,000	Replace 3.0 km of NPS 8 main with NPS 12, and remove an existing system bottleneck while ensuring a mandated inspection or elimination of high stress pipeline is completed by Dec 2013.
11.	BDCS Growth Initiative	Dec-13				5,934	The capital budget is required for future Business Development and Customer Strategy (BDCS) growth opportunities. Various projects are being reviewed and they will be assessed and reviewed by management as they arise for approval.
12.	Low Pressure Delivery Meter Set Program	Q3 and Q4			5,140	10,140	Study to enhance the knowledge of LP station condition and prioritize related upgrades, followed by required upgrade and replacement programs.

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13.	Technical Training Initiative	on going	4,993	3,900	3,700	3,647	Development of comprehensive training materials for field and office staff utilizing technologies such as eLearning modules (computer based training), instructor-led courses and practical hands-on scenarios. Gap analysis has identified over required 300 modules to respond to development needs, remedial training, change management and continuous improvement to ensure a safe and competent work force. Supporting tools and equipment for practical training are also required to ensure a safe and controlled environment in which to train our employees. To include training delivery, competency development and certification.
14.	Records Integrity Program	on going				3,523	Set of projects to identify and resolve various records related issues including clean up of data, refinement of processes and technology changes.
15.	Don River Bridge Replacement	Nov-13				3,500	Determine purpose need and timing of a replacement solution and implement the solution.
16.	Isolation Valve Study and Installation Program	Q3 and Q4				3,080	Study to validate the adequacy of the Company's current main line valve design requirements and any new/retrofit installations required associated with a change in the design requirement (including Automatic Shutoff and Remote Control Valves).
17.	Targeted Compression Couplings Pressure Containment Sleeve Program	Q3 and Q4				2,000	Reduce risk of injury to industry and public when excavating in areas with potential compression couplings. Identify targeted compression couplings and install pressure containment sleeves over these couplings.
18.	Revision Excess Flow Valve (EFV) policy	Q3 and Q4				1,500	EFVs are currently being installed in new services to single family homes. The initiative is to investigate expanding installation of EFVs to larger residential such as multi-family and small commercial customers.
19.	Amp Fitting Replacement program	Q3 and Q4				1,000	Study to examine leak rate trends and develop a replacement plan, followed by execution of the replacement plan. This initiative also includes an ongoing inspection program for amp fittings.
20.	Cast Iron Replacement Program	on going	43,832	40,580	25,190	942	Program to replace all remaining cast iron mains and their associated services. The rationale for replacement program is to ensure the safety and reliability of the distribution system.
21.	Stayner Reinforcement	Q3 2013				750	Install approx. 450m of 4XHP, 1300mm of 4HP, 200m of 4 IP and new XHP-IP station. Required to bolster IP system pressures in this growing community.
22.	Revise Damage Prevention Standards and Processes	on going			1,550	520	Required to reduce risks associated with third party damages. Install excavation detection technology at targeted gate station and critical pipelines. Will also drive the oversight of third party excavators performing work near critical pipelines.
23.	Angus Reinforcement	Q4 2012			6,000		Approximately 10 Km of XHP pipeline required to facilitate the required future capacity of the Angus area.
24.	Alliston Reinforcement	Q4 2012	532	800	4,660		Approximately 9 Km of XHP pipeline required to facilitate the required future capacity of the Alliston area.
25.	Relocation Main - Davis Drive	May-12			4,000		Main relocation as required by York region municipality. Involves installation of 6" PE-3000mm, 4" PE-1000mm & 2" PE-1000mm.
26.	Relocation Main - 9th Line (Markham Gate to Hoover Park)	Jul-12			3,000		Existing NPS 4 and NPS 8 XHP mains to be relocated and replaced by a single NPS 12 main to accommodate road widening.
27.	Torbram Relocation Main	Q4 2012	1,696	1,646	2,488		Rehabilitate relocation of NPS 12 XHP main for City of Mississauga.
28.	Kawartha Reinforcement- Phase 2 and 3	May-12	1,108	620	2,200		NPS 8 reinforcement to accommodate new ethanol plant "Kawartha Ethanol" in Havelock.
29.	Station B NPS 20	Q4 2012			2,000		Replacement and relocation of 700m NPS 20 downtown Toronto.
30.	Relocation Main- Bayly/Victoria	Q4 2012			2,000		Main relocation as required by the Region of Durham. Involves installation of 12" ST-2100m
31.	Peterborough Reinforcement	Sep-12			1,900		Install approximately 2.4km of NPS 8 on Preston Road (Mt Pleasant/Hwy 7).
32.	Sheridan Gate Station Bypass Relocation Main	Q2 2012			1,824		Relocation of pipe around the former Sheridan Gate Station site.
33.	Wyebridge Relocation Main	Q4 2012			1,800		Relocation of shallow pipe on easement to road allowance
34.	Relocation Main- Teston Rd/Pine Valley	Apr-12			1,300		Main relocation as required by the York Region. Involves installation of 12" - 800mm

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35.	Relocation Main - Highway 7 (Bayview to Warden)	Aug-12			1,200		Main relocation as required by the York Region. Involves installation of 6" - 1600m & 8" ST - 1000m
36.	Mayfield Road Reinforcement	Q4 2012			1,000		Approximately 2500m of 4 XHP on Mayfield east of Airport Rd to alleviate the sensitivity of the additional load on the IP.
37.	Relocation Main- Brock Road Phase 2	Q3 2012			980		Main relocation as required by the Region of Durham. Involves installation of 12" ST
38.	Scarborough Reinforcement	Q2 2012	(184)	659	751		Approximately 8 Km of NPS 16 main in the Scarborough and Markham required to meet the future demand in the Markham, Scarborough and Pickering area
39.	Hurontario Reinforcement	Q4 2012			750		Install approximately 1000m of NPS 6 ST HP on Hurontario (Steeles to County Court Blvd). Reinforcement necessary to maintain inlet pressures to stations due to organic growth.
40.	Anne Street (Barrie) Relocation Main	Q4 2012			750		Main relocation as required by the City of Barrie. Involves installation of 6" ST; 13.7m
41.	High Street (Barrie) Relocation Main	Q4 2012			600		Main relocation as required by the City of Barrie. Involves installation of 6" ST; 10m relocated; Additional relocation project originally scheduled for 2011 deferred to 2012 (includes 640 m 6"ST)
42.	Keele and McNaughton Reinforcement Main	Oct-12			560		Install approximately 1400M of NPS4 St on Keele from McNaughton to Teston. Required to bolster low system pressures.
43.	Brampton Rapid Transit - Satellite & Orbitor Relocation Main	Q4 2012			500		Main relocation as required by the City of Mississauga. 6" ST - 400m relocated 4" PE 700m
44.	Anderson Road Replacement	Q3 2011	2,291	2,287			Rush replacement of approx. 700m of NPS-16 XHP main from Hydro corridor N of Dolman Ridge Rd. to 700m N of Hydro corridor, along W side of Anderson Rd.
45.	Keele and Finch Relocation Main	Q4 2011	762	1,716			Relocation required by Toronto Transit Commission to accommodate Finch West subway station. Relocated approx 900m NPS 12 HP ST main.
46.	Hwy 35 South Relocation Main	Q1 2011	852	1,083			The MTO is widening highway 35 south of 7 for approximately 2.3km. Required by MTO to install 8" ST - 2000m
47.	Richmond Gate Reinforcement	Q3 2011	1,655	897			Reinforcement required to bolster overloaded systems in the central and west areas of Ottawa which have sustained significant rapid growth.
48.	Hwy 93 Relocation Main	Q4 2011	573	587			Main relocation as required by MTO. Involves installation of 6" ST - 2000m
49.	County Rd 88 Relocation Main	Q2 2011	525	525			Second phase of relocations for County of Simcoe widening of Cty Rd 88 west of Bradford. Required by Simcoe County to install 6"ST - 1500m
50.	New Westminster Replacement Main		2,695				
51.	Ottawa Gate Station		1,660				
52.	Oshawa Gate Station		1,180				
53.	Wasaga Beach Reinforcement		799				
54.	Haley Gate Station		752				
55.	In-line Inspection - Central region West		664				
56.	In-line Inspection - Eastern region		662				

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57.	Woodbine Station Replacement		533				
58.	York Region Rapid Transit/Highway 7 Relocation		514				
59.	Distribution Plant Listed above		91,039	78,692	99,380	126,493	
60.	Projects Less than \$500K		122,193	135,040	107,573	163,962	
61.	Distribution Plant sub total		213,232	213,732	206,953	290,455	
	General Plant including Computer Equipment						
62.	Transportation and Heavy Work Equipment Replacements	on-going	7,379	8,230	4,221	4,667	Represents the cost of vehicle and equipment replacements based on corporate replacement policy.
63.	Technical Training and Operations Centre	Jun-12	16,197	18,000	13,000		The budget for this project is required to construct a multi-purpose facility to meet the joint needs of Technical Training and Central Region East Operations. This project will see the consolidation of the following existing facilities into one site: Markham construction and warehouse, Richmond Hill operations depot, VPC Engineering Materials Evaluation Centre and Technical Training in Pickering and Richmond Hill. The site will include a one acre "Streetscape" where employees are trained on real life simulations in a safe and controlled environment and will be provided with comprehensive, theoretical and practical training on critical tools and equipment. Construction of this facility supports the Company's objective of enhancing its strong safety culture.
64.	Casselman Operations Centre Replacement	Dec-12			1,300		The purchase and development of a building and site improvements is being proposed to replace a leased property that no longer meets the current and future special purpose needs of the operations function in that area.
65.	Pembroke Operations Centre Replacement	Jun-12			800		The purchase of the currently leased building and an adjacent site together with improvements is being proposed to meet the longer term needs than the current design that no longer meets the current and future special purpose needs of the operations function in that area.
66.	Kennedy Road Operations Centre Replacement	May-14			5,200	4,300	The existing Kennedy Road operations depot does not meet current building standards and operational requirements, has site limitations and no long term potential to expand the existing facility. The building is over 40 years old and physically obsolete with the electrical and mechanical systems in need of a major retrofit and some of the building space inadequate for occupancy with barrier free accessibility being an issue. The property is also functionally obsolete as the building has exceeded allowable occupancy, the parking lot is congested, the operations yard requirements exceed the existing property with limited turn radius for construction equipment and the warehouse is undersized to house the necessary materials and equipment. The budget for this project includes the purchase of 6 acres of land and the construction of a 27,000 square foot building. Total project costs will be \$13.3 million (including \$3.8 million in 2014).

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Line No.	Function / Project Name	In Service Date	Col 1 Actual 2011	Col 2 Forecast 2011	Col 3 Estimate 2012	Col 4 Test Year Budget 2013	Description/Justification
67.	New Fleet Garage	May-14				8,500	The existing fleet garage is over 40 years old, does not meet current building standards and requires major improvements. The building shell, electrical and mechanical systems are in need of a major retrofit and windows and the roof will require a major capital improvement in the short term. The property is functionally obsolete as the heavy work equipment shop is undersized, there is an inadequate number and size of dedicated parking on site for vehicles and equipment and there are safety issues regarding the mixed use nature of the Victoria Park Complex for both industrial and office functions. The budget for this project includes the purchase of 4 acres of land and the construction of a 33,000 square foot building. Total project costs will be \$12.2 million (including \$3.7 million in 2014).
68.	New Meter Shop	Apr-13				2,000	This project is required to relocate the meter repair and testing shop from its current head office location to an appropriate location in a new leased facility. The vacated space can be transformed into office space to avoid significant lease costs for forecasted office space needs at head office. Leasehold improvements will be required to set up the operation in the new building and relocation of existing equipment.
69.	Colony Court Replacement	Jul-14				1,000	The existing operations depot at Colony Court in Brampton has served the region for the past 8 years and the lease expires in August 2013. As the organization has evolved, the office space and yard is no longer sufficient to accommodate the current and future needs of the operations function. The budget for this project is required for leasehold improvements in a new building.
70.	Envision Upgrade	2015				6,200	Upgrade of Work and Asset management system due to technology obsolesces and change in Vendor landscape.
71.	Leveraging SAP	on-going	3,389	6,017	4,900	4,500	Changes and enhancements required to stabilize SAP CIS to meeting growing business demands .
72.	SAP Hardware Refresh	2013				4,200	Purchase of new hardware (Servers and Storage) for SAP CIS. Existing SAP CIS hardware are coming off warranty at the end of 2012. The new purchase will keep technology current and at a supportable level.
73.	Reporting Analytics for Finance & Customer Care Department	on-going	485	1,297	1,450	1,500	Development of SAP business warehouse to support reporting and analytics for customer care and finance for enhanced decision making.
74.	Desktop Replacement	on-going			1,200	1,200	Necessary upgrades to existing desktop and laptop hardware due to obsolesce and support by vendors
75.	Capman/O&M Management Program	on-going	240	556	1,500	1,000	Development of capital management system to enable the organization to have visibility and greater control of capital and O&M spend.
76.	Microsoft Enterprise Agreement	on-going	1,062	1,060	950	950	Necessary upgrades to existing software to keep technology current and at a supportable level, in order to serve the Users and to ensure that systems do not become obsolete. Obsolete systems could pose risk to customer service, systems integrity, safety, and business itself.
77.	IT Request	on-going	770	676	650	800	All the miscellaneous hardware, software and accessories purchases.
78.	Remedy Upgrade	2012	913	1,100		756	Necessary upgrades to existing hardware and software to keep technology current and at a supportable level, in order to serve the Users and to ensure that systems do not become obsolete. Obsolete systems could pose risk to customer service, systems integrity, safety, and business itself.
79.	Infrastructure Replacement: Nortel to CISCO	2013	1,286	800	1,800	700	Replacement of Nortel Voice and Data due to technology obsolesce and which is no longer supported by the Vendor.
80.	Integrated Training Environment	2013	531			700	Creation of an end-to-end environment for meeting business training requirements. Systems include EnVision, SAP, and field force automation.
81.	SRM Enhancements	on-going	1,065	1,222	750	550	Enhancements to ensure data integrity, providing increased automation ,and additional reporting in order to serve the Users.

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82.	Supply Chain Management	on-going	612	559	1,000	500	Acquisition, development, and implementation of a warehouse management system to enhance business controls and enable EGD to better optimize its warehouse space and labor while minimizing transportation costs.
83.	Enterprise GIS Implementation/Enhancement	on-going	2,264	1,949	500	500	Software upgrades and incremental improvements to historical asset data solutions to improve functionality, data quality, accessibility and performance. Benefits include improved access to asset information that supports improved asset decision making for office and field staff.
84.	Asset Record Data capture	on-going			500	500	Analysis and development of systems and system enhancements to house the information to be captured to enhance records integrity and safety.
85.	Gas Molecule - hGARS	on-going	667	900	500	400	Enhance control, reporting and provide greater audit ability by replacing old spreadsheet system for a gas molecule costing and reconciliation system.
86.	Enterprise Email/Records Management	on-going			1,400	350	Implement email archiving for compliance and records management.
87.	EnMar Upgrade	on-going	1,197	1,061	700	300	Systems changes required to accommodate regulation mandated by Measurement Canada. Other enhancements also include changes to improve controls, reporting and transaction reliability, in addition to technology obsolescence as a result of lack of vendor support.
88.	Online Incident Management & Collaboration	on-going			500	200	Analysis, development, and implementation of a software solution to provide an integrated online incident reporting system to manage emergency incident response.
89.	EnVision Enhancements	on-going	3,003	1,688	4,800		Work and Asset management system changes required on an ongoing basis to enhance and extend functionality to meet evolving business needs, maintain data integrity and improve data management governance.
90.	Microsoft Program	2012	1,122	1,545	2,200		Required upgrades to existing software to keep technology current and at a supportable level, in order to serve the Users and to ensure that systems do not become obsolete. Obsolete systems could pose risk to customer service, systems integrity, and safety.
91.	GMS/Open Link - Customer web Access	2012			900		Enhancements required to provide web access to customers as it related to the Gas Management System
92.	Oracle Database upgrade	2012			537		Necessary upgrades to existing software to keep technology current and at a supportable level, in order to serve the Users and to ensure that systems do not become obsolete. Obsolete systems could pose risk to customer service, systems integrity, safety, and business itself.
93.	CCSA (LBA Repatriation)	Jul-11	1,354	1,458			Repatriation of large billing accounts/functions/process from Accenture and related system changes that are required to complete the transition.
94.	Altra GMS Replacement	2011	734	933			Replace the two separate EGD Altra GMS systems with a consolidated system for physical gas deals and nominations.

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95.	Emissions Data Management & Reporting	2012	703	677			System development/changes required to support the Ontario GHG regulation as well as Environment Canada - National Pollutant Release Inventory reporting.
96.	SRM Analytics	2011	475	529			Enhancement to Stakeholder Relationship Management (SRM) system to meet the evolving needs of business process changes and enhancing reporting and query capabilities.
97.	Energy Supply Asset Transfer		745				
97.	General Plant Listed above		46,173	50,257	51,258	46,273	
98.	Projects less than \$500K		22,814	16,338	15,171	17,432	
99.	General Plant sub total		68,987	66,595	66,429	63,705	
	Storage Plant						
100.	Tecumseh Office Facility	Dec2012/Dec2013			2,250	4,950	This is the cost of construction of new buildings in Gas Storage. This includes the cost of a new warehouse, fabrication shop and office as well as the cost of relocating the existing shop to the current warehouse building.
101.	Certificate of Approval Air and Noise Emissions	Dec-13	2,119	2,120	3,500	3,500	Make modifications to the exhaust stacks, cooler fans and turbochargers so as to comply with Ministry of Environment (MOE) Certificate of Approval for Tecumseh compressor station (Air and Noise emissions)
102.	MCC #1 Generator and Boiler Replacement	Dec-13				1,500	Replace and upsize the generator and boiler in MCC#1
103.	Purchase of Farm Properties	Nov2012/Dec2013		790	1,092	1,100	Purchase additional lands to ensure that there will be no residential noise and emissions receptor in close proximity to Tecumseh Corunna Compressor Station. Required for MOE compliance.
104.	Pipeline Integrity Program	Dec2012/Dec2013			1,000	1,000	Install the facilities that will be required to allow for pipeline inspection in the Mid and South Kimball gathering lines.
105.	Custody Measurement Upgrade at Dawn	Dec-13				1,000	Engineering review of facilities required for custody quality measurement at Dawn custody point.
106.	Plant Layout changes	Dec2012/Dec2013			750	750	Make a number of site changes at the Tecumseh, Sombra and Crowland compressor stations. They are intended to bring the sites up to meet current environmental and safety standards. The work will include moving fences, gate, parking areas, motor control centres and UPS. Will also include making site drainage changes and installing culverts into existing open drains.
107.	KVT Compressor Pressure Upgrade	Dec-13				750	Retrofit compressor to operate at higher pressures. Improves reliability in the event of unscheduled outages.
108.	Control Room Equipment changes	Dec-13			500	500	Relocate all control systems and related network infrastructure so as to relocate the Control Room to existing office building.
109.	Observation Wells	Dec-12	1,091	1,650	5,000		Completion of observation well drilling program that began in 2011. These wells are being drilled so as to provide a better understanding of the storage reservoirs and associated A1 structure.
110.	Replace/Upgrade Storage Pool Metering	Dec 12 and Dec 13	17,684	18,870	2,000		Upgrade required to enhance the integrity of gas inventory measurement.
111.	By-Pass of Sombra Station	Dec-12			1,000		Piping changes to eliminate the need to flow all gas through the Sombra station, even when not compressing gas.

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\$(000's)

Line No.	Function / Project Name	In Service Date	Col 1 Actual 2011	Col 2 Forecast 2011	Col 3 Estimate 2012	Col 4 Test Year Budget 2013	Description/Justification
112.	K/V Upgrade K703	Dec-12	652	700	1,000		Upgrade mandated by Ministry of Environment. Required to reduce Nox emissions.
113.	Mid Kimball/South Kimball Road Crossing	Oct-12			750		Pipeline integrity assessment of the Mid and South Kimball pool and gathering systems.
114.	3D Seismic - Dow Moore/Coveny/Black Creek	Dec-11	1,707	2,017			Required to enhance gas inventory measurement. Involves the delineation of four storage pools.
115.	Phase II - Reservoir Simulation		512				
115.	Storage Plant Listed above		23,765	26,147	18,842	15,050	
116.	Projects less than \$500K		3,100	856	4,930	3,555	
117.	Storage Plant sub total		26,865	27,003	23,772	18,605	
118.	Indirect Overheads		60,573	62,720	72,737	74,868	Excludes Technical Training Initiative
119.	Capitalized Administrative and General Overhead		24,369	24,199	30,404	30,742	
120.	Interest During Construction		5,183	3,790	4,249	5,541	
121.			90,125	90,709	107,390	111,151	
122.	Summary total		399,209	398,039	404,544	483,916	

COMPARISON OF CAPITAL EXPENDITURES
 2007 BOARD APPROVED BUDGET, 2008 THROUGH 2010 ACTUAL, 2011 ACTUAL, 2012 ESTIMATE, AND 2013 BUDGET
 (EXPRESSED IN \$MILLION)

Item No.	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7
	Board Approved Budget 2007	Actual 2008	Actual 2009	Actual 2010	Actual 2011	Estimate 2012	Budget 2013
A. <u>Customer Related</u>							
1.1.1 Sales Mains **	76.5	60.6	48.2	46.7	72.1	47.2	61.9
1.1.2 Services	46.2	49.3	48.7	52.6	55.9	58.9	64.1
1.1.3 Meters and Regulation	11.5	9.7	11.9	8.3	7.6	12.7	12.6
1.1.4 Customer Related Distribution Plant	134.2	119.6	108.8	107.6	135.6	118.8	138.6
1.1.5 NGV Rental Equipment	0.2	0.3	0.2	0.2	-	0.3	0.3
1.1 TOTAL CUSTOMER RELATED CAPITAL	134.4	119.9	109.0	107.8	135.6	119.1	138.9
B. <u>System Improvements and Upgrades</u>							
1.2.1 Mains - Relocations	7.7	14.8	8.0	13.2	15.5	20.0	23.4
1.2.2 - Replacement	58.1	58.8	49.9	55.7	54.6	23.5	49.1
1.2.3 - Reinforcement	26.6	16.7	16.8	14.0	9.8	62.4	111.6
1.2.4 Total Improvement Mains	92.4	90.3	74.7	82.9	79.8	105.9	184.1
1.2.5 Services - Relays	17.3	30.4	37.0	45.8	45.9	43.2	20.2
1.2.6 Regulators - Refits	3.5	3.5	7.7	6.4	5.6	5.4	6.8
1.2.7 Measurement and Regulation	15.7	13.4	9.2	10.3	11.4	17.6	25.7
1.2.8 Meters	20.2	18.9	15.9	13.1	17.8	16.1	20.7
1.2 TOTAL SYSTEM IMPROVEMENTS AND UPGRADES	149.1	156.5	144.5	158.5	160.5	188.2	257.5
C. <u>General and Other Plant</u>							
1.3.1 Land, Structures and Improvements	3.1	3.4	2.9	14.0	20.9	22.8	19.0
1.3.2 Office Furniture and Equipment	0.7	1.0	0.9	1.9	5.1	1.3	3.9
1.3.3 Transp/Heavy Work/NGV Compressor Equipment	7.7	11.0	11.4	6.5	7.4	4.2	4.7
1.3.4 Tools and Work Equipment	1.2	3.6	2.3	2.5	1.9	2.2	1.6
1.3.5 Computers and Communication Equipment	17.3	18.3	24.8	32.0	37.7	40.7	38.2
1.3 TOTAL GENERAL AND OTHER PLANT	30.0	37.3	42.3	56.9	73.0	71.2	67.4
D. Underground Storage Plant	4.5	5.9	4.6	14.7	30.1	26.0	20.1
E. Customer Information System (CIS)		46.4	48.7	(0.3)			
F. TOTAL CAPITAL EXPENDITURES	318.0	366.0	349.1	337.6	399.2	404.5	483.9
G. CUSTOMER ADDITIONS	46,228	41,052	32,089	36,902	35,657	37,927	38,896
** Power Generation Projects Included in Sales Mains	18.0	13.0	5.7	4.6	19.8	1.6	14.0

Witnesses: L. Au
 D. Kelly
 R. Lei

ASSET PLAN

Introduction

1. The purpose of this evidence is to introduce EGD's rolling 10 year Asset Plan which is currently being prepared, and which underpins much of the Company's proposed 2013 capital budget. The Asset Plan will set out the Company's distribution asset spending priorities in a manner which attempts to balance system integrity and growth requirements and the associated spending need. While EGD is not seeking approval of its Asset Plan, the Company believes that the Asset Plan will assist the Board in understanding the rationale for many of the items in the Company's 2013 capital budget, including the ways in which EGD's proposed capital spending in the Test Year relates to forecast expenditures in future years. Work on the Asset Plan is ongoing and the Company expects to be in a position to file the plan in this proceeding by March 2012. EGD expects that it will update its Asset Plan each year using the most current information available to it.

Background

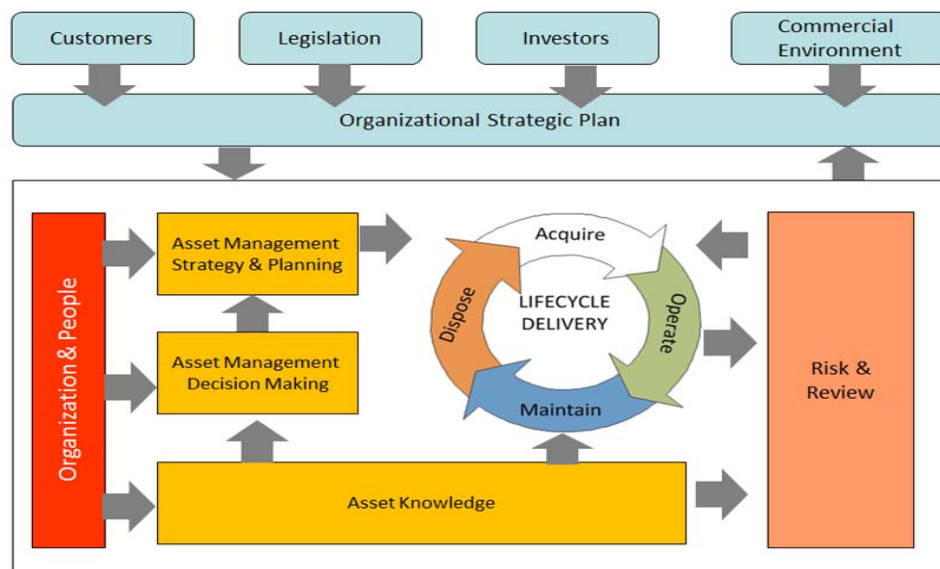
2. The development of an Asset Plan is one component of a broader discipline generally referred to as Asset Management. Therefore, to understand the purpose of EGD's Asset Plan, it is necessary to have some understanding of the work that EGD has been engaged in over the past several years to adopt an Asset Management approach to managing its distribution assets. The Asset Management discipline has been evolving over the past several years in a broad range of asset intensive industries, including utilities. The primary objective of Asset Management is to provide management with a systematic approach to making optimal asset related decisions based on trying to achieve an appropriate balance of risks, operational performance and financial performance. Through the adoption of the

Witnesses: L. Chiotti
L. Lawler

Asset Management discipline, EGD is striving to enhance the safety and reliability of its gas distribution system while also enhancing customer satisfaction and shareholder value.

3. In working to adopt an Asset Management approach, EGD has been using an asset management conceptual model developed by the Institute of Asset Management. This model as shown in Figure 1 below was detailed in the asset management standard called PAS 55, a "Publicly Available Specification" published by the British Standards Institute.

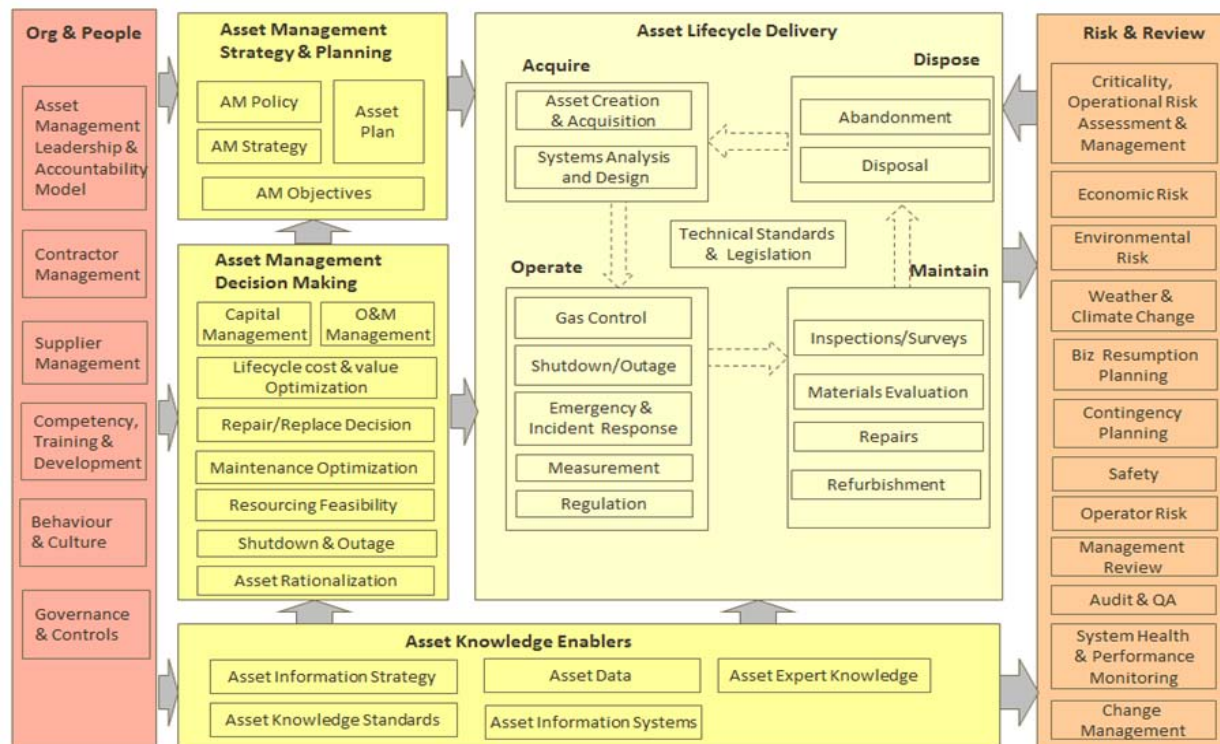
Figure 1 - IAM's Asset Management Conceptual Model*



* Original Source: Institute of Asset Management

4. EGD took this model and adapted it to its gas distribution business as shown in Figure 2 below.

Figure 2 - Asset Management System Components* (Adapted for EGD)



* Based on IAM's Asset Management Groups & Subjects. See IAM web site for details

5. Another important reference used by the Company was the Guiding Document on Asset Management released by the Canadian Gas Association in 2009. The CGA defines Asset Management as:

A strategic management system used to optimally manage assets over their life cycle by balancing performance, risk, and expenditures to achieve corporate strategic objectives.

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L. Lawler

6. Figure 2 above, outlines all the major components of a comprehensive Asset Management System. EGD has used this framework to assess its current Asset Management activities to identify gaps and areas for improvement. Addressing these opportunities has become a continuous improvement process. Some areas that have already been worked on include, System Health and Performance Monitoring, Risk Assessment and Management, Asset Data, Capital Management, Life Cycle Cost and Value Optimization and Asset Management Leadership and Accountability. Understanding that the OEB has been requiring electric utilities in Ontario to file asset plans and, in preparation for this re-basing rate case, in 2011, the Company turned its attention to the Asset Management Strategy and Planning component of the Asset Management System with the objective of developing a long term Asset Plan.

Overview of the Asset Plan:

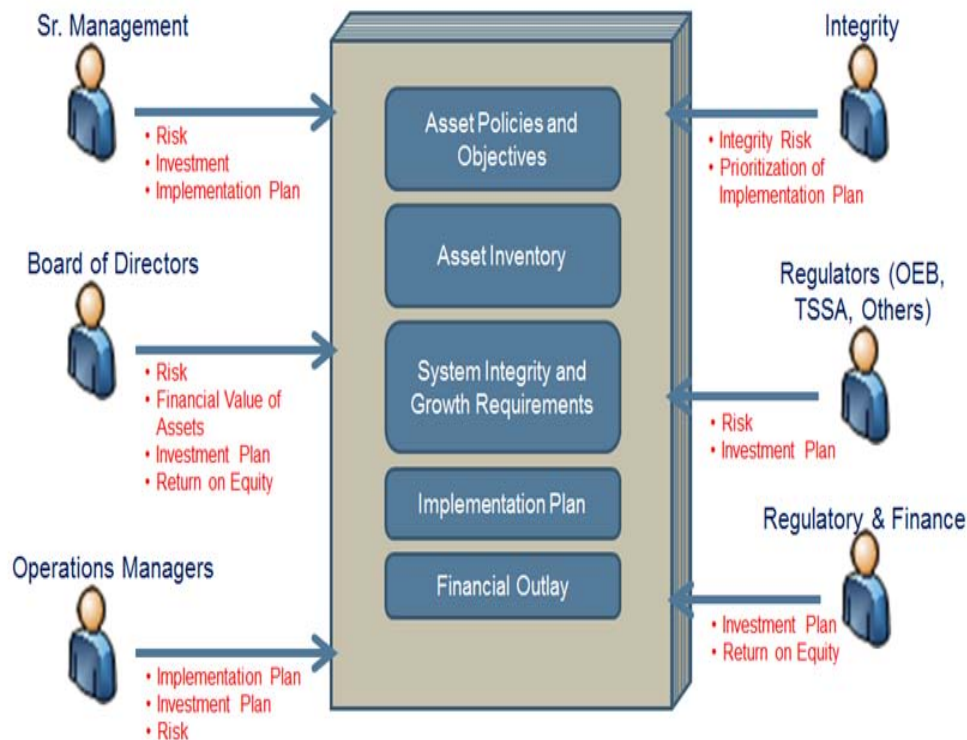
7. The purpose of an asset plan is to define and communicate what needs to be done with the organization's core assets over a specified period of time, the rationale behind these activities, and the resources needed for execution. The needs of the assets should be considered over their entire life cycle including creation or acquisition, operation, maintenance and decommissioning.
8. The Asset Plan being developed by EGD will:
 - Align asset-related activities with the organization's key strategic priorities (e.g. safety, reliability, efficiency, profitability, etc.)
 - Provide inputs to the organization's long term planning and budgeting processes
 - Provide a basis for substantiating financial requirements
 - Meet regulatory requirements

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L. Lawler

9. At this time, there is no prescribed format and content for an asset plan. EGD has established the format and content of its Asset Plan based on a review of some electric utility plans and the guidance provided by sources such as PAS 55.
10. Currently, the OEB has not required EGD to file an asset plan. However, electric utilities in Ontario are required to file asset plans as part of the rate hearing process and so EGD anticipates that gas distribution utilities will ultimately be required to file similar plans.
11. The Asset Management discipline and Asset Plan also dovetail nicely with the evolution of the pipeline standards and regulations to which EGD must adhere. There are new requirements from EGD's technical regulator and EGD's Asset Management System and Asset Plan assists EGD in meeting those requirements.
12. EGD anticipates that its Asset Plan will be useful and of interest to a number of internal and external stakeholders. The Asset Plan will give context to forecast distribution system capital costs for a given year. It will provide guidance as to expected future needs and spending, and it will outline the utility's prioritization of system spending requirements over a period of ten years. The components of EGD's Asset Plan and the anticipated stakeholders who will be interested in the Asset Plan (along with their areas of potential interest) are outlined in Figure 3 below.

Witnesses: L. Chiotti
L. Lawler

Figure 3 - Components of EGD's Asset Plan



13. The scope of EGD's Asset Plan, as depicted below in Figure 4, includes growth requirements, reinforcement requirements, system integrity and reliability requirements and distribution plant relocations. The Company's distribution system requirements related to customer growth, reinforcements and relocations are being identified and included in the Asset Plan using the same approaches and analyses as the Company has used for many years for system planning purposes. The Company's approach to assessing asset integrity and reliability requirements has evolved in recent years. To assist in understanding the Company's approach to these items in the Asset Plan, the following paragraphs describe the process used to identify and include system integrity and reliability items within the Asset Plan.

Witnesses: L. Chiotti
L. Lawler

Figure 4

faced by the Company. Finally, legislative and regulatory changes that are being implemented or contemplated in the United States in the wake of a number of pipeline tragedies that have occurred in the recent past have been taken into consideration when evaluating the Company's future system integrity needs.

16. EGD's evaluation of the system integrity needs of its distribution assets led to three different types of system integrity initiatives being included in the Asset Plan.
 - a. Existing system integrity programs
e.g. Cast Iron Replacement
 - b. New integrity programs where they could be identified
e.g. Amp Fitting Replacement
 - c. Studies to determine whether new integrity programs are required
e.g. Field Applied Coatings on Tie-in to Steel Mains
17. In total, there have been over forty initiatives / programs identified. Each will be detailed in the Asset Plan including their risk description, program / initiative description, priority, forecast capital spend profile and timeline.
18. Enbridge anticipates that, going forward, the same sources of information will be consulted and analyzed annually and used as input to future iterations of the Asset Plan.
19. As indicated in Figure 4, in addition to system integrity requirements, the Asset Plan also includes growth, reinforcement, and relocation requirements.
20. The growth requirements have been based on customer additions forecasts over the ten year period of the Asset Plan.

Witnesses: L. Chiotti
L. Lawler

21. The reinforcement requirements have been based on network analysis that has established need and timing of future system needs. Some of the reinforcement requirements included in the Asset Plan will be filed as Leave to Construct applications before the OEB in 2012. In particular, the Company expects to file Leave to Construct applications for the GTA Reinforcement Project and the Ottawa Reinforcement Project later this year. These reinforcement projects are necessary to ensure continued reliable delivery of natural gas to existing and new customers.
22. The GTA Reinforcement project will reinforce the Company's extra high pressure (XHP) network that supplies gas to Brampton, Mississauga, Vaughan, Markham and Toronto for eventual distribution to homes and businesses in the GTA. The last major reinforcement of the XHP network in the GTA (excluding projects for specific power generation customers) occurred in 1992/93. EGD has approximately doubled its customers since that time and expects to continue to add approximately 40,000 customers per year, largely in the GTA. The Ottawa Reinforcement Project will reinforce the Company's XHP network that supplies gas to Ottawa. The Ottawa area has also seen significant growth over this same time period and is expected to continue to grow over the next ten years. (Please also see Exhibit B1, Tab 3, Schedule 3)
23. Relocation requirements, which are generally driven by municipal and other third party works, have been determined based on known projects and historical trends.

Role of the Asset Plan in Enbridge's 2013 Rebasing Application

24. As outlined in this evidence, EGD is in the process of completing an Asset Plan which identifies distribution system capital requirements to address customer growth, reinforcement, integrity and reliability, and relocations needs over the next

Witnesses: L. Chiotti
L. Lawler

ten years (from 2012 to 2021). Enbridge expects to file its Asset Plan in this proceeding once the document is completed, likely in or around March 2012. The Asset Plan will be filed as Exhibit B2, Tab 2, Schedule 1.

25. The Asset Plan sets out the nature, timing and anticipated cost of the capital requirements for its distribution system for each year of the Asset Plan's ten year term. The timing of initiatives / programs and associated expenditures in the Asset Plan are based on priorities established through historical spend patterns, system analysis and relative risk ranking. The Asset Plan reflects a balanced approach taken by EGD between system integrity and growth requirements, and associated spending requirements/rate impacts.
26. EGD's 2013 distribution system capital budget is consistent with the Asset Plan. The Company believes that the Asset Plan will assist the Board in understanding and contextualizing EGD's 2013 distribution system capital budget in terms of why particular activities and expenditures are required in 2013, and in terms of understanding and taking into account what expenditures and activities are required and can be expected in future years.

Witnesses: L. Chiotti
L. Lawler

ASSET PLAN AND 2013 CAPITAL BUDGET

1. As explained at Exhibit B1, Tab 2, Schedule 1, the Asset Plan provides context and support for much of the Company's 2013 Capital Budget. At the time that Enbridge Gas Distribution's (EGD's) Application and Evidence were filed, the Asset Plan had not been completed. Now that the Asset Plan has been completed and filed (as Exhibit B1, Tab 3, Schedule 1), the Company believes that it would be helpful to file this additional evidence setting out details of the aspects of EGD's 2013 capital budget that relate to items in the Asset Plan.
2. The Asset Plan addresses the Company's planned activities and associated expenditures related to its distribution assets in the years from 2012 to 2021. That includes the Company's distribution asset requirements and the associated costs of addressing those needs for 2013. As set out in the final section of the Asset Plan (Exhibit B1, Tab 3, Schedule 1, page 61), the direct capital costs associated with implementation of the Asset Plan in 2013 total \$268.3M.
3. The Asset Plan does not address other parts of the Company's 2013 Capital Budget, such as Information Technology, Storage, Leave to Construct Applications for Power Generation Projects, Facilities and other non-distribution asset capital requirements. Evidence in support of those items was included in the B1 series of exhibits filed along with the Company's Application.
4. In this Exhibit, details are provided in respect of those items set out in the Asset Plan that are part of the Company's 2013 Capital Budget.

Witnesses: L. Chiotti
L. Lawler

Asset Plan/Distribution Asset Capital Budget

5. EGD's Asset Plan addresses the Company's distribution assets, and the forecast requirements related to those assets and new distribution assets over the next ten years (from 2012 to 2021). The Asset Plan is filed as Exhibit B1, Tab 3, Schedule 1.
6. The Asset Plan organizes the distribution asset-related capital investments that are required into five categories: (i) customer additions; (ii) routine reinforcement projects; (iii) major reinforcement projects; (vi) relocations; and (v) system integrity & reliability. For each category, the Asset Plan describes how EGD has evaluated and prioritized its expected requirements over the next ten years.
7. The Asset Plan contains forecasts of direct capital spending requirements in each of the five categories for each year from 2012 to 2021. As seen at page 61 of the Asset Plan, the overall capital spending requirements, excluding major reinforcements, for EGD's distribution assets over those ten years ranges from \$208M to \$246M and the forecast Asset Plan capital spending requirement for 2013 is \$217.2M, which is one of the lowest annual amounts during the term of the Asset Plan. Including Major Reinforcements, which are subject to separate Leave to Construct applications, capital spending in the Asset Plan in 2013 is expected to be \$268.3M. On a summary basis, as set out at page 61 of the Asset Plan, Enbridge's forecast distribution asset capital spending requirements for 2013 are as follow:

Witnesses: L. Chiotti
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	2013
Customer Additions (\$000)	\$84,413
Relocations (\$000)	\$13,209
Routine Reinforcements (\$000)	\$11,550
System Integrity & Reliability (\$000)	\$108,041
Total (Excluding Major Reinforcements)	\$217,213
Major Reinforcements (\$000)	\$51,117
Total (Including Major Reinforcements)	\$268,330

8. As the Asset Plan addresses distribution asset capital spending requirements for ten years, and this Application is focussed upon only one of those years (2013), this Exhibit is intended to highlight and explain the 2013 distribution asset capital requirements set out in the Asset Plan that are part of EGD's 2013 Capital Budget. To maintain consistency between this Exhibit and the Asset Plan, the same five categories of investment are used here as in the Asset Plan.

Customer Additions

9. The Asset Plan applies the Company's forecasts of customer additions over a ten year term to develop a forecast of the associated costs. The costs associated with adding new customers include installation costs related to sales mains, new services, measurement and regulation, and meters. Over time, customer additions also lead to requirements for pipeline reinforcements, however, the costs

Witnesses: L. Chiotti
L. Lawler

associated with reinforcements are set out in separate categories within the Asset Plan.

10. For 2013, the total number of forecast customer additions is 38,896. The process used to derive that customer addition forecast is set out at Exhibit B3, Tab 2, Schedule 3. As explained in the Asset Plan, the Company used similar methods to forecast customer additions for years further in the future (for years after 2013). Unit costs (capital cost per customer) are derived for the components of capital investments needed to support the customer additions namely:
 - ☐ Installation costs related to Mains, Services and Meters
 - ☐ Material costs related to Mains, Services and Meters
 - ☐ Cost related to Measurement & Regulation equipment required to support customer growth
11. These costs (capital cost per customer) were applied to the 2013 customer addition forecast to derive a budget estimate for customer additions in 2013.
12. As set out at page 30 of the Asset Plan, the forecast capital costs associated with customer additions for 2013 total \$84.4M. That amount is modestly higher (by approximately 7.5%) than the 2012 cost estimate for customer additions because of a higher forecast number of additions in 2013 and a higher estimated cost per customer addition. As can be seen in the chart titled "Customer Additions: Historic & Forecast Capital Spend" at page 30 of the Asset Plan, the costs associated with customer additions over the balance of the 2014 to 2021 term of the Asset Plan are expected to increase slightly in line with the increase in customer additions.

Witnesses: L. Chiotti
L. Lawler

Routine Reinforcement

13. EGD's distribution system has been built to accommodate some growth, but in some cases the existing distribution system cannot continue to provide sufficient supply for existing and new customers. That is not surprising in the context of a gas utility that adds around 40,000 customers every year, mostly in areas around the GTA.
14. Reinforcements refer to additions to the distribution system that ensure that the system reliably and safely delivers gas load to new and existing customers.
15. As part of the Asset Planning process that underlies the Asset Plan, network analysis was performed to establish the need and timing for reinforcement work across the Company's distribution system based on load growth. As described at page 31 of the Asset Plan reinforcements are required when the system is no longer expected to be able to meet minimum conditions.
16. The results of the process described above are set out in the Figure 5 at pages 35 and 36 of the Asset Plan which lists the required reinforcement activities identified over the term of the Asset Plan as well as the anticipated timing for each. In addition, the table sets out the forecast capital cost associated with each project. As the Asset Plan is a living document to be updated annually changes in load growth will affect the timetable of future reinforcement investments as projects are reprioritized as to need.
17. As seen at page 37 of the Asset Plan, EGD's forecast capital costs for routine reinforcement projects in 2013 total \$11.6M. One project, the Innes Road

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L. Lawler

reinforcement, estimated to cost \$6M, represents just over fifty percent of the budgeted routine reinforcement capital requirements.

18. The balance of the \$11.6M capital budget for reinforcements in 2013 includes the following:

- Install approximately 2km of NPS XHP 8 ST on Carville Road from Bathurst Road to Yonge Street (\$1.9M)
- Kingston Road reinforcement – install 2.4km of NPS 4 ST XHP from Lakeridge to Salem Road, with a station (\$1M)
- Stayner second source, NPS 4 XHP, with a station (\$.75M)
- Several smaller projects (\$1.85M).

19. As set out in the chart titled “Routine Reinforcements: Historic & Forecast Capital Spend” at page 37 of the Asset Plan, the forecast reinforcement costs for 2013 are somewhat higher than corresponding costs in some previous and future years. This is driven by the fact that relatively large reinforcement projects such as the Innes Road Reinforcement Project have large capital costs (\$6M, in this case), as compared to other projects. Whenever those large projects fall, the budget in that year will be relatively high. In the case of the 2013 forecast capital costs for reinforcements, the total budget without the Innes Road Reinforcement Project is approximately \$5.6M. As seen in the chart at page 37 of the Asset Plan, that amount is consistent (if not lower) with the amounts spent for reinforcements in prior years and forecast for future years.

Major Reinforcement

20. EGD is planning two very large reinforcement projects over the coming years (Ottawa and GTA Reinforcement projects) which (when approved) will be

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L. Lawler

substantial contributors to the Company's 2013 Capital Budget. The capital costs associated with these projects are significant, especially in comparison to the other reinforcement projects that are known and forecast over the term of the Asset Plan. Because of the large size of these projects, they are presented separately in the Asset Plan, and not included with the routine reinforcement projects. These projects are described at page 34 of the Asset Plan.

21. As described in the "Leave to Construct Projects" evidence at Exhibit B1, Tab 3, Schedule 3, page 3, EGD proposes to reinforce its Ottawa system to meet area growth and pressure requirements at the Ottawa Gate Station. The estimated capital cost of this project for 2013 is \$30M. The Company expects to file a Leave to Construct Application for this project in the coming months.
22. As described in the "Leave to Construct Projects" evidence at Exhibit B1, Tab 3, Schedule 3, pages 3 and 4, EGD proposes to reinforce the GTA area with approximately 50km of mostly 36 inch extra high pressure pipe and an additional gate station. This will allow EGD to meet area growth and to increase supply diversity and reliability. The estimated capital cost of this project for 2013 is \$21M. The Company expects to file a Leave to Construct Application for this project in late 2012.
23. Together, the forecast 2013 capital costs associated with the Ottawa and GTA Reinforcement Projects are \$51.1M.

System Integrity & Reliability

24. A major focus of the Asset Plan is on EGD's existing distribution assets, to evaluate current and future requirements to ensure continued safe and reliable service. At the same time, attention is paid to ensuring compliance with applicable regulatory

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L. Lawler

and legal standards and requirements, applying industry best practices, and to spreading the associated costs over time where possible.

25. As explained in the Asset Plan, EGD has undertaken a review of all of its distribution assets. The result is a current inventory of assets, organized by category with information about each class of asset such as its age and material type. The Asset Inventory is described at page 16 of the Asset Plan.
26. Using this Asset Inventory, the Company proceeded to identify system integrity and reliability risks with its assets. The identified risks were then catalogued in a Risk Register. That Risk Register was then analyzed to create relative risk rankings for each of the identified risks between Priority 1 (highest – where the incidence rate is high, and the consequences are very severe) and Priority 4 (lowest – where the incidence rate is low, and the consequences are minor).
27. The process undertaken by the Company is described in more detail at page 45 of the Asset Plan. The items in the Risk Register are listed in the tables at page 17 of the Asset Plan, and are classified by Priority level in the chart at page 50 of the Asset Plan.
28. Having identified risks and associated priorities, the Company has also determined appropriate responses to each of the risks. The descriptions of the planned initiatives to address each of the identified risks are set out in the chart at page 51 of the Asset Plan.
29. As a next step, EGD considered the nature of the identified risks (including the priority associated with addressing those risks) and the required response to each

Witnesses: L. Chiotti
L. Lawler

identified risk, in order to determine an Implementation Plan, which includes a schedule or timeline for addressing each identified risk. In preparing the Implementation Plan, EGD considered factors such as the relative risk ranking of each item, work already underway, the interdependencies between some of the activities required to address certain of the identified risks and the costs associated with the activities.

30. The Implementation Plan is set out at pages 55 and 56 of the Asset Plan. It depicts each of the risks in the risk register, the nature of the initiative to address each risk and the planned timing and associated overall cost for those activities. As with other items in the Asset Plan, the Implementation Plan addresses these items over a ten year term (though it will be an iterative document, updated each year).
31. The categories of Asset Management Strategies associated with System Integrity and Reliability requirements are described in a Table at pages 24 and 25 of the Asset Plan. Set out below is a list of those Asset Management Strategies, along with the forecast 2013 capital cost associated with each. Taken together, these items comprise the forecast 2013 capital budget associated with the System Integrity and Reliability activities described in the Asset Plan. Details of each of these items are provided below.

System Integrity and Reliability Cost Drivers	2013 Budget (000's)
1) Continue to replace existing assets that are near the end of their useful life	\$28,039
2) Conduct studies to improve understanding of the integrity of specific classes of assets where risks have been identified	\$4,680

Witnesses: L. Chiotti
L. Lawler

3) Enhance the integrity of distribution asset records	\$16,023
4) Continue to enhance the Company's understanding of the condition of its critical assets through inline inspection programs	\$1,000
5) Enhance the safety and reliability of the Company's critical assets by verifying the Maximum Allowable Operating Pressure (MAOP) of targeted lines	\$6,300
6) Continue Sewer Safety Program	\$1,350
7) Enhance the capability to effectively isolate portions of the system to minimize the impact of planned or unplanned service disruptions	\$6,580
8) Continue with existing integrity programs	\$44,069
Total	\$108,041

Continue to Replace Existing Assets Approaching the End of Life \$28.0M

32. As assets age, failure rates are anticipated to increase with the failure profile becoming more acute as the assets approach the end of their useful life. This increasing failure profile is expected to drive an increasing spend profile to replace the assets.

33. In 2013, the Company has budgeted \$28M to replace or improve the integrity of aging assets including low pressure delivery meter set components, compression couplings, AMP fittings, copper services, steel tubing services, gate and district components. The \$28M also includes approximately \$1M for cast iron reinstatement work.

Witnesses: L. Chiotti
L. Lawler

Asset	Explanation	2013 Budget (000's)
Low Pressure Delivery Meter Sets	Data gathering and evaluation of approximately 100,000 LP stations. Upgrade LP stations based on prioritized findings.	\$10,240
Targeted Compression Couplings Pressure Containment Sleeves	Install pressure containment sleeves over the highest priority of these couplings.	\$2,000
AMP Fitting Replacement	Due to leak rate, start proactive replacement of these fittings based on predicted failure profile.	\$1,000
Copper Services Replacement	Due to leak rate, proactively relay 2,250 of the remaining approximately 7,500 services.	\$4,500
Steel Tubing Service Replacement	Due to leak rate, proactively relay the remaining services.	\$1,000
Gate Station Equipment Replacement	Gate station replacement/rebuild programs to ensure system reliability and operational redundancy.	\$5,156
District Station Equipment Replacement	District station replacement/rebuild programs to ensure system reliability and operational redundancy.	\$3,201
Cast Iron Replacement Program	The cast iron program is expected to be completed in 2012, with residual clean-up work expected in 2013.	\$942

Conduct Studies \$4.7M

34. In order to improve understanding of the integrity of specific classes of assets where risks have been identified, targeted risk studies have been identified. The results of these studies will be leveraged to develop mitigation plans, including risk prioritized replacement, repair or monitoring programs. These studies may also

Witnesses: L. Chiotti
L. Lawler

result in additional programs or projects to address risks in future iterations of the Asset Plan.

35. In 2013, the Company has budgeted \$4.680M to continue with current studies or commence new studies to improve the understanding of the following asset-related risks: Field Applied Coatings, Plastic Mains, Carrier Pipe in Casing, Isolated Steel, Excess Flow Valves, Winglock Valves, Compression Outlet Service Tees, and Jumper & Service Extensions.

Asset	Explanation	2013 Budget (000's)
Field Applied Coatings	Study to understand issues with field applied coatings on tie-in to steel. Estimate 180 excavations in 2013.	\$360
Plastic Mains	Study to understand Aldyl A pipe susceptibility to cracking. Study to be done in conjunction with the Gas Technology Institute (GTI).	\$20
Carrier Pipe in Casing	Study to enhance knowledge of the effectiveness of cathodic protection of the carrier pipe in casing locations.	\$100
Isolated Steel	Study to increase knowledge of where isolated steel pipe may occur to enhance corrosion prevention strategies.	\$100
Excess Flow Valves	Study and related pilot to determine how to install EFVs on pre-2006 services. Expand installation of EFVs to additional customers such as mutli-family and small commercial customers.	\$1,500
Winglock Valves	Study to determine the condition and define program requirements with a pilot starting in 2013.	\$2,300
Compression Outlet Service Tees	Study to identify the most effective risk mitigation for compression outlet service tees with low pull out resistance.	\$200

Witnesses: L. Chiotti
L. Lawler

Jumper & Service Extensions	Study to increase knowledge regarding steel jumper and service extension condition and determine program requirements.	\$100
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Enhance Distribution Asset Records

\$16.0M

36. EGD is addressing the risk that inaccurate or incomplete records may impact safety, capital investment and operational decisions by creating a series of projects to identify and resolve a variety of records issues, including clean-up of data, refinement of processes and technology changes. The Company is accelerating the existing records clean-up efforts due to recent industry events highlighting the requirement for focus in this area. Continuing current record integrity program processes in 2013 accounts for \$3.523M of the \$16M forecast.
37. Records and GPS Strategy accounts for the remainder of the \$16M forecast. This includes, a project to scan EGD's Miscellaneous Orders (historical paper records that record maintenance work on plant). This effort is budgeted at \$2M in 2013. Further, a comprehensive analysis of asset records has been completed in 2012 to assist in determining the approach and plan of action for other records improvement projects. In 2013, the Company expects to spend \$6.27M on the Distribution Records Management Project, including work required to graphically display records in the GIS system (Header Conversion), digitizing hard copy records and capturing additional asset attributes (Data Capture), process and technology upgrades to support traceable, verifiable and complete records as per industry best practice.
38. Furthermore, EGD has initiated a major project to gather and utilize GPS coordinates for key elements of its gas distribution system. This accurate plant

Witnesses: L. Chiotti
L. Lawler

location information will contribute to improving a number of key processes such as emergency response, locates and compliance inspections such as corrosion and leak survey. This in turn will improve safety and reliability. The Company estimates this project to cost \$4.231M in 2013.

Continue In Line Inspection Program \$1.0M

- 39. The In Line Inspection (“ILI”) program is a program which evaluates the condition of high stress pipelines via the use of intelligent tools colloquially known as pigs.
- 40. The capital associated with the ILI program for 2013 is \$1M. Capital is required for the installation of In Line tool launchers, receivers, filter assemblies, as well as for investigative digs related to tool findings.
- 41. Projects for 2013 are the inspection of the NPS 36 Northern Link and NPS 8 Greenbank Road, and performing scheduled digs on NPS 26 Keele to DVP, NPS 8 Collingwood and the Mississauga Southern Link lines.

MAOP Verification \$6.3M

- 42. The effectiveness of the existing Integrity Management Program to maintain the safety and reliability of the Integrity Mains will be increased when the Company undertakes a three-year project to verify the Maximum Allowable Operating Pressure (“MAOP”) of all pipelines operating at or above 20% SMYS. The capital expenditure is intended to cover the cost of the records searches, resulting maximum operating pressure calculations, and mitigating actions for pipelines where the MAOP cannot be verified by records.

Witnesses: L. Chiotti
L. Lawler

43. Mitigating actions for these pipelines may include the following:

- Replacement of the pipeline
- Replacement of a specific component(s) of the pipeline
- Excavation of specific components to verify the data used to calculate the MAOP
- Removal of coupons from the pipeline for testing to determine mechanical properties
- Hydrostatic testing of the pipeline
- Downgrade the pipeline and reinforce affected networks.

Continue Sewer Safety Program and Pilot New DP Technology \$1.4M

44. In order to protect the distribution assets from damages, the Company will continue the Sewer Safety Program to reduce the risk associated with crossbores. In 2013, the Company has budgeted \$1.35M for the capital expenditure associated with this program which includes costs associated with One Call, sewer lateral locates, daylight witness holes, clearance tracking and Research and Development.

Isolation Valves and Load Shed Zones \$6.6M

45. Mainline valves are used to isolate and control larger areas of a natural gas distribution system. Mainline valves are normally in the open position, but when a section of pipeline requires maintenance or is involved in an emergency, operational crews close valves to isolate that section of the pipeline. The Company is currently conducting a study of system valves to sectionalize the networks in the event of an emergency. These valves would allow strategic isolation of the gas network, called load shed zones, in the event of a serious incident on the distribution system or as a result of a loss of supply by an upstream supplier. This

Witnesses: L. Chiotti
L. Lawler

study will also contemplate the use of automatic control valves ("ACV") and remote control valves ("RCV").

46. Once the study is complete, it is anticipated that many zones will require further sectionalizing valves which is reflected as a ten year program in the Asset Plan.
47. Based on the preliminary research, a conservative estimate for the number of new valves that will be required is in excess of 150. In 2013, \$1.5M has been budgeted for the installation of ten new valves and \$1.58M has been budgeted to add remote automation to existing control valves on the system.
48. Also, \$3.5M has been budgeted to remove the NPS 30 DVP line from a bridge at the foot of the Don Valley that is in a flood zone. A new route for this line will be required.

<u>Other Integrity Expenditures</u>	<u>\$44.1M</u>
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49. The Other Integrity Expenditures category includes existing programs such as the capital portion of Damage Prevention, pipeline marker installation, work associated with ensuring compliance with codes and standards, meter purchases, regulator retrofits, relays, and main replacements. These are considered to be ongoing spend items. The largest spend item for ongoing programs is the meter exchange program required to ensure that meters meet Measure Canada minimum specifications. For 2013 EGD is forecasting 84.855 Gls.

Witnesses: L. Chiotti
L. Lawler

Asset	Explanation	2013 Budget (000's)
Damage Prevention Program	Current damage prevention programs such as public awareness campaigns, damage investigations, excavator community education, etc.	\$2,492
Pipeline Markers	Installation of pipeline markers on targeted lines	\$1,060
Compliance of Integrity Programs	Ongoing work to ensure compliance with codes and standards such as Z662-11 Annex N	\$1,172
Meters (MXGI)	Cost of buying meters as part of the MXGI program	\$17,963
Regulator Refits	Cost of buying and installing regulators, conducted in conjunction with MXGI program	\$6,821
Relays	Scattered relays resulting from leak survey findings	\$10,398
Miscellaneous Replacement Mains	Anticipated mains requiring replacement (excluding Cast Iron)	\$4,163

50. The forecast 2013 capital costs for system integrity & reliability initiatives are modestly higher than amounts spent over the past three years, during which time annual spending was in the range of \$98M. This is partly explained by increased volumes of MXGIs and associated regulator retrofits. Other spend requirements are driven by aging infrastructure, industry events and resulting industry best practices.

Relocations

51. EGD's distribution assets need to be relocated from time to time in response to the needs and schedules of municipal authorities and others.

Witnesses: L. Chiotti
L. Lawler

52. In order to operate within a city or municipality, Enbridge enters into a municipal franchise agreement which dictates the cost sharing for rebillable relocations. Gas distribution rebillable relocations primarily arise from road realignments and expansions, bridge rehabilitation, grade separations or other developments that are initiated by a city or municipality. Relocations are identified through different processes. Very often, municipalities will contact Enbridge directly when their capital projects are planned or approved. However, sometimes relocations are identified during the Markups process where a third party will submit their design for utility approval. Enbridge may determine that there is a conflict between the design and the existing Enbridge pipe thereby necessitating a relocation of Enbridge's pipe if the design cannot be modified.
53. In budgeting for future years rebillable relocations, Enbridge takes into account the normal activity level of rebillable relocations and their associated cost. Projects or programs identified as incremental to that normal activity level are added as an incremental amount to the Asset Plan and Capital Budget. Incremental activity level would include items such as Infrastructure Stimulus Fund activities, major transit projects, road expansions and preparation for the 2015 PanAm Games. It is important to note that municipal capital projects go through extensive approval processes which may take longer than anticipated. Very often, Enbridge is involved in early design discussions that may be incorporated into the Enbridge Capital Budget based on the information available at the time of budget development. Enbridge staff work diligently to minimize the cost to Enbridge for rebillable relocations. However, it is not possible to avoid or defer these costs as they are a binding part of Enbridge's municipal franchise agreement.

54. In 2013, the Company estimates to spend \$13,209 on relocation projects as follows:

Delivery Area	2013 Budget (000's)
Greater Toronto Area	\$10,984
Ottawa Region	\$1,225
Niagara Region	\$1,000

55. This is higher than the historical level of activity as a result of an increase in relocation work since the introduction of the Infrastructure Stimulus Fund that has not diminished. Growth in the outer edges of the Greater Toronto Area has contributed to increased relocation costs for general infrastructure, i.e., road improvements as well as water and sewer main installations, while the more urban areas have had an increased emphasis on transit projects. Relocation projects in 2013 include:

- Greater Toronto Area:
 - Toronto Path Extension
 - TTC – LRT and other initiatives
 - Mississauga LRT
 - YRRT – Highway 7, Davis Drive, Yonge St.
 - 407 Extension
 - Various municipal road widening
- Ottawa Region:
 - Ottawa LRT
 - Churchill Avenue Rehabilitation
 - Bronson Avenue Renewal
- Niagara Region:
 - Various municipal road widening
 - Various bridge reconstructions

Witnesses: L. Chiotti
L. Lawler

56. In summary, for 2013, EGD expects to have direct capital expenditures of \$268.3M to support its customer growth and to maintain its distribution assets. Furthermore the Asset Plan goes on to highlight the EGD's current expectations with respect to future capital spending to serve customers and maintain its system. As a living document the Asset Plan will be updated as new information that affects the future spending is obtained.

Witnesses: L. Chiotti
L. Lawler

LEAVE TO CONSTRUCT PROJECTS

1. As indicated in Exhibit B1, Tab 2, Schedule 1 and 2, Capital Expenditure Budget, Enbridge Gas Distribution Inc. ("Enbridge" or the "Company") is planning several construction projects which require the filing of a Leave to Construct ("LTC") application with the Ontario Energy Board (the "Board"). A summary is provided below. The projects that have a capital requirement in 2012 or 2013 include:

- Alliston Reinforcement
- Angus Reinforcement
- Power Generation Project A¹
- Power Generation Project B¹
- Power Generation Project C¹
- Ottawa Reinforcement
- Greater Toronto Area ("GTA") Reinforcement
- Ottawa Innes Road Replacement

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2. Alliston Reinforcement – Enbridge proposes to reinforce the Alliston area system with approximately 9 km of 8 inch diameter extra high pressure pipe from the Cookstown Gate Station to the vicinity of Highway 89 and Sideroad 10. The reinforcement allows Enbridge to meet the area growth and the pipeline is to be located entirely within the municipal road allowances. The estimated capital for this project is \$5.4 million. An LTC application (EB-2011-0323) was filed on September 29, 2011. On January 23, 2012, the Board issued the Decision and Order approving the application. Construction is planned to start in the spring of 2012 with completion in the summer of the same year.

¹ Due to confidentiality, the customer is not identified.

Witnesses: E. Chin
N. MacNeil

3. Angus Reinforcement – Enbridge proposes to reinforce the vicinity of Angus with approximately 10 km of 8 inch diameter extra high pressure pipe from the Thornton Gate Station to the vicinity of Highway 89 and Sideroad 10. The Environmental Report is being prepared and the LTC application is expected to be filed in early 2012. Subject to Board approval, construction is planned to commence in the summer of 2012 for completion in the fall of 2012. While the route has not been finalized, the preliminary estimated total capital for this project is approximately \$6 million.
4. Power Generation Project A - Enbridge has been asked to supply a proposed new gas fired cogeneration plant. The customer has submitted the proposal to the Ontario Power Authority (“OPA”) under the Combined Heat and Power (“CHP IV”) procurement program. If the proposal is accepted by the OPA, Enbridge will execute a service contract with the customer and file a LTC application with the Board in 2012. It is anticipated that approximately 2 km of 36 inch and approximately 3.5 km of 12 inch extra high pressure pipes are required for the project with a requested gas in-service date of Q2 2014.
5. Power Generation Project B - Enbridge has been asked to supply a proposed new gas fired cogeneration plant. The proponent has submitted the proposal to the OPA under the CHP IV procurement program. If the proposal is accepted by the OPA, Enbridge will execute a service contract with the proponent and file a LTC application with the Board in 2012. It is anticipated that approximately 12 km of 12 inch extra high pressure pipe is required for the project with a requested gas in-service date of Q1 2014.
6. Power Generation Project C - Enbridge has been asked to supply gas for a

Witnesses: E. Chin
N. MacNeil

potential generation project. Pending decision from the customer, Enbridge will execute a service contract and file a LTC application with the Board in 2012. It is anticipated that approximately 2 km of 12 inch extra high pressure and approximately 3.6 km of 12 inch high pressure pipes are required for the project with a requested gas in-service date of Q1 2014.

7. Preliminary estimated Enbridge capital cost for the three power generation projects, net of customer contributions, is approximately \$15.5 million of which approximately \$14 million is expected to be spent in 2013.
8. Ottawa Reinforcement - Enbridge proposes to reinforce the Ottawa system with approximately 20 km of 24 inch diameter extra high pressure pipe from the Richmond Gate Station to the vicinity of West Hunt Club Road and Greenbank Road. The reinforcement allows Enbridge to meet the area growth as well as pressure requirements at the Ottawa Gate Station. The Environmental Report is being prepared and the LTC application is expected to be filed in the spring of 2012. Subject to Board approval, construction is planned to commence in the spring of 2013 for completion in Q1 2014. While the route has not been finalized, the preliminary estimated total capital for this project is approximately \$46 million. Approximately \$30 million is the expected capital expenditure in 2013. About \$1.9 million will be spent before 2013 and the balance in 2014.
9. GTA Reinforcement - Enbridge proposes to reinforce the GTA area with approximately 50 km of mostly 36 inch diameter extra high pressure pipe and an additional gate station. The reinforcement is required to allow Enbridge to meet area growth, and to increase supply diversity and reliability. The project will enhance network integrity, flexibility and the ability to dual-feed critical parts of the

Witnesses: E. Chin
N. MacNeil

GTA. Environmental and engineering work is at a very early stage and while much of the route is planned for utility corridors, final routes and costs cannot be determined without the benefit of the preliminary work. A very preliminary estimate of the total cost for the project is between \$450 and \$650 million. Preliminary planning and engineering are budgeted to cost \$33 million in 2012/13 with \$21million being the current estimated spend in 2013. It is anticipated that a LTC application will be filed in Q3 2012. Subject to Board approval, construction will take place in 2014 and 2015.

10. Ottawa Innes Road Replacement – Enbridge proposes to replace 3.0 km of Nominal Pipe Size (NPS) 8 inch pipe on Innes Road in Ottawa with an NPS 12 pipe. This replacement enables the mandated inspection of the pipeline. The retrofit of the existing NPS 8 pipe is impractical because of un-piggable configurations. In addition, the replacement will facilitate other improvements in the system. It is expected that a LTC will be filed in Q3 2012 with construction to be completed by Q4 2013. The preliminary estimated cost is \$6 million, all of which is to be spent in 2013.

Witnesses: E. Chin
N. MacNeil

INFORMATION TECHNOLOGY CAPITAL BUDGET

1. This document describes the capital expenditures that the Information Technology (“IT”) department of Enbridge Gas Distribution (“EGD” or the “Company”) plans to make in 2013 to invest in technology to support its business.

2. A summary of these capital expenditures are set out below:

Enhancement Projects	\$ 12.7 million
Upgrades to Existing Software and Hardware	\$ 21.9 million
Total	\$ 34.6 million

3. The IT Capital Budget is developed following a rigorous examination of the Company’s IT needs and in response to identified process or system concerns. These needs are then prioritized based on a cost benefit analysis with the objectives of enhancing productivity, reducing risk and sustaining systems availability. A project that does not meet the business case threshold is not pursued. The initiatives that survive this review are then subject to further review by the Executive Management Team (“EMT”) prior to approval.

Enhancement Projects

4. The Company estimates that it requires \$12.7 million in 2013 for enhancement projects. These projects will leverage existing investments in systems to extend functionalities to meet the evolving needs of the business units within EGD. All projects align with Enbridge Gas Distribution core business strategies. The major projects are the following:

Witnesses: B. Misra
H. Wong

Leveraging SAP (\$4.5M) – This project involves enhancing the Customer Information System (“CIS”) to meet the evolving needs of Customer Care operations; improve system operations to ensure the system is stable and reliable, as well as improve customer self-service via direct linkages to the Company internet site. The Company will also assess opportunities to migrate the functionality related to meter management and billing and broker and large volume contract management. This capital cost was contemplated as part of and is within the spend threshold associated with the Customer Care/CIS settlement agreement (EB-2011-0226).

Capman/O&M (\$1.0M) – The Capital Management System involves a number of in-house custom built applications that are utilized as tools to budget, report, forecast, track and control capital costs. It also assists Construction and Customer Connections Managers analyze their capital costs and drive efficiencies. The enhancement is required to bring Operations and Maintenance (“O&M”) costs into the Capital Management System to provide the Operations Managers with better oversight and control of O&M costs. The changes also focus on portfolio management which will incorporate additional project estimating and feasibility tools. The enhancements will allow users to save additional time and costs.

Reporting and Analytics (\$1.5M) – The Reporting and Analytics System is an in-house custom built application to enhance reporting and analytics capabilities and functionalities for EGD business units on customer related data including billing and financials. This will aid in operational decision making by Customer Care and Finance

Witnesses: B. Misra
H. Wong

Necessary Upgrades

5. The Company forecasts to need to spend \$21.9 million in required upgrades to IT systems and infrastructure. These upgrades are necessary to sustain the reliability, security, availability, and supportability of systems and infrastructure that are critical to the operations of EGD. The major projects are the following:

EnVision upgrade (\$6.2M) – EnVision is a consolidated solution providing a work and asset management application to manage EGD distribution assets. There are core components of the system that are nearing end of life and require upgrades in order for the system to continue to be reliable and available for EGD operations. The current version of EnVision also needs to be enhanced to support evolving business needs, including improvement of asset management and integrity requirements and capabilities. The last upgrade to EnVision software occurred in 2005. The overall complexity of the system requires effort to determine which components need upgrades and in what sequence.

The EnVision application operates on an operating platform which the Vendor has improved and upgraded over time. The current operating platform will become obsolete in two years and will no longer be supported by the software Vendors. It is therefore necessary to undertake a major upgrade to the EnVision systems to ensure that they will remain compatible with all current and future versions of relevant operating systems.

Without undertaking the necessary upgrades, it will not be possible to apply future software patches which, for example, address and rectify security threats. This could put the entire EGD IT infrastructure at risk.

Witnesses: B. Misra
H. Wong

Part of the work contemplated by the 2013 budget is to assess the various alternatives and select the most cost effective options to complete the upgrade.

SAP Hardware Refresh (\$4.2M) - The SAP (CIS) solution hardware was acquired during the implementation project in 2007 - 2008 and will reach its end of life in the late 2012 - early 2013. This is not unusual for such hardware much of which is depreciated annually at a rate of 20%. This project will upgrade the existing hardware technology to a newer infrastructure enabling the continued operation and maintenance of the overall SAP solution and address growth in the volume of activity and usage of the solution since it was launched in September 2009. This capital cost was also contemplated as part of and is within the spend threshold associated with the Customer Care/CIS settlement agreement (EB-2011-0226).

Desktop Replacement (\$1.2M) – Desktop computers must be replaced as part of on-going upgrade cycle to ensure that computing desktop hardware is reliable and can be supported. In addition, the increase in use of new productivity applications by end users requires the need to upgrade desktop hardware to support evolving business needs.

6. The balance of the capital budget which is required to sustain existing systems and undertake necessary upgrades are required for servers and telecommunication upgrades and enhancements to all other business applications software. Several of these initiatives are identified in Exhibit B1, Tab 2, Schedule 2.

Witnesses: B. Misra
H. Wong

STORAGE CAPITAL EXPENDITURE

1. The 2013 Test Year Capital Expenditure Budget for Underground Storage is set at \$20.1 million out of the \$483.9 million total for EGD. As indicated in Exhibit B1, Tab 2, Schedule 2 this 2013 amount, as well as the expected \$23.8 million spend in 2012, and the Historic spend in 2011, \$27.0 million, are all significantly higher than the amount for Underground Storage Expenditure included in the 2007, Board Approved figure.
2. For the period from 2011 through the Test Year, the Underground Storage Capital Expenditures include a number of extraordinary projects intended to improve the overall safety and reliability of storage operations, as well as to ensure that EGD's storage facilities meet environmental targets set by the Ontario Ministry of the Environment ("MOE"). In addition to these, there are several other, higher cost projects underway that will improve EGD's understanding of its storage reservoirs and its ability to measure, and manage, the volume and energy content of its gas inventories.
3. The projects that are driving the higher spend through this period include:
 - Control Room, Office and Shop Buildings Replacements
 - Corunna Compressor Plant MOE Certificate of Approval Work
 - Storage Pool Check Metering Replacement
 - 3D Seismic Program
 - Storage Pool Observation Well Drilling
4. Control Room, Office and Shop Building Replacements – Enbridge has conducted a safety assessment of its Corunna Gas Storage Compressor Plant site to identify any safety risk exposure for staff, contractors and the public at large, as well as for the

Witnesses: B. Pilon
J. Sanders

overall reliability and continuity of storage operations. Out of that review came a number of recommendations and strategies for risk mitigation that the Company is acting on. It is a combination of these, as well as general staff accommodation needs, that have resulted in the plan to relocate and construct a new control room, office and shop buildings in 2012 and 2013, at a cost of \$8.2 million, of which \$5.5 million is budgeted to be spent in 2013..

5. Corunna Compressor Plant MOE Certificate of Approval ("C of A") Projects – The Corunna (Tecumseh) Compressor Plant C of A, issued by the MOE on October 31, 2008, contains specific terms and conditions under which the station is allowed to operate. Currently, the station is having trouble meeting some of the air and noise emissions targets set out in the C of A and capital expenditures are required to ensure compliance. Among the projects is the extension of compressor engine exhaust stack heights, making improvements in the effectiveness of the engine exhaust and turbocharger silencers, and improvements in the engine jacket water and gas coolers so as to improve noise and exhaust emission rates. In addition to these facilities projects, the Company is also purchasing some farm properties that are close to the Corunna Compressor Station. Ownership of these lands will eliminate the possibility of someone building a home or workplace near the station and becoming a noise and emission receptor. The timetable for compliance requires that this be done prior to the end of 2013 at an estimated capital cost over the 2011 to 2013 period of \$12.1 million of which \$6.1 million is budgeted in 2013.
6. Storage Pool Gas Metering Replacement – Enbridge's internal and third-party auditors, PriceWaterhouseCoopers ("PWC"), have both expressed concern with the magnitude of the discrepancy between the gas volume and energy inventory amounts, as indicated in operational measurement reports, and those suggested by pressure derived calculations of reservoir volumes. A large part of this

Witnesses: B. Pilon
J. Sanders

measurement discrepancy is attributable to the vintage and technology of the Company's gas measurement facilities, which have remained largely unchanged from circa 1964 when the storage plant was originally built. The intent of this project is to replace and upgrade all storage pool metering to include bi-directional, ultrasonic flow measurement, on-line gas composition analysis and moisture measurement to meet current accepted standards of Measurement Canada. In 2009 the Company's Executive Management Team approved this project for completion by 2011 although changes to the Wilkesport Metering Station will not occur until 2012. The expected cost of this upgrade is estimated at about \$21 million. This project is expected to be complete prior to the end of the Test Year.

7. 3D Seismic Program – The Company has conducted a 3-D seismic survey of its storage pools. This work was necessary to adequately delineate the pools so as to improve its understanding of the respective gas volumes and potential causes of any indicated Lost and Unaccounted For Gas ("LUF"). The information will also be used in determining the most cost effective location and completion programs for observation wells and replacement injection/withdrawal wells. The 3D seismic data acquisition was recommended by several engineering consultants, GLJ Ltd., Sproule, and Walter Dowdle & Associates, who have been working with EGD on various issues associated with the Company's gas inventory. As a result of its 2009 Audit Report, Enbridge committed to its external auditor, PWC, that it would conduct the acquisition of 3D seismic data as part of a program to better resolve variances with its gas inventory counts.
8. Reservoir Observation Well Drilling - After conducting 3-D seismic data acquisition for its storage pools over the last two winters, and the subsequent reservoir simulation analysis, a number of potential observation well locations were identified

Witnesses: B. Pilon
J. Sanders

in and around several of the pools. Walter Dowdle Associate recommended the drilling of these wells as a result of the Company's LUF study and it is intended that the information they provide will improve our understanding of the gas balance discrepancies. These well locations were chosen based upon the expected geological structure and porosity they would intersect, and their proximity to the storage pools. The location of the Designated Storage Area ("DSA") is also taken into account when choosing locations, especially where storage zones overlap DSA boundaries. It is believed that gas migration could be occurring from the main storage pools into adjacent zones if the respective structures contain adequate porosity and permeability. This migration could be accounting for some, or all, of the LUF that appears to be occurring in some of the pools. Drilling and testing of this suspected porosity was recommended to adequately assess its relative gas migration potential. This capital project will see relatively low cost observation wells drilled into these porous structures to assess their respective porosity and permeability and any indicated connection with the gas storage structures. It is proposed that the wells be drilled as test wells to evaluate each structure and that they be retained as observation wells to monitor the pressures in each respective gas accumulation. The Company expects to spend \$6.6 million for the Observation Wells before the Test Year.

Witnesses: B. Pilon
J. Sanders

ECONOMIC FEASIBILITY PROCEDURE AND POLICY

Introduction

1. The purpose of this evidence is to present the current procedures and policies for determining feasibility of Enbridge Gas Distribution Inc's ("Enbridge" or the "Company") system expansion projects. These procedures and policies are adopted to comply with the Ontario Energy Board's (the "Board") "*Guidelines for Assessing and Reporting on Natural Gas System Expansion in Ontario*", reported under EBO 188 dated January 30, 1998.
2. This evidence includes an overview of the Company's Customer Connection Policy, Customer Contribution and Refund Policy, Procedure for Capital Expenditure Approval and Method for Economic Feasibility Assessment.
3. The most recent feasibility parameters are used in this evidence, which are based on 2011 system expansion portfolio and are updated to reflect EB-2011-0051 Decision with Reasons.

Customer Connection Policy

4. The Company uses a portfolio approach to manage the system expansion activities and ensures that the required profitability standards are achieved at both the individual project and the portfolio level. Investment Portfolio and Rolling Project Portfolio are two Board prescribed portfolio approaches and are discussed on page 3 of this schedule. The Company manages to achieve a Profitability Index ("PI") of greater than 1.0 for both portfolios as required by the Board under EBO 188.

Witnesses: F. Ahmad
P. Squires

5. The minimum PI required for individual projects is 0.80. For projects with a PI less than 0.80, the customer shall be required to pay a Contribution-in-Aid-of-Construction ("CIAC") to bring the project up to the required PI level.
6. Customers connecting to the existing mains are provided, at no cost, with a service connection up to a maximum of 20 meters. Any service length beyond 20 meters is charged to the customer at a rate prescribed in Rider G.
7. The length of service for feasibility assessment is measured from the customer property line to the meter.
8. Requests for exceptions to the minimum PI must be authorized by the Manager, Customer Portfolio and Policy.
9. During construction and operation of each project, the Company will comply with the "*OEB Environment Guidelines for HydroCarbon Pipelines and Facilities in Ontario*".

Customer Contribution and Refund Policy

10. CIAC may be obtained for projects having a negative NPV. The contribution should be sufficient to bring the project NPV up to a viable level as assessed by the Customer Portfolio and Policy group from time to time. Harmonized Sales Tax ("HST") is added to contribution payments.
11. Where the use of a proposed facility is dominated by a single large volume customer, it is considered a dedicated facility for CIAC purposes. The dominant customer may be required to pay a contribution to result in a project NPV of zero or a PI of 1.0. Contribution amounts are subject to added HST.

Witnesses: F. Ahmad
P. Squires

12. Refunds of CIAC may be requested when the actual customer count on the system expansion exceeds the original forecast. For general service customers, these refunds are processed at the end of five years from the date of construction. The system expansion project is then re-evaluated with the actual customer count to determine a revised contribution that is required to bring the NPV to the original targeted level. The difference between this and the actual contribution paid by customers is the total amount to be refunded. Refunds are made based on the proportionate contribution of the customers.
13. Refunds for large volume customers will be determined based on a re-evaluation of the system expansion project taking into consideration extra investment and additional load brought on within five years to the specific piece of main constructed to serve the initial customer(s).
14. These refunds are made only for the specific piece of main put into service and no refunds are payable for customers added downstream of this piece of main. No interest is payable, and only customers who made a contribution are eligible for a refund. In order to be eligible for a refund, the customer must be consuming natural gas at the address for which refund is being claimed. If the customer moves, he or she is responsible for notifying the Company of the new address. Records of contributions are maintained by the Business Performance group at Enbridge.

System Expansion Portfolios – Accountability

15. Investment Portfolio: The Company evaluates all system expansion projects in a test year and ensures they achieve a portfolio PI threshold of 1.1. All new customers attaching to new and existing mains are included in this portfolio. The

Witnesses: F. Ahmad
P. Squires

Manger, Customer Portfolio and Policy is accountable for ensuring that the required PI threshold is achieved.

16. Rolling Project Portfolio ("RPP"): The Company also maintains a rolling 12-month distribution expansion portfolio including the cumulative result of project-specific Discounted Cash Flow ("DCF") analyses. The RPP does not include customer attachments from existing mains constructed in prior years. The company maintains RPP at a PI level greater than 1.0 and the Manager, Business Performance is accountable for maintaining this level.

Procedure for Capital Expenditure Approval

17. Enbridge's procedure for obtaining management approval to make a capital expenditure for distribution system expansion is known as the Authorization for Expenditure ("AFE"), and is outlined in the AFE manual. A system expansion project is typically initiated by a Regional Customer Connections Field Representative, who identifies potential new customers. He or she will assess the required amount of plant additions to provide service and will initiate an AFE for approval.
18. A feasibility calculation is required with an AFE, which assesses the estimated revenue and benefits of attaching these new customers against the cost of serving them. The Capital Project Feasibility ("CAPF") program is an IT tool used for evaluating all projects except for Large Volume Customer additions. Large volume projects are separately evaluated by Enbridge's Investment Review group with inputs from the special project group. All calculations related to project feasibility assessment are attached to an AFE as part of the approval process.

Witnesses: F. Ahmad
P. Squires

19. The Customer Connections representative inputs information on plant requirements, customer additions and timing, and volumetric data for Subdivision/Residential and Commercial/Industrial connections. For large-volume connections, the inputs are completed by the Investment Review group.
20. All AFEs are reviewed by the Manager, Business Performance who obtains approval from the appropriate management levels. The Manager Business Performance also ensures compliance with the Company's Connection Policies.

Method for Economic Feasibility Assessment

21. This section provides the method used to determine the input parameters including cost and revenues associated with a system expansion project. These parameters are discounted at the Utility's Weighted Average Cost of Capital ("WACC") to perform a discounted cash flow ("DCF") analysis. The Economic Feasibility of a project is measured using a NPV and PI.
22. Capital Cost: Budgeted average unit prices are used to estimate capital cost for mains and services based on the required pipe size and ground conditions. This procedure is used to develop capital estimates for all residential, commercial and industrial connections. For large volume connections (i.e., above 340 000 m³ annual consumption), field estimates are used to estimate mains and service cost.
23. If a main is oversized to meet future growth potential, it may be re-priced at the size required to meet customers' load requirements for feasibility calculations. The actual cost of the main must be shown on the AFE.
24. An incremental overhead allowance is added to the cost of mains and services and is incorporated in the CAPF program for feasibility analysis.

Witnesses: F. Ahmad
P. Squires

25. Consumption and Revenue: For subdivision and residential connections, consumption is estimated based on building type (single, semi-detached, townhouse) and configuration (bungalow, split or two-storey). The CAPF program calculates customer revenue based on consumption levels input by the local Customer Connections representative.
26. A load sheet is used to estimate consumption of commercial and industrial connections. The load sheet information is provided by the customer and contains consumption of various appliances installed at the premises.
27. For large volume connections, consumption information should include monthly volumes and the customer's contract daily demand. The Investment Review group calculates revenue, based on the input consumption profiles and the most recent Board Approved revenue rates.
28. Customer Attachment and Revenue Horizon: The maximum customer attachment horizon for regular residential, commercial and industrial connections is 10 years. The revenue horizon is 40 years from the in-service date of the initial mains.
29. For large volume customers, the customer attachment horizon is 10 years. The maximum revenue horizon is 20 years from the customers' initial service date if this is a reasonable expectation.
30. Marginal Operating and Maintenance ("O&M) Expenses: According to the most recent feasibility parameters, the incremental O&M cost for adding residential connections is estimated to be \$70.11 per customer.

Witnesses: F. Ahmad
P. Squires

31. For commercial and industrial connections, the incremental O&M cost is \$190.14 per customer.
32. For large volume connections, incremental O&M is determined based on the average annual expense for various rate classes except for rate 125 and is shown in Table 1 provided below. For rate 125 customers, marginal O&M is determined on a case by case basis.

Table 1
Marginal O&M Expense per Customer

Rate Class	<u>R9</u>	<u>R110</u>	<u>R115</u>	<u>R135</u>	<u>R145</u>	<u>R170</u>	<u>R300</u>
Marginal O&M per customer	\$4,586	\$5,230	\$6,694	\$3,521	\$4,082	\$5,306	\$4,994

33. Gas Costs: Gas costs are based on the Weighted Average Cost of Gas ("WACOG") less the commodity component. Currently the WACOG (excluding commodity) is \$.0794/m³ for conventional heating and water heating loads at residential, commercial and industrial facilities.
34. For large volume connections, gas costs are based on the customer's load profile characteristics which will typically warrant a customized gas cost calculation consisting of four components including: 1) Unbilled and Unaccounted for Gas ("UUF"), 2) transportation, 3) annual storage and 4) peak day delivery. The Investment Review group calculates gas cost based on the customers' monthly volumes, contract demand and service requirement (Western or Ontario). All gas costs include UUF, but only Western contracts include transportation costs. The customers' load profile dictates the amount of load balancing, storage, and peak day costs/credits are included in gas costs. Firm customers will incur peak day

Witnesses: F. Ahmad
P. Squires

costs, while interruptible customers will receive peak day credits. UUF and transportation costs will be applied to the customers' load, storage costs to the customers' stored gas, and peak day costs to the customers' peak day storage requirement if the customer is firm. Peak day credits will be applied to interruptible customers' average daily volume. The formula used for calculating amounts of stored gas and peak day storage requirements are included with the table of costs found in Table 2 on the following page.

35. The interruptible gas cost categories are: (a) Rate 145 customers with a minimum 16 hour curtailment notice; and (b) Rate 170 customers with 4 hours curtailment notice.

Witnesses: F. Ahmad
P. Squires

Table 2
Gas Cost for Large Volume Customers

Firm		<u>UUF</u> (\$/m ³)	<u>Transportation</u> <u>(Western Only)</u> (\$/m ³)	<u>Annual Storage</u> (\$/m ³)	<u>Peak Day</u> <u>Delivery</u> (\$/m ³ d)
		Annual load	Annual load	Stored gas ¹	Excess on peak day over average daily
	<u>Rates 100, 110, 115, 135</u>				
	a) Volume				
	b) Cost				
	Rates 100, 110, 115	0.00064	0.05727	0.01095	1.00573
	Rate 135	0.00064	0.05727	0.00000	(1.19730) ³
Interruptible	<u>Rates 145 and 170</u>				
	a) Rate 145 with 72 hour curtailment	0.00064	0.05727	0.01095 ²	(1.19730) ³
	b) Rate 145 with 16 hour curtailment	0.00064	0.05727	0.00881 ²	(0.17067) ³
	c) Rate 170 ⁴	0.00064	0.05727	0.00881 ²	(0.17067) ³

1 (Volume from November to April/181 days – Annual Load/365 days)*181 days

2 Applied to uncurtailed volumes.

3 Applied as a credit based on the customers' average daily volume

4 If Enbridge Gas Distribution is restricted in utilizing its interruption rights a custom calculation should be performed by the Investment Review group.

Witnesses: F. Ahmad
P. Squires



EGD Asset Plan

2012-2021



May 9, 2012

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1. Executive Summary

Enbridge Gas Distribution (EGD) is one of North America's oldest investor-owned, regulated natural gas distribution utilities and shares many of the challenges facing some of its North American counterparts – an increased focus on safety and reliability, aging assets, an aging workforce, and the need to cost-effectively meet the demands of customer growth in its franchise area.

In response to these challenges, EGD has been adopting an Asset Management System approach to managing its distribution assets. Through the adoption of this approach, EGD is striving to enhance the value delivered to its customers through enhanced safety, reduced service disruptions, and improved cost effectiveness.

An Asset Plan is an important component of any Asset Management System. It defines and communicates what needs to be done with the organization's core assets over a specified period of time, the rationale behind these activities, and the resources needed for execution.

EGD's Asset Plan is a rolling 10-year plan that establishes the Company's distribution asset spending priorities over the term of the plan in a manner which attempts to address system needs while being mindful of ratepayer impacts.

This first iteration of the Asset Plan applies to the 2012-2021 time period. Going forward, the plan will be reviewed and updated on an annual basis. The scope of the plan includes EGD's core gas distribution system assets – Pipelines (Mains and Services), Valves, Fittings, and Measurement & Regulation equipment such as stations.

The Asset Plan includes a set of guiding principles which define EGD's Asset Management Objectives, Policies and Strategies.

Consistent with these guiding principles, the Asset Plan establishes the requirements and estimates the related capital expenditures to support four primary kinds of asset-related investments - Customer Additions, Reinforcements, System Integrity & Reliability, and Relocations.

Customer Additions:

EGD has experienced significant customer growth in its franchise area. This growth is forecast to continue in the future, as outlined in the chart below, driving the need to make continued investments in new distribution plant to service these new customers.

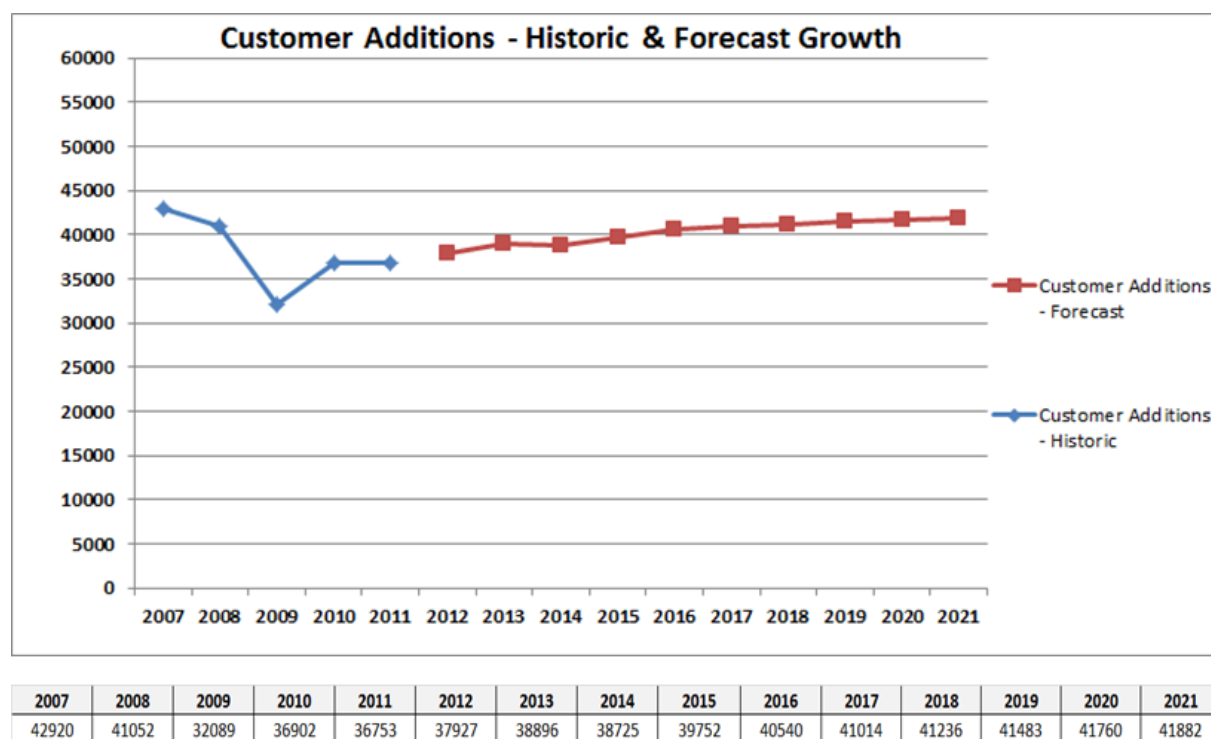


Chart 1 - Executive Summary: Customer Additions – Historic & Forecast Growth

Reinforcements:

Reinforcements increase the capacity and operating flexibility of the distribution system. Investments required to reinforce the distribution system are primarily driven by Customer Growth and System Integrity & Reliability considerations. As part of the Asset Planning process, network analysis is performed to establish the need and timing for reinforcements within each of the operating areas that make up EGD's franchise area (Areas 10, 20, 30, 40, 50, 60 and 80). This analysis has determined that a significant increase in reinforcement investment is required over the 10 year horizon of this Asset Plan.

In addition to several routine reinforcements, two major reinforcements of the extra-high pressure grid mains that form the major backbone of the distribution system serving the GTA

and Ottawa areas are required to further support customer growth and address significant system reliability and security of supply issues.

System Integrity & Reliability:

A critical responsibility in managing a gas distribution system is understanding potential threats to the safety and reliability of the system. This can be accomplished through condition monitoring, as well as reference to historical knowledge and industry developments and trends. By understanding these threats and the risks that they can manifest, mitigation programs have been, and continue to be developed and implemented to effectively manage these risks.

In addition, recent events in the natural gas industry, such as the tragic San Bruno explosion in September 2010, the Philadelphia explosion in January 2011, and the Allentown explosion in February 2011, have resulted in increased focus on public safety.

As part of applying an Asset Management System approach, EGD has made a concerted effort to identify, assess and prioritize risks to its distribution system and to continue to develop and implement programs to monitor, repair or replace components of the system as required, as part of this Asset Plan. In cases where risks require further analysis before the extent of mitigation can be determined, targeted risk studies have been identified and also included in this plan. These studies may result in additional programs or projects to address risks in future iterations of the plan.

The following are some of the key initiatives that represent a significant portion of the capital investments for System Integrity and Reliability requirements outlined in the Asset Plan:

- The need to continue to address classes of assets that are near the end of their useful life. Examples include Copper Services, Steel Tubing Services, AMP Fittings, and Mainline Compression Couplings
- The need to continue to conduct studies to improve our understanding of the condition of specific classes of assets where risks have been identified. These studies will help establish the requirements and scope of any related mitigation programs
- A number of initiatives to continue to enhance Records Integrity, including completeness, accuracy, verifiability, timeliness, and accessibility
- In-line inspect targetted XHP pipelines operating over 20% Specified Minimum Yield Strength (SMYS)

- Install additional mainline valves at key locations to enhance EGD's capability to effectively isolate portions of the system to minimize the impact of planned or unplanned service disruptions

Relocations:

Distribution assets generally need to be relocated for reasons such as road-widening and other municipal or third party construction projects.

In forecasting future years' relocations, EGD begins with the historical level of relocation activity and then adds projects or programs identified as incremental to that historical level. Within the 10 year horizon of this Asset Plan, a number of incremental activities, which are already underway or announced, are driving forecast relocation costs above historical levels. These activities include items such as Infrastructure Stimulus Fund activities, major transit projects (TTC Subway expansion, GTAA Rail Link, Rapid Transit – Eglinton LRT, York Region Rapid Transit, and Ottawa LRT), major road expansions (407 Extension) and preparations for the 2016 Pan Am Games.

Forecast Capital Cost of the Asset Plan

The following two charts summarize the total capital spend profile required to effectively meet the Customer Additions, Reinforcement, System Integrity & Reliability, and Relocation requirements included in this Asset Plan, as compared to the historic spend. The forecast costs are based on 2012 dollars (i.e. inflation and other time-based adjustments have not been applied) and include only the direct capital costs of the projects and initiatives.

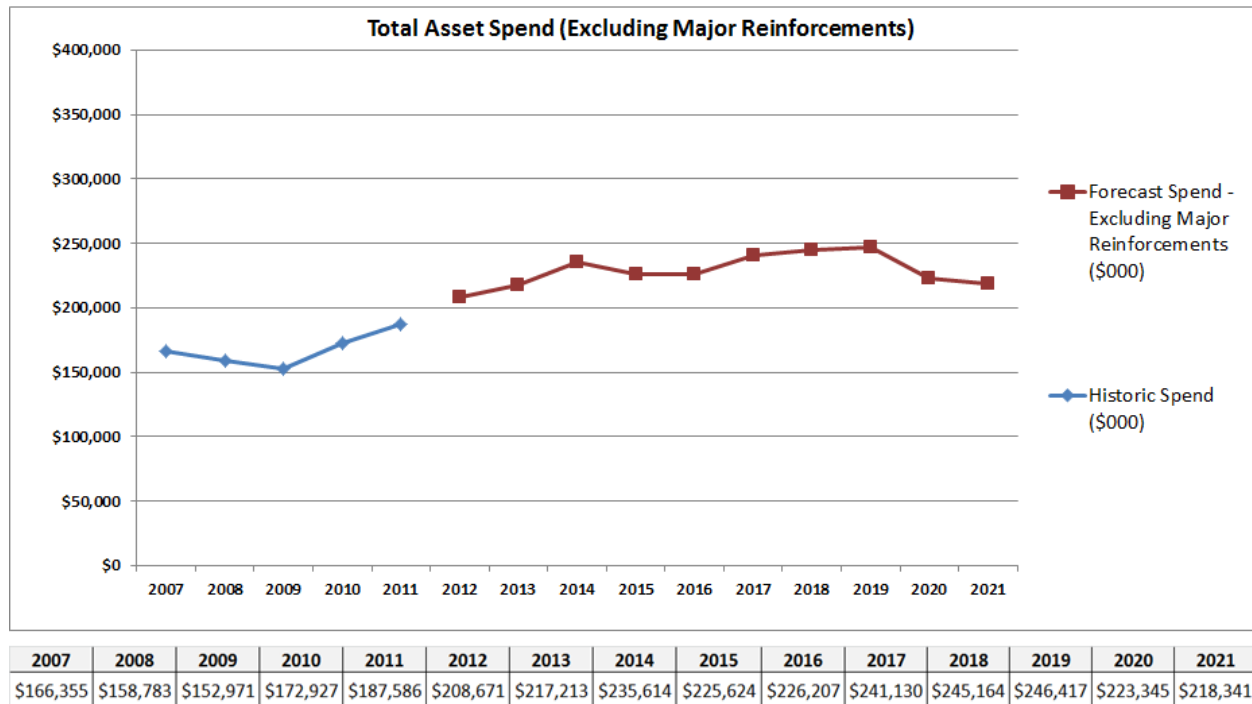


Chart 2 - Executive Summary: Historic & Forecast Capital Spend (Excluding Major Reinforcements)

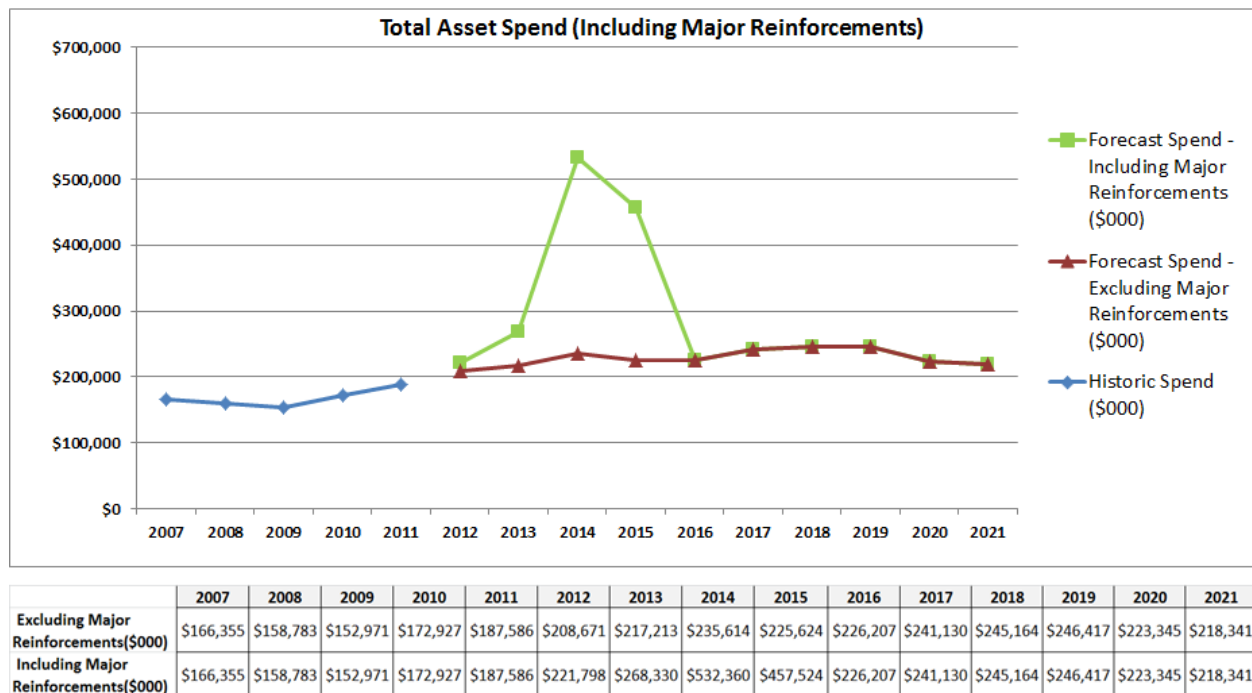


Chart 3 - Executive Summary: Historic & Forecast Capital Spend (Including Major Reinforcements)

2. Introduction

2.1 Background & Context

EGD is one of North America's oldest investor-owned, regulated natural gas distribution utilities and shares many of the challenges facing some of its North American counterparts – an increased focus on safety and reliability, aging assets, an aging workforce, and the need to cost-effectively meet the demands of customer growth in its franchise area. While meeting these challenges, EGD remains committed to the safe, reliable operation of its gas distribution network.

In response to these challenges, EGD has been working over the past several years to build on and enhance its past practices using an Asset Management System approach. Asset Management, as an approach, has been evolving over the past several years in a broad range of asset intensive industries, including utilities. The primary objective of an Asset Management System is to provide management with a systematic approach to making optimal asset related decisions based on trying to achieve an appropriate balance of risks, operational performance and costs. Achieving this balance enhances the value that EGD delivers to its customers through enhanced safety, reduced service disruptions, and improved cost effectiveness.

In working to adopt an Asset Management System approach, EGD has been using an asset management conceptual model developed by the Institute of Asset Management. This model was detailed in the asset management standard called PAS 55, a "Publicly Available Specification" published by the British Standards Institute. EGD took this model and adapted it to its gas distribution business.

Another important reference used by the Company was the Guiding Document on Asset Management released by the Canadian Gas Association in 2009. The CGA defines Asset Management as:

A strategic management system used to optimally manage assets over their life cycle by balancing performance, risk, and expenditures to achieve corporate strategic objectives.

From these reference sources, EGD created a framework that outlines all the major components of a comprehensive Asset Management System. EGD has used this framework to assess its current Asset Management activities to identify gaps and areas for improvement. Addressing these opportunities has become a continuous improvement process. Some areas

where work has already started include system health and performance monitoring, risk assessment and management, asset data, capital management, life cycle cost and value optimization and asset management leadership and accountability. These areas will continue to improve, through the Asset Management process going forward.

A key component of the Asset Management System is Asset Management Strategy and Planning. In addressing this Asset Management System requirement, EGD turned its attention to the development of a 10 year Asset Plan which will guide asset-related investments.

This document provides the first iteration of the plan, which will be reviewed, updated and improved every year going forward, thereby creating a 10-year rolling plan.

2.2 Purpose & Objectives of the Asset Plan

The purpose of an asset plan is to define and communicate what needs to be done with the organization's core assets over a specified period of time, the rationale behind these activities, and the resources needed for execution, consistent with the Company's key priorities. The needs of the assets should be considered over their entire life cycle including creation or acquisition, operation, maintenance and decommissioning.

EGD's Asset Plan establishes the Company's distribution asset spending priorities over a 10-year period (2012-2021) in a manner which attempts to address system needs while being mindful of ratepayer impacts.

More specifically, the objectives of this plan are:

- Align asset-related activities with the Company's key priorities (including safety, reliability, risk management, customer satisfaction, productivity and innovation)
- Provide inputs to the Company's long term planning and budgeting processes
- Provide a basis for substantiating financial requirements
- Meet regulatory requirements
- Serve as a mechanism to communicate EGD's asset management priorities and planned investments with internal and external parties

The target audience of the plan includes EGD's Senior Management, Operational Managers, partners, and external parties such as the OEB and other applicable stakeholders.

2.3 Scope of the Asset Plan

The following are the key elements that define the scope of this Asset Plan:

- The planning horizon for the Asset Plan is 10 years, 2012 to 2021.
- Organizationally, the Plan is limited to assets owned and operated by EGD across all regions within its franchise area.
- The Plan applies to core gas distribution assets only. These are physical plant assets that primarily make up the gas distribution system, including Pipelines (Mains & Services), Fittings, Valves, Stations, Meters and other Measurement & Regulation assets.
- The Plan does not include other assets such as Facilities, IT and Fleet.
- For this first iteration of the Asset Plan, Storage assets at EGD's Tecumseh Storage facility have not been included. In the future, EGD expects to include storage assets within the scope of the Asset Plan.
- This first iteration of the Asset Plan is focused on the capital investment requirements to optimally manage EGD's distribution assets. In future iterations, O&M requirements which are currently addressed in our O&M budgets will be addressed in more detail in the Asset Plan.

Based on the scope assumptions above, the Asset Plan will help substantiate a significant portion, but not all of EGD's capital requirements.

The Asset Plan is intended to supplement, but not replace, the evidence to be filed by the Company in support of its budget requirements in rate application filings.

2.4 High Level Overview of EGD's Asset Planning Process

Based on industry best-practices and internal expertise, EGD has developed, adapted and employed its own asset planning process. At the high level, this four-step process can be summarized as follows.

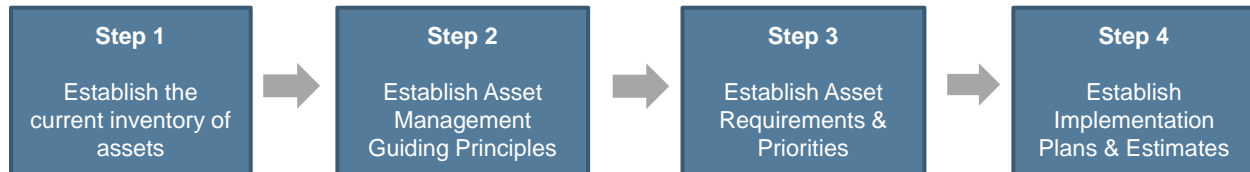


Figure 1 - Asset Planning Process

Step 1: Establish the Current Inventory of Assets:

The Distribution System is comprised of thousands of discrete components. To analyze and determine the needs of the assets, it is necessary to develop an appropriate classification for those assets, and inventory those assets by class rather than try to deal with discrete components.

- Based on the scope of the Asset Plan, a suitable “Asset taxonomy” has been established. The taxonomy identifies the key assets, and classifies them into a hierarchy
- Using the taxonomy as a reference, an inventory of assets was established. This represents a count of the key assets within the asset hierarchy
- Information on the asset inventory is supported by an explanation of relevant details on each class of asset, such as its age distribution

Step 2: Establish Asset Management Guiding Principles:

- Guiding Principles provide the basis and rationale for Asset Management decisions
- These principles include Asset Management Objectives, Policies, and Strategies

Step 3: Establish Asset Requirements & Priorities:

When considering asset requirements and priorities, it is necessary to consider the various types of asset investments that are required to build, operate and maintain the distribution system.

- Considering the various types of asset investments, there are primarily four categories of requirements that determine the overall plan for all the assets within the scope of the Asset Plan:
 - a. Customer Additions
 - b. Relocations
 - c. Reinforcements
 - d. System Integrity & Reliability
- The approach to establishing these requirements and prioritizing them varies by category
- In general, the requirements and priorities are determined based on a variety of sources of information, including asset condition data from operational systems, results of risk assessments, studies, forecasts, tacit knowledge, and historical information.

Step 4: Establish Implementation Plans & Estimates:

- The implementation plan establishes the scope and timing of asset-related projects, programs and investments that are needed to meet the asset requirements and priorities
- Capital investments needed to support the execution of the implementation plans are estimated by using a variety of approaches as appropriate, including historical expenditures and unit costs where available
- To the extent possible, an attempt has been made to manage potential rate impacts and resource availability by smoothing the expenditure profile and spreading out the costs over a longer term

3. Overview of EGD's Distribution Assets

This section provides an overview of how EGD classifies distribution assets, an inventory count, geographic distribution, and age-related profiles. This information will particularly help set the context for the discussion on System Integrity and Reliability requirements, strategies and plans that are discussed in subsequent sections of this document.

3.1 Asset Taxonomy and Inventory

EGD's distribution assets have been classified into four classes – Pipe, Fittings, Measurement & Regulation Equipment including Stations, and Valves. A further level of categorization has been done based on the sub-type of assets by material type / function. Figure 2 below is a depiction of the asset hierarchy.

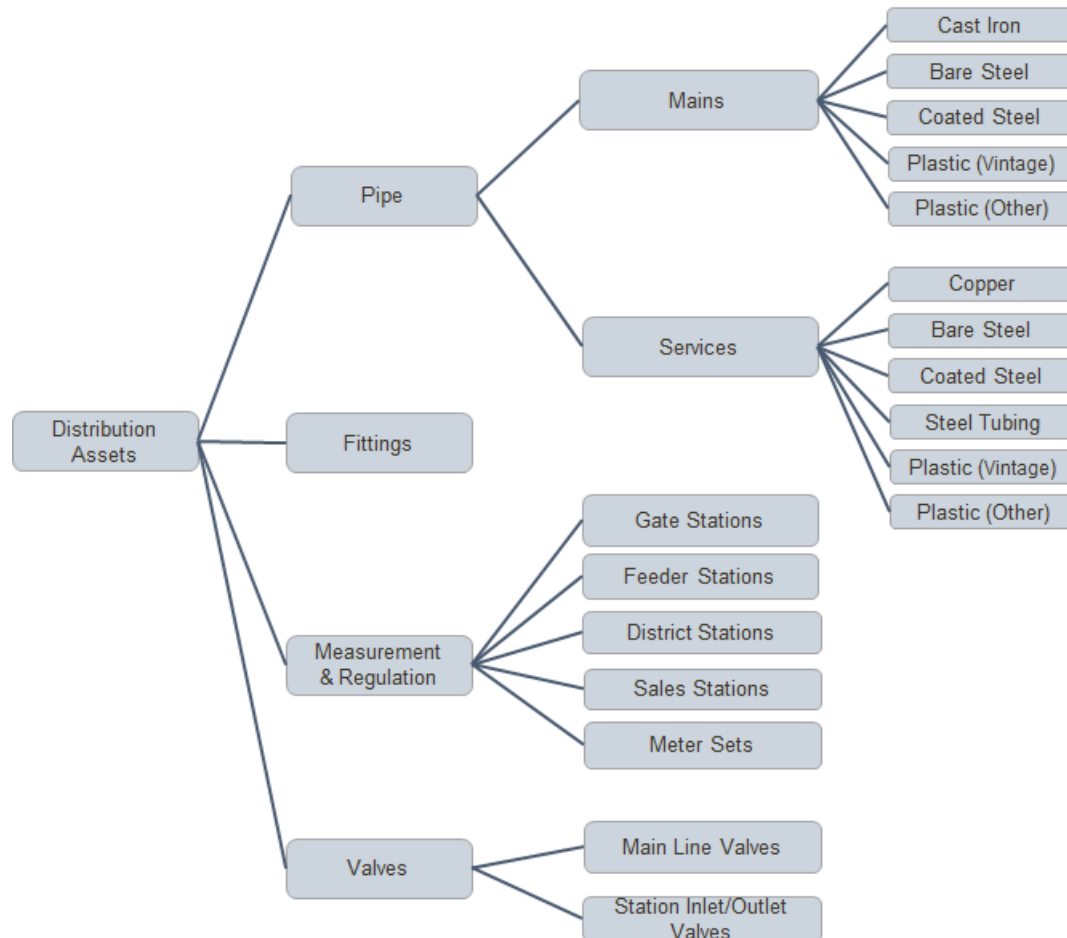


Figure 2 - Asset Taxonomy

Based on the Asset hierarchy above, Table 1 below quantifies the assets, as of March 2012.

Distribution Asset Classes		Quantity
Pipe		
Mains (#kms)		35,181
	Cast Iron	138
	Bare Steel	17
	Coated Steel	12,773
	Plastic - Vintage	3,689
	Plastic - Other	18,559
	Unclassified	5
Service Lines (#)		1,947,325
	Copper	6,754
	Bare Steel	30,714
	Coated Steel	159,744
	Steel Tubing	423
	Plastic - Vintage	284,892
	Plastic - Other	1,463,535
	Unclassified	1,263
Measurement & Regulation		
Gate Stations (#)		47
Feeder Stations (#)		19
District Stations(#)		4,613
Sales Stations (#)		9,391
Customer Meter Sets (#)		2,025,872
Main & Station Valves		
Main Line Valves (#)		19,884
Station Inlet/Outlet Valves (#)		9,273
Unclassified		1,225

Table 1 - Asset Inventory

A common reality faced by the natural gas industry is legacy records where some information about the asset that would be instructive to have is not available. In many cases this is because collection of specific types of data was not part of the records collection standard at the time of installation.

Where adequate information was not available to accurately classify the assets, they have been labeled “Unclassified”.

Although fittings are recognized as an important element of EGD’s asset inventory, historically these have not been recorded as separate assets, but rather associated with pipe assets. This makes it difficult to determine a precise inventory of these assets.

3.2 Geographic Distribution of Assets

EGD's franchise area is divided into seven administrative areas (Areas 10, 20, 30, 40, 50, 60, 80) as shown below. All of EGD's distribution assets reside in these areas.

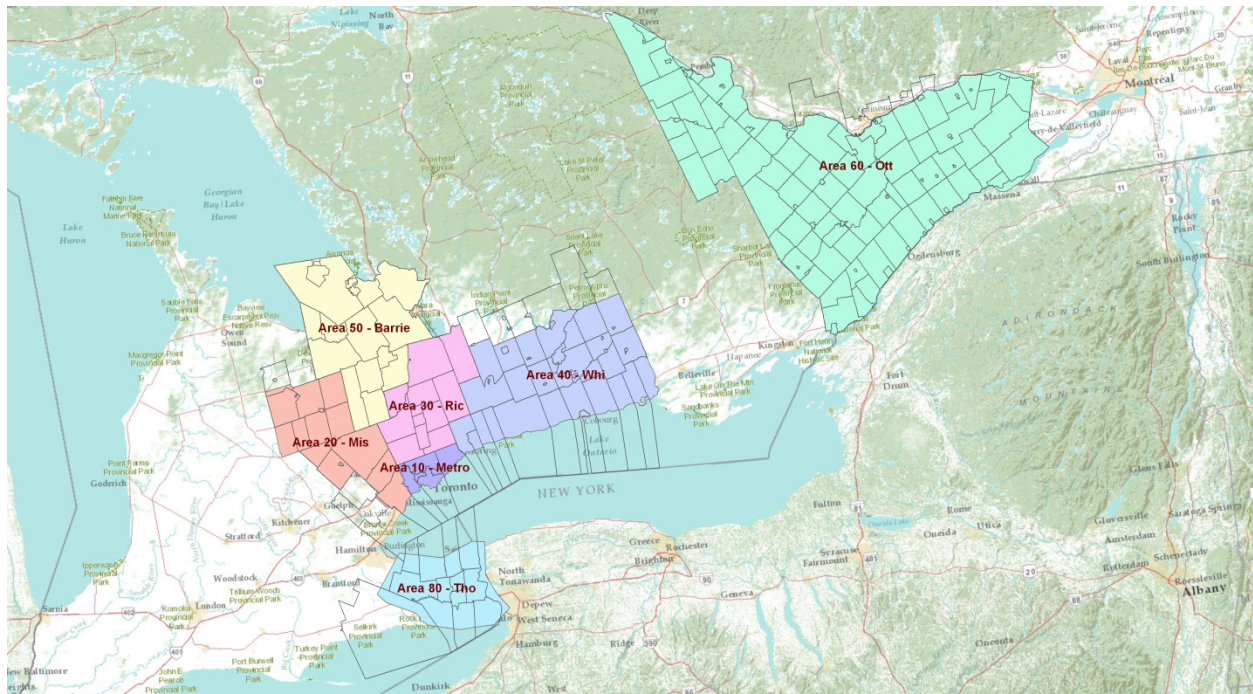


Figure 3 - EGD's Geographic Organization

Area 10 covers Toronto. Areas 20, 30, 40 and 50 cover the remainder of the Greater Toronto area. Area 60 covers the Ottawa region, and Area 80 covers the Niagara region.

In some cases, asset requirements can vary by area based on historic and future customer growth trends, historic regional practices, geographical conditions such as topography, soil conditions, and other factors.

The asset inventory outlined in Table 1 Asset Inventory is an aggregate of assets by asset class across all areas.

3.3 Understanding Assets by Age

EGD, as Ontario's oldest natural gas utility, has assets of varying age. Understanding the in-service date of the assets is important since materials degrade, and the performance characteristics of the assets can change over time. This understanding can help inform the need, scope and timing of replacement programs.

Histograms of Mains, Services and Main/Station Valves based on age follow.

Mains:

EGD's distribution system has over 35,000 km of mains. Based on when these assets were installed and their material type, there are different generations or distributions of mains as shown in the chart below.

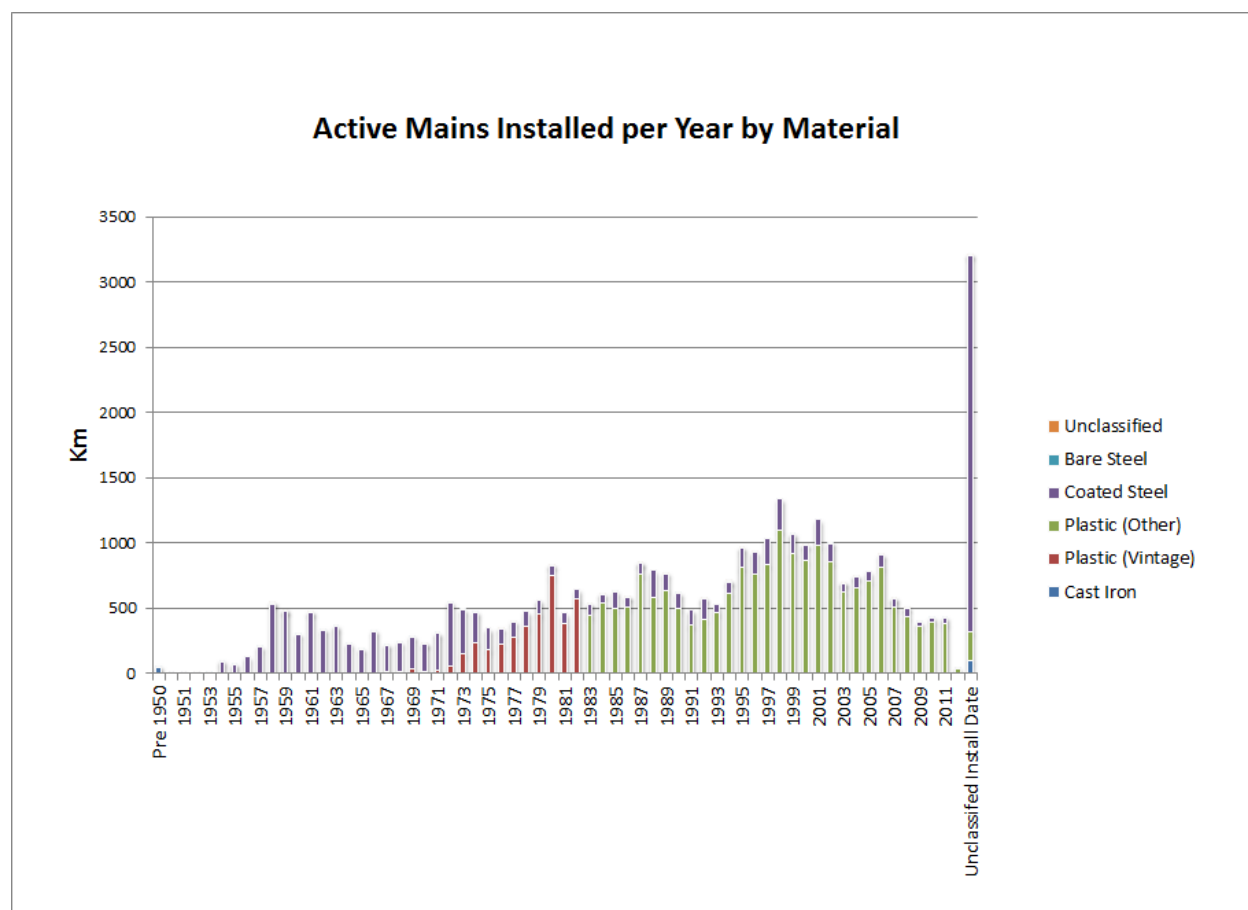


Chart 4 - Active Mains Installed by Year by Material

Services:

There are approximately 1.9 million active services across the franchise area. Similar to mains, there are several generations or distributions of services, based on their material type as shown in the chart below.

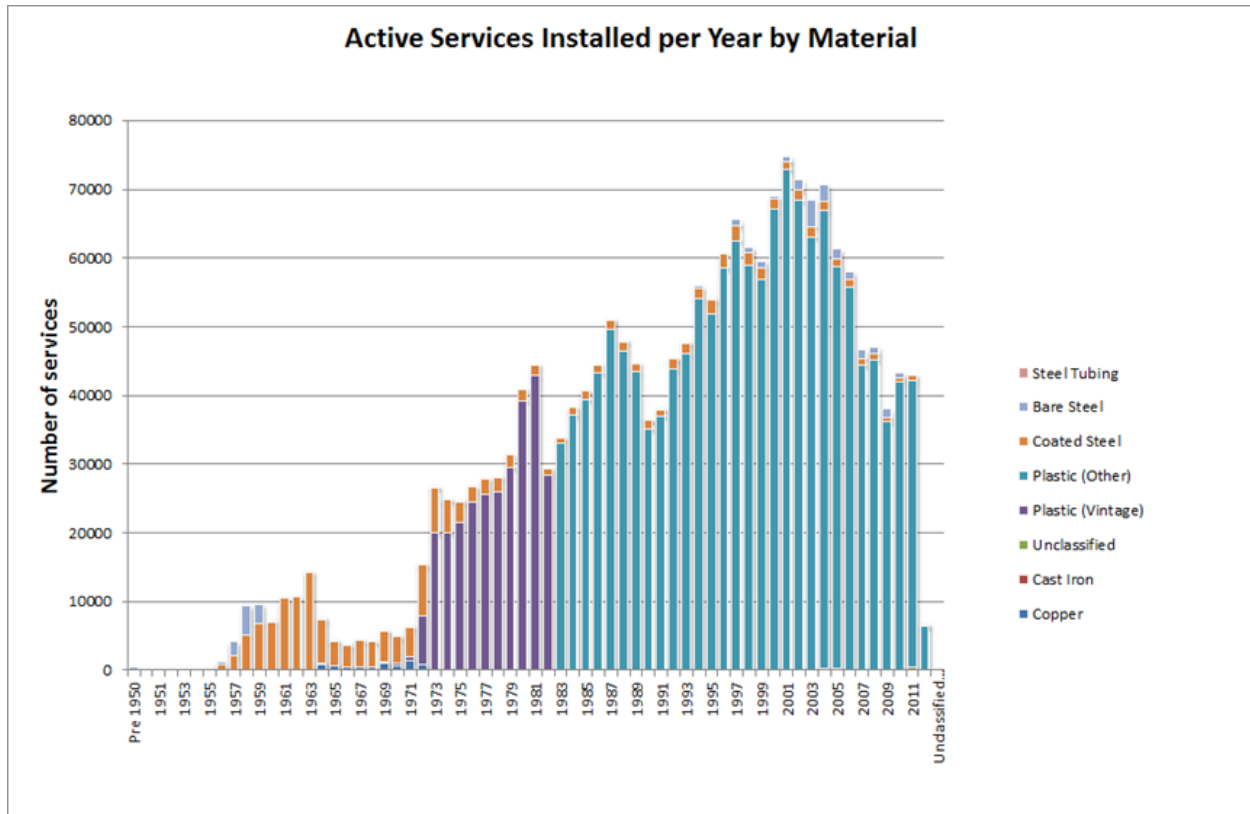


Chart 5 - Active Services Installed by Year by Material

Main and Station Valves

There are approximately 34,000 active main and station valves across the franchise area. Approximately 95% of these valves are steel, with the remaining 5% being plastic. These valves are located in system pressure regulating facilities, in-line in mains, as well as at customer sales stations. Similar to mains and services, there are several generations or distributions of valves as depicted in the chart below.

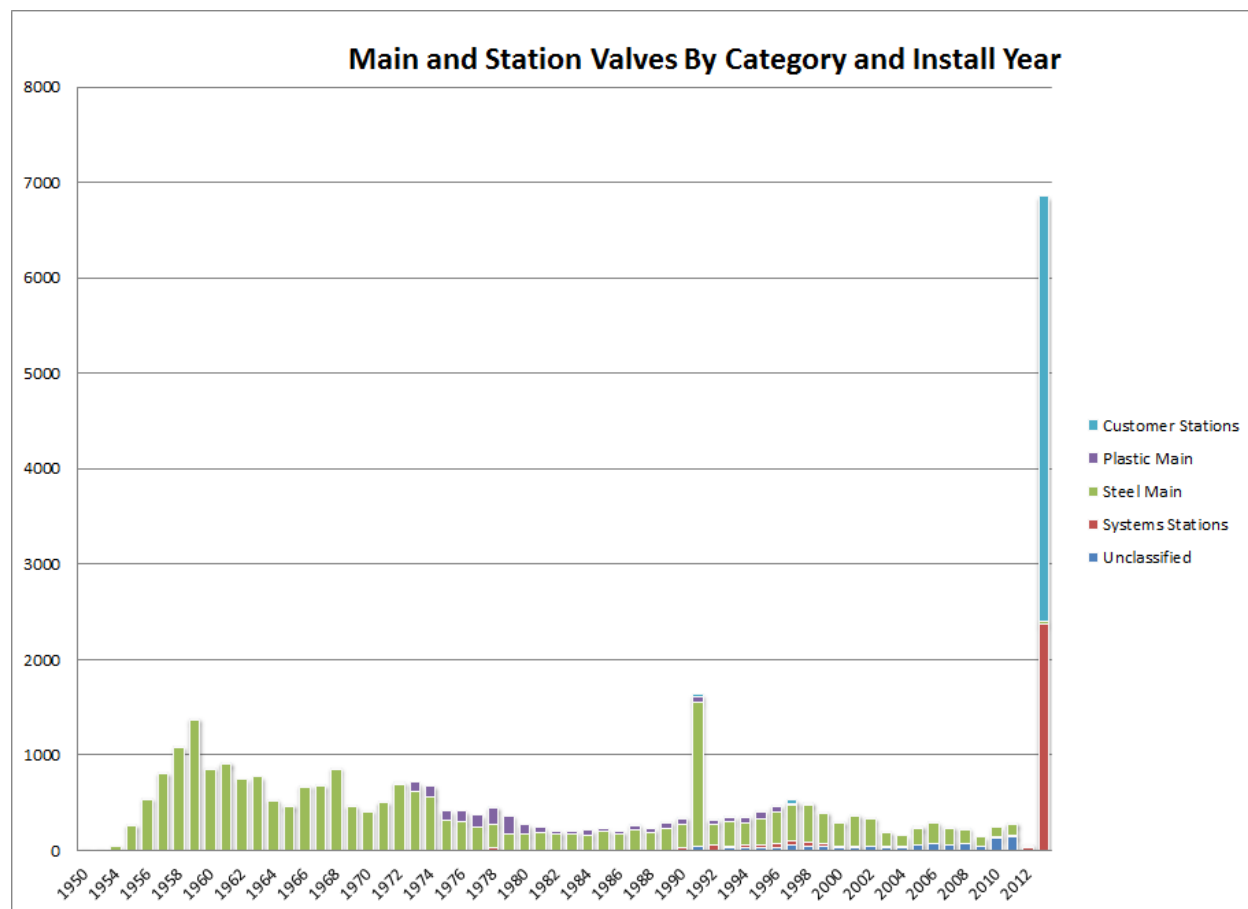


Chart 6 - Main and Station Valves by Category and Install Year

4. EGD's Asset Management Principles

As part of EGD's Asset Management System, several guiding principles have been developed. The principles are expressed as Objectives, Policies, and Strategies. These principles have been used to guide the development of the Asset Plan, more specifically with respect to the identification of requirements, their prioritization, and definition of plans to address requirements.

- Asset Management Objectives help align asset investments with the Company's strategic priorities
- Policies define the key considerations that should apply to ensure the effective management of the Company's assets
- Strategies define the high level approach to meet the Asset Management Objectives, consistent with the Asset Management Policies

4.1 Asset Management Objectives

The overall purpose of EGD's Asset Management System is to optimize the long term value of its distribution assets by achieving an effective balance of Risk, Operational Performance and Cost.

The specific objectives are:

- Safety : Continue to drive to zero incidents and property damage
- Reliability : Proactively identify and address asset related risks that can result in disruption of gas distribution service to customers
- Growth: Expand the distribution system to meet the growth in EGD's customer base in a sustainable manner
- Cost Effectiveness : Make prudent asset investment decisions while being mindful of rate payer impacts
- Environmental stewardship : Effectively manage the lifecycle of the Company's assets to reduce their environmental impact
- Compliance : Meet all applicable industry and regulatory requirements related to management of assets

4.2 Asset Management Policies

Enbridge Gas Distribution is committed to the safe, reliable, cost effective and environmentally responsible provision of gas distribution and services. At the core of this commitment is the effective stewardship of the company's distribution assets. It is through these assets that the company ultimately provides value to all of its stakeholders.

The following are policies that EGD has established to effectively manage its distribution assets:

1. The Company shall use the Asset Manager – System Operator model as the fundamental organizational construct to manage and operate its assets. This model provides a clear separation of accountabilities such that the Asset Manager is primarily responsible for decisions related to asset investments, while the System Operator executes building and operating the assets in the most efficient manner
2. The Company is committed to making all asset-related decisions on the basis of striving to achieve the appropriate balance of Risk, Operational Performance and Cost
3. The Company is committed to the regular assessment of risks associated with its assets, and ensuring that these risks are effectively managed
4. The Company acknowledges that asset information is critical to the effective management of its assets. Therefore, the organization shall ensure that its processes, systems and controls collectively strive to deliver complete, timely, accurate, verifiable and accessible asset information
5. The Company shall have an Asset Plan that is consistent with its key priorities. This plan will be reviewed, revised and ratified on an annual basis
6. The Company is committed to managing every stage in the lifecycle of its assets in compliance with all applicable laws and regulations, industry codes of practice, and internal company policies

4.3 Asset Management Strategies

The following table summarizes the high level strategies that have been developed by Management to address the asset requirements included in this Asset Plan.

Type of Investment	Strategies
Customer Additions	<ul style="list-style-type: none"> The strategy for customer additions is to add all customers in existing and new communities that meet feasibility guidelines
Reinforcements	<ul style="list-style-type: none"> Reinforce existing distribution assets to ensure that the system has the capacity to reliably meet current and future customer load demand Ensure security of supply by enhancing the flexibility of the system to address disruptions in upstream supply or failures with major components of the system
System Integrity & Reliability	<ul style="list-style-type: none"> Replace existing assets that are near the end of their useful life Conduct studies to improve understanding of the condition of specific classes of assets where risks have been identified. Leverage these studies to develop mitigation plans, including risk prioritized replacement, repair or monitoring programs Comply with all applicable rules and regulations related to system integrity and safety Enhance the integrity of distribution asset records to reduce operational risk Enhance our understanding of the condition of our critical assets by expanding the scope of inline inspection programs to include select XHP lines operating over 20% Specified Minimum Yield Strength (SMYS), consistent with current industry best-practices Enhance the safety and reliability of our critical assets by verifying the Maximum Allowable Operating Pressure (MAOP) of targeted lines Protect the distribution assets from damages through enhanced monitoring, installation of protective equipment, and the implementation of programs to address specific risks such as sewer laterals

	<ul style="list-style-type: none">• Enhance the capability to effectively isolate portions of the system to minimize the impact of planned or unplanned service disruptions• Continue with existing programs already in place to address operational and asset risks and compliance requirements
Relocations	<ul style="list-style-type: none">• The need to relocate EGD assets is primarily driven by external parties such as municipal authorities. EGD's strategy is to meet these relocation requirements in the most cost-effective way while recovering costs allowed by franchise and other agreements

Table 2 - Asset Management Strategies

5. Asset Management Requirements

This section of the Asset Plan defines:

- The known, and anticipated requirements related to our assets
- The approach to fulfill these requirements, consistent with the Company's Asset Management Objectives, Policies and Strategies
- Estimates of the financial investments needed to meet these requirements

5.1 Overview of Requirements

The following diagram depicts the four primary types of asset-related capital investments that are required over the term of the asset plan.

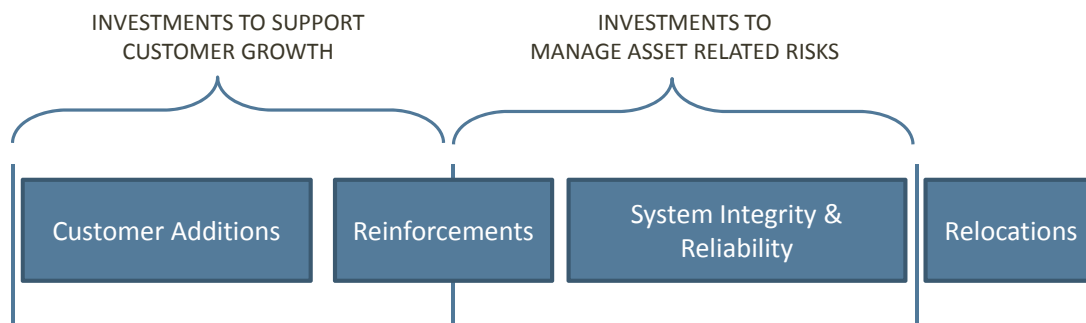


Figure 4 - Types of Asset Related Capital Investments

Customer Additions:

EGD is obligated to meet its customer growth demand by attaching customers that meet feasibility guidelines. Each year, there are several thousand Customer Addition projects that accomplish this. Customer Addition projects typically involve installing new segments of mains, installing services, and related meter sets.

In some cases, new Measurement & Regulation equipment such as stations need to be added or existing equipment needs to be upgraded due to increased loads.

Reinforcements:

Reinforcements increase the capacity and operating flexibility of the distribution system. They primarily refer to Mains. These projects are driven by Customer Growth and/or System Integrity & Reliability requirements.

System Integrity & Reliability:

In order to ensure safety and reliability, assets need to be effectively monitored, and risks need to be addressed in a proactive manner. There are a number of programs currently in place that address known risks. As new risks are identified, existing programs may need to be amended, or new programs may need to be established. Before amending existing programs or establishing new programs, studies are necessary to validate the requirements.

Relocations:

Distribution assets generally need to be relocated for reasons such as road-widening and other municipal or third party construction projects. The requirement and timing for these Relocation projects are primarily driven by municipal authorities. EGD recovers a portion of the capital investments for such projects.

5.2 Customer Additions

Requirements

EGD has experienced significant customer growth in its franchise area. This growth is expected to continue in the future.

The customer additions forecast at EGD is developed using a number of information sources:

1. Projections of potential customer growth resulting from current projects in different geographical areas of operation based on information from builders, developers and municipalities
2. Projections for customer growth based on housing start forecasts and other economic factors such as GDP growth, employment, and mortgage rates
3. Projections developed by external consultants specializing in population growth forecasting, as well as municipality long term plans

The following chart depicts the historic customer additions and the forecast for the term of the Asset Plan.

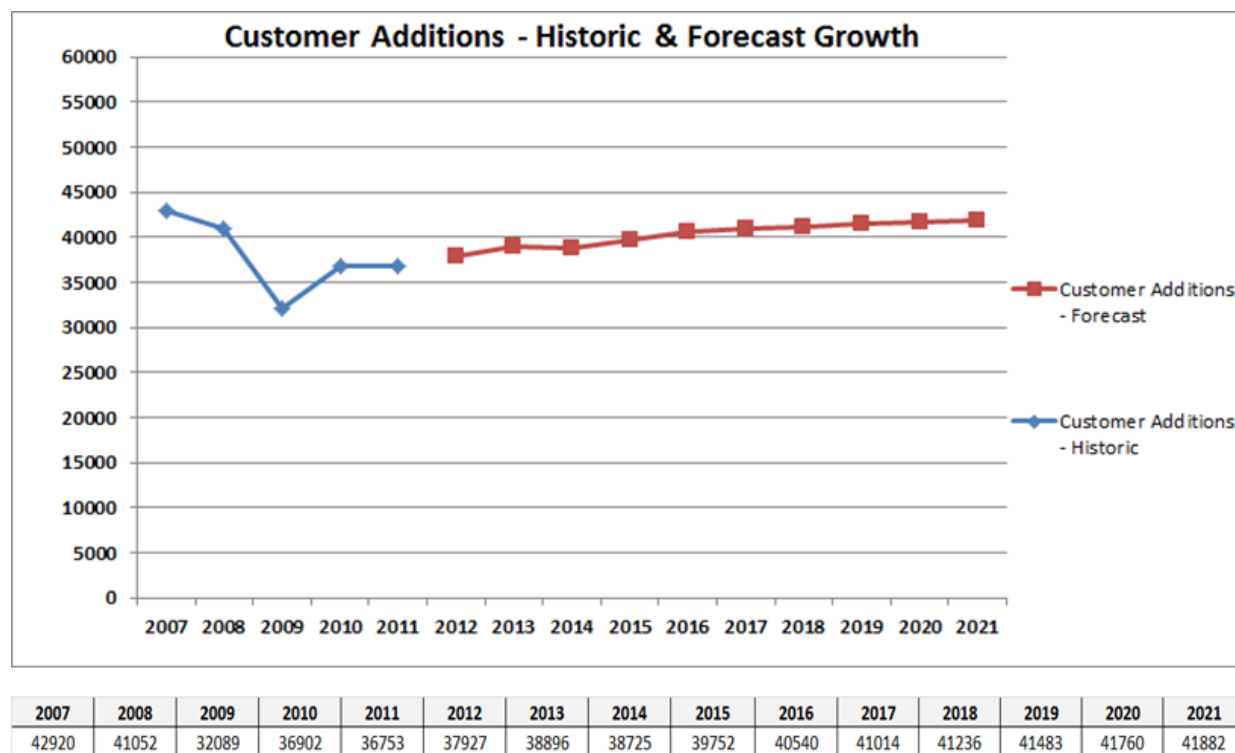


Chart 7 - Customer Additions: Historic & Forecast Growth

The pace of customer growth is expected to continue from 2012 to 2021.

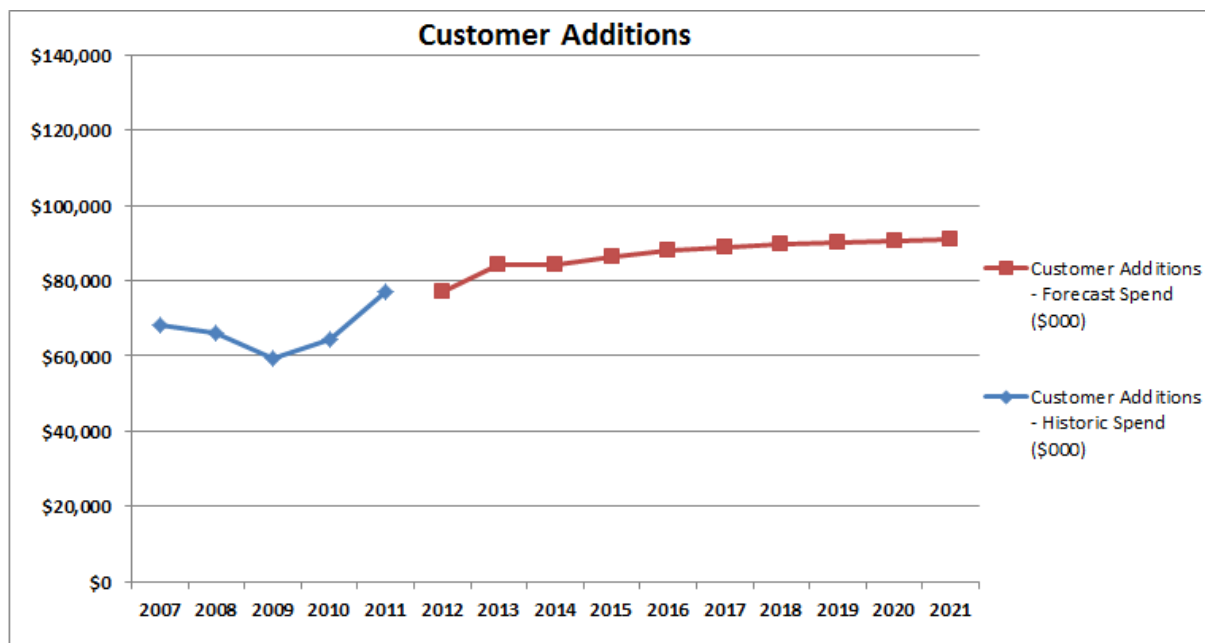
- The majority of these customer additions will be for new residential customers in existing communities
- Toronto (Area 10) will see approx. 10% of the annual customer additions. The Niagara region (Area 80) is expected to see the smallest share of these customer additions – under 3%. The Ottawa region (Area 60) will see approximately 20%. Over 60% of the new customer additions are expected to take place in the GTA, representing Areas 20, 30, 40 and 50. This in turn will inform when and where reinforcements to the system may be required

Implementation Plan & Estimated Capital Investments

Generally, there are three components of capital investments needed to support the customer additions requirements:

- Installation costs related to Mains, Services and Meters
- Material costs related to Mains, Services and Meters
- Cost related to Measurement & Regulation equipment required to support customer growth

The following chart depicts the historic capital spend on customer additions and the forecast spend for 2012-2021 based on the customer addition forecast numbers.



2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
\$68,323	\$66,132	\$59,257	\$64,226	\$77,116	\$76,982	\$84,413	\$84,036	\$86,264	\$87,974	\$89,003	\$89,485	\$90,021	\$90,622	\$90,887

Chart 8 - Customer Additions: Historic & Forecast Capital Spend

5.3 Reinforcements

Requirements

Reinforcement requirements are primarily driven by Customer Growth and System Integrity & Reliability considerations.

As part of the Asset Planning process, network analysis is performed to establish the need and timing for reinforcements within each of the operating areas that make up EGD's franchise area as defined in Section 3.2 - Geographic Distribution of Assets.

Routine Reinforcements:

Reinforcements to the distribution system are required to ensure that the system can continue to reliably deliver the gas load required by existing and new customers.

The basic objective at EGD for network design is that the system must meet anticipated peak demand at a temperature-dependent design condition. All load additions to the system are modeled based on this design temperature.

To determine the timing of the necessary reinforcements, yearly load additions are modeled by geographical area. Reinforcements are specified based on the system's ability to meet minimum system pressures at key control locations. The ultimate design is based on a minimum of 10 years of customer growth with due consideration given to 20 years of growth, security of supply, and operational flexibility.

This analysis yields the specific reinforcement projects in the following table. In addition, other reinforcements that have not been previously identified will be required from time to time. A provision has been made in the implementation plan to account for these.

The following is a summary of the known requirements by area as of December 2011.

AREA	PROJECT DESCRIPTION
Area 10	4.2 km of HP on Bathurst from Steeles to Sheppard & 3.5 km E on Sheppard to Bayview plus a new HP to IP District Station
	4.0 km of NPS 12" HP from Node 1802294 to 1802241 to 1801503, On Oriole from Roselawn to Kilbarry to Roxborough
	4.5 km of NPS 12" HP from Node 1803252 to 1890057, On Spadina from MacPherson to Lakeshore
	3.5 km of NPS 16" HP Steel Main from New Bayview Station to existing NPS 24" HP Main at Avenue /McPherson
	2.5 km of NPS 16" HP from Node 1803363 to 1900043 from Victoria Park on Dawes to Woodbine & Strathmore
Area 20	Install approximately 2500m of 4" XHP on Mayfield east to Airport Rd
	Install approximately 1000m of NPS 6 ST HP on Hurontario from Steeles to County Court
	Install approx 5 km of NPS 8 XHP from the newly elevated Bondhead line northbound to increase the pressure in Dundalk and Shelburne
	Replace 1181.5m of NPS 4 with NPS 8 on Hurontario, from Steeles to County Court
	Replace 1279.9m NPS 4 with NPS 8 from 1803184 to 1802257
	Install 253.7m NPS 6 connect 21820195 to NPS 24 PineValley line (Mississauga Rd close to CNR)
Area 30	Scarborough Reinforcement - Phase 2 Station Installation
	Install 1200m NPS 12 HP main in new development to avoid construction on Steels and crossing of Rouge
	Install approximately 2000m of XHP NPS 8 ST on Carrville from Bathurst to Yonge
	Install approximately 1400m of NPS 4 ST on Keele from McNaughton to Teston
	Install 7400m of NPS 16 on Woodbine, from Victoria Square to Bloomington
	Install 1050m of NPS 4 on 6th Concession, from Silver Spring Cres to Old Stouffville Sdrd
	Install 200m of NPS 4 on Holburn, from Leslie to Woodbine
	Install 570m of NPS 8 on 16th Ave, from Granton to Spadina
	Install 1200m of NPS 8 on Hwy 7, from stn# 33027 to Woodbine
	Install 2200m of NPS 8 on 19th Ave, from 9th Line to Reesor
	Install 6500m of NPS 16 on Woodbine, from Bloomington to St. Johns Sdrd
	Install 6800m of NPS 8 on Glenwoods/Warden, from Woodbine to Bethel Sdrd

AREA	PROJECT DESCRIPTION
Area 40	Peterborough Reinforcement Phase 1 - Install approximately 1.5 km of NPS 8
	Peterborough Reinforcement Phase 2 - Install approximately 2.4 km of NPS 8 on Preston from the terminus of Phase 1 north to Mount Pleasant at Hwy 7
	Peterborough Reinforcement Phase 3 - Install 1.9 km of NPS 8 ST XHP on HWY 7 from north of Mt Pleasant to Lily Lake
	Kingston Road Reinforcement, install 2.4 km of NPS 4 ST XHP from Lakeridge to Salem with Station
	Approx 8 km NPS 12 XHP, to support OPG and Durham EFW
	Install 300m of NPS 4 ST HP on Whites from south of HWY 401 to Oklahoma Drive, Pickering
	Replace 1.8 km of NPS 12 XHP main with 1.8km of NPS 16 XHP from Oshawa gate to Conlin and Wilson
	NPS 8XHP reinforcement - Kawartha Ethanol Reinforcement - Phase 2 & 3
	Install 2.8 km of NPS 8 ST HP main from ex NPS 8 HP main on at Brock & Kingston, Pickering to Ex.NPS 6 ST HP main at Westney and Kingston Rd in Pickering
Area 50	Alliston Reinforcement, 9 km NPS 8
	Angus Reinforcement
	Alliston Reinforcement Phase 2, 1.5 km NPS 8
	Stayner Second source, NPS 4 XHP with Station
	Alliston Reinforcement Phase 3, 2.8 km NPS 8
	Install 400m of NPS 4 on Hwy 27, from Hwy 9 south, with XHP to HP station Schomberg
	Alliston Reinforcement Phase 4, 3 km NPS 6
Area 60	Approx. 900m OF NPS 8 ST XHP River Crossing @ Woodroffe & Hwy.# 16 towards River Rd
	Mitch Owens Rebuild and install 2 km NPS 4 XHP
	Ottawa Innes Road Replacement - Replace 3.0 km of NPS 8 main with NPS 12, and remove an existing system bottleneck while ensuring a mandated inspection or elimination of high stress pipeline is completed by Dec 2013
	Pressure elevate HP network 6597 feeding Richmond to XHP, approx. 5300m of NPS 4 ST
	Approx. 6700m of NPS 20 ST HP pipe from Greenbank to Rideau Heights
Area 80	Chippawa Creek Road Reinforcement, Replace approx. 400m of NPS 6 ST HP with NPS 12 ST HP

Table 3 - Routine Reinforcements

Major Reinforcements:

In addition to the routine reinforcements, from time to time major reinforcements of the extra-high pressure grid mains that form the major backbone of the distribution system are required to further support customer growth and address significant system reliability and security of supply issues. These reinforcements are characterized by their size and complexity, and do not arise as frequently as the routine reinforcements.

Analysis of the supply chain and failure risks within the supply chain has indicated the potential for significant customer outages under certain upstream and downstream upset conditions affecting areas of high population densities, including the GTA and the Ottawa region.

This has led to the identification for the need of two major reinforcements in the 10-year planning horizon of this Asset Plan:

- The GTA Project will address these concerns for the Greater Toronto Area
- The Ottawa Reinforcement will address similar concerns for the Ottawa area

While these projects have been included within this Asset Plan, further details will be provided in the Leave-To-Construct applications that will be filed for each of these projects later in 2012.

The following is a summary of the Major Reinforcements.

PROJECT	PROJECT DESCRIPTION
GTA Project	Upgrading the XHP grid system in the Greater Toronto Area to meet load growth, ensure continued reliability and enable access to lower cost natural gas supplies
Ottawa Reinforcement	Ottawa Reinforcement Pre-Engineering
	Approx. 19300m of NPS 24 ST XHP pipe from Richmond Gate Station, North easterly to Greenbank
	Ottawa Reinforcement additional construction costs

Table 4 - Major Reinforcements

Implementation Plan & Estimated Capital Investments

Based on the reinforcement requirements, an implementation schedule was developed for reinforcement projects over the term of the Asset Plan. An estimate was also developed for the capital spend required for each of the projects. The following is a summary of this schedule.

Routine Reinforcements:

AREA	PROJECT DESCRIPTION	Dates	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Forecast (2012-2021) (\$000)
Area 10	4.2 km of HP on Bathurst from Steeles to Sheppard & 3.5 km E on Sheppard to Bayview plus a new HP to IP District Station	2018							A-10				\$9,000
	4.0 km of NPS 12" HP from Node 1802294 to 1802241 to 1801503, On Oriole from Roselawn to Kilbarry to Roxborough	2018							A-10				\$6,000
	4.5 km of NPS 12" HP from Node 1803252 to 1890057, On Spadina from MacPherson to Lakeshore	2019								A-10			\$7,000
	3.5 km of NPS 16" HP Steel Main from New Bayview Station to existing NPS 24" HP Main at Avenue /McPherson	2017						A-10					\$20,000
	2.5 km of NPS 16" HP from Node 1803363 to 1900043 from Victoria Park on Dawes to Woodbine & Strathmore	2019								A-10			\$5,000
Area 20	Install approximately 2500m of 4" XHP on Mayfield east to Airport Rd	2012	A-20										\$1,000
	Install approximately 1000m of NPS 6 ST HP on Hurontario from Steeles to County Court	2012	A-20										\$750
	Install approx 5 km of NPS 8 XHP from the newly elevated Bondhead line northbound to increase the pressure in Dundalk and Shelburne	2012	A-20										\$1,900
	Replace 1181.5m of NPS 4 with NPS 8 on Hurontario, from Steeles to County Court	2017						A-20					\$1,000
	Replace 1279.9m NPS 4 with NPS 8 from 1803184 to 1802257	2019								A-20			\$1,000
	Install 253.7m NPS 6 connect 21820195 to NPS 24 PineValley line (Mississauga Rd close to CNR)	2020									A-20		\$250
Area 30	Scarborough Reinforcement - Phase 2 Station Installation	2012	A-30										\$751
	Install 1200m NPS 12 HP main in new development to avoid construction on Steels and crossing of Rouge	2012	A-30										\$1,000
	Install approximately 2000m of XHP NPS 8 ST on Carrville from Bathurst to Yonge	2013		A-30									\$1,900
	Install approximately 1400m of NPS 4 ST on Keele from McNaughton to Teston	2012	A-30										\$560
	Install 7400m of NPS 16 on Woodbine, from Victoria Square to Bloomington	2014			A-30								\$15,000
	Install 1050m of NPS 4 on 6th Concession, from Silver Spring Cres to Old Stouffville Sdrd	2016					A-30						\$400
	Install 200m of NPS 4 on Holburn, from Leslie to Woodbine	2017						A-30					\$600
	Install 570m of NPS 8 on 16th Ave, from Granton to Spadina	2018							A-30				\$600
	Install 1200m of NPS 8 on Hwy 7, from stn# 33027 to Woodbine	2018							A-30				\$800
	Install 2200m of NPS 8 on 19th Ave, from 9th Line to Reesor	2018							A-30				\$1,600
	Install 6500m of NPS 16 on Woodbine, from Bloomington to St. Johns Sdrd	2019								A-30			\$14,000
	Install 6800m of NPS 8 on Glenwoods/Warden, from Woodbine to Bethel Sdrd	2020									A-30		\$5,000

AREA	PROJECT DESCRIPTION	Dates	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Forecast (2012-2021) (\$000)
Area 40	Peterborough Reinforcement Phase 1 - Install approximately 1.5 km of NPS 8	2012	A-40										\$485
	Peterborough Reinforcement Phase 2 - Install approximately 2.4 km of NPS 8 on Preston from the terminus of Phase 1 north to Mount Pleasant at Hwy 7	2012	A-40										\$1,900
	Peterborough Reinforcement Phase 3 - Install 1.9 km of NPS 8 ST XHP on HWY 7 from north of Mt Pleasant to Lily Lake	2014			A-40								\$1,500
	Kingston Road Reinforcement, install 2.4 km of NPS 4 ST XHP from Lakeridge to Salem with Station	2013		A-40									\$1,000
	Approx 8 km NPS 12 XHP, to support OPG and Durham EFW	2014			A-40								\$12,000
	Install 300m of NPS 4 ST HP on Whites from south of HWY 401 to Oklahoma Drive, Pickering	2015				A-40							\$200
	Replace 1.8 km of NPS 12 XHP main with 1.8km of NPS 16 XHP from Oshawa gate to Conlin and Wilson	2016					A-40						\$3,500
	NPS 8XHP reinforcement - Kawartha Ethanol Reinforcement - Phase 2 & 3	2012	A-40										\$2,200
	Install 2.8 km of NPS 8 ST HP main from ex NPS 8 HP main on at Brock & Kingston, Pickering to Ex.NPS 6 ST HP main at Westney and Kingston Rd in Pickering	2017						A-40					\$2,500
Area 50	Alliston Reinforcement, 9 km NPS 8	2012	A-50										\$4,660
	Angus Reinforcement	2012	A-50										\$6,000
	Alliston Reinforcement Phase 2, 1.5 km NPS 8	2014			A-50								\$1,150
	Stayner Second source, NPS 4 XHP with Station	2013		A-50									\$750
	Alliston Reinforcement Phase 3, 2.8 km NPS 8	2015				A-50							\$1,989
	Install 400m of NPS 4 on Hwy 27, from Hwy 9 south, with XHP to HP station Schomberg	2017						A-50					\$500
	Alliston Reinforcement Phase 4, 3 km NPS 6	2019								A-50			\$1,917
Area 60	Approx. 900m OF NPS 8 ST XHP River Crossing @ Woodroffe & Hwy.# 16 towards River Rd	2012	A-60										\$1,600
	Mitch Owens Rebuild and install 2 km NPS 4 XHP	2012	A-60										\$950
	Ottawa Innes Road Replacement - Replace 3.0 km of NPS 8 main with NPS 12, and remove an existing system bottleneck while ensuring a mandated inspection or elimination of high stress pipeline is completed by Dec 2013	2013		A-60									\$6,000
	Pressure elevate HP network 6597 feeding Richmond to XHP, approx. 5300m of NPS 4 ST	2017						A-60					\$200
	Approx. 6700m of NPS 20 ST HP pipe from Greenbank to Rideau Heights	2018							A-60				\$10,000
Area 80	Chippawa Creek Road Reinforcement, Replace approx. 400m of NPS 6 ST HP with NPS 12 ST HP	2013		A-80									\$400
Contingency for Reinforcements	Contingency to account for additional Reinforcement requirements that might come up within each year	2012-2021											\$18,250

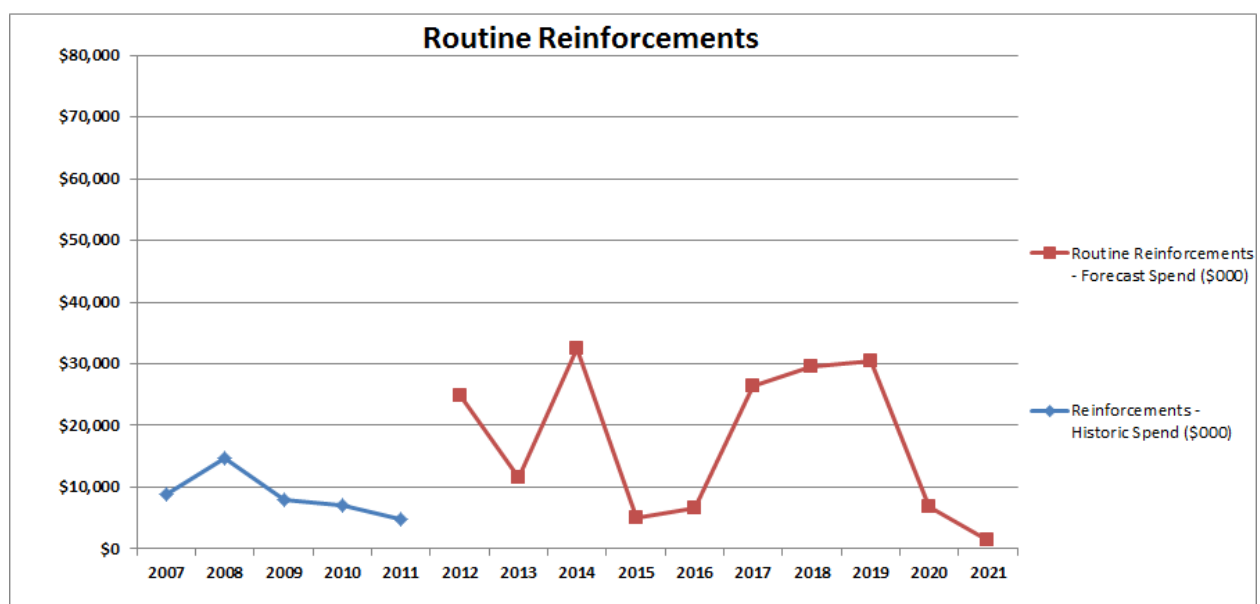
Figure 5 - Routine Reinforcements: Implementation Schedule & Cost

Major Reinforcements:

PROJECT	PROJECT DESCRIPTION	Dates	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Forecast (2012-2021) (\$000)
GTA Project	Upgrading the XHP grid system in the Greater Toronto Area to meet load growth, ensure continued reliability and enable access to lower cost natural gas supplies	2012-2015	A-10										\$548,144
Ottawa Reinforcement	Ottawa Reinforcement Pre-Engineering	2012	A-60										\$1,500
	Approx. 19300m of NPS 24 ST XHP pipe from Richmond Gate Station, North easterly to Greenbank	2013		A-60									\$30,000
	Ottawa Reinforcement additional construction costs	2014			A-60								\$13,246

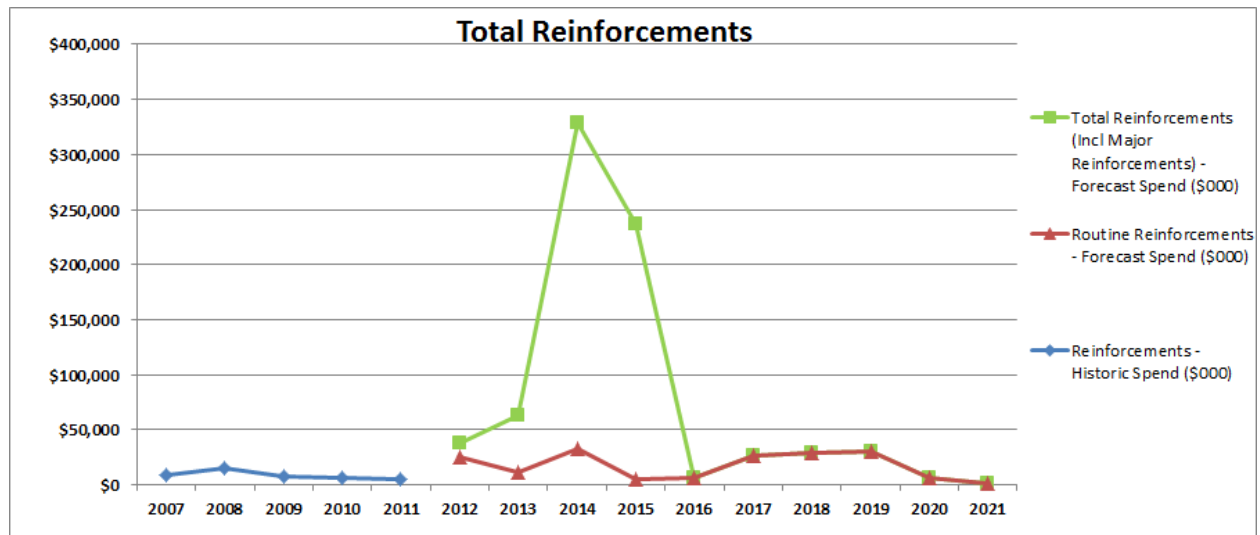
Figure 6 - Major Reinforcements: Implementation Schedule & Cost

The charts below depict the historic and forecast capital spend for routine reinforcements alone, and the total reinforcements within the term of the Asset Plan.



2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
\$8,795	\$14,710	\$8,061	\$7,054	\$4,742	\$24,756	\$11,550	\$32,400	\$4,939	\$6,650	\$26,300	\$29,500	\$30,417	\$6,750	\$1,500

Chart 9 - Routine Reinforcements: Historic & Forecast Capital Spend



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Routine Reinforcements (\$000)						\$24,756	\$11,550	\$32,400	\$4,939	\$6,650	\$26,300	\$29,500	\$30,417	\$6,750	\$1,500
Total Reinforcements (\$000)	\$8,795	\$14,710	\$8,061	\$7,054	\$4,742	\$37,883	\$62,667	\$329,146	\$236,839	\$6,650	\$26,300	\$29,500	\$30,417	\$6,750	\$1,500

Chart 10 - Total Reinforcements: Historic & Forecast Capital Spend

At this time, the forecast of costs for the GTA project for 2014 and 2015 are still being refined, and the estimates are only available as a range. The chart above assumes the mid-point of the estimated range.

5.4 System Integrity & Reliability

The Need for Integrity Management

A critical responsibility in managing a natural gas distribution system is to understand potential threats to the safety and reliability of the system. Threats to the system can manifest risks (defined as a combination of likelihood and impact), which if not appropriately managed, can lead to serious incidents.

In general, risks associated with gas distribution assets occur when there is a loss of containment of gas from the system. Two basic characteristics of natural gas are that it is lighter than air and when it is released from containment, it will follow the path of least resistance. In most cases, a release of gas will result in the gas escaping to the atmosphere with minor consequences. However, if the gas ignites or if the release of gas follows a path of least resistance to a confined space, increasing the probability of ignition, serious consequences can result. There are several threats to a gas distribution system, such as third party damages, corrosion or degradation, equipment malfunction, etc. which can result in a loss of containment of gas from the system.

In terms of System Integrity, EGD must meet its regulatory obligation to comply with the CSA Z662 Oil and Gas Pipeline Systems standard. EGD will be required to comply with Annex N of the 2011 edition of this standard, Integrity Management Programs and Activities, when the Technical Standards and Safety Authority (TSSA) adopts the standard, likely later this year. At this time, EGD is required to comply with a form of Annex N that is included in the current standard.

The following figure depicts the requirements of Annex N. To ultimately comply with this regulation, EGD must plan, assess, act, measure and improve its management of integrity on a continuous improvement cycle.

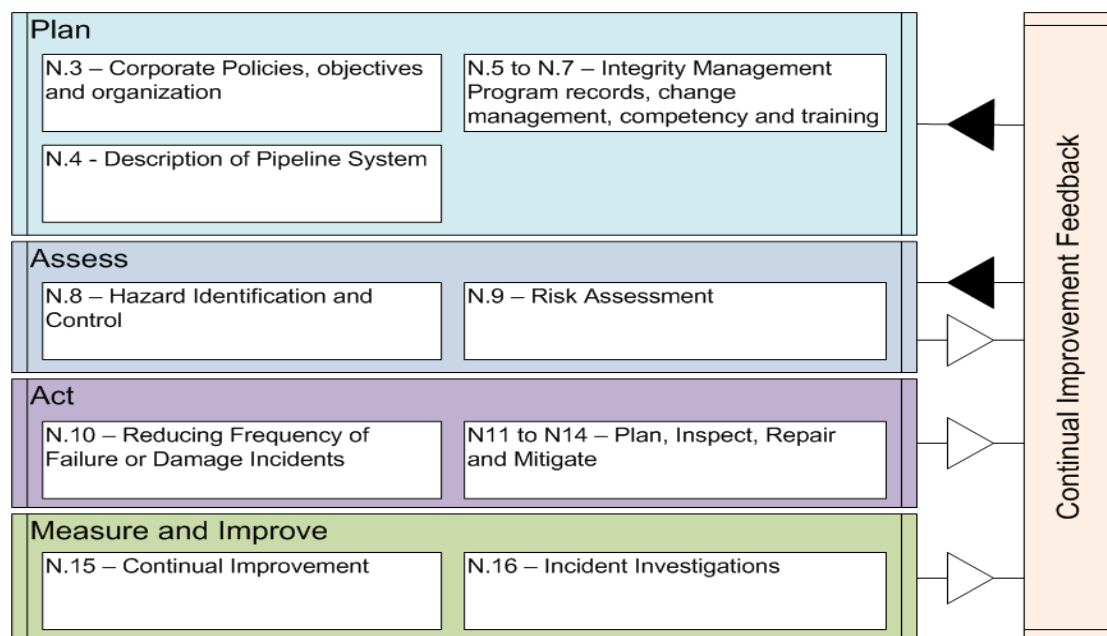


Figure 7 - Elements of CSA Z662 Annex N

In addition, recent events in the natural gas industry, such as the tragic San Bruno explosion in September 2010, the Philadelphia explosion in January 2011, and the Allentown explosion in February 2011, have resulted in increased focus on public safety. Lessons learned from these tragedies are expected to lead to changes in legislation and standards as the industry and regulators seek to minimize the chances of incidents occurring in the future.

EGD's Evolving Integrity Management Practice

Threats to the gas distribution system have existed from the inception of the industry. EGD has practiced a form of asset management to address integrity issues throughout its history. Integrity Management practices have focused on a wide variety of mitigation programs, including ongoing leak detection and damage prevention programs supported by effective emergency response processes to reactively respond to leaks and damages. In some cases, Integrity Management practices have been directed at proactively addressing specific assets that posed significant risks such as cast iron or bare steel mains and services.

In the case of cast iron, leak and failure rates due to cracking were significantly higher than with newer plastic and steel components. Assessing these risks led to a long term program to replace cast iron on a risk prioritized basis. Similarly, bare steel mains are approaching the end of their useful life due to corrosion failure. Therefore, a replacement program was also initiated

to replace EGD's bare steel mains. Both the Cast Iron and Bare Steel Main Replacement Programs are due to be completed in 2012.

Learning from these experiences and consistent with an Asset Management System approach, EGD has been working to adopt a broader risk based decision making approach to Integrity Management. This is not only consistent with a best practice industry trend, it is consistent with the evolution of regulations from a traditional "prescriptive" approach to a "goal oriented" or "risk based" approach. Annex N of CSA Z662 is an example of regulation that is evolving in this direction.

A risk based approach can be defined as a comprehensive and defensible process to identify threats, assess the potential risks from those threats, prioritize these risks and specify appropriate asset investments to mitigate likelihoods and impacts to effectively manage the risks.

The following figure is a high level representation of a risk based Integrity Management process.

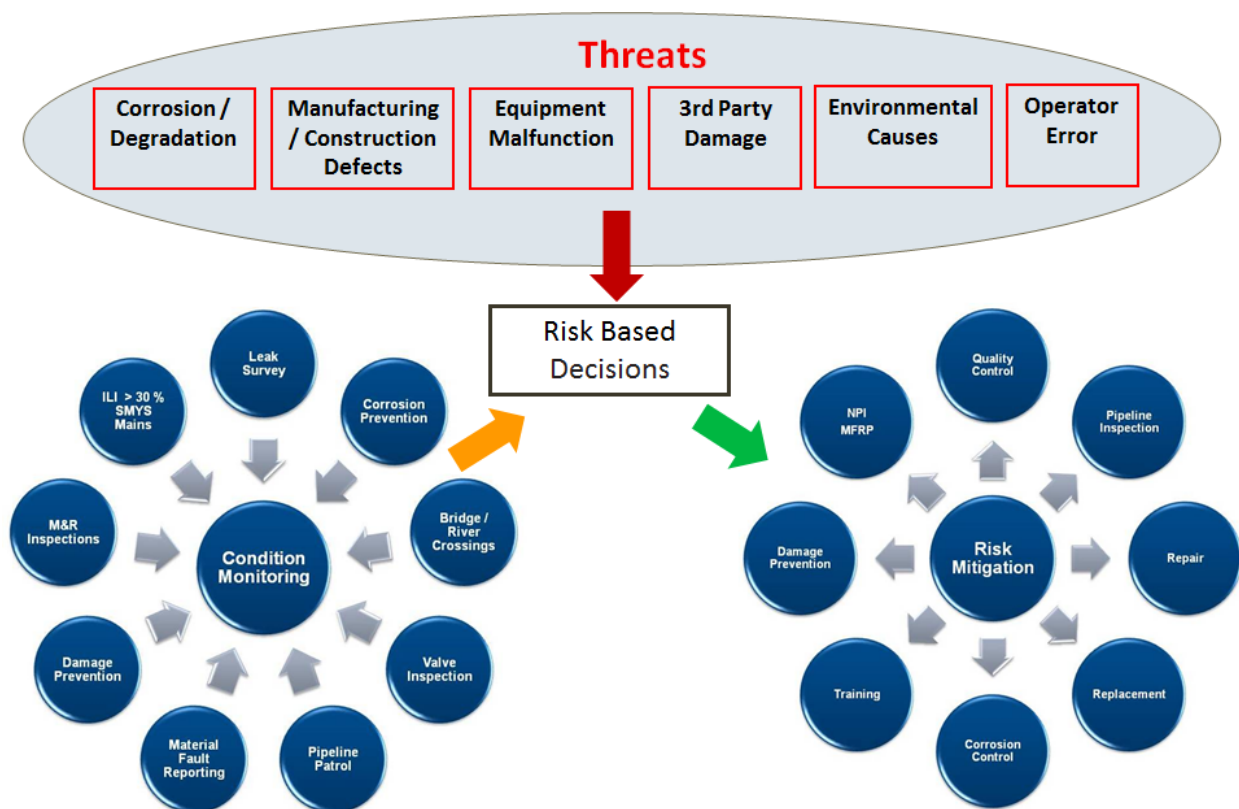


Figure 8 - Threats, Condition Monitoring and Risk Mitigation Programs

Following this risk based approach, EGD has been striving to better understand threats and related risks to the distribution system. One area of focus has been working to gain a better understanding of the condition of different classes of assets that comprise the system based on factors such as the age profile of the assets. As assets age, failure rates are anticipated to increase with the failure profile becoming more acute as the assets approach the end of their useful life. This increasing failure profile is expected to drive an increasing spend profile to maintain and ultimately replace the assets.

EGD has also been striving to improve the condition monitoring of its assets to better understand the factors that contribute to failure rates. For the past five years, since Distribution System Integrity Management Programs have been mandated through the CSA standard and the TSSA, EGD has been working to comprehensively and proactively analyze asset condition and assess which threats contribute to higher failure rates.

In the past, this form of analysis has at times been limited by the availability and completeness of the required asset information, which occurs throughout the industry. EGD continues to seek to improve its capture of asset information, which in turn continues to yield improved understanding of the condition and risks associated with the assets.

These analytical approaches are expected to play an increasing role in Integrity Management, particularly as improvements are made in gathering and correlating the required asset information. However, it is also expected that the tacit knowledge of experienced personnel will remain an important component in understanding and assessing threats and risks, prioritizing these risks and defining the mitigations needed to effectively manage these risks. Industry developments and trends will also continue to play an important role.

In summary, this evolving Integrity Management approach is intended to help ensure that EGD can continue to comply with current and future regulations and that EGD is constantly working to continue to reduce overall asset risks in a cost effective manner over time.

The development of the System Integrity and Reliability Requirements section of this Asset Plan has leveraged this Integrity Management work done to-date. It has also helped to focus these efforts and draw them together into a more formal Integrity Management process which will continue to evolve with subsequent iterations of the Asset Plan.

Theory Applied

As mentioned above, EGD has been comprehensively and proactively analyzing asset condition and failure incidents.

One trend that has been identified is the increased failure rate of a particular component, corrosion of the copper service riser immediately downstream of an AMP fitting (AMP fitting failure). A graph of the growing trend of AMP fitting failures is shown in the chart below. EGD has a Material Fault Program, under which field workers submit material failures so that the Company can physically evaluate why a component has failed through an analysis performed by EGD's Engineering Materials Evaluation Centre (EMEC). The increased trend of material faults on this asset highlighted an emerging risk. Further analysis through EGD's Work and Asset Management System identified the full scope of the issue. The red bars on the graph show the Material Fault Report submissions for AMP fitting failures. The green bars represent the failure rate as analyzed through EGD's Work and Asset Management systems.

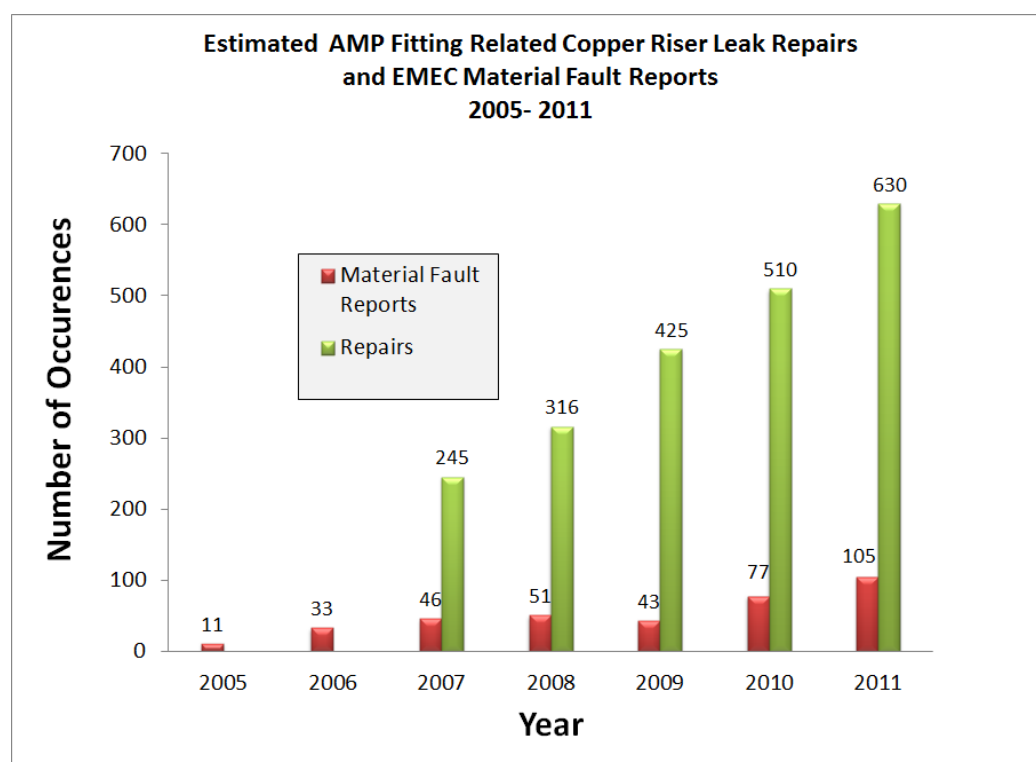


Chart 11 - Failure Analysis

Although EGD cannot predict exact future AMP fitting failure rates, the Company can predict that failures will increase over time.

Therefore, a program to mitigate failures for services that contain AMP fittings will be required going forward. This program will be designed to mitigate the risk of this failure mechanism, and

to the extent that EGD can predict which AMP fittings will fail next, a risk prioritized proactive program should be more cost effective than a reactive program.

EGD is continuing to work to understand how to predict which AMP fitting failures will occur next. In 2012, the Company plans to proactively extract physical samples in order to investigate the failure mechanisms in more detail. The outcome will provide insight into the prioritization of future replacement programs or activities.

The above failure analysis illustrates how EGD is evolving its understanding of its assets, threats to the assets, failures associated with these threats, and recommended mitigation plans.

Requirements

In applying the above Integrity Management approach, the process EGD undertook to develop the System Integrity and Reliability requirements of the Asset Plan is outlined below.

Step 1: System Integrity & Reliability asset risks were identified through three primary approaches:

- Asset condition assessment, by leveraging data gathered from EGD's operating systems and existing asset condition monitoring programs
- Tacit knowledge, gathered by engaging experienced Operations field staff to identify risks, that EGD has encountered historically
- Relevant industry developments and trends. This includes legislative and regulatory changes that are being implemented or contemplated in the United States in the wake of incidents that have occurred in the recent past as mentioned above.

The risks gathered by using these approaches were catalogued into a Risk Register.

Step 2: Risks within the Risk Register were assessed to establish a relative risk ranking.

This was accomplished by defining the risk, the current mitigation programs in place and asking a group of experienced Operational and Engineering personnel to determine the likelihood and impact of potential events based on their knowledge and experience. The following figure depicts the range of likelihood and impact that was used.

		Impact					
	Value	Minor	Moderate	Major	Severe	Worst Case	
Daily to monthly	5	P3	P2	P1	P1	P1	Likelihood
Monthly to yearly	4	P3	P2	P2	P1	P1	
Once in 1 to 10 years	3	P3	P3	P2	P2	P1	
Once in 10 to 100 years	2	P4	P3	P3	P2	P2	
Once in > 100 years	1	P4	P4	P3	P3	P3	
		1	2	3	4	5	

Figure 9 - Risk Prioritization: Likelihood & Impact Chart

The results of this qualitative risk assessment were validated with further analysis of available data.

As a result of this assessment, risks were prioritized into categories with items in the top right corner of the matrix having the greatest relative risk (Priority 1) and items in the bottom left having the least relative risk (Priority 4).

Step 3: Programs or other initiatives were defined to address each of the prioritized risks based on the Asset Management objectives, policies and strategies described in Section 4 - EGD's Asset Management Principles.

The outcome of this step was the identification of four different types of integrity initiatives to address the identified risks:

- Continuation of existing System Integrity risk mitigation programs (e.g. Cast Iron Replacement, Failure of M&R Station Components)
- Expansion of scope of existing System Integrity programs (e.g. In-Line Inspection (ILI) Scope and Technology, Damage to Non-Excess Flow Valve (EFV) Services)
- New System Integrity Programs (e.g. Corrosion Downstream of Amp Fittings)
- Studies to determine whether New System Integrity Programs are required (e.g. Field Applied Coatings on Tie-in to Steel)

The figure below provides a high-level summary of the process used to establish System Integrity and Reliability requirements.

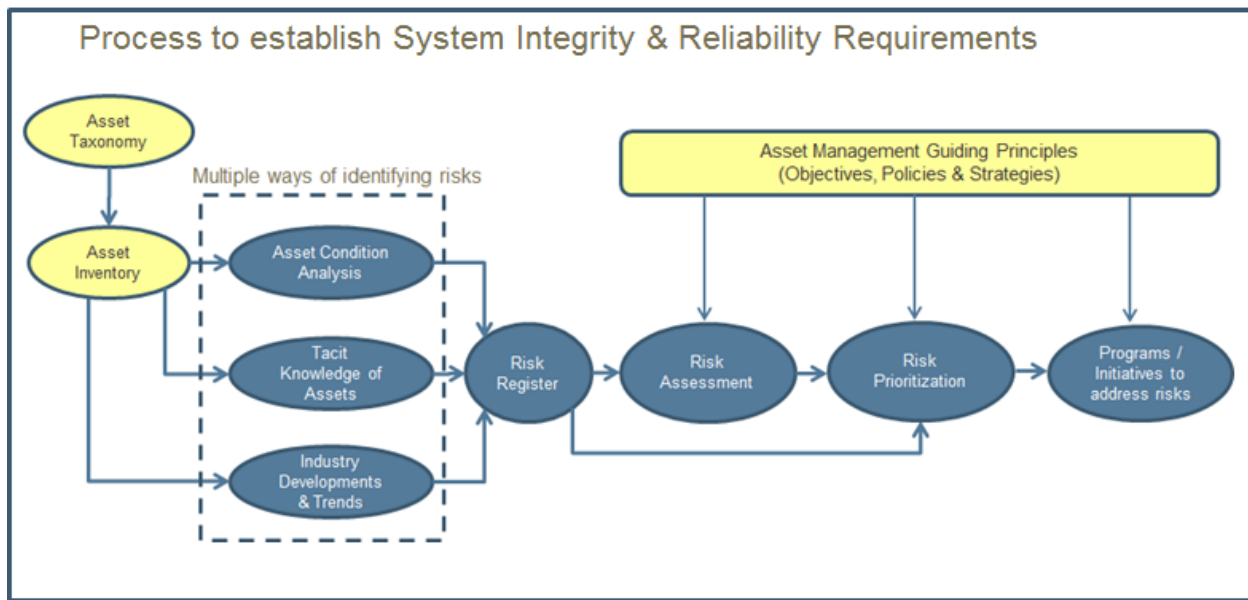


Figure 10 - Process to Establish System Integrity & Reliability Requirements

This is the first time EGD has applied the above process to support the development of a comprehensive, long range asset plan. Therefore, many of the methodologies and tools used to develop portions of the plan are first time efforts. It is expected that these methodologies and tools will be continuously improved over time with resultant improvements in future iterations of the Asset Plan.

Step 1: The Risk Register

The following table was developed through Step 1 of the process described above.

ASSET CLASS	RISK	RISK DESCRIPTION
Mains	Cast Iron	Cast iron mains have good corrosion resistance but the material can degrade due to graphitization. Leaks occur at main breaks or may occur at bell joints with the primary threat being ground movement by natural forces or excavation.
	Bare Steel	Bare steel mains may leak due to corrosion and cannot be effectively protected from corrosion in the same manner as coated steel.
	ILI Scope & Technology	The scope of current inspection programs consists of pipelines with operating pressures at or greater than 30% Specified Minimum Yield Strength (SMYS). Defects that are beyond the current scope and identification technology may not get identified.
	Older Coated Steel	Corrosion may occur where the coating is damaged.
	Field Applied Coatings on Tie-In to Steel	For certain field applied coatings on tie-in to steel, the coating may be disbonding from the steel pipe, leaving the area prone to corrosion.
	Plastic Mains (including Services)	Brittle like cracking has been identified by the industry in certain vintage plastic pipes. As a result, leaks may occur at stress points.
	Corrosion of Carrier Pipe in Casings	In situations where the steel carrier pipe touches the casing, cathodic protection may be compromised, possibly accelerating corrosion of the carrier pipe resulting in loss of containment.
	Reliability of Supply	Failure risk within supply chain. Potential for significant customer outages under certain upstream and downstream upset conditions.
	Don River Bridge Crossing	Extra High Pressure 30-inch line on bridge may be damaged in a flood resulting in significant customer outages.
Services	Corrosion of segment of the 20-inch Lakeshore line	There is a 650m segment of the line that has known coating disbondment leading to a risk of corrosion.
	Corrosion on Copper Services	Copper services were installed between the mid 1960's and early 1970's. Due to their age, these services are subject to the risk of leaks due to internal and external corrosion.
	Corrosion of Steel Tubing	Steel tubing is thin wall and can fail due to corrosion more quickly than steel pipe. It has a greater likelihood of release of gas than thicker wall steel pipe.
	Corrosion on Bare Steel Services	Bare steel services may leak due to corrosion and cannot be effectively protected from corrosion in the same manner as coated steel.
	Corrosion on Isolated Steel	Isolated steel pipe may not be cathodically protected from corrosion and therefore may be subject to accelerated corrosion.
M&R Equipment	Damage to Non-EFV Services	Significant volume of gas may be released when a service is damaged and the service does not have an Excess Flow Valve (EFV).
	Failure of Gate Station Components	Failure of gate station components can lead to overpressure and/or loss of containment of high pressure gas or odourant.
	Failure of District Station Components	Failure of district station components can lead to overpressure and/or loss of containment of gas.
	Failure of LP Station Components	Failure of Low Pressure (LP) station components can lead to overpressure and/or loss of containment of gas.
M&R Equipment	Failure of Farm Tap Components	Failure of farm tap components can lead to overpressure and/or loss of containment of gas.

ASSET CLASS	RISK	RISK DESCRIPTION
Valves	Failure of Bonnet Bolts on Valves (1.25" to 2")	Valve malfunction due to corrosion of bolts and material brittleness may result in loss of containment of gas.
	Failure of WingLock Valves	Incorrect application of force to operate such valves can cause the internal components of the valve to break which may result in loss of containment of gas.
	Isolation Valves	Due to limited number and/or the technology associated with isolation valves, the company may be constrained when addressing an emergency related to line failure.
	Main Line Valves	Main line valves may be difficult to access or may not operate as required which may result in delay in response to an emergency.
	Load Shed Zones	Due to a limited number and/or the technology associated with isolation valves, the company may be constrained when addressing an emergency related to gas supply disruptions.
Fittings	Corrosion downstream of AMP Fittings	Potential for an underground gas leak to occur downstream of the AMP fitting due to corrosion of the copper risers connected to plastic services.
	Mainline Compression Couplings	Unrestrained compression couplings, when exposed at a point of thrust, can lead to loss of containment.
	Anodeless Risers	Anodeless risers were purchased to avoid the need for cathodic protection. Corrosion may be occurring where the epoxy coating may have been chipped. Exposed plastic pipe can then degrade in sunlight.
	Chicago Fittings	Potential for an above ground gas leak to occur at the Chicago fitting due to age and/or ground movement.
	Compression Outlet Service Tees	Compression outlet on a steel service connection may pull apart due to third party damage or ground movement resulting in loss of containment of gas.
	Jumpers & Service Extensions	Steel jumpers and service extensions are used to connect regulators located outside of a building to piping or meters located inside a building. The jumper or service extension may corrode if the coating is damaged leading to a loss of containment of gas.
	Punch Tee Cap	Punch Tee Cap, including vintage plastic material variety are susceptible to cracking when over-torqued during installation which may result in leaks.
	Expansion Joints	Failure of aging expansion joints, resulting in leaks.
General	Records Integrity	Inaccurate or incomplete records may impact operational decisions and safety.
	Cross Bores	Homeowner/Plumber/City, while attempting to clear a sewer may damage a gas line that at time of installation was inadvertently installed through a sewer lateral, resulting in loss of containment of gas.
	Meter Barriers	A lack of meter barriers in areas where meters may be susceptible to damage from vehicles may result in damage to the meter set, resulting in loss of containment of gas.
	Residential Meter Sets	Changes to requirements around meter exchange government inspections (MXGIs).
	Inside Regulators	Third party damage to a service line may result in an unregulated gas escape inside a customer premise.
	Encased Bridge Crossings	Leaks or pipe support deterioration could develop where visual inspection isn't possible.

Table 5 - Risk Register

Step 2: Relative Risk Ranking

The result of the risk assessment and prioritization from Step 2 is summarized in the table below:

	Priority 1	Priority 2	Priority 3
Mains	Cast Iron	Older Coated Steel	
	Field Applied Coating on Tie-In to Steel	Corrosion of Carrier Pipe in Casings	
	Corrosion of segment of the 20-inch Lakeshore Line	Inline Inspection Scope and Technology	
	Don River Bridge Crossing	Plastic Mains	
		Bare Steel	
Services		Corrosion on Copper Services	
		Corrosion of Steel Tubing	
		Corrosion on Bare Steel Services	
		Corrosion on Isolated Steel	
		Damage to Non-EFV Services	
M&R Equipment	Failure of Gate Station Components	Failure of Farm Tap Components	
	Failure of District Station Components		
	Failure of LP Station Components		
Valves	Isolation Valves	Failure of Bonnet Bolts on Valves (1.25" to 2")	
	Main Line Valves	Failure of WingLock Valves	
	Load Shed Zones		
Fittings	Corrosion downstream of AMP Fittings	Anodeless Risers	Expansion Joints
	Mainline Compression Couplings	Chicago Fittings	
	Compression Outlet Service Tees	Jumpers & Service Extensions	
		Punch Tee Cap	
General	Records Integrity	Inside Regulators	
	Cross Bores	Encased Bridge Crossings	
	Meter Barriers	Residential Meter Sets	

Table 6 - Risk Prioritization

Assets assessed as Priority 4 risks are considered to simply require monitoring to ensure that their risk level is not increasing.

Step 3: Programs Defined to Address Risks

As an outcome of Step 3, the following table shows the initiatives that have been established to address the risks contained in the risk register.

ASSET CLASS	RISK	INITIATIVE NAME	INITIATIVE DESCRIPTION
Mains	Cast Iron	Cast Iron Replacement Program	Complete the replacement and abandonment of all cast iron mains by 2012. Some restoration may be required in 2013.
	Bare Steel	Bare Steel Replacement Program	Complete replacement and abandonment of all bare steel mains by 2012.
	ILI Scope & Technology	ILI for pipelines over 20% SMYS	Continue the existing inline inspection (ILI) program, expand the scope to include targeted lines over 20% SMYS and include new technology ILI tools in future ILI runs.
	Older Coated Steel	Coated Steel Program (Mains & Services)	Study to evaluate the effectiveness of different manufacturer applied coatings to protect from corrosion over time in order to determine where upgrades or additional corrosion protection may be required.
	Field Applied Coatings on Tie-In to Steel	Field Applied Coatings Study	Study to understand issues with field applied coatings on tie-in to steel, and how to resolve it.
	Plastic Mains (including Services)	Plastic Mains (incl Services) Study	Study to understand plastic pipe susceptibility to cracking. Study to be done in conjunction with the Gas Technology Institute (GTI).
	Corrosion of Carrier Pipe in Casings	Casing Study & Program	Study to enhance knowledge of the effectiveness of cathodic protection of the carrier pipe in casing locations.
	Reliability of Supply	Reinforcement Projects	Projects to construct Reinforcement Mains in networks to address capacity or reliability issues.
	Don River Bridge Crossing	Don River Bridge Crossing Replacement	Determine the purpose, need and timing of a replacement solution and implement the solution.
Services	Corrosion of segment of the 20-inch Lakeshore line	20-Inch Lakeshore Line Replacement	Determine the purpose, need and timing of a replacement solution and implement the solution.
	Corrosion on Copper Services	Copper Services Replacement	Complete the current replacement program for copper services.
	Corrosion of Steel Tubing	Steel Tubing Service Replacement	Complete the current replacement program for steel tubing services.
	Corrosion on Bare Steel Services	Bare Steel Services Study	Identify locations of bare steel services not being replaced with the cast iron program in order to develop a proactive replacement program.
	Corrosion on Isolated Steel	Isolated Steel Study	Study to increase knowledge of where isolated steel pipe may occur to enhance corrosion prevention strategies.
	Damage to Non-EFV Services	EFV Program	Study and related pilot to determine how to install EFVs on pre-2006 services. Expand installation of EFVs to additional customers such as multi-family and small commercial customers.

ASSET CLASS	RISK	INITIATIVE NAME	INITIATIVE DESCRIPTION
M&R Equipment	Failure of Gate Station Components	Gate Station Equipment Replacement	Continue with existing gate station maintenance & replacement programs.
	Failure of District Station Components	District Station Equipment Replacement	Continue with existing district station maintenance & replacement programs.
	Failure of LP Station Components	Low Pressure Delivery Meter Set Program	Study to enhance the knowledge of LP station condition and prioritize related upgrades, followed by required upgrade/replacement programs.
	Failure of Farm Tap Components	Farm Tap Study	Study to determine condition of farm taps and to define program requirements if necessary.
Valves	Failure of Bonnet Bolts on Valves (1.25" to 2")	Failure of Bonnet Bolts on Valves Study	Study to determine condition of Bonnet Bolts on Valves and to define program requirements if necessary.
	Failure of WingLock Valves	WingLock Valve Study & Replacement	Study to determine the condition of WingLock valves and to define program requirements if necessary.
	Isolation Valves	Isolation Valve Study & Installation (RCV / ASV)	Study to validate the adequacy of Enbridge Gas Distribution's current main line valve design requirements and any new/retrofit installations required associated with a change in the design requirement (including automatic shutoff and remote (ASV) control valves (RCV)).
	Main Line Valves		
	Load Shed Zones		
Fittings	Corrosion downstream of AMP Fittings	AMP Fitting Replacement	Study to examine leak rate trends and develop a replacement plan, followed by execution of the replacement plan.
	Mainline Compression Couplings	Targeted Compression Couplings Pressure Containment Sleeve Program	Study to identify targeted compression couplings and to install pressure containment sleeves over these couplings.
	Anodeless Risers	Anodeless Riser Replacement	Study to better understand the nature and extent of corrosion issues associated with anodeless risers, followed by a repair/replacement program as appropriate.
	Chicago Fittings	Chicago Fitting Study	Study to determine if a proactive replacement program would be more effective than reactive repair.
	Compression Outlet Service Tees	Compression Outlet Service Tee Study	Study to identify the most effective risk mitigation and define program requirements if necessary.
	Jumpers & Service Extensions	Jumper and Service Extension Study	Study to increase knowledge regarding steel jumper and service extension condition and determine program requirements if necessary, followed by program execution. This study will be done in conjunction with the Isolated Steel study.
	Punch Tee Cap	Punch Tee Cap Program	Continue to monitor and repair as required leveraging the material fault report program and Construction and Maintenance manual.
	Expansion Joints	Expansion Joint Study	Study to determine the condition of expansion joints.

ASSET CLASS	RISK	INITIATIVE NAME	INITIATIVE DESCRIPTION
General	Records Integrity	Distribution Records Management Program	Set of projects to identify and resolve various records related issues, including clean-up of data, refinement of processes and technology changes.
		Verification of MAOP	Required to mitigate records risks via MAOP verification and resulting in-line inspections requirements.
	Cross Bores	Sewer Safety Program	Inspection and other programs to proactively identify sewer lateral risks, ensure construction practices do not create new risks, increase public awareness, and resolve instances where identified.
	Meter Barriers	Meter Barrier Study & Program	Study followed by program to install meter barriers where field conditions have changed resulting in a meter barrier being required.
	Residential Meter Sets	Residential Meter Sets Study (incl. SMART system)	Study to evaluate the application of new technologies for improved management of residential meters while addressing revised requirements for meter exchanges
	Inside Regulators	Inside Regulator Replacement	Create exterior weak link on inside regulators so that break occurs outside if external force applied to the meter set. Move inside meters outside where possible.
	Encased Bridge Crossings	Encased Bridge Crossings Study	Study to evaluate the condition of bridge crossings.

Table 7 - System Integrity & Reliability Risk Mitigation Initiatives

Implementation Plan & Estimated Capital Investments

Based on the relative risk ranking, project interdependencies and current work in progress, an implementation schedule was established for the various initiatives that are required to meet the System Integrity & Reliability requirements. The relative risk ranking identified initiatives with varying priorities from 1 to 3 which consists of continuing existing programs, expanding the scope of other existing programs, initiating new programs and conducting studies.

Risks were prioritized based on current asset condition and tacit and industry knowledge information. As more knowledge is gained through studies, certain prioritization may change. Priority 1 initiatives address high impact assets. Priority 2 and 3 initiatives include risk mitigation programs for assets whose combination of likelihood of an event and degree of impact are lower.

Consistent with the risk based approach, Priority 1 and select priority 2 initiatives are identified early in the schedule. Select Priority 2 and Priority 3 initiatives are scheduled later. Within each risk mitigation program, a second level of prioritization is applied to address higher risk assets early in each program.

Some risks identified by the process are currently not well understood. These risks require studies to further analyze and understand risk dynamics and potential mitigation strategies. In the plan, where a risk study is followed by a program, EGD has a high confidence, based on failure data and tacit knowledge, that a risk mitigation program will be required, even though the form of the program may not be fully understood. Where a risk study does not have a program illustrated beyond the study, the level of certainty that a risk mitigation program will be required is lower. The study itself may allow EGD to reduce the assessment of the risk to a lower priority.

To the extent possible, EGD has attempted to smooth the spending on the overall system integrity and reliability programs. For example, many of the programs have been defined as multi-year, long term initiatives. However, it should be noted that, due to aging infrastructure and other factors such as increased Company or industry knowledge, EGD's belief is that asset investments will require increased spending over time. It should also be noted that improved understanding of certain risks may require a higher rate of spend to stay ahead of the failure curve, and reduce risk in a more timely manner.

The figure below summarizes the implementation plan for the initiatives, and provides an estimate for the required capital investments over the 2012 to 2021 period.

ASSET CLASS	RISK	INITIATIVE NAME	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Forecast (2012-2021) (\$000)	
Mains	Cast Iron	Cast Iron Replacement Program	Prog										\$26,132	
	Bare Steel	Bare Steel Replacement Program	Prog										\$900	
	ILI Scope & Technology	ILI for pipelines over 20% SMYS	Program										\$82,600	
	Older Coated Steel	Coated Steel Program (Mains & Services)			Study								\$720	
	Field Applied Coatings on Tie-In to Steel	Field Applied Coatings Study	Study										\$720	
	Plastic Mains (including Services)	Plastic Mains (incl Services) Study	Study										\$40	
	Corrosion of Carrier Pipe in Casings	Casing Study & Program	Study	Program										\$4,200
	Reliability of Supply	Reinforcement Projects											Covered as part of Reinforcements	
	Don River Bridge Crossing	Don River Bridge Crossing Replacement		Prog									\$3,500	
	Corrosion of segment of the 20-inch Lakeshore line	20-Inch Lakeshore Line Replacement	Prog										\$2,000	
Services	Corrosion on Copper Services	Copper Services Replacement	Program										\$15,000	
	Corrosion of Steel Tubing	Steel Tubing Service Replacement	Program										\$2,000	
	Corrosion on Bare Steel Services	Bare Steel Services Study			Study								\$200	
	Corrosion on Isolated Steel	Isolated Steel Study	Study										\$200	
	Damage to Non-EFV Services	EFV Program		Study									\$1,500	
M&R Equipment	Failure of Gate Station Components	Gate Station Equipment Replacement	Program										\$50,424	
	Failure of District Station Components	District Station Equipment Replacement	Program										\$25,013	
	Failure of LP Station Components	Low Pressure Delivery Meter Set Program	Program										\$95,380	
	Failure of Farm Tap Components	Farm Tap Study			Study								\$200	

ASSET CLASS	RISK	INITIATIVE NAME	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Forecast (2012-2021) (\$000)
Valves	Failure of Bonnet Bolts on Valves (1.25" to 2")	Failure of Bonnet Bolts on Valves Study					Study						\$200
	Failure of WingLock Valves	WingLock Valve Study & Replacement		Study				Program					\$26,300
	Isolation Valves	Isolation Valve Study & Installation (RCV / ASV)											
	Main Line Valves		Study					Program					\$27,480
	Load Shed Zones												
Fittings	Corrosion downstream of AMP Fittings	AMP Fitting Replacement	Study					Program					\$221,200
	Mainline Compression Couplings	Targeted Compression Couplings Pressure Containment Sleeve Program	Study					Program					\$18,200
	Anodeless Risers	Anodeless Riser Replacement			Study			Program					\$4,320
	Chicago Fittings	Chicago Fitting Study		Study									\$200
	Compression Outlet Service Tees	Compression Outlet Service Tee Study	Study										\$400
	Jumpers & Service Extensions	Jumper and Service Extension Study	Study		Program								\$500
	Punch Tee Cap	Punch Tee Cap Program						Program					Covered through O&M (maintenance cost)
	Expansion Joints	Expansion Joint Study							Study				\$200
General	Records Integrity	Distribution Records Management Program						Program					\$59,023
		Verification of MAOP		Program									\$18,300
	Cross Bores	Sewer Safety Program						Program					\$8,976
	Meter Barriers	Meter Barrier Study & Program						Program					Included as part of Customer Growth related M&R
	Residential Meter Sets	Residential Meter Sets Study (incl. SMART system)			Study								\$200
	Inside Regulators	Inside Regulator Replacement	Prog										\$380
	Encased Bridge Crossings	Encased Bridge Crossings Study				Study							\$200

Figure 11 - System Integrity & Reliability: Implementation Schedule & Cost

The following chart depicts EGD's historic and forecast capital spend for System Integrity & Reliability.

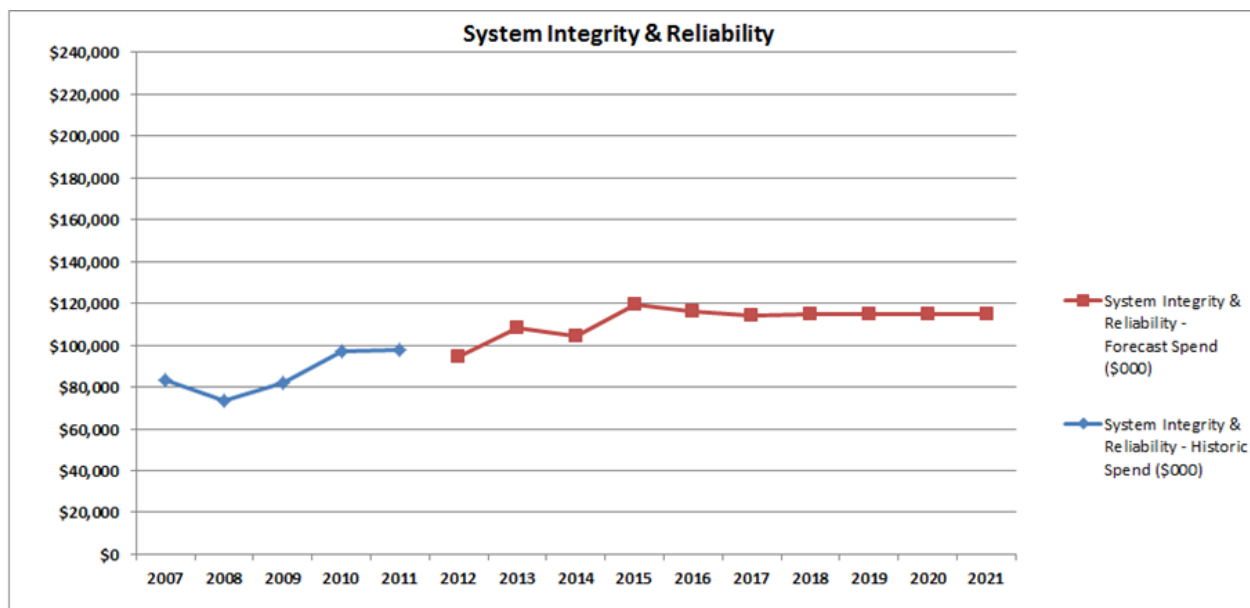


Chart 12 - System Integrity & Reliability: Historic & Forecast Capital Spend

The forecast spend for System Integrity and Reliability trends up between 2012 and 2015 and then stays relatively flat until 2021.

There are several reasons that contribute to the upward trend in the capital spend from 2012 to 2015 :

- Beyond the existing programs to replace Cast Iron and Bare Steel, the risk assessment has identified the need to address additional classes of assets that are near the end of their useful life. Examples include Copper Services, Steel Tubing Services, AMP Fittings, and Mainline Compression Couplings
- Studies will need to be conducted to improve our understanding of the condition of specific classes of assets where risks have been identified. These studies will help establish the requirements and scope of any related mitigation programs
- Records Integrity, including completeness, accuracy, verifiability, timeliness, and accessibility, was assessed as one of the key risks. EGD has identified a number of initiatives, with significant upfront investments in 2013 and continuing investments in 2014 to 2021 to address this risk. For example, the Company is embarking on utilizing

Geospatial Positioning System (GPS) technology to more accurately identify the location of EGD's distribution assets

- Consistent with industry best-practices, EGD will expand its current in-line inspection program to include targetted XHP pipelines operating over 20% Specified Minimum Yield Strength (SMYS)
- EGD will enhance its capability to effectively isolate portions of the system to minimize the impact of planned or unplanned service disruptions by installing additional mainline valves at key locations

Many of the programs that are needed to mitigate System Integrity & Reliability risks span multiple years. An effort was made to smooth these expenses over the term of the Asset Plan.

5.5 Relocations

Requirements

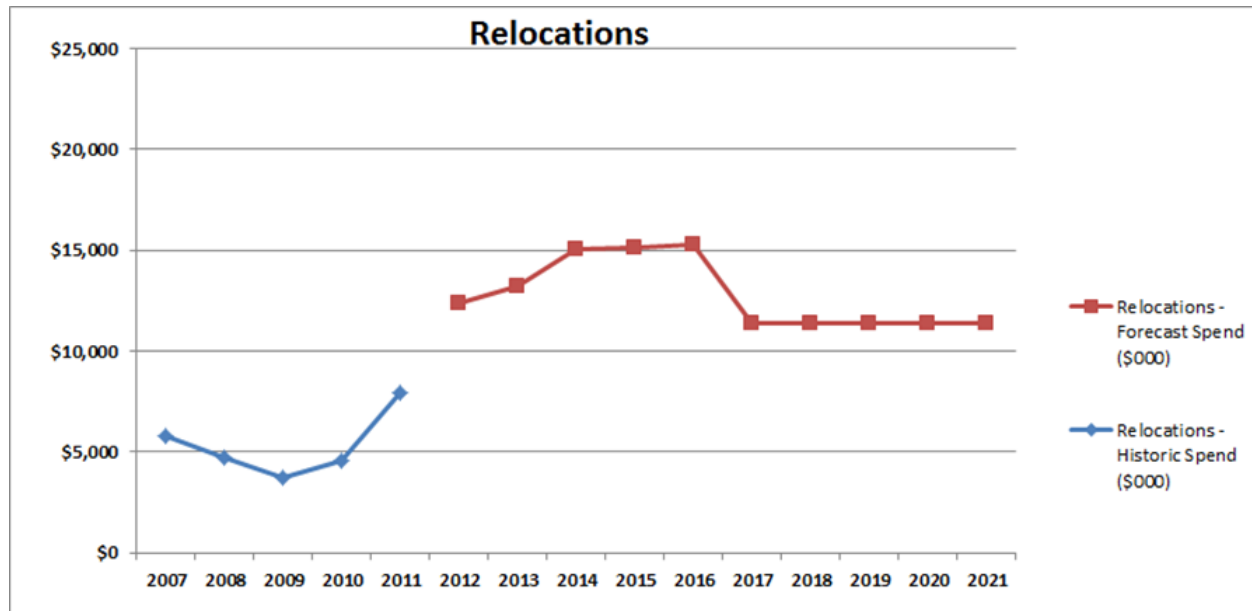
Relocation requirements are generally driven by municipal and other third party works. While some of these relocation requirements are known for the next few years, it is not possible to comprehensively forecast the future relocation requirements over the term of the Asset Plan. Hence, known future projects have to be combined with historic and projected trends to estimate the capital investments needed to support relocation requirements.

Relocation requirements primarily arise from road realignments and expansions, bridge rehabilitation, grade separations or other developments that are initiated by a city, municipality or other third party. In most cases, EGD is able to recover a portion of the relocation costs from the municipality or other party requiring the relocation.

While forecasting relocation requirements and costs, EGD takes into account the normal activity level of relocations and their associated costs. Projects or programs identified as incremental to that normal activity level are then added. Incremental activity could include items such as Infrastructure Stimulus Fund activities, major transit projects (subway expansion, GTAA Rail Link, Rapid Transit – Eglinton LRT, York Region Rapid Transit, Ottawa LRT), major road expansions (407 Extension) and preparation for the 2016 Pan Am Games.

Implementation Plan & Estimated Capital Investments

The following chart depicts the historic and forecast capital investments, net of the re-billable portion, required for relocations.



2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
\$5,770	\$4,717	\$3,749	\$4,551	\$7,965	\$12,350	\$13,209	\$15,035	\$15,150	\$15,259	\$11,400	\$11,400	\$11,400	\$11,400	\$11,400

Chart 13 - Relocations: Historic & Forecast Capital Spend

The capital spend profile shows an escalation of relocation expenditure over the period of this Asset Plan. In addition to known relocation projects in this time period, EGD expects additional relocations driven by preparations for the Pan Am games, and light rail transit and subway projects that have been planned and already under way in the GTA and Ottawa.

6. Financial Summary

The table below summarizes the forecasted capital spend profile to meet the four types of asset related requirements within the scope of the Asset Plan.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Customer Additions (\$000)	\$76,982	\$84,413	\$84,036	\$86,264	\$87,974	\$89,003	\$89,485	\$90,021	\$90,622	\$90,887
Relocations (\$000)	\$12,350	\$13,209	\$15,035	\$15,150	\$15,259	\$11,400	\$11,400	\$11,400	\$11,400	\$11,400
Routine Reinforcements (\$000)	\$24,756	\$11,550	\$32,400	\$4,939	\$6,650	\$26,300	\$29,500	\$30,417	\$6,750	\$1,500
System Integrity & Reliability (\$000)	\$94,583	\$108,041	\$104,143	\$119,271	\$116,324	\$114,427	\$114,779	\$114,579	\$114,573	\$114,554
Total (Excluding Major Reinforcements)	\$208,671	\$217,213	\$235,614	\$225,624	\$226,207	\$241,130	\$245,164	\$246,417	\$223,345	\$218,341
Major Reinforcements (\$000)	\$13,127	\$51,117	\$296,746	\$231,900	\$0	\$0	\$0	\$0	\$0	\$0
Total (Including Major Reinforcements)	\$221,798	\$268,330	\$532,360	\$457,524	\$226,207	\$241,130	\$245,164	\$246,417	\$223,345	\$218,341

Chart 14 - Financial Summary of Asset Spend by Category of Requirements

The following is a general set of assumptions that was used in developing these forecasts:

- For the term 2014-2021, the estimated capital spend is based on 2012 dollars, i.e. inflation and other time-based adjustments have not been applied
- Estimates are based on EGD's asset requirements as of December 2011. Going forward, as part of the annual Asset Planning cycle, these requirements will be reviewed and revised as needed. The capital investment profile is expected to change as the requirements evolve
- Estimates include only the direct capital costs of the projects and initiatives set out in the Asset Plan
- At this time, only a range of estimates is available for the GTA project. The mid-point of this range has been assumed for the purpose of the Asset Plan

The charts below depict the overall spend for the term of the Asset Plan excluding and including major reinforcements.

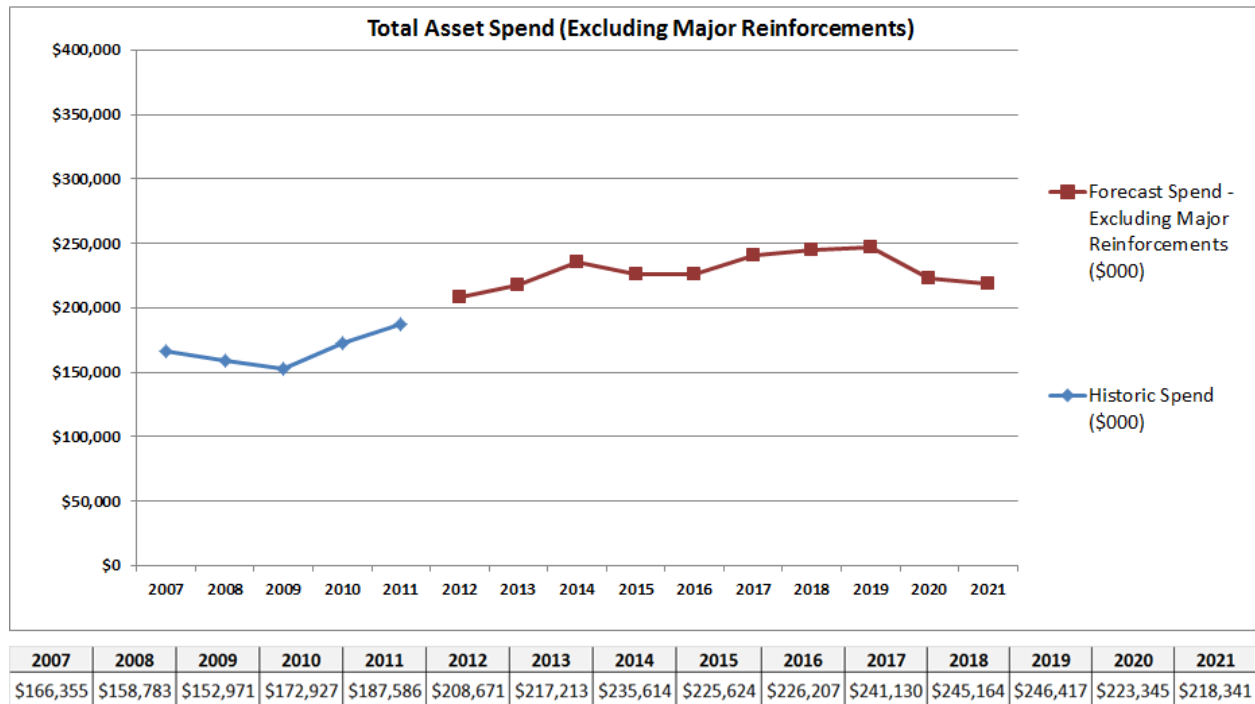


Chart 15 - Financial Summary of Total Asset Capital Spend (Excluding Major Reinforcements)

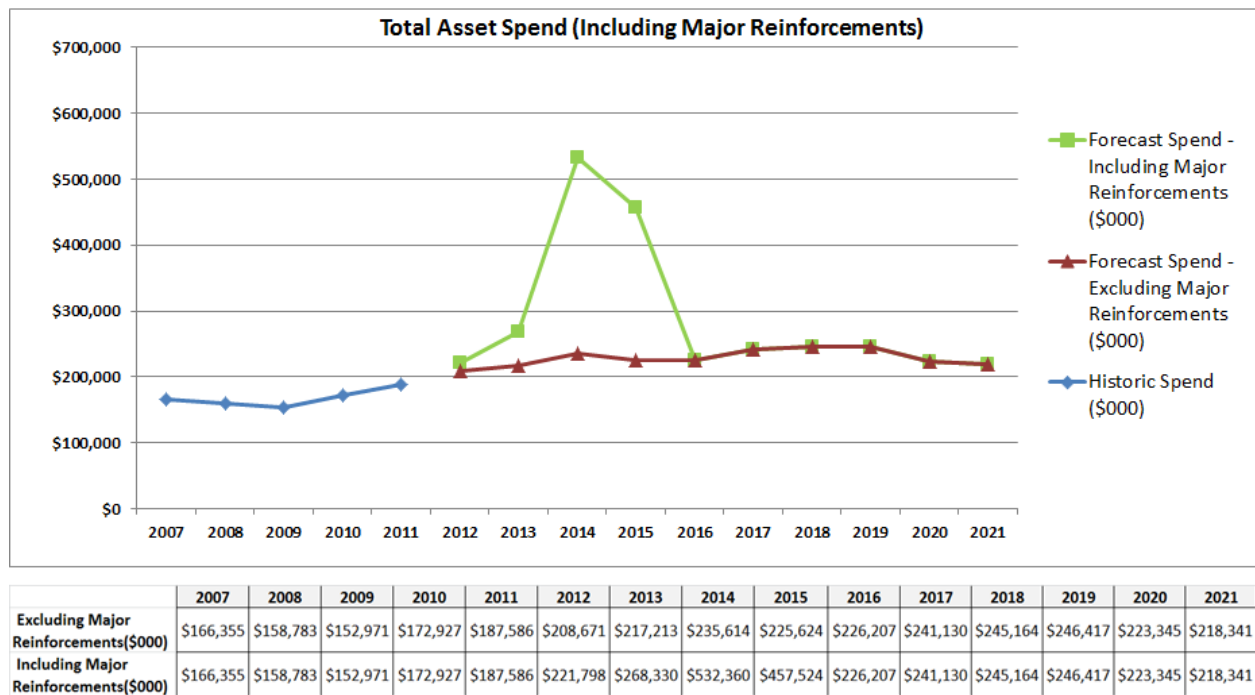


Chart 16 - Financial Summary of Total Asset Capital Spend (Including Major Reinforcements)

UTILITY RATE BASE
COMPARISON OF 2013 TEST YEAR TO 2012 BRIDGE YEAR

	Col. 1	Col. 2	Col. 3
Line No.	2013 Test Year Incl. CIS & Customer Care	2012 Bridge Year	Difference
	(\$Millions)	(\$Millions)	(\$Millions)
<u>Property, Plant, and Equipment</u>			
1. Cost or redetermined value	6,759.0	6,406.3	352.7
2. Accumulated depreciation	<u>(2,823.7)</u>	<u>(2,594.2)</u>	<u>(229.5)</u>
3. Net property, plant, and equipment	<u>3,935.3</u>	<u>3,812.1</u>	<u>123.2</u>
<u>Allowance for Working Capital</u>			
4. Accounts receivable merchandise finance plan	-	-	-
5. Accounts receivable rebillable projects	1.3	0.3	1.0
6. Materials and supplies	31.9	31.2	0.7
7. Mortgages receivable	0.2	0.3	(0.1)
8. Customer security deposits	(68.7)	(70.5)	1.8
9. Prepaid expenses	1.8	1.8	-
10. Gas in storage	288.6	302.0	(13.4)
11. Working cash allowance	<u>0.4</u>	<u>(8.5)</u>	<u>8.9</u>
12. Total Working Capital	<u>255.5</u>	<u>256.6</u>	<u>(1.1)</u>
13. <u>Utility Rate Base</u>	<u>4,190.8</u>	<u>4,068.7</u>	<u>122.1</u>

Witness: K. Culbert

UTILITY RATE BASE
2013 TEST YEAR

Line No.	Col. 1 2013 Test Year Excl. CIS & Customer Care (\$Millions)	Col. 2 2013 Test Year CIS & Customer Care (\$Millions)	Col. 3 Total 2013 Test Year (\$Millions)
<u>Property, Plant, and Equipment</u>			
1. Cost or redetermined value	6,631.9	127.1	6,759.0
2. Accumulated depreciation	<u>(2,767.1)</u>	<u>(56.6)</u>	<u>(2,823.7)</u>
3. Net property, plant, and equipment	<u>3,864.8</u>	<u>70.5</u>	<u>3,935.3</u>
<u>Allowance for Working Capital</u>			
4. Accounts receivable merchandise finance plan	-	-	-
5. Accounts receivable rebillable projects	1.3	-	1.3
6. Materials and supplies	31.9	-	31.9
7. Mortgages receivable	0.2	-	0.2
8. Customer security deposits	(68.7)	-	(68.7)
9. Prepaid expenses	1.8	-	1.8
10. Gas in storage	288.6	-	288.6
11. Working cash allowance	<u>0.4</u>	<u>-</u>	<u>0.4</u>
12. Total Working Capital	<u>255.5</u>	<u>-</u>	<u>255.5</u>
13. <u>Utility Rate Base</u>	<u>4,120.3</u>	<u>70.5</u>	<u>4,190.8</u>

Witness: K. Culbert

UTILITY PROPERTY, PLANT, AND EQUIPMENT (EXCLUDING CIS & CUSTOMER CARE)
SUMMARY STATEMENT - AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.	Col. 1 Gross Property, Plant, and Equipment (\$Millions)	Col. 2 Accumulated Depreciation (\$Millions)	Col. 3 Net Property, Plant, and Equipment (\$Millions)
1. Underground storage plant	343.2	(113.0)	230.2
2. Distribution plant	5,989.8	(2,540.8)	3,449.0
3. General plant	305.8	(112.6)	193.2
4. Other plant	<u>0.5</u>	<u>(0.5)</u>	<u>-</u>
5. Total plant in service	6,639.3	(2,766.9)	3,872.4
6. Plant held for future use	<u>1.7</u>	<u>(1.1)</u>	<u>0.6</u>
7. Sub- total	6,641.0	(2,768.0)	3,873.0
8. Affiliate Shared Assets Value	<u>(9.1)</u>	<u>0.9</u>	<u>(8.2)</u>
9. Total property, plant, and equipment	<u><u>6,631.9</u></u>	<u><u>(2,767.1)</u></u>	<u><u>3,864.8</u></u>

Witness: K. Culbert

UTILITY GROSS UNDERGROUND STORAGE PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2013 (\$Millions)	Col. 5 Regulatory Adjustments (Note 1) (\$Millions)	Col. 6 Utility Balance Dec.2013 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Crowland storage (450/459)	-	-	-	-	-	-	-
2. Land and gas storage rights (450/451)	47.7	1.1	-	48.8	(1.0)	47.7	47.1
3. Structures and improvements (452.00)	17.9	3.6	-	21.5	(0.1)	21.4	18.0
4. Wells (453.00)	47.9	1.1	-	49.0	-	49.0	48.1
5. Well equipment (454.00)	9.6	-	-	9.6	-	9.6	9.6
6. Field Lines (455.00)	62.1	1.2	-	63.2	-	63.2	62.1
7. Compressor equipment (456.00)	100.6	8.2	(0.9)	107.9	(0.5)	107.5	100.6
8. Measuring and regulating equipment (457.00)	16.8	1.2	-	17.9	-	17.9	16.8
9. Base pressure gas (458.00)	41.0	0.0	-	41.0	-	41.0	41.0
10. Total	343.4	16.4	(0.9)	358.9	(1.5)	357.4	343.2

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY UNDERGROUND STORAGE PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
	Opening Balance Dec.2012	Additions	Retirements	Costs Net of Proceeds	Closing Balance Dec.2013	Regulatory Adjustments (Note 1)	Utility Balance Dec.2013	Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Crowland storage (450/459)	-	-	-	-	-	-	-	-
2. Land and gas storage rights (451.00)	(22.7)	(0.5)	-	-	(23.2)	-	(23.2)	(22.9)
3. Structures and improvements (452.00)	(5.5)	(0.3)	-	-	(5.8)	0.1	(5.8)	(5.6)
4. Wells (453.00)	(14.5)	(0.7)	-	-	(15.2)	-	(15.2)	(14.8)
5. Well equipment (454.00)	(5.1)	(0.5)	-	-	(5.6)	-	(5.6)	(5.4)
6. Field Lines (455.00)	(23.2)	(0.9)	-	-	(24.1)	-	(24.1)	(23.6)
7. Compressor equipment (456.00)	(34.1)	(2.6)	0.9	-	(35.8)	0.2	(35.6)	(35.0)
8. Measuring and regulating equipment (457.00)	(5.4)	(0.5)	-	-	(5.9)	-	(5.9)	(5.6)
9. Total	(110.4)	(6.1)	0.9	-	(115.5)	0.2	(115.3)	(113.0)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

UTILITY GROSS DISTRIBUTION PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2013 (\$Millions)	Col. 5 Regulatory Adjustment (Note 1) (\$Millions)	Col. 6 Utility Balance Dec.2013 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Land (470.00)	25.1	2.8	-	27.9	-	27.9	27.8
2. Offers to purchase (470.01)	-	-	-	-	-	-	-
3. Land rights intangibles (471.00)	7.5	-	-	7.5	-	7.5	7.5
4. Structures and improvements (472.00)	118.9	0.6	(0.5)	119.0	(0.3)	118.7	118.6
5. Services, house reg & meter install. (473/474)	2,194.1	91.0	(5.0)	2,280.1	-	2,280.1	2,235.6
6. NGV station compressors (476)	2.5	0.1	(0.2)	2.4	-	2.4	2.4
7. Meters (478)	402.6	25.1	(5.5)	422.2	-	422.2	410.3
8. Sub-total	2,750.5	119.6	(11.2)	2,859.0	(0.3)	2,858.7	2,802.2
9. Mains (475)	2,767.1	163.2	(3.8)	2,926.6	(2.2)	2,924.4	2,827.4
10. Measuring and regulating equip. (477)	348.6	29.5	(2.3)	375.8	(0.5)	375.3	360.2
11. Sub-total	3,115.7	192.7	(6.0)	3,302.4	(2.7)	3,299.7	3,187.6
12. Total	5,866.3	312.3	(17.2)	6,161.4	(3.1)	6,158.3	5,989.8

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY DISTRIBUTION PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012	Col. 2 Additions	Col. 3 Retirements	Col. 4 Costs Net of Proceeds	Col. 5 Closing Balance Dec.2013	Col. 6 Regulatory Adjustment (Note 1)	Col. 7 Utility Balance Dec.2013	Col. 8 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Land rights intangibles (471.00)	(1.8)	(0.1)	-	-	(1.9)	-	(1.9)	(1.9)
2. Structures and improvements (472.00)	(6.9)	(7.1)	0.5	0.7	(12.8)	0.1	(12.7)	(9.7)
3. Services, house reg & meter install. (473/474)	(992.4)	(77.5)	5.0	18.3	(1,046.5)	-	(1,046.5)	(1,019.3)
4. NGV station compressors (476)	(1.7)	(0.2)	0.2	-	(1.7)	-	(1.7)	(1.7)
5. Meters (478)	(100.6)	(37.8)	5.5	-	(132.9)	-	(132.9)	(116.6)
6. Mains (475)	(1,154.3)	(101.0)	3.8	-	(1,251.6)	1.6	(1,250.0)	(1,201.0)
7. Measuring and regulating equip. (477)	(188.4)	(7.7)	2.3	-	(193.8)	0.5	(193.3)	(190.6)
8. Total	(2,446.2)	(231.2)	17.2	19.1	(2,641.2)	2.2	(2,639.0)	(2,540.8)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY GROSS GENERAL PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2013 (\$Millions)	Col. 5 Regulatory Adjustment (\$Millions)	Col. 6 Utility Balance Dec.2013 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Lease improvements (482.50)	3.7	3.5	-	7.3	(0.2) ¹	7.1	6.2
2. Office furniture and equipment (483.00)	18.6	3.9	(1.1)	21.3	-	21.3	19.7
3. Transportation equipment (484.00)	47.7	2.5	(1.0)	49.2	(0.1) ¹	49.2	47.8
4. NGV conversion kits (484.01)	7.4	0.5	(0.3)	7.6	-	7.6	7.4
5. Heavy work equipment (485.00)	22.2	1.6	(0.3)	23.4	-	23.4	22.4
6. Tools and work equipment (486.00)	37.1	1.6	(0.5)	38.2	-	38.2	37.3
7. Rental equipment (487.70)	1.0	0.0	(0.0)	1.0	-	1.0	1.0
8. NGV rental compressors (487.80)	4.1	0.1	(0.3)	4.0	-	4.0	4.1
9. NGV cylinders (484.02 and 487.90)	3.0	0.2	(0.0)	3.2	-	3.2	3.0
10. Communication structures & equip. (488)	3.6	0.7	-	4.3	-	4.3	3.8
11. Computer equipment (490.00)	39.6	8.2	(4.3)	43.4	-	43.4	39.0
12. Software Acquired/Developed (491.00)	110.5	28.9	(19.8)	119.6	-	119.6	114.1
13. CIS (491.00)	127.1	-	-	127.1	(127.1) ²	-	-
14. Total	425.5	51.7	(27.6)	449.6	(127.4)	322.2	305.8

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Note 2: Separation of previous approved CC/CIS amounts enabling an all other Utility deficiency/rate impact calculation. (Ex.D1.T12.S1)

UTILITY GENERAL PLANT
 CONTINUITY OF ACCUMULATED DEPRECIATION
 YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
 2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Costs Net of Proceeds (\$Millions)	Col. 5 Closing Balance Dec.2013 (\$Millions)	Col. 6 Regulatory Adjustment (\$Millions)	Col. 7 Utility Balance Dec.2013 (\$Millions)	Col. 8 Average of Monthly Averages (\$Millions)
1. Lease improvements (482.50)	(2.7)	(0.6)	-	-	(3.3)	0.1 ¹	(3.1)	(2.8)
2. Office furniture and equipment (483.00)	(7.9)	(1.8)	1.1	-	(8.5)	-	(8.5)	(8.2)
3. Transportation equipment (484.00)	(9.9)	(5.1)	1.0	-	(14.0)	0.1 ¹	(13.9)	(11.8)
4. NGV conversion kits (484.01)	(4.3)	(0.7)	0.3	-	(4.7)	-	(4.7)	(4.5)
5. Heavy work equipment (485.00)	(7.8)	(0.8)	0.3	-	(8.3)	-	(8.3)	(8.0)
6. Tools and work equipment (486.00)	(14.3)	(1.5)	0.5	-	(15.2)	-	(15.2)	(14.7)
7. Rental equipment (487.70)	(1.0)	-	-	-	(1.0)	-	(1.0)	(1.0)
8. NGV rental compressors (487.80)	(2.8)	(0.3)	0.3	-	(2.9)	-	(2.9)	(2.8)
9. NGV cylinders (484.02 and 487.90)	(1.6)	(0.4)	0.0	-	(2.0)	-	(2.0)	(1.8)
10. Communication structures & equip. (488)	(0.7)	(0.4)	-	-	(1.0)	-	(1.0)	(0.9)
11. Computer equipment (490.00)	(9.6)	(14.2)	4.3	-	(19.5)	-	(19.5)	(12.7)
12. Software Acquired/Developed (491.00)	(39.1)	(26.8)	19.8	-	(46.1)	-	(46.1)	(43.4)
13. CIS (491.00)	(41.2)	(12.7)	-	-	(53.9)	53.9 ²	-	-
14. Total	(142.7)	(65.2)	27.6	-	(180.3)	54.1	(126.2)	(112.6)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Note 2: Separation of previous approved CC/CIS amounts enabling an all other Utility deficiency/rate impact calculation. (Ex.D1.T12.S1)

UTILITY GROSS OTHER PLANT
 YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
 2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2013 (\$Millions)	Col. 5 Regulatory Adjustment (\$Millions)	Col. 6 Utility Balance Dec.2013 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Intangible plant (Peterborough 402.50)	0.5	-	-	0.5	-	0.5	0.5
2. Total	0.5	-	-	0.5	-	0.5	0.5

Witness: K. Culbert

UTILITY OTHER PLANT
 CONTINUITY OF ACCUMULATED DEPRECIATION
 YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012	Col. 2 Additions	Col. 3 Retirements	Col. 4 Costs Net of Proceeds	Col. 5 Closing Balance Dec.2013	Col. 6 Regulatory Adjustment	Col. 7 Utility Balance Dec.2013	Col. 8 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Intangible plant (Peterborough 402.50)	(0.5)	-	-	-	(0.5)	-	(0.5)	(0.5)
2. Total	(0.5)	-	-	-	(0.5)	-	(0.5)	(0.5)

Witness: K. Culbert

UTILITY GROSS PLANT HELD FOR FUTURE USE
 YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
 2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012	Col. 2 Additions	Col. 3 Retirements	Col. 4 Closing Balance Dec.2013	Col. 5 Regulatory Adjustment	Col. 6 Utility Balance Dec.2013	Col. 7 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Inactive services (102.00)	1.7	-	-	1.7	-	1.7	1.7
2. Total	1.7	-	-	1.7	-	1.7	1.7

Witness: K. Culbert

UTILITY PLANT HELD FOR FUTURE USE
 CONTINUITY OF ACCUMULATED DEPRECIATION
 YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
 2013 TEST YEAR

Line No.	Col. 1 Opening Balance Dec.2012	Col. 2 Additions	Col. 3 Retirements	Col. 4 Costs Net of Proceeds	Col. 5 Closing Balance Dec.2013	Col. 6 Regulatory Adjustment	Col. 7 Utility Balance Dec.2013	Col. 8 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Inactive services (105.02)	(1.1)	(0.1)	-	-	(1.2)	-	(1.2)	(1.1)
2. Total	(1.1)	(0.1)	-	-	(1.2)	-	(1.2)	(1.1)

Witness: K. Culbert

WORKING CAPITAL COMPONENTS
MONTH END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.	Col. 1 Account Merchandise Finance Plan	Col. 2 Account Receivable Rebillable Projects	Col. 3 Materials and Supplies	Col. 4 Mortgages Receivable	Col. 5 Customer Security Deposits	Col. 7 Prepaid Expenses	Col. 8 Gas in Storage	Col. 9 Working Cash Allowance	Total
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. January 1	-	0.2	31.6	0.3	(68.0)	1.7	380.6	0.4	346.8
2. January 31	-	0.1	31.6	0.2	(68.1)	1.0	242.2	0.4	207.4
3. February	-	0.2	31.7	0.2	(68.2)	0.5	134.0	0.4	98.8
4. March	-	0.1	31.8	0.2	(68.4)	0.4	55.1	0.4	19.6
5. April	-	0.5	31.8	0.2	(68.5)	0.5	49.6	0.4	14.5
6. May	-	0.8	31.9	0.2	(68.6)	1.0	115.5	0.4	81.2
7. June	-	1.0	31.9	0.2	(68.7)	1.0	200.7	0.4	166.5
8. July	-	1.9	32.0	0.2	(68.8)	4.3	312.0	0.4	282.0
9. August	-	3.2	32.0	0.2	(68.9)	3.5	423.9	0.4	394.3
10. September	-	3.5	32.1	0.2	(69.0)	2.8	517.5	0.4	487.5
11. October	-	2.2	32.2	0.2	(69.2)	1.9	547.0	0.4	514.7
12. November	-	1.8	32.2	0.2	(69.3)	2.4	487.5	0.4	455.2
13. December	-	0.7	32.3	0.2	(69.4)	2.0	374.9	0.4	341.1
14. Avg. of monthly avgs.	-	1.3	31.9	0.2	(68.7)	1.8	288.6	0.4	255.5

Witness: K. Culbert

WORKING CAPITAL COMPONENTS - WORKING CASH ALLOWANCE
2013 TEST YEAR

Line No.	Col. 1 Disbursements (\$Millions)	Col. 2 Net Lag-Days (Days)	Col. 3 Allowance (\$Millions)
1. Gas purchase and storage and transportation charges	1,562.7	3.6	15.4
2. Items not subject to working cash allowance (Note 1)	<u>(14.1)</u>		
3. Gas costs charged to operations	<u>1,548.6</u>		
4. Operation and Maintenance	336.7		
5. Less: Storage costs	<u>(7.9)</u>		
6. Operation and maintenance costs subject to working cash	328.8		
7. Ancillary customer services	<u>-</u>		
8.	<u>328.8</u>	(19.4)	<u>(17.5)</u>
9. Sub-total			<u>(2.1)</u>
10. Storage costs	7.9	62.5	1.4
11. Storage municipal and capital taxes	2.2	24.4	<u>0.1</u>
12. Sub-total			<u>1.5</u>
13. Harmonized Sales Tax			<u>1.0</u>
14. Total working cash allowance			<u>0.4</u>

Note 1: Represents non cash items such as amortization of deferred charges,
 accounting adjustments and the T-service capacity credit.

Witness: K. Culbert

COMPARISON OF UTILITY CAPITAL EXPENDITURES
BUDGET 2013 AND ESTIMATE 2012

	Col. 1	Col. 2	Col. 3
Item No.	Budget 2013 (\$Millions)	Estimate 2012 (\$Millions)	Budget 2013 Over/(Under) Estimate 2012 (\$Millions)
A. <u>Customer Related</u>			
1.1.1 Sales Mains	61.9	47.2	14.7
1.1.2 Services	64.1	58.9	5.2
1.1.3 Meters and Regulation	12.6	12.7	(0.1)
1.1.4 Customer Related Distribution Plant	138.6	118.8	19.8
1.1.5 NGV Rental Equipment	0.3	0.3	-
1.1 TOTAL CUSTOMER RELATED CAPITAL	138.9	119.1	19.8
B. <u>System Improvements and Upgrades</u>			
1.2.1 Mains - Relocations	23.4	20.0	3.4
1.2.2 - Replacement	49.1	23.5	25.6
1.2.3 - Reinforcement	111.6	62.4	49.2
1.2.4 Total Improvement Mains	184.1	105.9	78.2
1.2.5 Services - Relays	20.2	43.2	(23.0)
1.2.6 Regulator Refits	6.8	5.4	1.4
1.2.7 Measurement and Regulation	25.7	17.6	8.1
1.2.8 Meters	20.7	16.1	4.6
1.2 TOTAL SYSTEM IMPROVEMENTS AND UPGRADES	257.5	188.2	69.3
C. <u>General and Other Plant</u>			
1.3.1 Land, Structures and Improvements	19.0	22.8	(3.8)
1.3.2 Office Furniture and Equipment	3.9	1.3	2.6
1.3.3 Transp/Heavy Work/NGV Compressor Equipment	4.7	4.2	0.5
1.3.4 Tools and Work Equipment	1.6	2.2	(0.6)
1.3.5 Computers and Communication Equipment	38.2	40.7	(2.5)
1.3 TOTAL GENERAL AND OTHER PLANT	67.4	71.2	(3.8)
D. <u>Underground Storage Plant</u>	20.1	26.0	(5.9)
E. <u>TOTAL CAPITAL EXPENDITURES</u>	483.9	404.5	79.4

Witnesses: L. Au
D. Kelly
R. Lei

EXPLANATION OF MAJOR CHANGES
IN BUDGET 2013 UTILITY CAPITAL EXPENDITURES
FROM ESTIMATED 2012 UTILITY CAPITAL EXPENDITURES

The 2013 Budget is \$483.9 million, which is \$79.4 million or 19.6% over the 2012 Estimate of \$404.5 million. Capital expenditure increases in the 2013 Budget are primarily driven by increased requirements for system improvements and upgrades, and customer related distribution plant, partially offset by decreased requirements in general and other plant, and underground storage plant. The major categories showing significant variances are explained below:

Item No.

1.1.4 Customer Related Distribution Plant - Increase \$19.8 Million

The increase in customer related distribution plant is primarily due to the requirements for three new power generation facilities (\$12.4 million) which will require Leave to Construct ("LTC") applications. Further details of LTCs can be found at Exhibit B1, Tab 3 Schedule 3. The remaining increase of \$7.4 is driven by the increased number of customers and higher indirect costs.

1.2.4 Improvement Mains - Increase \$78.2 Million

The increase includes several LTC applications for major reinforcement and replacement work (\$30.0 million). Further details of LTCs can be found at Exhibit B1, Tab 3 Schedule 3. This increased activity is primarily to ensure system integrity and to support the future demand capacity particularly in the areas north of Toronto and in the Ottawa region. The relocation mains increased by \$3.4 million due to project timing, which is dependent on the co-ordination of efforts with other utilities and municipalities. Future growth opportunities contribute \$5.9 million to the overall increase. The remaining increase is driven by safety and integrity programs that are essential to maintain a safe and reliable distribution system. The projects reflect the continuous commitment to meeting governing codes and standards as well as industry best practices. Capital expenditures for 2013 includes the on-going integrity management initiatives

Witnesses: L. Au
D. Kelly
R. Lei

such as Records and GPS Strategy, Asset Risk Mitigation and Revision of Damage Prevention Standards. This category also includes asset plan initiatives that will assist management in making optimal decisions with respect to EGD's distribution system assets by balancing risks, operational performance and financial performance. These initiatives include Low Pressure Delivery Meter Set Program, Records Integrity Program, Don River Bridge Crossing Replacement, Isolation Valve Study & Installation Program (RCV / ASV), Targeted Compression Couplings Pressure Containment Sleeve Program and Revision of Excess Flow Valve policy, Amp Fitting Replacement. Further details can be found at Exhibit B2, Tab 2, Schedule 1 and Exhibit B1, Tab 2, Schedule 2.

1.2.5 Service Relays – Decrease \$23.0 Million

The decrease is driven by the expected completion of the Cast Iron Replacement Program in 2012.

1.2.6 Regulator Refits – Increase \$1.4 Million

The increase is primarily due to the safety and integrity requirements related to replacement of copper risers in plastic services. Further details can be found at Exhibit B2, Tab 2, Schedule 1.

1.2.7 Measurement and Regulation – Increase \$8.1 Million

The increase is due primarily to increased requirements for low pressure delivery station improvements. Further details can be found at Exhibit B2, Tab 2, Schedule 1.

1.2.8 Meters – Increase \$4.6 Million

The increase is due to a higher number of replacement meter units required in 2013. Replacement meters (\$3.5 million) planned for 2012 were advanced to 2011. These costs represent meters that have reached the end of their useful life. These are mandated by Measurement Canada's accuracy standards.

Witnesses: L. Au
D. Kelly
R. Lei

1.3.1 Land, Structures and Improvements – Decrease \$3.8 Million

The decrease reflects completion of the Technical Training and Operations Centre (\$13.0 million) and replacement of Pembroke (\$1.3 million) and Casselman (\$0.8 million) Operations centres in 2012. This was partially offset by 2013 initiatives which include the Fleet Garage replacement (\$8.5 million), Meter Shop relocation (\$2.0 million) and Colony Court Operations centre replacement (\$1.0). Further details on these projects are shown in Exhibit B1, Tab 2, Schedule 2.

1.3.3 Office Furniture and Equip - Increase \$2.6 Million

The variance represents the cost of furniture and equipment requirements related to the new building facilities.

1.3.4 Tools and Work Equipment - Decrease \$0.6 Million

The decrease reflects a decline in requirements anticipated for 2013.

1.3.5 Computers and Communication Equipment - Decrease \$2.5 Million

The computer and communication requirements are driven by information technology enhancements and necessary upgrades to existing software and hardware. The decrease of \$2.5 million relative to the 2012 Estimate is mainly due to the timing of the expenditures. More information is provided at Exhibit B1, Tab 4, Schedule 1.

D. Underground Storage Plant – Decrease \$5.9 Million

The 2013 Capital Expenditures Budget for underground storage plant includes several major projects for a number of upgrade initiatives that will ensure both safety and environmental compliance as well as increase overall system reliability. The decreased expenditures in 2013 are primarily driven by the expected completion of several large initiatives in 2012. Storage Capital

Witnesses: L. Au
D, Kelly
R. Lei

requirements are explained at Exhibit B1, Tab 5 Schedule 1. A listing of the major projects included in the test year budget can be found at Exhibit B3, Tab 2, Schedule 2 and all major underground storage projects are listed with description and justification at Exhibit B1, Tab 2, Schedule 2.

Witnesses: L. Au
D, Kelly
R. Lei

2013 CAPITAL EXPENDITURES BY PROJECT
(EXCEEDING \$500,000)

<u>Item No.</u>	<u>Description of Project</u>	<u>2013 Budget (\$000)</u>
1.	Power Generation Projects A, B and C	14,040
2.	Ottawa Reinforcement Main	30,000
3.	GTA Reinforcement Main	21,117
4.	Records and GPS Strategy	12,500
5.	Low Pressure Delivery Meter Set Program	10,140
6.	Asset Risk Mitigation Initiative	6,300
7.	Ottawa Innes Rd Replacement Main	6,000
8.	Business Development and Customer Strategy -Growth Initiative	5,934
9.	Technical Training Initiative	3,647
10.	Records Integrity Program	3,523
11.	Don River Bridge Replacement	3,500
12.	Isolation Valve Study and Installation Program	3,080
13.	Targeted Compression Couplings Pressure Containment Sleeve Program	2,000
14.	Revision Excess Flow Valve Policy	1,500
15.	Amp Fitting Replacement Program	1,000
16.	Cast Iron Replacement Program	942
17.	Stayner Reinforcement	750
18.	Revise Damage Prevention Standards and Processes	520
19.	Kennedy Road Operations Centre Replacement	4,300
20.	New Fleet Garage	8,500
21.	New Meter Shop	2,000
22.	Colony Court Replacement	1,000
23.	EnVision Upgrade	6,200
24.	Leveraging SAP	4,500
25.	SAP Hardware Refresh	4,200

Witnesses: L. Au
D. Kelly
R. Lei

2013 CAPITAL EXPENDITURES BY PROJECT
(EXCEEDING \$500,000)

<u>Item No.</u>	<u>Description of Project</u>	<u>2013 Budget (\$000)</u>
26.	Reporting Analytics for Finance & Customer Care Department	1,500
27.	Desktop Replacement	1,200
28.	Capman/O&M Management Program	1,000
29.	Microsoft Enterprise Agreement	950
30.	IT Request	800
31.	Remedy Upgrade	756
32.	Infrastructure Replacement:Nortel to CISCO	700
33.	Integrated Training Environment	700
34.	SRM Enhancements	550
35.	Supply Chain Management	500
36.	Enterprise GIS Implementation/Enhancement	500
37.	Asset Record Data capture	500
38.	Tecumseh Office Facility	4,950
39.	Certificate of Approval Air and Noise Emmissions	3,500
40.	MCC #1 Generator and Boiler Replacement	1,500
41.	Purchase of Farm Properties	1,100
42.	Pipeline Integrity Program	1,000
43.	Custody Measurement Upgrade at Dawn	1,000
44.	Plant Layout changes	750
45.	KVT Compressor Pressure Upgrade	750
46.	Control Room Equipment changes	500

Witnesses: L. Au
D. Kelly
R. Lei

GROSS CUSTOMER ADDITIONS
AND AVERAGE COST PER CUSTOMER ADDITION
BUDGET 2013 AND ESTIMATE 2012

Item No.		Col. 1	Col. 2	Col. 3
		Budget 2013	Estimate 2012	Budget 2013 Over/(Under) Estimate 2012
	<u>RESIDENTIAL</u> ¹			
1.1	New Construction	30,601	29,450	1,151
1.2	Replacement	5,676	5,948	(272)
1.	TOTAL RESIDENTIAL	<u>36,277</u>	<u>35,398</u>	<u>879</u>
	<u>COMMERCIAL</u> ²			
2.1	New Construction	1,780	1,727	53
2.2	Replacement	832	798	34
2.	TOTAL COMMERCIAL	<u>2,612</u>	<u>2,525</u>	<u>87</u>
	<u>INDUSTRIAL</u>			
3.1	New Construction	6	3	3
3.2	Replacement	1	1	0
3.	TOTAL INDUSTRIAL	<u>7</u>	<u>4</u>	<u>3</u>
4.	TOTAL GROSS CUSTOMER ADDITIONS	<u>38,896</u>	<u>37,927</u>	<u>969</u>
5.	AVERAGE COSTS PER CUSTOMER ADDITION ³ INCLUDING POWER GENERATION	<u>\$3,563</u>	<u>\$3,132</u>	<u>\$431</u>
6.	AVERAGE COSTS PER CUSTOMER ADDITION ³ EXCLUDING POWER GENERATION	<u>\$3,201</u>	<u>\$3,088</u>	<u>\$113</u>

¹ Residential customers include singles homes and apartment ensuites

² Commercial customers include commercial and traditional apartment buildings

³ Includes the cost of Sales Mains, New Services, Measurement and Regulation, and Meters

Witnesses: F. Ahmad
L. Au
R. Lei

EXPLANATION OF MAJOR VARIANCES
IN COMPARISON OF GROSS CUSTOMER ADDITIONS
BUDGET 2013 AND ESTIMATE 2012

Total Customer Additions

1. Total customer additions for the 2013 Budget are 38,896, which is 2.6% or 969 more than the 2012 estimate of 37,927. This increase has largely been driven by relatively stronger housing starts expectations.
2. The customer additions forecast for 2013 has been developed using a grass roots approach. Information considered in developing this forecast include the Economic Outlook, information from builders provided by Regional Operations and the impact of customer growth initiatives. The groups involved in providing this information have collectively developed this forecast with consensus. This approach has been used by the Company in previous rate applications and replicates a process that has been accepted in settlement proposals and Board decisions.
3. The residential sector constitutes the vast majority of total customer additions and follows the trends in the housing starts. The Company's housing starts forecast and Economic Outlook are included in this rate case filing at Exhibit C2, Tab 1, Schedule 1. Positive trends in the housing market can be attributed to a variety of factors including continued economic recovery, strong employment growth and relatively low mortgage rate expectations. In addition to these economic indicators, inputs from Regional Operations also suggest higher customer additions forecast in 2013 compared to 2012.
4. The continued economic recovery is expected to encourage investments in the commercial sector. Higher customer growth in this sector is expected in both residential (apartment traditional) and non-residential sectors.

Witnesses: F. Ahmad
L. Au
R. Lei

5. Investments in the industrial manufacturing sector are expected due to positive economic trends, however a strong Canadian dollar and foreign competition may hinder customer growth in this sector. The company is expecting seven industrial customer additions in 2013 compared to four customers in 2012.

Average Cost Per Customer Addition

6. The primary factors that influence the average cost per customer are the mix of customer additions and service types (i.e., replacement versus new construction, residential versus commercial or industrial), the mix of meter types and the length of main required for the customer addition.
7. The increase in the average cost per customer in the 2013 Budget is primarily due to an increase in power generation facilities (refer to Exhibit B1, Tab 3, Schedule 3). The 2013 Budget average cost per customer excluding power generation facilities is \$113, or 3.6% higher than the 2012 Estimate.

Witnesses: F. Ahmad
L. Au
R. Lei

SYSTEM EXPANSION MONITORING
2013 TEST YEAR

	<u>\$millions</u>	Reference Line on Page 3
CAPITAL EXPENDITURE		
1 New Mains	20.14	1
2 Services	56.33	2
3 Meters and Regulation	10.16	3
4 Allowance for Marginal Overhead & Reinforcement	<u>22.90</u>	8
5 Total	<u>109.53</u>	9
 CASH FLOW		
6 Projected Annual Revenue from Capital Additions	26.64	16
7 Less: Operating Expenses	<u>13.75</u>	25
8 Operating Cash Flow before Income Taxes	12.89	
9 Income Tax before Allowance for Tax Shield from Interest and CCA	<u>3.29</u>	
10 Annual Operating Cash Flow after Income Taxes and before Allowance for Tax Shield due to Interest and CCA	<u>9.60</u>	
 PRESENT VALUE CALCULATION		
11 Present Value at the Beginning of Year one of Annual Cash Flows for the Revenue Horizon	136.17	
12 Present Value of Tax Shield from CCA	<u>13.47</u>	
13 Present Value of Total Cash Flows	149.64	
14 Present Value of Capital Investment	<u>(109.47)</u>	
15 Net Present Value from Investment	<u>40.17</u>	
16 Profitability Index	1.37	

Note: Columns may not add due to rounding.

Witnesses: F. Ahmad
P. Squires

CALCULATION OF REVENUE (DEFICIENCY)/SUFFICIENCY
2013 Test Year

	Year 1	Year 2	Year 3	Year 4	Year 5
	(\$ Millions)	(\$ Millions)	(\$ Millions)	(\$ Millions)	(\$ Millions)
CAPITAL					
Beginning Balance (PPE)	-	107.204	102.561	97.918	93.274
Investments Made	109.526	-	-	-	-
Depreciation	2.322	4.643	4.643	4.643	4.643
Ending Balance (PPE)	107.204	102.561	97.918	93.274	88.631
Working Capital	(0.029)	(0.058)	(0.058)	(0.058)	(0.058)
Average Incremental Rate Base	53.57	104.82	100.18	95.54	90.89
REVENUE REQUIREMENT					
Rate of Return on Rate Base @ 7.31%	3.915	7.660	7.321	6.982	6.642
Add: After Tax					
Depreciation	2.322	4.643	4.643	4.643	4.643
Ontario and Federal Capital Tax	-	-	-	-	-
Expenses	1.619	2.752	2.752	2.752	2.752
Gas Costs	3.747	7.493	7.493	7.493	7.493
Less: CCA Tax shield	0.838	1.625	1.528	1.436	1.350
Interest tax shield	0.461	0.902	0.862	0.822	0.782
After tax revenue requirement	10.303	20.021	19.820	19.612	19.399
Income tax requirement	3.527	6.853	6.784	6.713	6.640
Revenue requirement	13.830	26.874	26.603	26.325	26.039
REVENUE (DEFICIENCY)/SUFFICIENCY					
Residential/Subdivision Revenue	19.434				
Small Commercial/Industrial Revenue	7.209				
Large Volume Revenue	-				
Forecasted Revenue from Expansion	26.643	26.643	26.643	26.643	26.643
Effectiveness Factor	50%	100%	100%	100%	100%
Forecasted Effective Revenue From Expansion	13.321	26.643	26.643	26.643	26.643
Less: Revenue Requirement	13.830	26.874	26.603	26.325	26.039
Revenue (deficiency) / sufficiency	(0.509)	(0.232)	0.039	0.318	0.604

Witnesses: F. Ahmad
P. Squires

Derivation of Inputs to Return on System Expansion Monitoring: 2013 Test Year

(\$millions unless otherwise noted)								
Capital Expenditure	Col.1	Col.2 Exhibit Reference	Col.3 Overheads	Col.4 Adjustment per note 4	Col.5	Col.6	Col.7	Col.8 Col.9 Exhibit Reference B3 T2 S4 P1
1 Sales Mains	61.8	B1/2/4 pg 1	(27.7)	(14.04)				20.14
2 Services	64.1	B1/2/4 pg 1	(7.8)	-				56.33
3 Meters and Regulation	12.6	B1/2/4 pg 1	(2.4)	-				10.16
4 Sub-total								86.63
5 Marginal A&G Overhead			5.1	-				5.12
6 Normalized Mains Reinforcement			4.0	-				4.04
7 Miscellaneous Regional Overhead			13.7	-				13.74
8 Total Overhead								22.90
9 TOTAL								109.53
Cash Flow								
10 Projected Annual Revenues from Capital Additions	Customer Additions	Exhibit Reference	Use/Customer 10 ³ m ³	Revenue Rate (\$ per 10 ³ m ³ (per note 2)				
11 Residential - New Construction	30,601	B3/2/3 pg 1	2,331	230.56				
12 Residential - Replacement	5,676	B3/2/3 pg 1	2,247	234.31				
13 Commercial/Industrial - New Construction (excl. large volume customers)	1,786	B3/2/3 pg 1	15,820	171.03				
14 Commercial/Industrial - Replacement	833	B3/2/3 pg 1	17,133	166.50				
15 Large Volume	0	B3/2/3 pg 1	-	-				
16 Projected Annual Revenues from Capital Additions								
Operating Expenses	Customer Additions	Exhibit Reference	O&M/customer (per note 1)	O&M Cost \$	Use/Customer 10 ³ m ³ per 10 ³ m ³ (per note 2)	Gas costs	Gas Cost	Total
17 Projected Annual Operating Costs								
18 Residential - New Construction	30,601	B3/2/3 pg 1	70.11	2.15	2,331	79.44	5.67	7.8
19 Residential - Replacement	5,676	B3/2/3 pg 1	70.11	0.40	2,247	79.44	1.01	1.4
20 Commercial/Industrial - New Construction	1,786	B3/2/3 pg 1	190.14	0.34	15,820	79.44	2.24	2.6
21 Commercial/Industrial - Replacement	833	B3/2/3 pg 1	190.14	0.16	17,133	79.44	1.13	1.3
22 Large Volume	0	B3/2/3 pg 1	-	-	-	-	-	0.0
23 Sub-total								13.1
24 Municipal Taxes (see note 3)								0.7
25 Total Operating Expenses								13.8

Note 1 O&M costs are based on the latest feasibility guidelines effective in 2011.
Note 2 Revenue and gas costs are net of commodity and are based on the 2011 feasibility guidelines.
Note 3 Municipal Taxes based on 0.60% of the total capital per portfolio per feasibility guidelines.
Note 4 This adjustment refers to the capital net of contribution not included in 2013 Investment Portfolio. The associated customers are not attached in 2013.

Witnesses: F. Ahmad
P. Squires

Witnesses: F. Ahmad
P. Squires

**IMPACT OF EBO 188 SYSTEM EXPANSION ON EB-2011-0277
TYPICAL BILL IMPACTS BASED ON SALES SERVICE CUSTOMERS**
2013 Test Year

Item No.		<u>Col.1</u>	<u>Col.2</u>	<u>Col.3</u>	<u>Col.4</u>
		Residential , Subdivision	Commercial / Industrial General Serv	Commercial / Industrial Large Volume	TOTAL
1.	Deficiency Allocation (\$ millions)	0.369	0.126	0.014	0.509
2.	Delivery Volumes (10 ⁶ m ³)	4,667.4	4,814.7	2,027.7	11,509.9
3.	Per Unit Rate (\$ per m ³)	0.0001	0.00003	0.000007	n/a
4.	Typical Bill Volumes (m ³ /customer)	3,064	22,606	15,169,902 ^[1]	n/a
5.	Annual Bill Increase (\$/customer)	0.24	0.59	106.34	n/a
6.	Annual Percent Increase (%)	0.023%	0.009%	0.003%	n/a

Notes:

^[1] Typical bill volume for Large Volume customers is based on an average of volumes for gas rates 110-200

UTILITY RATE BASE
COMPARISON OF 2012 BRIDGE YEAR TO 2011 HISTORIC YEAR

	Col. 1	Col. 2	Col. 3
Line	2012	2011	
No.	Bridge Year	Historical Year	Difference
	(\$Millions)	(\$Millions)	(\$Millions)
<u>Property, Plant, and Equipment</u>			
1. Cost or redetermined value	6,406.3	6,072.3	334.0
2. Accumulated depreciation	<u>(2,594.2)</u>	<u>(2,399.9)</u>	<u>(194.3)</u>
3. Net property, plant, and equipment	<u>3,812.1</u>	<u>3,672.4</u>	<u>139.7</u>
<u>Allowance for Working Capital</u>			
4. Accounts receivable merchandise finance plan	-	-	-
5. Accounts receivable rebillable projects	0.3	1.7	(1.4)
6. Materials and supplies	31.2	28.3	2.9
7. Mortgages receivable	0.3	0.5	(0.2)
8. Customer security deposits	(70.5)	(74.7)	4.2
9. Prepaid expenses	1.8	1.5	0.3
10. Gas in storage	302.0	348.5	(46.5)
11. Working cash allowance	<u>(8.5)</u>	<u>(3.6)</u>	<u>(4.9)</u>
12. Total Working Capital	<u>256.6</u>	<u>302.2</u>	<u>(45.6)</u>
13. <u>Utility Rate Base</u>	<u><u>4,068.7</u></u>	<u><u>3,974.6</u></u>	<u><u>94.1</u></u>

Witness: K. Culbert

UTILITY PROPERTY, PLANT, AND EQUIPMENT
SUMMARY STATEMENT - AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1	Col. 2	Col. 3
	Gross Property, Plant, and Equipment	Accumulated Depreciation	Net Property, Plant, and Equipment
	(\$Millions)	(\$Millions)	(\$Millions)
1. Underground storage plant	327.5	(111.1)	216.4
2. Distribution plant	5,672.0	(2,346.0)	3,326.0
3. General plant	413.7	(136.4)	277.3
4. Other plant	<u>0.5</u>	<u>(0.5)</u>	<u>-</u>
5. Total plant in service	6,413.7	(2,594.0)	3,819.7
6. Plant held for future use	<u>1.7</u>	<u>(1.1)</u>	<u>0.6</u>
7. Sub- total	6,415.4	(2,595.1)	3,820.3
8. Affiliate Shared Assets Value	<u>(9.1)</u>	<u>0.9</u>	<u>(8.2)</u>
9.	<u><u>6,406.3</u></u>	<u><u>(2,594.2)</u></u>	<u><u>3,812.1</u></u>

Witness: K. Culbert

UTILITY GROSS UNDERGROUND STORAGE PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7
	Opening Balance Dec.2011	Additions	Retirements	Closing Balance Dec.2012	Regulatory Adjustments (Note 1)	Utility Balance Dec.2012	Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Crowland storage (450/459)	-	-	-	-	-	-	-
2. Land and gas storage rights (450/451)	46.2	1.5	-	47.7	(1.0)	46.6	46.0
3. Structures and improvements (452.00)	16.4	1.5	-	17.9	(0.1)	17.9	16.4
4. Wells (453.00)	44.0	6.7	(2.8)	47.9	-	47.9	44.0
5. Well equipment (454.00)	9.1	0.5	-	9.6	-	9.6	9.2
6. Field Lines (455.00)	59.3	3.1	(0.4)	62.1	-	62.1	59.5
7. Compressor equipment (456.00)	96.5	5.2	(1.1)	100.6	(0.5)	100.1	96.5
8. Measuring and regulating equipment (457.00)	14.9	2.4	(0.5)	16.8	-	16.8	14.9
9. Base pressure gas (458.00)	40.9	0.0	-	41.0	-	41.0	41.0
10. Total	327.4	20.8	(4.8)	343.4	(1.5)	341.9	327.5

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY UNDERGROUND STORAGE PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1 Opening Balance Dec.2011	Col. 2 Additions	Col. 3 Retirements	Col. 4 Costs Net of Proceeds	Col. 5 Closing Balance Dec.2012	Col. 6 Regulatory Adjustments (Note 1)	Col. 7 Utility Balance Dec.2012	Col. 8 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Crowland storage (450/459)	-	-	-	-	-	-	-	-
2. Land and gas storage rights (451.00)	(21.8)	(0.9)	-	-	(22.7)	-	(22.7)	(22.2)
3. Structures and improvements (452.00)	(5.1)	(0.4)	-	-	(5.5)	0.1	(5.5)	(5.2)
4. Wells (453.00)	(17.5)	(2.0)	2.8	2.3	(14.5)	-	(14.5)	(16.8)
5. Well equipment (454.00)	(4.8)	(0.3)	-	-	(5.1)	-	(5.1)	(5.0)
6. Field Lines (455.00)	(22.0)	(1.5)	0.4	-	(23.2)	-	(23.2)	(22.7)
7. Compressor equipment (456.00)	(33.1)	(2.1)	1.1	-	(34.1)	0.2	(33.9)	(33.7)
8. Measuring and regulating equipment (457.00)	(5.3)	(0.5)	0.5	-	(5.4)	-	(5.4)	(5.5)
9. Total	(109.6)	(7.8)	4.8	2.3	(110.4)	0.2	(110.1)	(111.1)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY GROSS DISTRIBUTION PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1 Opening Balance Dec.2011 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2012 (\$Millions)	Col. 5 Regulatory Adjustment (Note 1) (\$Millions)	Col. 6 Utility Balance Dec.2012 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Land (470.00)	20.8	4.3	-	25.1	-	25.1	23.1
2. Offers to purchase (470.01)	-	-	-	-	-	-	-
3. Land rights intangibles (471.00)	7.5	-	-	7.5	-	7.5	7.5
4. Structures and improvements (472.00)	82.7	36.7	(0.5)	118.9	(0.3)	118.6	100.8
5. Services, house reg & meter install. (473/474)	2,097.8	103.0	(6.8)	2,194.1	-	2,194.1	2,143.0
6. NGV station compressors (476)	2.5	0.1	(0.1)	2.5	-	2.5	2.5
7. Meters (478)	388.0	20.1	(5.5)	402.6	-	402.6	393.7
8. Sub-total	2,599.2	164.2	(12.9)	2,750.5	(0.3)	2,750.2	2,670.5
9. Mains (475)	2,598.8	172.7	(4.3)	2,767.1	(2.2)	2,764.9	2,664.0
10. Measuring and regulating equip. (477)	326.4	24.4	(2.2)	348.6	(0.5)	348.1	337.5
11. Sub-total	2,925.2	197.1	(6.5)	3,115.7	(2.7)	3,113.0	3,001.5
12. Total	5,524.4	361.3	(19.4)	5,866.3	(3.1)	5,863.2	5,672.0

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY DISTRIBUTION PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1 Opening Balance Dec.2011	Col. 2 Additions	Col. 3 Retirements	Col. 4 Costs Net of Proceeds	Col. 5 Closing Balance Dec.2012	Col. 6 Regulatory Adjustment (Note 1)	Col. 7 Utility Balance Dec.2012	Col. 8 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Land rights intangibles (471.00)	(1.5)	(0.4)	-	-	(1.8)	-	(1.8)	(1.6)
2. Structures and improvements (472.00)	(6.0)	(2.7)	0.5	1.3	(6.9)	0.1	(6.8)	(6.2)
3. Services, house reg & meter install. (473/474)	(925.1)	(96.3)	6.8	22.2	(992.4)	-	(992.4)	(958.5)
4. NGV station compressors (476)	(1.6)	(0.2)	0.1	-	(1.7)	-	(1.7)	(1.7)
5. Meters (478)	(96.4)	(9.8)	5.5	-	(100.6)	-	(100.6)	(98.5)
6. Mains (475)	(1,048.2)	(110.5)	4.3	-	(1,154.3)	1.5	(1,152.8)	(1,099.3)
7. Measuring and regulating equip. (477)	(173.2)	(17.4)	2.2	-	(188.4)	0.5	(187.9)	(180.3)
8. Total	(2,252.0)	(237.1)	19.4	23.5	(2,446.2)	2.1	(2,444.1)	(2,346.0)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

UTILITY GROSS GENERAL PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1 Opening Balance Dec.2011 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2012 (\$Millions)	Col. 5 Regulatory Adjustment (Note 1) (\$Millions)	Col. 6 Utility Balance Dec.2012 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Lease improvements (482.50)	3.6	0.2	(0.1)	3.7	(0.2)	3.5	3.5
2. Office furniture and equipment (483.00)	19.8	0.1	(1.3)	18.6	-	18.6	19.1
3. Transportation equipment (484.00)	45.8	2.9	(1.0)	47.7	(0.1)	47.7	46.0
4. NGV conversion kits (484.01)	7.4	0.2	(0.3)	7.4	-	7.4	7.4
5. Heavy work equipment (485.00)	21.7	0.7	(0.3)	22.2	-	22.2	21.8
6. Tools and work equipment (486.00)	35.5	2.2	(0.5)	37.1	-	37.1	35.8
7. Rental equipment (487.70)	1.0	0.0	(0.0)	1.0	-	1.0	1.0
8. NGV rental compressors (487.80)	4.3	0.1	(0.3)	4.1	-	4.1	4.2
9. NGV cylinders (484.02 and 487.90)	2.8	0.2	(0.0)	3.0	-	3.0	2.9
10. Communication structures & equip. (488)	3.4	1.8	(1.6)	3.6	-	3.6	3.2
11. Computer equipment (490.00)	41.8	1.3	(3.5)	39.6	-	39.6	38.9
12. Software Acquired/Developed (491.00)	92.2	40.0	(21.6)	110.5	-	110.5	103.0
13. CIS (491.00)	127.1	-	-	127.1	-	127.1	127.1
14. Total	406.2	49.8	(30.5)	425.5	(0.3)	425.2	413.7

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY GENERAL PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1 Opening Balance Dec.2011 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Costs Net of Proceeds (\$Millions)	Col. 5 Closing Balance Dec.2012 (\$Millions)	Col. 6 Regulatory Adjustment (Note 1) (\$Millions)	Col. 7 Utility Balance Dec.2012 (\$Millions)	Col. 8 Average of Monthly Averages (\$Millions)
1. Lease improvements (482.50)	(2.4)	(0.4)	0.1	-	(2.7)	0.1	(2.5)	(2.4)
2. Office furniture and equipment (483.00)	(8.3)	(0.9)	1.3	-	(7.9)	-	(7.9)	(8.0)
3. Transportation equipment (484.00)	(8.8)	(2.0)	1.0	-	(9.9)	0.1	(9.8)	(9.3)
4. NGV conversion kits (484.01)	(4.4)	(0.2)	0.3	-	(4.3)	-	(4.3)	(4.4)
5. Heavy work equipment (485.00)	(7.3)	(0.8)	0.3	-	(7.8)	-	(7.8)	(7.5)
6. Tools and work equipment (486.00)	(13.7)	(1.1)	0.5	-	(14.3)	-	(14.3)	(13.9)
7. Rental equipment (487.70)	(1.0)	(0.0)	0.0	-	(1.0)	-	(1.0)	(1.0)
8. NGV rental compressors (487.80)	(2.7)	(0.3)	0.3	-	(2.8)	-	(2.8)	(2.8)
9. NGV cylinders (484.02 and 487.90)	(1.5)	(0.1)	0.0	-	(1.6)	-	(1.6)	(1.6)
10. Communication structures & equip. (488)	(2.2)	(0.1)	1.6	-	(0.7)	-	(0.7)	(1.4)
11. Computer equipment (490.00)	(5.3)	(7.8)	3.5	-	(9.6)	-	(9.6)	(6.0)
12. Software Acquired/Developed (491.00)	(40.3)	(20.4)	21.6	-	(39.1)	-	(39.1)	(43.4)
13. CJS (491.00)	(28.5)	(12.7)	-	-	(41.2)	-	(41.2)	(34.8)
14. Total	(126.3)	(46.9)	30.5	-	(142.7)	0.2	(142.5)	(136.4)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY GROSS OTHER PLANT
 YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
 2012 BRIDGE YEAR

Line No.	Col. 1 Opening Balance Dec.2011 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2012 (\$Millions)	Col. 5 Regulatory Adjustment (\$Millions)	Col. 6 Utility Balance Dec.2012 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Intangible plant (Peterborough 402.50)	0.5	-	-	0.5	-	0.5	0.5
2. Total	0.5	-	-	0.5	-	0.5	0.5

Witness: K. Culbert

UTILITY OTHER PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
	Opening Balance Dec.2011	Additions	Retirements	Costs Net of Proceeds	Closing Balance Dec.2012	Regulatory Adjustment	Utility Balance Dec.2012	Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Intangible plant (Peterborough 402.50)	(0.5)	-	-	-	(0.5)	-	(0.5)	(0.5)
2. Total	(0.5)	-	-	-	(0.5)	-	(0.5)	(0.5)

UTILITY GROSS PLANT HELD FOR FUTURE USE
 YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1 Opening Balance Dec.2011 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2012 (\$Millions)	Col. 5 Regulatory Adjustment (\$Millions)	Col. 6 Utility Balance Dec.2012 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Inactive services (102.00)	1.7	-	-	1.7	-	1.7	1.7
2. Total	1.7	-	-	1.7	-	1.7	1.7

Witness: K. Culbert

UTILITY PLANT HELD FOR FUTURE USE
 CONTINUITY OF ACCUMULATED DEPRECIATION
 YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1 Opening Balance Dec.2011	Col. 2 Additions	Col. 3 Retirements	Col. 4 Costs Net of Proceeds	Col. 5 Closing Balance Dec.2012	Col. 6 Regulatory Adjustment	Col. 7 Utility Balance Dec.2012	Col. 8 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Inactive services (105.02)	(1.0)	(0.1)	-	-	(1.1)	-	(1.1)	(1.1)
2. Total	(1.0)	(0.1)	-	-	(1.1)	-	(1.1)	(1.1)

Witness: K. Culbert

WORKING CAPITAL COMPONENTS
MONTH END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.	Col. 1 Account Merchandise Finance Plan	Col. 2 Account Receivable Projects	Col. 3 Materials and Supplies	Col. 4 Mortgages Receivable	Col. 5 Customer Security Deposits	Col. 6 Prepaid Expenses	Col. 7 Gas in Storage	Col. 8 Working Cash Allowance	Col. 9 Total
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. January 1	-	0.2	30.8	0.4	(73.0)	1.7	384.0	(8.5)	335.6
2. January 31	-	0.1	30.9	0.3	(72.5)	1.0	252.5	(8.5)	203.8
3. February	-	0.1	31.0	0.3	(72.1)	0.5	148.0	(8.5)	99.3
4. March	-	0.2	31.0	0.3	(71.7)	0.4	74.1	(8.5)	25.8
5. April	-	0.2	31.1	0.3	(71.3)	0.5	63.3	(8.5)	15.6
6. May	-	0.3	31.1	0.3	(70.9)	1.0	133.5	(8.5)	86.8
7. June	-	0.3	31.2	0.3	(70.5)	1.0	223.1	(8.5)	176.9
8. July	-	0.4	31.3	0.3	(70.1)	4.3	331.1	(8.5)	288.8
9. August	-	0.3	31.3	0.3	(69.7)	3.5	439.6	(8.5)	396.8
10. September	-	0.3	31.4	0.3	(69.3)	2.8	526.4	(8.5)	483.4
11. October	-	0.4	31.5	0.3	(68.8)	1.9	554.7	(8.5)	511.5
12. November	-	0.3	31.5	0.3	(68.4)	2.4	494.7	(8.5)	452.3
13. December	-	0.2	31.6	0.3	(68.0)	1.7	381.1	(8.5)	338.4
14. Avg. of monthly avgs.	-	0.3	31.2	0.3	(70.5)	1.8	302.0	(8.5)	256.6

Witness: K. Culbert

WORKING CAPITAL COMPONENTS - WORKING CASH ALLOWANCE
2012 BRIDGE YEAR

Line No.	Col. 1 Disbursements (\$Millions)	Col. 2 Net Lag-Days (Days)	Col. 3 Allowance (\$Millions)
1. Gas purchase and storage and transportation charges	1,531.2	5.1	21.3
2. Items not subject to working cash allowance (Note 1)	<u>(15.7)</u>		
3. Gas costs charged to operations	<u>1,515.5</u>		
4. Operation and Maintenance	402.2		
5. Less: Storage costs	<u>(6.0)</u>		
6. Operation and maintenance costs subject to working cash	396.2		
7. Ancillary customer services	<u>-</u>		
8.	<u>396.2</u>	(26.9)	<u>(29.2)</u>
9. Sub-total			<u>(7.9)</u>
10. Storage costs	6.0	79.9	1.3
11. Storage municipal and capital taxes	1.6	34.6	<u>0.2</u>
12. Sub-total			<u>1.5</u>
13. Harmonized sales tax			<u>(2.1)</u>
14. Total working cash allowance			<u>(8.5)</u>

Note 1: Represents non cash items such as amortization of deferred charges,
accounting adjustments and the T-service capacity credit.

Witness: K. Culbert

COMPARISON OF UTILITY CAPITAL EXPENDITURES
ESTIMATE 2012 AND ACTUAL 2011

	Col. 1	Col. 2	Col. 3
Item No.	Estimate 2012 (\$Millions)	Actual 2011 (\$Millions)	Estimate 2012 Over/(Under) Actual 2011 (\$Millions)
A. <u>Customer Related</u>			
1.1.1 Sales Mains	47.2	72.1	(24.9)
1.1.2 Services	58.9	55.9	3.0
1.1.3 Meters and Regulation	12.7	7.6	5.1
1.1.4 Customer Related Distribution Plant	118.8	135.6	(16.8)
1.1.5 NGV Rental Equipment	0.3	-	0.3
1.1 TOTAL CUSTOMER RELATED CAPITAL	119.1	135.6	(16.5)
B. <u>System Improvements and Upgrades</u>			
1.2.1 Mains - Relocations	20.0	15.5	4.6
1.2.2 - Replacement	23.5	54.6	(31.1)
1.2.3 - Reinforcement	62.4	9.8	52.6
1.2.4 Total Improvement Mains	105.9	79.8	26.1
1.2.5 Service Relays	43.2	45.9	(2.7)
1.2.6 Regulator Refits	5.4	5.6	(0.2)
1.2.7 Measurement and Regulation	17.6	11.4	6.2
1.2.8 Meters	16.1	17.8	(1.7)
1.2 TOTAL SYSTEM IMPROVEMENTS AND UPGRADES	188.2	160.5	27.7
C. <u>General and Other Plant</u>			
1.3.1 Land, Structures and Improvements	22.8	20.9	1.9
1.3.2 Office Furniture and Equipment	1.3	5.1	(3.8)
1.3.3 Transp/Heavy Work/NGV Compressor Equipment	4.2	7.4	(3.2)
1.3.4 Tools and Work Equipment	2.2	1.9	0.3
1.3.5 Computers and Communication Equipment	40.7	37.7	3.0
1.3 TOTAL GENERAL AND OTHER PLANT	71.2	73.0	(1.8)
D. Underground Storage Plant	26.0	30.1	(4.1)
E. TOTAL CAPITAL EXPENDITURES	404.5	399.2	5.3

Witnesses: L. Au
D. Kelly
R. Lei

EXPLANATION OF MAJOR CHANGES
IN ESTIMATE 2012 UTILITY CAPITAL EXPENDITURES
FROM ACTUAL 2011 UTILITY CAPITAL EXPENDITURES

The 2012 Estimate is \$404.5 million, which is \$5.3 million or 1.3% over the 2011 Actual year of \$399.2 million. Capital expenditure increases in the 2012 Estimate are primarily driven by system improvement and information technology requirements, partially offset by decreases in customer related and storage capital.

Item No.

1.1.4 Customer Related Distribution Plant - Decrease \$16.8 Million

The decrease in customer related distribution plant is primarily driven by the power generation customers (\$18.4 million). The York Energy Centre facility was completed in 2011 while several new facilities commence construction in 2012. The overall decrease was partially offset by an increased number of customer additions and higher indirect costs \$1.6 million.

1.2.4 System Improvement Mains - Increase \$26.1 Million

The increase is primarily due to the inclusion of several major reinforcement mains projects as well as additional safety and integrity initiatives. The reinforcement projects are required to support the expanded growth experienced and anticipated in the Toronto and York regions. The projects include GTA Reinforcement (\$11.6 million), Angus Reinforcement (\$6.0 million), Alliston Reinforcement (\$3.9 million) and other projects (\$4.2 million). The 2012 Estimate increase includes requirements for various relocation main projects (\$4.5 million). These projects are mandated by other utilities and municipalities based on their needs. The safety and integrity initiatives represent programs which are required to maintain a safe and reliable distribution system. This would include amounts related to the integrity management initiatives

Witnesses: L. Au
D. Kelly
R. Lei

(\$10.9 million), Station B Relocation (\$2.0 million), and Sheridan Gate Station relocation (\$1.8 million). The overall increases were partially offset by the Cast Iron Replacement program (\$18.8 million). The justification for all projects mentioned can be found at Exhibit B1, Tab 2, Schedule 2.

1.2.5 Service Relays – Decrease \$2.7 Million

The decrease is primarily due to lower indirect costs.

1.2.7 Measurement and Regulation – Increase \$6.2 Million

The increase is primarily due to station improvement requirements.

1.2.8 Meters - Decrease \$1.7 Million

The decrease is primarily due to reduced requirements for meter replacements.

C. General and Other Plant - Decrease \$1.8 Million

The decrease is driven by reduced requirements for office furniture and equipment (\$3.8 million) and decreased requirements for Transportation and Heavy Work equipment (\$3.2 million). This was partially offset by increased computer and communication equipment requirements (\$3.0 million) which is primarily due to enhancements and necessary upgrades to existing hardware and software and increased requirements for Land, Structures and Improvements (\$1.9 million). More details can be found at Exhibit B1, Tab 4, Schedule 1.

D. Underground Storage Plant - Decrease \$4.1 Million

The decrease in Storage plant requirements reflects the completion of a major Pool Metering project in 2011. More information on Storage capital can be found at Exhibit B1, Tab 5, Schedule 1.

Witnesses: L. Au
D. Kelly
R. Lei

2012 CAPITAL EXPENDITURES BY PROJECT
(EXCEEDING \$500,000)

<u>Item No.</u>	<u>Description of Project</u>	<u>2012 Estimate (\$000)</u>	<u>Historic 2011 Forecast (\$000)</u>	<u>2011 Actual (\$000)</u>	<u>2012 Over/Under Actual (\$000)</u>
1.	Power Generation Projects A, B and C	1,460	-	-	1,460
2.	Ottawa Reinforcement Main	1,500	400	-	1,500
3.	GTA Reinforcement Main	11,627	1,850	1,441	10,186
4.	Technical Training Initiative	3,700	3,900	4,993	(1,293)
5.	Cast Iron Replacement Program	25,190	40,580	43,832	(18,642)
6.	Angus Reinforcement	6,000			6,000
7.	Low Pressure Delivery Meter Set Program	5,140			5,140
8.	Asset Risk Mitigation Initiative	5,700			5,700
9.	Alliston Reinforcement	4,660	800	532	4,128
10.	Relocation Main - Davis Drive	4,000			4,000
11.	Relocation Main - 9th Line (Markham Gate to Hoover Park)	3,000			3,000
12.	Records and GPS Strategy	3,000	-		3,000
13.	Torbram Relocation Main	2,488	1,646	1,696	792
14.	Kawartha Reinforcement- Phase 2 and 3	2,200	620	1,108	1,092
15.	Station B NPS 20	2,000			2,000
16.	Relocation Main- Bayly/Victoria	2,000			2,000
17.	Peterborough Reinforcement	1,900			1,900
18.	Sheridan Gate Station Bypass Relocation Main	1,824			1,824
19.	Revise Damage Prevention Standards and Processes	1,550			1,550
20.	Wyebridge Relocation Main	1,800			1,800
21.	Relocation Main- Teston Rd/Pine Valley	1,300			1,300
22.	Relocation Main - Highway 7(Bayview to Warden)	1,200			1,200
23.	Mayfield Road Reinforcement	1,000			1,000
24.	Relocation Main- Brock Road Phase 2	980			980
25.	Scarborough Reinforcement	751	659	(184)	935

Witnesses: L. Au
D. Kelly
R. Lei

2012 CAPITAL EXPENDITURES BY PROJECT
 (EXCEEDING \$500,000)

Item No.	Description of Project	2012 Estimate (\$000)	Historic 2011 Forecast (\$000)	2011 Actual (\$000)	2012 Over/ Under Actual (\$000)
26	Hurontario Reinforcement	750			750
27	Anne Street (Barrie) Relocation Main	750			750
28	High Street (Barrie) Relocation Main	600			600
29	Keele and McNaughton Reinforcement Main	560			560
30	Brampton Rapid Transit - Satellite & Orbitor Relocation Main	500			500
31	Technical Training and Operations Centre	13,000	18,000	16,197	(3,197)
32	Casselman Operations Centre Replacement	1,300			1,300
33	Pembroke Operations Centre Replacement	800			800
34	Kennedy Road Operations Centre Replacement	5,200			5,200
35	Leveraging SAP	4,900	6,017	3,389	1,511
36	Reporting Analytics for Finance & Customer Care Department	1,450	1,297	465	985
37	Desktop Replacement	1,200			1,200
38	Capman/O&M Management Program	1,500	556		1,500
39	Microsoft Enterprise Agreement	950	1,060	1,062	(112)
40	IT Request	650	676	770	(120)
41	Infrastructure Replacement:Nortel to CISCO	1,800	800	1,286	514
42	SRM Enhancements	750	1,222	1,065	(315)
43	Supply Chain Management	1,000	559	612	388
44	Enterprise GIS Implementation/Enhancement	500	1,949	2,264	(1,764)
45	Asset Record Data capture	500			500
46	Gas Molecule - 'nGARS	500	900	667	(167)
47	Enterprise Email/Records Management	1,400			1,400
48	EnMar Upgrade	700	1,061	1,197	(497)

Witnesses: L. Au
 D. Kelly
 R. Lei

2012 CAPITAL EXPENDITURES BY PROJECT
(EXCEEDING \$500,000)

Item No.	Description of Project	2012 <u>Estimate</u> (\$000)	Historic 2011 <u>Forecast</u> (\$000)	2011 <u>Actual</u> (\$000)	2012 Over/ Under <u>Actual</u> (\$000)
49	Online Incident Management & Collaboration	500			500
50	EnVision Enhancements	4,800	1,688	3,003	1,797
51	Microsoft Program	2,200	1,545	1,122	1,078
52	GMS/Open Link - Customer web Access	900			900
53	Oracle Database upgrade	537			537
54	Tecumseh Office Facility	2,250			2,250
55	Certificate of Approval Air and Noise Emmissions	3,500	2,120	2,119	1,381
56	Purchase of Farm Properties	1,092	790	-	1,092
57	Pipeline Integrity Program	1,000			1,000
58	Plant Layout changes	750			750
59	Control Room Equipment changes	500			500
60	Observation Wells	5,000	1,650	1,091	3,909
61	Replace/Upgrade Storage Pool Metering	2,000	18,870	17,684	(15,684)
62	By-Pass of Sombra Station	1,000			1,000
63	KVT Upgrade K703	1,000	700	652	348
64	Mid Kimball/South Kimball Road Crossing	750			750

Witnesses: L. Au
D. Kelly
R. Lei

GROSS CUSTOMER ADDITIONS
AND AVERAGE COST PER CUSTOMER ADDITION
ESTIMATE 2012 AND ACTUAL 2011

	Col. 1	Col. 2	Col. 3
Item No.	Estimate 2012	Actual 2011	Estimate 2012 Over/(Under) Actual 2011
<u>RESIDENTIAL</u> ¹			
1.1 New Construction	29,450	25,577	3,873
1.2 Replacement	5,948	7,722	(1,774)
1. TOTAL RESIDENTIAL	<u>35,398</u>	<u>33,299</u>	<u>2,099</u>
<u>COMMERCIAL</u> ²			
2.1 New Construction	1,727	1,709	18
2. Replacement	798	641	157
TOTAL COMMERCIAL	<u>2,525</u>	<u>2,350</u>	<u>175</u>
<u>INDUSTRIAL</u>			
3.1 New Construction	3	7	(4)
3. Replacement	1	1	0
TOTAL INDUSTRIAL	<u>4</u>	<u>8</u>	<u>(4)</u>
4. TOTAL GROSS CUSTOMER ADDITIONS	<u>37,927</u>	<u>35,657</u>	<u>2,270</u>
5. AVERAGE COSTS PER CUSTOMER ADDITION ³ INCLUDING POWER GENERATION	<u>\$3,132</u>	<u>\$3,803</u>	<u>(\$671)</u>
6. AVERAGE COSTS PER CUSTOMER ADDITION ³ EXCLUDING POWER GENERATION	<u>\$3,088</u>	<u>\$3,247</u>	<u>(\$159)</u>

¹ Residential customers include singles homes and apartment ensuites

² Commercial customers include commercial and traditional apartment buildings

³ Includes the cost of Sales Mains, New Services, Measurement and Regulation, and Meters

Witnesses: F. Ahmad
L. Au
R. Lei

EXPLANATION OF MAJOR VARIANCES
IN COMPARISON OF GROSS CUSTOMER ADDITIONS
ESTIMATE 2012 AND ACTUAL 2011

Total Customer Additions

1. The total customer additions estimate for 2012 is 37,927, which is higher than the actual 2011 value by 2,270 customers. This increase has largely been driven by positive trends in the housing market and a continued economic recovery.

Average Cost Per Customer Addition

2. The primary factors that influence the average cost per customer addition are the mix of customer additions and service types (i.e., replacement versus new construction, residential versus commercial or industrial), the mix of meter types and the length of main required for the customer addition.
3. The 2012 Estimate average cost per customer addition is \$671 lower than the 2011 Actual average cost primarily due to the completion of York Energy Centre power generation facility in 2011. The 2012 Estimate average cost per customer excluding power generation is \$159, or 4.8% less than the 2011 Actual average cost primarily due to customer mix. Relative to 2011 Actual, the 2012 Estimate has fewer residential replacement customer additions.

Witnesses: F. Ahmad
L. Au
R. Lei

SYSTEM EXPANSION MONITORING
2012 Bridge Year

	<u>\$millions</u>	Reference Line on Page 3
CAPITAL EXPENDITURE		
1 New Mains	17.65	1
2 Services	51.50	2
3 Meters and Regulation	9.88	3
4 Allowance for Marginal Overhead & Reinforcement	<u>21.04</u>	8
5 Total	<u>100.07</u>	9
CASH FLOW		
6 Projected Annual Revenue from Capital Additions	25.99	16
7 Less: Operating Expenses	<u>13.38</u>	25
8 Operating Cash Flow before Income Taxes	12.61	
9 Income Tax before Allowance for Tax Shield from Interest and CCA	<u>3.31</u>	
10 Annual Operating Cash Flow after Income Taxes and before Allowance for Tax Shield due to Interest and CCA	<u>9.30</u>	
PRESENT VALUE CALCULATION		
11 Present Value at the Beginning of Year one of Annual Cash Flows for the Revenue Horizon	151.00	
12 Present Value of Tax Shield from CCA	<u>13.86</u>	
13 Present Value of Total Cash Flows	164.87	
14 Present Value of Capital Investment	<u>(100.01)</u>	
15 Net Present Value from Investment	<u>64.85</u>	
16 Profitability Index	1.65	

Note: Columns may not add due to rounding.

Witnesses: L. Au
D. Kelly
R. Lei

CALCULATION OF REVENUE (DEFICIENCY)/SUFFICIENCY

2012 Bridge Year

	Year 1 (\$ Millions)	Year 2 (\$ Millions)	Year 3 (\$ Millions)	Year 4 (\$ Millions)	Year 5 (\$ Millions)
CAPITAL					
Beginning Balance (PPE)	-	97.952	93.717	89.483	85.248
Investments Made	100.069	-	-	-	-
Depreciation	2.117	4.234	4.234	4.234	4.234
Ending Balance (PPE)	<u>97.952</u>	<u>93.717</u>	<u>89.483</u>	<u>85.248</u>	<u>81.014</u>
Working Capital	<u>(0.028)</u>	<u>(0.056)</u>	<u>(0.056)</u>	<u>(0.056)</u>	<u>(0.056)</u>
Average Incremental Rate Base	<u>48.95</u>	<u>95.78</u>	<u>91.54</u>	<u>87.31</u>	<u>83.08</u>
REVENUE REQUIREMENT					
Rate of Return on Rate Base @ 6.29%	<u>3.080</u>	<u>6.027</u>	<u>5.761</u>	<u>5.494</u>	<u>5.228</u>
Add: After Tax					
Depreciation	2.117	4.234	4.234	4.234	4.234
Ontario and Federal Capital Tax	-	-	-	-	-
Expenses	1.532	2.625	2.625	2.625	2.625
Gas Costs	3.623	7.245	7.245	7.245	7.245
Less: CCA Tax shield	0.788	1.529	1.437	1.351	1.270
Interest tax shield	0.450	0.881	0.842	0.803	0.764
After tax revenue requirement	<u>9.114</u>	<u>17.721</u>	<u>17.586</u>	<u>17.444</u>	<u>17.298</u>
Income tax requirement	<u>3.244</u>	<u>6.308</u>	<u>6.259</u>	<u>6.209</u>	<u>6.157</u>
Revenue requirement	<u>12.358</u>	<u>24.029</u>	<u>23.845</u>	<u>23.653</u>	<u>23.455</u>
REVENUE (DEFICIENCY)/SUFFICIENCY					
Residential/Subdivision Revenue	18.988				
Small Commercial/Industrial Revenue	7.002				
Large Volume Revenue	-				
Forecasted Revenue from Expansion	<u>25.990</u>	25.990	25.990	25.990	25.990
Effectiveness Factor	<u>50%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>
Forecasted Effective Revenue From Expansion	<u>12.995</u>	25.990	25.990	25.990	25.990
Less: Revenue Requirement	<u>12.358</u>	<u>24.029</u>	<u>23.845</u>	<u>23.653</u>	<u>23.455</u>
Revenue (deficiency) / sufficiency	<u>0.637</u>	<u>1.961</u>	<u>2.145</u>	<u>2.337</u>	<u>2.535</u>

Witnesses: L. Au
D. Kelly
R. Lei

Derivation of Inputs to Return on System Expansion Monitoring: 2012 Bridge Year

(\$millions unless otherwise noted)

Capital Expenditure

	Col.1	Col.2	Col.3	Col.4	Col.5	Col.6	Col.7	Col.8	Col.9
		Exhibit Reference	Overheads	Adjustment see note 4				Total	Exhibit Reference
1 Sales Mains	47.2	B1/2/4 pg 1	(27.9)	(1.71)				17.65	1
2 Services	58.9	B1/2/4 pg 1	(7.4)	-				51.50	2
3 Meters and Regulation	12.7	B1/2/4 pg 1	(2.8)	-				9.88	3
4 Sub-total								<u>79.03</u>	
5 Marginal A&G Overhead			3.9	-				3.93	
6 Normalized Mains Reinforcement			3.5	-				3.54	
7 Miscellaneous Regional Overhead			13.6	-				<u>13.58</u>	
8 Total Overhead								<u>21.04</u>	4
9 TOTAL								<u>100.07</u>	5

Cash Flow

10 Projected Annual Revenues from Capital Additions

	Customer Additions	Exhibit Reference	Use/Customer 10 ³ m ³	Revenue Rate (\$ per 10 ³ m ³ (per note 2))	Total
11 Residential - New Construction	29,450	B4/2/3 pg 1	2,337	230.32	15.8
12 Residential - Replacement	5,948	B4/2/3 pg 1	2,258	233.82	3.1
13 Commercial/Industrial - New Construction (excl. large volume customers)	1,730	B4/2/3 pg 1	16,507	168.58	4.8
14 Commercial/Industrial - Replacement	799	B4/2/3 pg 1	16,112	169.96	2.2
15 Large Volume	-		-	-	0.0

16 Projected Annual Revenues from Capital Additions

Operating Expenses

	Customer Additions	Exhibit Reference	O&M/customer (per note 1)	\$	O&M Cost \$	Use/Customer 10 ³ m ³	Gas costs 10 ³ m ³ per 10 ³ m ³ (per note 2)	Gas Cost	Total
17 Projected Annual Operating Costs									
18 Residential - New Construction	29,450	B4/2/3 pg 1	70.11	2.06	2.06	2,337	79.44	5.47	7.5
19 Residential - Replacement	5,948	B4/2/3 pg 1	70.11	0.42	0.42	2,258	79.44	1.07	1.5
20 Commercial/Industrial - New Construction	1,730	B4/2/3 pg 1	190.14	0.33	0.33	16,507	79.44	2.27	2.6
21 Commercial/Industrial - Replacement	799	B4/2/3 pg 1	190.14	0.15	0.15	16,112	79.44	1.02	1.2
22 Large Volume	-		-	-	-	-	-	-	0.0
23 Sub-total									<u>12.8</u>
24 Municipal Taxes (see note 3)									0.6

25 **Total Operating Expenses**

13.4

Witnesses: L. Au
D. Kelly
R. Lei

Note 1 O&M costs are based on the latest feasibility guidelines effective in 2011
Note 2 Revenue and gas costs are net of commodity and are based on the 2011 feasibility guidelines.
Note 3 Municipal Taxes based on 0.60% of the total capital per portfolio per feasibility guidelines.
Note 4 This adjustment refers to the capital net of contribution not included in 2012 Investment Portfolio. The associated customers are not attached in 2012.

Witnesses: L. Au
D. Kelly
R. Lei

IMPACT OF EBO 188 SYSTEM EXPANSION ON EB-2010-0146
TYPICAL BILL IMPACTS BASED ON SALES SERVICE CUSTOMERS
2012

Item No.	<u>Col.1</u>	<u>Col.2</u>	<u>Col.3</u>	<u>Col.4</u>
	Residential / Subdivision	Commercial / Industrial General Service	Commercial / Industrial Large Volume	TOTAL
1. Deficiency Allocation (\$ millions)	(0.430)	(0.188)	(0.019)	(0.637)
2. Delivery Volumes (10 ⁶ m ³)	4,805.6	4,539.1	2,078.7	11,423.4
3. Per Unit Rate (\$ per m ³)	(0.0001)	(0.00004)	(0.000009)	n/a
4. Typical Bill Volumes (m ³ /customer)	3,064	22,606	15,169,902 ^[1]	n/a
5. Annual Bill Increase (\$/customer)	(0.27)	(0.94)	(136.96)	n/a
6. Annual Percent Increase (%)	(0.026%)	(0.014%)	(0.002%)	n/a

Notes:

^[1] Typical bill volume for Large Volume customers is based on an average of volumes for gas rates 110-200

UTILITY RATE BASE
COMPARISON OF 2011 HISTORICAL YEAR TO 2007 BOARD APPROVED

	Col. 1	Col. 2	Col. 3
Line No.	2011 Historical Year	2007 Board Approved	Difference
	(\$Millions)	(\$Millions)	(\$Millions)
<u>Property, Plant, and Equipment</u>			
1. Cost or redetermined value	6,064.1	4,979.3	1,084.8
2. Accumulated depreciation	<u>(2,398.4)</u>	<u>(1,839.1)</u>	<u>(559.3)</u>
3.	<u>3,665.7</u>	<u>3,140.2</u>	<u>525.5</u>
<u>Allowance for Working Capital</u>			
4. Accounts receivable merchandise finance plan	-	0.1	(0.1)
5. Accounts receivable rebillable projects	1.6	6.9	(5.3)
6. Materials and supplies	30.1	21.0	9.1
7. Mortgages receivable	0.4	0.9	(0.5)
8. Customer security deposits	(75.6)	(42.8)	(32.8)
9. Prepaid expenses	1.5	2.7	(1.2)
10. Gas in storage	337.6	613.1	(275.5)
11. Working cash allowance	<u>(4.3)</u>	<u>3.6</u>	<u>(7.9)</u>
12. Total Working Capital	<u>291.3</u>	<u>605.5</u>	<u>(314.2)</u>
13. <u>Utility Rate Base</u>	<u>3,957.0</u>	<u>3,745.7</u>	<u>211.3</u>

Witness: K. Culbert

UTILITY PROPERTY, PLANT, AND EQUIPMENT
SUMMARY STATEMENT - AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1 Gross Property, Plant, and Equipment	Col. 2 Accumulated Depreciation	Col. 3 Net Property, Plant, and Equipment
	(\$Millions)	(\$Millions)	(\$Millions)
1. Underground storage plant	298.1	(109.0)	189.1
2. Distribution plant	5,387.6	(2,161.9)	3,225.7
3. General plant	385.7	(126.9)	258.8
4. Other plant	<u>0.5</u>	<u>(0.5)</u>	<u>-</u>
5. Total plant in service	6,071.9	(2,398.3)	3,673.6
6. Plant held for future use	<u>1.7</u>	<u>(1.0)</u>	<u>0.7</u>
7. Sub- total	6,073.6	(2,399.3)	3,674.3
8. Affiliate Shared Assets Value	<u>(9.5)</u>	<u>0.9</u>	<u>(8.6)</u>
9. Total property, plant, and equipment	<u><u>6,064.1</u></u>	<u><u>(2,398.4)</u></u>	<u><u>3,665.7</u></u>

Witness: K. Culbert

UTILITY GROSS UNDERGROUND STORAGE PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1 Opening Balance Dec.2010	Col. 2 Additions	Col. 3 Retirements	Col. 4 Closing Balance Dec.2011	Col. 5 Regulatory Adjustments	Col. 6 Utility Balance Dec.2011	Col. 7 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Crowland storage (450/459)	4.2	-	-	4.2	-	4.2	4.2
2. Land and gas storage rights (450/451)	41.7	0.0	-	41.7	(1.0)	40.7	40.6
3. Structures and improvements (452.00)	14.2	0.3	-	14.5	(0.1)	14.4	14.2
4. Wells (453.00)	38.5	3.6	-	42.2	-	42.2	39.3
5. Well equipment (454.00)	8.9	0.0	-	8.9	-	8.9	8.9
6. Field Lines (455.00)	46.6	13.7	-	60.3	-	60.3	47.3
7. Compressor equipment (456.00)	90.4	3.3	-	93.6	(0.5)	93.2	91.2
8. Measuring and regulating equipment (457.00)	11.5	0.0	-	11.5	-	11.5	11.5
9. Base pressure gas (458.00)	40.9	0.0	-	40.9	-	40.9	40.9
10. Total	296.8	21.0	-	317.7	(1.5)	316.2	298.1

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY UNDERGROUND STORAGE PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1 Opening Balance Dec.2010	Col. 2 Additions	Col. 3 Retirements	Col. 4 Costs Net of Proceeds	Col. 5 Closing Balance Dec.2011	Col. 6 Regulatory Adjustments	Col. 7 Utility Balance Dec.2011	Col. 8 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Crowland storage (450/459)	(2.2)	(0.1)	-	0.1	(2.2)	-	(2.2)	(2.2)
2. Land and gas storage rights (451.00)	(20.2)	(0.8)	-	-	(21.0)	-	(21.0)	(20.6)
3. Structures and improvements (452.00)	(4.7)	(0.4)	-	-	(5.1)	0.1	(5.0)	(4.8)
4. Wells (453.00)	(17.9)	(1.9)	-	1.0	(18.9)	-	(18.9)	(18.8)
5. Well equipment (454.00)	(4.4)	(0.3)	-	-	(4.7)	-	(4.7)	(4.6)
6. Field Lines (455.00)	(20.8)	(1.3)	-	-	(22.1)	-	(22.1)	(21.4)
7. Compressor equipment (456.00)	(30.5)	(2.1)	-	-	(32.6)	0.2	(32.4)	(31.4)
8. Measuring and regulating equipment (457.00)	(5.0)	(0.4)	-	-	(5.4)	-	(5.4)	(5.2)
9. Total	(105.7)	(7.3)	-	1.0	(112.0)	0.2	(111.8)	(109.0)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

UTILITY GROSS DISTRIBUTION PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1 Opening Balance Dec.2010	Col. 2 Additions Retirements	Col. 3 (\$Millions)	Col. 4 Closing Balance Dec.2011	Col. 5 Regulatory Adjustment (Note 1)	Col. 6 Utility Balance Dec.2011	Col. 7 Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Land (470.00)	20.4	0.2	-	20.6	-	20.6	20.6
2. Offers to purchase (470.01)	-	-	-	-	-	-	-
3. Land rights intangibles (471.00)	7.5	-	-	7.5	-	7.5	7.5
4. Structures and improvements (472.00)	82.0	4.4	(0.6)	85.8	(0.3)	85.4	82.8
5. Services, house reg & meter install. (473/474)	2,024.6	103.5	(19.5)	2,108.6	-	2,108.6	2,057.7
6. NGV station compressors (476)	2.6	0.1	-	2.7	-	2.7	2.6
7. Meters (478)	367.8	22.6	(7.8)	382.5	-	382.5	371.5
8. Sub-total	2,504.7	130.8	(27.9)	2,607.6	(0.3)	2,607.3	2,542.6
9. Mains (475)	2,481.2	141.8	(6.2)	2,616.9	(2.2)	2,614.7	2,526.4
10. Measuring and regulating equip. (477)	314.9	14.4	(1.0)	328.3	(0.5)	327.7	318.6
11. Sub-total	2,796.1	156.2	(7.2)	2,945.2	(2.7)	2,942.4	2,845.0
12. Total	5,300.8	287.1	(35.1)	5,552.8	(3.1)	5,549.7	5,387.6

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY DISTRIBUTION PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
	Opening Balance Dec.2010	Additions	Retirements	Costs Net of Proceeds	Closing Balance Dec.2011	Regulatory Adjustment (Note 1)	Utility Balance Dec.2011	Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Land rights intangibles (471.00)	(1.1)	(0.4)	-	-	(1.5)	-	(1.5)	(1.3)
2. Structures and improvements (472.00)	(5.3)	(2.2)	0.6	0.3	(6.5)	0.1	(6.4)	(6.2)
3. Services, house reg & meter install. (473/474)	(872.5)	(93.4)	19.5	19.6	(926.8)	-	(926.8)	(902.0)
4. NGV station compressors (476)	(1.6)	(0.2)	-	-	(1.8)	-	(1.8)	(1.7)
5. Meters (478)	(92.6)	(9.2)	7.8	(0.5)	(94.5)	-	(94.5)	(94.0)
6. Mains (475)	(949.2)	(104.9)	6.2	11.3	(1,036.6)	1.4	(1,035.2)	(992.1)
7. Measuring and regulating equip. (477)	(159.0)	(16.6)	1.0	3.3	(171.3)	0.5	(170.8)	(164.7)
8. Total	(2,081.2)	(226.8)	35.1	34.0	(2,239.0)	2.0	(2,237.0)	(2,161.9)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY GROSS GENERAL PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1 Opening Balance Dec.2010 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2011 (\$Millions)	Col. 5 Regulatory Adjustment (Note 1) (\$Millions)	Col. 6 Utility Balance Dec.2011 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Lease improvements (482.50)	4.8	0.6	-	5.4	(0.2)	5.2	5.0
2. Office furniture and equipment (483.00)	18.1	5.2	(1.5)	21.8	-	21.8	17.9
3. Transportation equipment (484.00)	41.0	5.3	(0.2)	46.1	(0.1)	46.0	41.6
4. NGV conversion kits (484.01)	7.7	0.4	-	8.1	-	8.1	7.8
5. Heavy work equipment (485.00)	19.3	1.5	(0.3)	20.5	-	20.5	19.4
6. Tools and work equipment (486.00)	34.3	1.6	(0.0)	35.9	-	35.9	34.4
7. Rental equipment (487.70)	1.0	0.0	-	1.0	-	1.0	1.0
8. NGV rental compressors (487.80)	4.9	0.1	(1.2)	3.7	-	3.7	4.8
9. NGV cylinders (484.02 and 487.90)	2.3	0.1	-	2.4	-	2.4	2.3
10. Communication structures & equip. (488)	3.0	-	-	3.0	-	3.0	3.0
11. Computer equipment (490.00)	32.6	8.6	(5.8)	35.3	-	35.3	31.9
12. Software Aquired/Developed (491.00)	90.2	21.5	(21.8)	90.0	-	90.0	89.5
13. CIS (491.00)	127.1	-	-	127.1	-	127.1	127.1
14. Total	386.2	44.8	(30.7)	400.2	(0.3)	400.0	385.7

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY GENERAL PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1 Opening Balance Dec.2010 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Costs Net of Proceeds (\$Millions)	Col. 5 Closing Balance Dec.2011 (\$Millions)	Col. 6 Regulatory Adjustment (Note 1) (\$Millions)	Col. 7 Utility Balance Dec.2011 (\$Millions)	Col. 8 Average of Monthly Averages (\$Millions)
1. Lease improvements (482.50)	(3.7)	(0.5)	-	-	(4.2)	0.1	(4.1)	(3.8)
2. Office furniture and equipment (483.00)	(9.0)	(0.8)	1.5	-	(8.3)	-	(8.3)	(8.6)
3. Transportation equipment (484.00)	(7.8)	(1.8)	0.2	(0.3)	(9.8)	0.1	(9.7)	(8.7)
4. NGV conversion kits (484.01)	(4.6)	(0.2)	-	-	(4.8)	-	(4.8)	(4.7)
5. Heavy work equipment (485.00)	(6.8)	(0.7)	0.3	(0.1)	(7.3)	-	(7.3)	(7.1)
6. Tools and work equipment (486.00)	(13.1)	(1.0)	0.0	-	(14.1)	-	(14.1)	(13.6)
7. Rental equipment (487.70)	(1.0)	(0.0)	-	-	(1.0)	-	(1.0)	(1.0)
8. NGV rental compressors (487.80)	(3.1)	(0.4)	1.2	-	(2.3)	-	(2.3)	(3.2)
9. NGV cylinders (484.02 and 487.90)	(1.5)	(0.1)	-	-	(1.6)	-	(1.6)	(1.5)
10. Communication structures & equip. (488)	(2.1)	(0.1)	-	-	(2.2)	-	(2.2)	(2.2)
11. Computer equipment (490.00)	(4.4)	(6.3)	5.8	-	(4.9)	-	(4.9)	(2.3)
12. Software Acquired/Developed (491.00)	(44.0)	(17.9)	21.8	-	(40.1)	-	(40.1)	(48.1)
13. CIS (491.00)	(15.7)	(12.9)	-	-	(28.6)	-	(28.6)	(22.1)
14. Total	(116.8)	(42.7)	30.7	(0.4)	(129.2)	0.2	(129.0)	(126.9)

Note 1: Adjustments associated with previously established non-utility items and disallowances.

Witness: K. Culbert

UTILITY GROSS OTHER PLANT
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7
	Opening Balance Dec.2010	Additions	Retirements	Closing Balance Dec.2011	Regulatory Adjustment	Utility Balance Dec.2011	Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Intangible plant (Peterborough 402.50)	0.5	-	-	0.5	-	0.5	0.5
2. Total	0.5	-	-	0.5	-	0.5	0.5

UTILITY OTHER PLANT
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
	Opening Balance Dec.2010	Additions	Retirements	Costs Net of Proceeds	Closing Balance Dec.2011	Regulatory Adjustment	Utility Balance Dec.2011	Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Intangible plant (Peterborough 402.50)	(0.5)	-	-	-	(0.5)	-	(0.5)	(0.5)
2. Total	(0.5)	-	-	-	(0.5)	-	(0.5)	(0.5)

Witness: K. Culbert

UTILITY GROSS PLANT HELD FOR FUTURE USE
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1 Opening Balance Dec.2010 (\$Millions)	Col. 2 Additions (\$Millions)	Col. 3 Retirements (\$Millions)	Col. 4 Closing Balance Dec.2011 (\$Millions)	Col. 5 Regulatory Adjustment (\$Millions)	Col. 6 Utility Balance Dec.2011 (\$Millions)	Col. 7 Average of Monthly Averages (\$Millions)
1. Inactive services (102.00)	1.7	-	-	1.7	-	1.7	1.7
2. Total	1.7	-	-	1.7	-	1.7	1.7

Witness: K. Culbert

UTILITY PLANT HELD FOR FUTURE USE
CONTINUITY OF ACCUMULATED DEPRECIATION
YEAR END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
	Opening Balance Dec.2010	Additions	Retirements	Costs Net of Proceeds	Closing Balance Dec.2011	Regulatory Adjustment	Utility Balance Dec.2011	Average of Monthly Averages
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. Inactive services (105.02)	(0.9)	(0.1)	-	-	(1.0)	-	(1.0)	(1.0)
2. Total	(0.9)	(0.1)	-	-	(1.0)	-	(1.0)	(1.0)

Witness: K. Culbert

WORKING CAPITAL COMPONENTS
MONTH END BALANCES AND AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.	Col. 1 Account Receivable Merchandise Finance Plan	Col. 2 Account Receivable Projects	Col. 3 Materials and Supplies	Col. 4 Mortgages Receivable	Col. 5 Customer Security Deposits	Col. 6 Prepaid Expenses	Col. 7 Gas in Storage	Col. 8 Working Cash Allowance	Col. 9 Total
	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)	(\$Millions)
1. January 1	-	0.2	25.2	0.5	(73.3)	1.3	411.2	(4.3)	360.8
2. January 31	-	-	25.6	0.5	(73.7)	0.9	282.6	(4.3)	231.6
3. February	-	0.7	26.8	0.5	(74.5)	0.4	175.8	(4.3)	125.4
4. March	-	2.9	27.3	0.5	(74.9)	0.4	116.9	(4.3)	68.8
5. April	-	4.1	28.4	0.5	(75.2)	0.4	154.2	(4.3)	108.1
6. May	-	2.7	28.8	0.4	(75.2)	0.9	245.0	(4.3)	198.3
7. June	-	3.8	30.3	0.4	(74.7)	0.8	333.2	(4.3)	289.5
8. July	-	1.5	31.1	0.4	(74.6)	3.6	414.9	(4.3)	372.6
9. August	-	2.7	31.6	0.4	(75.8)	3.0	462.2	(4.3)	419.8
10. September	-	2.7	33.7	0.4	(76.1)	2.4	498.2	(4.3)	457.0
11. October	-	1.3	33.5	0.4	(76.5)	1.7	498.9	(4.3)	455.0
12. November	-	(3.6)	33.9	0.4	(79.5)	1.7	473.0	(4.3)	421.6
13. December	-	0.7	34.8	0.4	(78.7)	1.3	381.9	(4.3)	336.1
14. Avg. of monthly avgs.	-	1.6	30.1	0.4	(75.6)	1.5	337.6	(4.3)	291.3

Witness: K. Culbert

WORKING CAPITAL COMPONENTS - WORKING CASH ALLOWANCE
2011 HISTORICAL YEAR

Line No.	Col. 1 Disbursements (\$Millions)	Col. 2 Net Lag-Days (Days)	Col. 3 Allowance (\$Millions)
1. Gas purchase and storage and transportation charges	1,402.7	5.8	22.3
2. Items not subject to working cash allowance (Note 1)	<u>(19.0)</u>		
3. Gas costs charged to operations	<u>1,383.7</u>		
4. Operation and Maintenance	360.5		
5. Less: Storage costs	<u>(5.4)</u>		
6. Operation and maintenance costs subject to working cash	355.1		
7. Ancillary customer services	<u>-</u>		
8.	<u>355.1</u>	(26.1)	<u>(25.4)</u>
9. Sub-total			<u>(3.1)</u>
10. Storage costs	5.4	78.6	1.2
11. Storage municipal and capital taxes	1.5	36.0	<u>0.1</u>
12. Sub-total			<u>1.3</u>
13. Harmonized sales tax			<u>(2.5)</u>
14. Total working cash allowance			<u>(4.3)</u>

Note 1: Represents non cash items such as amortization of deferred charges,
accounting adjustments and the T-service capacity credit.

Witness: K. Culbert

COMPARISON OF UTILITY CAPITAL EXPENDITURES
ACTUAL 2011 AND BOARD APPROVED 2007

	Col. 1	Col. 2	Col. 3
Item No.	Actual 2011 (\$Millions)	Board Approved 2007 (\$Millions)	Historic 2011 Over/(Under) Approved 2007 (\$Millions)
A. <u>Customer Related</u>			
1.1.1 Sales Mains	72.1	76.5	(4.4)
1.1.2 Services	55.9	46.2	9.7
1.1.3 Meters and Regulation	7.6	11.5	(3.9)
1.1.4 Customer Related Distribution Plant	135.6	134.2	1.4
1.1.5 NGV Rental Equipment	-	0.2	(0.2)
1.1 TOTAL CUSTOMER RELATED CAPITAL	135.6	134.4	1.2
B. <u>System Improvements and Upgrades</u>			
1.2.1 Mains - Relocations	15.5	7.7	7.8
1.2.2 - Replacement	54.6	58.1	(3.5)
1.2.3 - Reinforcement	9.8	26.6	(16.8)
1.2.4 Total Improvement Mains	79.8	92.4	(12.6)
1.2.5 Services - Relays	45.9	17.3	28.6
1.2.6 Regulators - Refits	5.6	3.5	2.1
1.2.7 Measurement and Regulation	11.4	15.7	(4.3)
1.2.8 Meters	17.8	20.2	(2.4)
1.2 TOTAL SYSTEM IMPROVEMENTS AND UPGRADES	160.5	149.1	11.4
C. <u>General and Other Plant</u>			
1.3.1 Land, Structures and Improvements	20.9	3.1	17.8
1.3.2 Office Furniture and Equipment	5.1	0.7	4.4
1.3.3 Transp/Heavy Work/NGV Compressor Equipment	7.4	7.7	(0.3)
1.3.4 Tools and Work Equipment	1.9	1.2	0.7
1.3.5 Computers and Communication Equipment	37.7	17.3	20.4
1.3 TOTAL GENERAL AND OTHER PLANT	73.0	30.0	43.0
D. <u>Underground Storage Plant</u>	30.1	4.5	25.6
E. <u>TOTAL CAPITAL EXPENDITURES</u>	399.2	318.0	81.2

Witnesses: L. Au
 D. Kelly
 R. Lei

EXPLANATION OF MAJOR CHANGES
IN ACTUAL 2011 UTILITY CAPITAL EXPENDITURES
FROM BOARD APPROVED 2007 UTILITY CAPITAL EXPENDITURES

1. The 2011 Actual year is \$399.5 million, which was \$81.2 million or 25.5% above the 2007 Fiscal Board Approved Budget of \$318.0 million. The Board in its EB-2006-0034 ADR settlement of 2007 capital expenditures allowed for a \$300.0 million capital envelope, plus \$18.0 million for the Portland Energy Centre. It was to be left to Company management to determine which projects it would pursue in 2007, except for the \$18.0 million allocated to Portlands Energy Centre. The division of the \$300.0 million capital amount in the ADR Settlement was created for internal purposes and was not specifically approved by the Board at the individual capital element level (i.e., services, regulators, meters).
2. The primary drivers of the increase in 2011 include the Technical Training and Operations Centre (\$16.2 million), increased storage operation requirements (\$25.6 million), increased requirements for information technology (\$20.4 million), increased capital requirements for system improvements and upgrades (\$11.4 million) ,other general plant increases (\$6.4 million) and increased customer related capital (\$1.2 million). Details and descriptions of the projects greater than \$500,000 can be found at Exhibit B1, Tab 2, Schedule 2.

Witnesses: L. Au
D. Kelly
R. Lei

2011 CAPITAL EXPENDITURES BY PROJECT
(EXCEEDING \$500,000)

Item No.	Description of Project	Historic 2011 <u>Forecast</u> (\$000)	2011 <u>Actual</u> (\$000)
1.	York Energy Centre Power Generation	20,029	20,049
2.	Everett Expansion Phase 1 Sales Main	1,113	1,376
3.	GTA Reinforcement	1,850	1,441
4.	Technical Training Initiative	3,900	4,993
5.	Cast Iron Replacement Program	40,580	43,832
6.	Alliston Reinforcement	800	532
7.	Torbram Relocation Main	1,646	1,696
8.	Kawartha Reinforcement- Phase 2 and 3	620	1,108
9.	Scarborough Reinforcement	659	(184)
10.	Ottawa Gate Station	-	1,660
11.	Anderson Road Replacement	2,287	2,291
12.	Keele and Finch Relocation Main	1,716	762
13.	Richmond Gate Reinforcement	897	1,655
14.	Hwy 35 South Relocation Main	1,083	852
15.	Hwy 93 Relocation Main	587	573
16.	County Rd 88 Relocation Main	525	525
17.	New Westminister Replacement Main	-	2,695
18.	Oshawa Gate Station	-	1,180
19.	Wasaga Beach Reinforcement	-	799
20.	Haley Gate Station	-	752
21.	Inline Inspection-Central region West	-	664
22.	Inline Inspection-Eastern region	-	662
23.	Woodbine Station Replacement	-	533
24.	York Region Rapid Transit/Hwy 7 Relocation Main	-	514
25.	Technical Training and Operations Centre	18,000	16,197
26.	Leveraging SAP	6,017	3,389

Witnesses: L. Au
D. Kelly
R. Lei

2011 CAPITAL EXPENDITURES BY PROJECT
(EXCEEDING \$500,000)

Item No.	Description of Project	Historic 2011 Forecast (\$000)	2011 Actual (\$000)
27.	Reporting Analytics for Finance & Customer Care Department	1,297	465
28.	Capman/O&M Management Program	556	240
29.	Microsoft Enterprise Agreement	1,060	1,062
30.	IT Request	676	770
31.	Remedy Upgrade	1,100	913
32.	Infrastructure Replacement:Nortel to CISCO	800	1,286
33.	SRM Enhancements	1,222	1,065
34.	Supply Chain Management	559	612
35.	Enterprise GIS Implementation/Enhancement	1,949	2,264
36.	Gas Molecule - 'nGARS	900	667
37.	EnMar Upgrade	1,061	1,197
38.	EnVision Enhancements	1,688	3,003
39.	Microsoft Program	1,545	1,122
40.	CCSA (LBA Repatriation)	1,458	1,354
41.	Altra GMS Replacement	933	734
42.	Emissions Data Management & Reporting	677	703
43.	SRM Analytics	529	475
44.	Energy Supply Asset Transfer	-	745
45.	Integrated Training	-	531
46.	Certificate of Approval Air and Noise Emmissions	2,120	2,119
47.	Purchase of Farm Properties	790	-
48.	Phase II - Reservoir Simulation	-	512
49.	Replace/Upgrade Storage Pool Metering	18,870	17,684
50.	3D Seismic - Dow Moore/Coveny/Black Creek	2,017	1,707
51.	Observation Wells	1,650	1,091
52.	KVT Upgrade K703	700	652

Witnesses: L. Au
D. Kelly
R. Lei

GROSS CUSTOMER ADDITIONS
 AND AVERAGE COST PER CUSTOMER ADDITION
 ACTUAL 2011 AND BOARD APPROVED BUDGET 2011

Item No.		Col. 1	Col. 2	Col. 3
		Actual 2011	Board Approved Budget 2011	Actual 2011 Over/(Under) Budget 2011
	<u>RESIDENTIAL</u> ¹			
1.1	New Construction	25,577	27,303	(1,726)
1.2	Replacement	7,722	6,309	1,413
1.	TOTAL RESIDENTIAL	33,299	33,612	(313)
	<u>COMMERCIAL</u> ²			
2.1	New Construction	1,709	1,792	(83)
2.2	Replacement	641	829	(188)
2.	TOTAL COMMERCIAL	2,350	2,621	(271)
	<u>INDUSTRIAL</u>			
3.1	New Construction	7	3	4
3.2	Replacement	1	1	-
3.	TOTAL INDUSTRIAL	8	4	4
4.	TOTAL GROSS CUSTOMER ADDITIONS	35,657	36,237	(580)
5.	AVERAGE COSTS PER CUSTOMER ADDITION ³ INCLUDING POWER GENERATION	\$3,803	\$3,681	⁴ \$ 122
6.	AVERAGE COSTS PER CUSTOMER ADDITION ³ EXCLUDING POWER GENERATION	\$3,247	\$3,129	⁴ \$ 118

¹ Residential customers include singles homes and apartment ensuites

² Commercial customers include commercial and traditional apartment buildings

³ Includes the cost of Sales Mains, New Services, Measurement and Regulation, and Meters

⁴ Please note that there was no Board Approved Capital Budget for 2011

Witnesses: F. Ahmad
 L. Au
 R. Lei

EXPLANATION OF MAJOR VARIANCES
IN COMPARISON OF GROSS CUSTOMER ADDITIONS
THE ACTUAL 2011 AND BOARD APPROVED BUDGET 2011

Total Customer Additions

1. The total customer additions for the actual 2011 are 35,657, which is 1.6% or 508 customers lower than the 2011 Board Approved budget of 36,237. This decrease was due to lower than expected customer growth in the residential new construction and commercial sectors. This unfavourable variance is driven by a weaker than expected economic recovery in Ontario.

Average Cost Per Customer Addition

2. There was no Board Approved Capital expenditure budget in 2011. Hence the change in average cost per customer is a function of the change in number of customer additions and customer mix. The average cost has increased because there are more residential replacement customer additions in the Actual year relative to the Board Approved Budget.

Witnesses: F. Ahmad
L. Au
R. Lei

SYSTEM EXPANSION MONITORING
2011 ACTUAL

CAPITAL EXPENDITURE	<u>\$millions</u>	Reference Line on Page 3
1 New Mains	44.62	1
2 Services	54.87	2
3 Meters and Regulation	6.86	3
4 Allowance for Marginal Overhead & Reinforcement	<u>24.18</u>	8
5 Total	<u>130.53</u>	9
 CASH FLOW		
6 Projected Annual Revenue from Capital Additions	25.06	16
7 Less: Operating Expenses	<u>11.18</u>	25
8 Operating Cash Flow before Income Taxes	13.88	
9 Income Tax before Allowance for Tax Shield from Interest and CCA	<u>3.67</u>	
10 Annual Operating Cash Flow after Income Taxes and before Allowance for Tax Shield due to Interest and CCA	<u>10.21</u>	
 PRESENT VALUE CALCULATION		
11 Present Value at the Beginning of Year one of Annual Cash Flows for the Revenue Horizon	144.98	
12 Present Value of Tax Shield from CCA	<u>19.02</u>	
13 Present Value of Total Cash Flows	164.00	
14 Present Value of Capital Investment	<u>(130.42)</u>	
15 Net Present Value from Investment	<u>33.58</u>	
16 Profitability Index	1.26	

Note: Columns may not add due to rounding.

Witnesses: F. Ahmad
 P. Squires

CALCULATION OF REVENUE (DEFICIENCY)/SUFFICIENCY
2011 Actual

	Year 1 (\$ Millions)	Year 2 (\$ Millions)	Year 3 (\$ Millions)	Year 4 (\$ Millions)	Year 5 (\$ Millions)
CAPITAL					
Beginning Balance (PPE)	-	128.110	122.337	116.565	110.792
Investments Made	130.530	-	-	-	-
Depreciation	2.420	5.772	5.772	5.772	5.772
Ending Balance (PPE)	128.110	122.337	116.565	110.792	105.020
Working Capital	(0.050)	(0.119)	(0.119)	(0.119)	(0.119)
Average Incremental Rate Base	64.01	125.10	119.33	113.56	107.79
REVENUE REQUIREMENT					
Rate of Return on Rate Base @ 6.50%	4.156	8.125	7.749	7.374	6.999
Add: After Tax					
Depreciation	2.420	5.772	5.772	5.772	5.772
Ontario and Federal Capital Tax	-	-	-	-	-
Expenses	1.568	2.769	2.769	2.769	2.769
Gas Costs	2.627	5.253	5.253	5.253	5.253
Less: CCA Tax shield	1.106	2.146	2.017	1.896	1.782
Interest tax shield	0.646	1.264	1.205	1.147	1.089
After tax revenue requirement	9.018	18.510	18.322	18.126	17.923
Income tax requirement	3.551	7.288	7.214	7.137	7.057
Revenue requirement	12.569	25.798	25.535	25.263	24.980
REVENUE (DEFICIENCY)/SUFFICIENCY					
Residential/Subdivision Revenue	17.669				
Small Commercial/Industrial Revenue	3.826				
Forecasted Revenue from Expansion	21.496	21.496	21.496	21.496	21.496
Effectiveness Factor	50%	100%	100%	100%	100%
Forecasted Effective Revenue From Expansion	10.748	21.496	21.496	21.496	21.496
Large Volume Revenue	0.001	2.674	3.563	3.563	3.563
Total Forecasted Effective Revenue From Expansion	10.748	24.170	25.059	25.059	25.059
Less: Revenue Requirement	12.569	25.798	25.535	25.263	24.980
Revenue (deficiency) / sufficiency	(1.821)	(1.628)	(0.477)	(0.204)	0.078

Derivation of Inputs to Return on System Expansion Monitoring: 2011 Actuals
(\$millions unless otherwise noted)

Capital Expenditure	Col.1	Col.2	Col.3	Col.4	Col.5	Col.6	Col.7	Col.8	Col.9
		Exhibit Reference	Overheads	Adjustment see note 5				Total	Exhibit Reference B5 T2 S4 P1
1 Sales Mains	72.1	B1/2/4 pg 1	(34.9)	7.46				44.62	1
2 Services	55.9	B1/2/4 pg 1	(1.0)	-				54.87	2
3 Meters and Regulation	7.6	B1/2/4 pg 1	(0.8)	-				6.86	3
4 Sub-total								<u>106.35</u>	
5 Marginal A&G Overhead			2.5	-				2.53	
6 Normalized Mains Reinforcement			3.5	-				3.47	
7 Miscellaneous Regional Overhead			18.2	-				18.18	
8 Total Overhead								<u>24.18</u>	4
9 TOTAL								<u>130.53</u>	5

Cash Flow
10 Projected Annual Revenues from Capital Additions

Customer Additions	Exhibit Reference	Use/Customer 10³ m³	Revenue Rate (\$ per 10³ m³ (per note 2))	Total
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11 Residential - New Construction	25,577	B5/2/3 pg 1	2.433	219.27	13.6
12 Residential - Replacement	7,722	B5/2/3 pg 1	2.334	223.24	4.0
13 Commercial/Industrial - New Construction (excl. large volume customer)	1,715	B5/2/3 pg 1	7.322	229.34	2.9
14 Commercial/Industrial - Replacement	642	B5/2/3 pg 1	5.560	265.16	0.9
15 Large Volume (see note 3)	1	B5/2/3 pg 1	3,264.000	1,089.50	<u>3.6</u>
16 Projected Annual Revenues from Capital Additions					<u>25.1</u>

Operating Expenses

Customer Additions	Exhibit Reference	O&M/customer (per note 1)	O&M Cost \$	Use/Customer 10³ m³	Gas costs (per note 2)	Gas Cost	Total
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17 Projected Annual Operating Costs								
18 Residential - New Construction	25,577	B5/2/3 pg 1	69.69	1.78	2.433	75.96	4.73	6.5
19 Residential - Replacement	7,722	B5/2/3 pg 1	69.69	0.54	2.334	75.96	1.37	1.9
20 Commercial/Industrial - New Construction	1,715	B5/2/3 pg 1	186.88	0.32	7.322	75.96	0.95	1.3
21 Commercial/Industrial - Replacement	642	B5/2/3 pg 1	186.88	0.12	5.560	75.96	0.27	0.4
22 Large Volume (see note 3)	1	B5/2/3 pg 1	320,820.19	0.321	3,264.000	0.00	0.00	0.3
23 Sub-total								10.4

24 Municipal Taxes (see note 4)

25 Total Operating Expenses

11.2

- Note 1 O&M costs are based on a weighted average per feasibility guidelines effective throughout calendar 2011.
Note 2 Revenue and gas costs are net of commodity. Gas cost are based on 2011 Board approved WACOG (Jan.2011-Dec.2011) except for Large Volume customized gas cost.
Revenue is calculated based on Board approved rates for calendar 2011.
Note 3 This is Service Rate 125 Customer. Use per customer of 3,264.000 is the contract demand and the revenue is based on demand charge.
The Gas Costs are not recovered through rates therefore they are not applicable.
Note 4 Municipal Taxes based on 0.60% of the total capital per portfolio per feasibility guidelines
Note 5 This adjustment refers to the capital net of contribution included in 2011 Investment Portfolio.
The associated customer, York Energy Centre, has expected pipeline in service date December 4th 2011.

Witnesses: F. Ahmad
P. Squires

IMPACT OF EBO 188 SYSTEM EXPANSION ON EB-2009-0172
TYPICAL BILL IMPACTS BASED ON SALES SERVICE CUSTOMERS
2011 Historical

Item No.	<u>Col.1</u> Residential / Subdivision	<u>Col.2</u> Commercial / Industrial General Service	<u>Col.3</u> Commercial / Industrial Large Volume	<u>Col.4</u> TOTAL
1. Deficiency Allocation (\$ millions)	1.260	0.504	0.056	1.821
2. Delivery Volumes (10 ⁶ m ³)	4,686.2	4,443.8	2,066.2	11,196.2
3. Per Unit Rate (\$ per m ³)	0.00027	0.00011	0.00003	n/a
4. Typical Bill Volumes (m ³ /customer)	3,064	22,606	15,169,902 ^[1]	n/a
5. Annual Bill Increase (\$/customer)	0.82	2.56	411.59	n/a
6. Annual Percent Increase (%)	0.07%	0.03%	0.007%	n/a

Notes:

^[1] Typical bill volume for Large Volume customers is based on an average of volumes for gas rates 110-200