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February 18, 2014

**VIA RESS, EMAIL and COURIER**

Ms. Kirsten Walli
Ontario Energy Board
2300 Yonge Street
Suite 2700
Toronto, Ontario
M4P 1E4

**Re: EB-2012-0459 - Enbridge Gas Distribution Inc. ("Enbridge")**
**2014 – 2018 Rate Application**
**New and Updated Exhibits**

Further to Enbridge Gas Distribution's filing of January 29, 2014, enclosed please find new and updated as follows:

- Exhibit A1, Tab 6, Schedule 5 (New);
- Exhibit A2, Tab 1, Schedule 3;
- Exhibit B2, Tab 1, Schedule 1 (New pages 44 to 45);
- Exhibit B2, Tab 3, Schedule 1, page 5;
- Exhibit B2, Tab 9, Schedule 1, page 3;
- Exhibit D1, Tab 3, Schedule 1 (New pages 27 to 28)
- Exhibit I.A1.EGDI.BOMA.2;
- Exhibit I.A1.EGDI.SEC.5;
- Exhibit I.B17.EGDI.CME.14;
- Exhibit I.B17.EGDI.VECC.15, page 2;
- Exhibit I.D33.EGDI.STAFF.69;
- Exhibit TCU1.14;
- Exhibit TCU2.4;
- Exhibit TCU2.14; and
- Exhibit TCU3.5

This submission was filed through the Board's RESS and is available on the Company's website at www.enbridgegas.com/ratecase.

Yours truly,

(original signed)

Lorraine Chiasson
Regulatory Coordinator

cc: Mr. F. Cass, Aird & Berlis
EB-2012-0459 Intervenors

# CURRICULUM VITAE OF
# DEIRDRE BROUDE, P.Eng

Experience: Enbridge Gas Distribution Inc.

Sr. Manager System Integrity
2012

Manager Technical Training Projects
2011

Manager Extended Alliance Relationship
2010

Manager, Operations Business Support
2007

Manager, Operations, Central Region North
2005

Manager, Special Projects, Distribution Planning
2002

Manager, Drafting, Distribution Planning
2001

Project Manager, Engineering Construction
1998

Supervisor, Budgets
1997

Operations Engineer
1993

Education: Bachelor of Engineering, Mechanical (B.Eng, P.Eng.), 1993

Memberships: Professional Engineers of Ontario

Appearances: (Ontario Energy Board)
RP-2001-0014

CURRICULUM VITAE OF
JANA JORDAN

Experience: Enbridge Inc.

Senior Director, Treasury
2012

Senior Director, Tax
2008

Director, US Tax
2001

American General Corp

Director – Planning and Corporate Development
1998 – 2001

Manager – Tax Reporting
1995

Associate / Senior Tax Accountant / Tax Accountant – Tax Reporting
1991

La Quinta Inns

Tax Accountant
1989 – 1991

Ernst & Whinney

Senior Tax Accountant
1987 - 1989

Education: B.S.B.A. – Accounting
University of Houston – Victoria
1986

Memberships: Certified Public Accountant
Association for Financial Professionals

Appearances: (Ontario Energy Board)
None

# CURRICULUM VITAE OF CATHERINE L. MCCOWAN

Experience:

Enbridge Gas Distribution Inc.

Senior Manager, Asset Analytics
2014

Manager Asset management Systems Support
2011

Manager Operations Service
2002

Manager, Business Process Solutions
2001

Manager Performance Benchmarking
2000

Manager Distribution Expansion
1998

Manager Maintenance
1997

Supervisor C&M System Operations
1995

Senior Project Manager, Engineering
1993

British Gas plc

Senior Engineer, Mathematics & Computing, Engineering Research
1990

Scientist/Engineer, Mathematics & Computing, Gas Control & Network Analysis
1987

Education:

Bachelor of Science (Applied Mathematics and Mechanical Engineering)
Queen's University, 1987

Master of Business Administration
University of Strathclyde, 2000

Memberships: Professional Engineers of Ontario

Appearances: (Ontario Energy Board)
RP-2003-0203

CURRICULUM VITAE OF
SAMANTHA MENDELL, P.Eng.

Experience: Enbridge Gas Distribution Inc.

Manager Engineering Governance and Controls
2014

Program Manager – Planning, Design and Records
2011

Project Manager – Engineering Construction and Maintenance
2008

Project Manager – Kerotest Replacement Program
2006

Project Leader – Engineering Professional Development Program
2003

Education: B. Eng. (Aerospace), Carleton University, 2003
P. Eng., Professional Engineers Ontario, 2006

Memberships: Professional Engineers Ontario

Appearances: (Ontario Energy Board)
None

CURRICULUM VITAE OF
W. ROBERT MILNE

Experience: Enbridge Gas Distribution Inc.

Senior Operations Manager, Toronto Customer Safety and Compliance
2012

Operations Manager, Areas 20/50
2012

Manager, Construction, Toronto
2008

SME, Planning & Design, Extended Enterprise
2008

Operations Manager, Areas 30/50
2007

Manager, Distribution Planning
2003

Manager, Operations Services
2002

Manager, Utility Planning and Evaluation
2001

Manager, Gas / Electric Synergy
2000

Senior Policy Advisor, Environmental Health and Safety Solutions
1999

Director of Environmental Affairs
1997

Manager of Environmental, Health and Safety Audits
1995

Manager of Environmental Affairs
1990

Government of Ontario

Policy Advisor, Premier's Office, Queen's Park
1989

Senior Policy Advisor, Office of the Minister, Ministry of Natural Resources
1988

Special Assistant (Legislation), Office of the Minister, Ministry of the Environment
1986

Researcher, Liberal Member's Services Office, Queen's Park
1985

Research Technician, Ministry of Natural Resources, Chatham District Office
1984

Education: Master of Science, Marine Biology,
University of Guelph, 1984

Bachelor of Science (Honours), Marine Biology,
University of Guelph, 1981

Masters of Business Administration (Executive),
University of Western Ontario, 2001

Appearances: (Ontario Energy Board)
EB-2006-0034
EB-2005-0001
RP-2001-0032
EBLO 262
EBA 698, EBA 699, EBA 818, EBA 842, EBA 843
EBC 223, EBC 224, EBC 270, EBC 271, EBC 273
EBO 188 Environmental Screening Workshops

CURRICULUM VITAE OF
CHRISTOPHER MOORE

Experience:

Enbridge Gas Distribution

Director, Asset Renewal and Improvement
2013

Director, Network Operations
2012

Senior Manager, Engineering Construction and Maintenance
2011

Senior Manager, Environment, Health and Safety
2010

Operations Manager, Toronto Region
2005

Manager, Engineering Materials and Construction
2003

Enbridge Gas Storage

Manager, Engineering and Construction
2002

Enbridge Pipelines

Senior Operations Engineer
2000

Enbridge International

Operations Engineer, Jose Terminal, Venezuela
1999

Interprovincial Pipelines

Operations Engineer, Eastern Region
1996

Associate Engineer, Canadian Projects
1994

Education:

Bachelor of Engineering Science, Materials Engineering
University of Western Ontario, 1994

Memberships: Licensed Professional Engineer, Ontario and Alberta

Appearances: (Ontario Energy Board)
None

CURRICULUM VITAE OF
NORMAN W. RYCKMAN

Experience: Enbridge Gas Distribution Inc.

Director Market Development and Sales
2013

Director Regulatory Affairs
2008

Director Business Intelligence and Support
2006

Group Manager Business Intelligence and Support
2003

Group Manager Utility Planning & Evaluation
2002

Portfolio Manager, Market Expansion
1997

Manager Business Development, Northern Region
1995

Consultant Residential Utilization, Northern Region
1993

Representative, Natural Gas Vehicles Business Development
1990

Retail Sales Representative, Metro Region
1987

Education: Executive Program Queens University

Graduate School of Sales & Marketing Management, Syracuse University.

Miscellaneous courses in building environmental systems, general management, marketing and sales programs.

Appearances: (Ontario Energy Board)
EB-2006-0021
EB-2005-0001
RP-2003-0203

RP-2003-0048
RP-2002-0133
RP-2001-0032
RP-2000-0040
RP-1999-0001
EBRO 497
EBLO 261/EBC 266/EBA 785

CURRICULUM VITAE OF
IAN TAYLOR

Experience: Enbridge Gas Distribution Inc.

Manager Area Planning and Design
2013

Manger Work Management Centre
2010

Manager Eastern Region Planning
2004

Supervisor Planning and Design
1998

Education: Architectural Technology, Algonquin College
1996

Memberships: none

Appearances: (Ontario Energy Board)
None

# CHALLENGES OF AN I-X IR MODEL

## Purpose of this Evidence

1. The purpose of this exhibit is to describe the challenges of an Inflation minus Productivity Factor ("I-X") formula based incentive regulation model for Enbridge Gas Distribution ("EGD" or "Company") in a 2nd Generation IR ("IR") term. This is accomplished through the development of a number of scenarios that determine ROE deficiency/sufficiencies assuming a revenue cap per customer I-X model versus forecast allowed ROE using the Company's filed budget O&M and capital forecasts. The development of "I" and "X" Factors is discussed in evidence provided by Concentric Energy Advisors, Inc. ("Concentric") at Exhibit A2, Tab 9, Schedule 1.

2. Specifically, this evidence will present:
   a) EGD System Challenges
   b) Traditional Model for Cost Recovery
   c) Limitations of I-X Frameworks
   d) Challenge of an I-X model in EGD's circumstances
   e) Challenge of Increasing Depreciation and Amortization Expense
   f) Other Considerations for a Customized IR

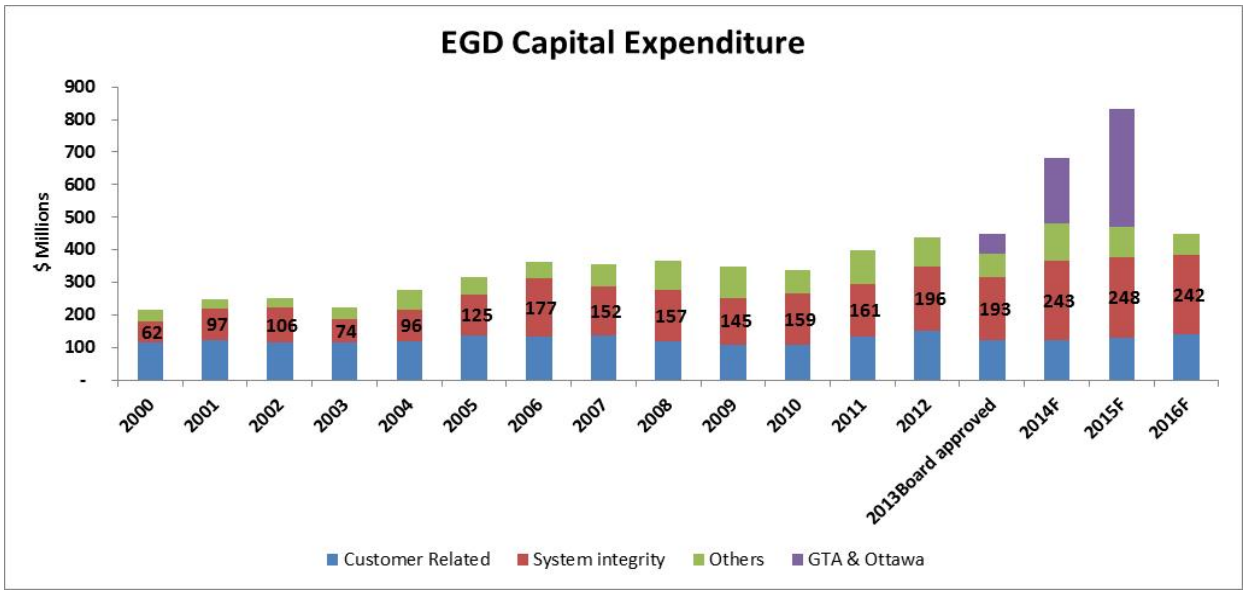
## EGD System Challenges

3. EGD is one of North America's oldest investor owned, regulated natural gas distribution utilities and it shares many of the common challenges facing utilities across the globe – an increased focus on safety and reliability, aging assets and the need to cost effectively meet the demands of customer growth in its franchise area. In addition to these common challenges, Enbridge has one of the fastest growing customer bases in North America, which brings other cost challenges.

Witnesses: S. Kancharla
R. Fischer
M. Lister

Notwithstanding these characteristics, EGD remains committed to the safe, reliable operation of its gas distribution network and has made that commitment a business priority.

4. Over the last decade, EGD has experienced an increased need for system improvement and integrity related capital. As shown in the illustration below, the share of system integrity capital has been increasing historically and is expected to increase more significantly in the future.

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5. EGD's Customized IR plan is structured to respond to these forecast business needs, which includes the expectation for significant increased capital investments for safety, system integrity and reliability initiatives driving the next 3 to 5 years. Specifically, EGD needs to increase its capital spending over the next 3 years to address unavoidable issues such as safety and integrity issues, relocations, IT projects, and the GTA and Ottawa Reinforcement projects. In fact, EGD's total capital expenditures over the next three years are forecast to be approximately

$2.0 billion, which represents a 53% increase over the total capital spent during the previous three years.

6. This significant increase in capital spending translates directly into higher rate base and higher annual depreciation expense, which in turn results in an annual Allowed Revenue amount that is much higher than what a traditional Total Factor Productivity ("TFP") based "inflation less productivity" IR methodology would provide.

7. The needs of the utility pose a challenge to EGD to develop an IR framework that accommodates the financial consequences associated with growing incremental capital. A traditional formula I-X based framework, with the X factor defined by reference to industry average TFP trends, was found to be insufficient to meet those needs because it clearly does not anticipate the unusual capital spending demands facing EGD. The traditional I-X approach will not provide EGD the capacity to fund its project capital investment needs and afford EGD a reasonable opportunity to earn the allowed return. As a result, the proposed Customized IR plan was developed.

8. EGD's 1st Generation IR model relied on an I-X escalator supplemented with a revenue cap per customer calculator and Y factors for specific incremental projects not subject to the revenue escalator. These "add-ons" to the traditional I-X model were designed to recognize the unique needs of the business during the term of the 1st Generation IR relating to funding customer growth and specific incremental projects not included in the 2007 base revenue requirement. These "add-ons" necessarily increased the complexity of the IR model. As the need for capital increases, additional "add-ons" in the form of new Y factors or other mechanisms

such as capital trackers, would be required to increase the possibility that an I-X framework could work for EGD in the coming years. The inherent complexity of the 1st Generation IR framework would, as a result increase, further straining the applicability of a formula-based model for EGD's 2nd Generation IR term.

9. The scenarios evaluated below analyze whether an I-X model is still appropriate for EGD for its 2nd Generation IR term and also examine whether the creation of additional Y factors for EGD's two major reinforcement projects impoves the prospects for EGD to earn its allowed return. The analysis also determines the results of a scenario where I-X is assumed to be held to the average I-X level that applied during the term of EGD 1st Generation IR and further assumes Y factors for the two major reinforcement projects.

Traditional Model for Cost Recovery

10. In a traditional Cost of Service ("COS") framework, all else being equal, rates are designed to result in neither a revenue sufficiency or deficiency, ensuring that all cost elements that contribute to the determination of revenue requirement are recovered. In turn, a COS framework generally provides a utility the ability to earn its allowed return. The utility's costs are reviewed closely before the regulator approves them for recovery through rates to ensure they are both prudent and just and reasonable expenditures.

11. Non-revenue generating capital investments, for example, replacements and certain reinforcements and relocations which ensure system reliability, cause upward pressure on rates as they do not promote customer attachment or result in increases in volume delivery. Traditional ratemaking frameworks such as COS allow for the recovery of prudent costs in rates, whereas in an I-X model, the

percentage escalator must be sufficiently high to generate revenue increases to cover the costs of non-revenue generating capital investment without undermining a utility's reasonable opportunity to earn the allowed return.

Limitations of I-X Frameworks

12. Many utilities (and regulators) around the world have adopted multi-year Performance Based Ratemaking ("PBR") frameworks to overcome some of the perceived weaknesses of COS regulation by incorporating incentive mechanisms and productivity in models that in turn encourage innovation and the realization of sustainable efficiencies. IR models are traditionally formula-based, starting from a COS rebasing year with revenue or rates escalated during the IR term through consideration of inflation and productivity factors in an I-X escalation formula. Multi-year IR plans encourage efficiencies and provide incentives for utilities to realize those efficiencies.

13. Under that form of IR, the utility is expected to manage its business within the confines of the I-X formula design. In this model, incremental capital expenditures produce an earnings drag since the utility is prevented under most circumstances from filing a COS rate case. This situation may be untenable in an environment where the growth rate in depreciation costs and other cost elements driven by capital investments more than outstrip the growth in revenue from the I-X formula. Further, finding efficiencies may be increasingly difficult, especially for a utility like EGD that can demonstrate a long history of strong relative productivity performance. In this case, the utility is forced to forego the return on and the return of the capital that is invested until there is a rebasing, which significantly impacts a utility's ability to earn a Fair Return, as defined by the Fair Return Standard.

14. For example, assume there is a $100 million increase in net capital above historic levels, driven by reinforcement and replacement projects. The incremental revenue required to provide cost recovery in a traditional COS model is approximately $8 million. This level of change from historical capital spending creates a condition where the normal rate of industry productivity improvement using I-X cannot reasonably compensate for the incremental costs. In addition, in subsequent years, there will be additive pressures to find more productivity enhancements as the foregone return on capital continues to accumulate. This situation creates a built-in disincentive to invest in non-revenue generating projects. It is noteworthy that safety and integrity projects are, by their very nature, non-revenue generating projects.

Challenge of an I-X model in EGD's circumstances

15. In a traditional I-X IR framework, base rates are established in a rebasing year from an approved revenue requirement. At a high level, the approved revenue requirement includes operating cost and capital cost elements, including depreciation, return on capital and income tax. During an IR term, changes in revenue recovered through rates are capped by the application of an I-X adjustment factor (for a revenue cap).

16. In order to determine whether and how the Company could continue for a 2nd Generation IR term using a plan similar to the 1st Generation IR plan, Enbridge completed various financial analyses. The results of the analyses, which considered a variety of scenarios using an I-X framework, including additional Y factors for EGD's two major reinforcement projects, indicated that an alternative IR approach is required from that adopted for the 1st Generation IR term.

Witnesses: S. Kancharla
R. Fischer
M. Lister

17. The analysis compared the expected ROE derived from an I-X framework versus the forecast allowed ROE using the Board's ROE formula to determine whether Enbridge could reasonably recover its capital investment and earn the Fair Return over the IR term.

Description of the analysis:

18. For each scenario, a revenue cap per customer calculator with an I-X revenue escalator was assumed and customer growth was forecast. The following factors were considered as Y factors (flow through costs) for each scenario - Carrying cost for Gas in storage; Pension Cost; DSM; and Customer Care. Forecast achieved ROEs were then compared to forecast allowed ROEs.

19. The following six scenarios were evaluated :

    a) Scenario 1: No new Y factors for I-X model.
    b) Scenario 2: Scenario 1 plus new Y factors for the GTA and Ottawa reinforcement projects.
    c) Scenario 3: Breakeven escalation factor such that annual average ROEs in Scenario 2 are equal to forecast allowed ROE.
    d) Scenario 4: Scenario 2 plus SRC impact.
    e) Scenario 5: Breakeven escalation factor such that annual average ROEs in Scenario 4 are equal to forecast allowed ROE.
    f) Scenario 6: Same assumptions as Scenario 4 except I-X is assumed equal to the actual effective average I-X during the 1st Generation IR term.

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Witnesses: S. Kancharla
R. Fischer
M. Lister

Key assumptions for the analysis:

20. For Scenarios 1 to 5, EGD assumed that the I-X escalator would equal 2.5%, based on an I factor forecast of 2.5% and a productivity factor or X factor of 0%. The I factor forecast represents the average composite inflation rate that applies to EGD's costs as recommended and forecast by Concentric at Exhibit A2, Tab 9, Schedule 1. The X factor is the recommended productivity factor derived from Concentric's TFP analysis in their report. For Scenario 6, EGD assumed an I-X = 0.9%.

21. These scenarios were evaluated for each of the next three years, assuming levels of capital and O&M spending that are consistent with Enbridge's forecast budgets included in this IR application (and which include embedded productivity).

22. The table below provides details of the other assumptions used in the analysis.

**Assumptions**

| **$ Millions** | **2014** | **2015** | **2016** |
|---|---|---|---|
| Capital expenditure | 682 | 832 | 450 |
| Operating expenses | 425 | 429 | 440 |
| Customer growth | 1.69% | 1.73% | 1.75% |
| Weighted Average Cost of debt (LT&ST) | 5.41% | 5.36% | 5.31% |
| Allowed ROE | 9.27% | 9.72% | 10.12% |
| Tax rate | 26.50% | 26.50% | 26.50% |
| Inflation factor | 2.45% | 2.45% | 2.45% |
| Productivity factor * | 0.00% | 0.00% | 0.00% |
| Composite depreciation rate before SRC adjustment | 4.03% | 3.99% | 3.94% |
| Composite depreciation rate with SRC adjustment | 3.59% | 3.55% | 3.50% |
| Constant Dollar Net Salvage Value Adjustment | 68.1 | 63.1 | 58.1 |

* Productivity savings are embedded within Enbridge's budgets

Witnesses: S. Kancharla
R. Fischer
M. Lister

## Analysis and Interpretation of Scenario 1

23. Scenario 1 assumes no new Y factors for the GTA and Ottawa reinforcement projects. The 3 year average escalation factor is 2.5% and with customer growth, IR revenue is growing 4.2% per year. Layering on the existing Y factors results in average annual IR revenue growth of 3.5%. In this scenario, the achieved average annual ROE over the IR term would be 1.8% less than forecast allowed ROE.

**Sc1: No new Y factors for I-X Model**

| | Rebase | Second Generation IR | | | |
|---|---|---|---|---|---|
| **Revenue - IR ($M)** | **2013** | **2014** | **2015** | **2016** | ***3 yr - CAGR*** |
| **Escalation factor** | | | | | |
| Escalation factor (Inflation) | | 2.5% | 2.5% | 2.5% | *2.5%* |
| Productivity | | 0.0% | 0.0% | 0.0% | |
| | | 2.5% | 2.5% | 2.5% | *2.5%* |
| Customer growth | | 1.7% | 1.7% | 1.7% | *1.7%* |
| | | 4.2% | 4.2% | 4.2% | *4.2%* |
| **2013 Revenue Requirement** | **817** | **817** | | | |
| Adjustment for Reduction in depreciation expense with SRC in 2013 base | | **-** | | | |
| **2013 Adjusted Revenue Requirement - Subject to escalation** | | **817** | | | |
| **Revenue Requirement - IR with escalation** | 817 | **851** | **887** | **925** | ***4.2%*** |
| **Y factor** | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | |
| Pension cost | 43 | 37 | 34 | 31 | |
| DSM | 31 | 32 | 33 | 33 | |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | |
| Y factor for GTA&Ottawa | - | - | - | - | |
| Site Restoration Cost - Tax impact | - | - | - | - | |
| | 204 | 203 | 206 | 209 | |
| **Total Distribution Revenues -IR** | **1,021** | **1,055** | **1,093** | **1,133** | ***3.5%*** |
| **Achieved ROE** | **8.9%** | **8.3%** | **8.7%** | **6.6%** | ***7.9%*** |
| **Forecast Allowed ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | ***9.7%*** |
| **ROE Variance (Acheived vs Allowed)** | **0.0%** | **-1.0%** | **-1.0%** | **-3.5%** | **-1.8%** |

Witnesses: S. Kancharla
R. Fischer
M. Lister

## Analysis and Interpretation of Scenario 2

**Sc2: Scenario 1 plus new Y factors for the GTA and Ottawa reinforcement projects**

| Revenue Requirement - IR ($M) | Rebase 2013 | Second Generation IR 2014 | 2015 | 2016 | *3 yr - CAGR* |
|---|---|---|---|---|---|
| **Escalation factor** | | | | | |
| Escalation factor (Inflation) | | 2.5% | 2.5% | 2.5% | *2.5%* |
| Productivity | | 0.0% | 0.0% | 0.0% | |
| | | 2.5% | 2.5% | 2.5% | *2.5%* |
| Customer Growth | | 1.7% | 1.7% | 1.7% | *1.7%* |
| | | 4.2% | 4.2% | 4.2% | *4.2%* |
| **2013 Revenue Requirement** | **817** | **817** | | | |
| Adjustment for Reduction in depreciation expense with SRC in 2013 base | | **-** | | | |
| **2013 Adjusted Revenue Requirement - Subject to escalation** | | **817** | | | |
| **Revenue Requirement - IR with escalation** | 817 | **851** | **887** | **925** | ***4.2%*** |
| **Y factor** | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | |
| Pension cost | 43 | 37 | 34 | 31 | |
| DSM | 31 | 32 | 33 | 33 | |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | |
| Y factor for GTA&Ottawa | - | 5 | 12 | 64 | |
| Site Restoration Cost - Tax impact | - | - | - | - | |
| | 204 | 209 | 218 | 273 | |
| **Total Distribution Revenues -IR** | **1,021** | **1,060** | **1,105** | **1,198** | ***5.5%*** |
| **Achieved ROE** | **8.9%** | **8.6%** | **9.2%** | **9.1%** | ***9.0%*** |
| **Forecast Allowed ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | ***9.7%*** |
| **ROE Variance (Acheived vs Allowed)** | **-** | **-0.7%** | **-0.5%** | **-1.0%** | **-0.7%** |

24. In this scenario, the major reinforcement projects in the GTA and Ottawa were considered as new Y factors in the I-X model. Layering on the existing Y factors and new Y factors for the two major reinforcement projects results in IR revenue growth of 5.5%. In this scenario, the achieved average annual ROE over the IR term under an I-X model would be 0.7% less than forecast allowed ROE.

Witnesses: S. Kancharla
R. Fischer
M. Lister

## Analysis and interpretation of Scenario 3

**Sc3: Breakeven escalation factor such that ROEs in Scenario 2 from I-X and allowed ROE are equal**

| Revenue Requirement - IR ($M) | Rebase 2013 | Second Generation IR 2014 | 2015 | 2016 | *3 yr - CAGR* |
|---|---|---|---|---|---|
| **Escalation factor** | | | | | |
| Escalation factor (Inflation) | | 4.3% | 2.0% | 4.0% | *3.4%* |
| Productivity | | 0.0% | 0.0% | 0.0% | |
| | | 4.3% | 2.0% | 4.0% | *3.4%* |
| Customer Growth | | 1.7% | 1.7% | 1.7% | *1.7%* |
| | | 6.0% | 3.7% | 5.9% | *5.2%* |
| **2013 Revenue Requirement** | **817** | **817** | | | |
| Adjustment for Reduction in depreciation expense with SRC in 2013 base | | - | | | |
| **2013 Adjusted Revenue Requirement - Subject to escalation** | | **817** | | | |
| **Revenue Requirement - IR with escalation** | 817 | **866** | **898** | **951** | ***5.2%*** |
| **Y factor** | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | |
| Pension cost | 43 | 37 | 34 | 31 | |
| DSM | 31 | 32 | 33 | 33 | |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | |
| Y factor for GTA&Ottawa | - | 5 | 12 | 64 | |
| Site Restoration Cost - Tax impact | - | - | - | - | |
| | 204 | 209 | 218 | 273 | |
| **Total Distribution Revenues -IR** | **1,021** | **1,075** | **1,116** | **1,224** | ***6.2%*** |
| **Achieved ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | ***9.7%*** |
| **Forecast Allowed ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | ***9.7%*** |
| **ROE Variance (Acheived vs Allowed)** | **0.0%** | **0.0%** | **0.0%** | **0.0%** | **0.0%** |

25. In this scenario, the GTA and Ottawa reinforcement major projects were considered as new Y factors in the I-X model and an escalation factor is solved to produce ROEs from the I-X model equal to forecast allowed ROE. The 3 year I-X average escalation factor required in this case is 3.4%. This escalation factor is significantly

Witnesses: S. Kancharla
R. Fischer
M. Lister

greater than the 2.5% I-X derived from the productivity factor and inflation factors that are recommended and forecast by Concentric for an I-X IR model framework.

26. For the next two scenarios, the recommendations of the new depreciation study are incorporated. The key differences arise from the changes in “Site Restoration Costs” collected as part of depreciation expense and from the changes in “site restoration costs” accumulated and shown in “accumulated depreciation”. For details, please refer to Exhibit D1, Tab 5, Schedule 1.

## Analysis and interpretation of Scenario 4

**Sc4: Scenario 2 plus SRC impact**

| Allowed Revenues - IR ($M) | Rebase 2013 | Second Generation IR 2014 | 2015 | 2016 | *3 yr- CAGR* |
|---|---|---|---|---|---|
| | ADR | | | | |
| **Escalation factor** | | | | | |
| Escalation factor (Inflation) | | 2.5% | 2.5% | 2.5% | ***2.5%*** |
| Productivity | | 0.0% | 0.0% | 0.0% | |
| I-X | | 2.5% | 2.5% | 2.5% | |
| Customer growth | | 1.7% | 1.7% | 1.7% | ***1.7%*** |
| Total Escalation factor | | 4.2% | 4.2% | 4.2% | ***4.2%*** |
| **2013 Revenue Requirement** | **817** | | | | |
| **Allowed Revenues - IR with escalation** | | **851** | **887** | **925** | ***4.2%*** |
| **Y factor** | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | |
| Pension cost | 43 | 37 | 34 | 31 | |
| DSM | 31 | 32 | 33 | 33 | |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | |
| Y factor for GTA&Ottawa | - | 5 | 12 | 62 | |
| SRC impact | - | (61) | (55) | (48) | |
| | 1,021 | 148 | 163 | 223 | |
| **Total Allowed Revenues -IR** | **1,021** | **999** | **1,050** | **1,148** | ***4.0%*** |
| **Achieved ROE** | **8.9%** | **8.7%** | **9.4%** | **9.3%** | ***9.1%*** |
| **Forecast Allowed ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | ***9.7%*** |
| **ROE Variance (Achieved vs Allowed)** | | **-0.6%** | **-0.4%** | **-0.9%** | **-0.6%** |

/u

27. In this scenario, the major reinforcement projects in the GTA and Ottawa were considered as new Y factors in the I-X model. Layering on the existing and new Y factors, and impacts of the new Depreciation Study results, IR revenue growth of 4.0% was calculated. The forecast average annual ROE over the IR term under an I-X model is 0.6% less than allowed ROE. /u /u

Witnesses: S. Kancharla
R. Fischer
M. Lister

## Analysis and Interpretation of Scenario 5

**Sc5: Breakeven escalation factor such thatannual average ROEs in Scenario 4 are equal to forecast allowed ROE**

| Allowed Revenues - IR ($M) | Rebase 2013 | Second Generation IR 2014 | 2015 | 2016 | *3 yr- CAGR* |
|---|---|---|---|---|---|
| | ADR | | | | |
| **Escalation factor** | | | | | |
| Escalation factor (Inflation) | | 4.0% | 2.0% | 4.0% | ***3.3%*** |
| Productivity | | 0.0% | 0.0% | 0.0% | |
| I-X | | 4.0% | 2.0% | 4.0% | |
| Customer growth | | 1.7% | 1.7% | 1.7% | ***1.7%*** |
| Total Escalation factor | | 5.8% | 3.7% | 5.8% | ***5.1%*** |
| **2013 Revenue Requirement** | **817** | | | | |
| **Allowed Revenues - IR with escalation** | | **864** | **896** | **948** | ***5.1%*** |
| **Y factor** | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | |
| Pension cost | 43 | 37 | 34 | 31 | |
| DSM | 31 | 32 | 33 | 33 | |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | |
| Y factor for GTA&Ottawa | - | 5 | 12 | 62 | |
| SRC impact | - | (61) | (55) | (48) | |
| | 1,021 | 148 | 162 | 223 | |
| **Total Allowed Revenues -IR** | **1,021** | **1,012** | **1,058** | **1,171** | ***4.7%*** |
| **Achieved ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | ***9.7%*** |
| **Forecast Allowed ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | ***9.7%*** |
| **ROE Variance (Achieved vs Allowed)** | | **0.0%** | **0.0%** | **0.0%** | **0.0%** |

/u

28. In this scenario, the major reinforcement projects were considered as new Y factors and the impacts of the new depreciation study are incorporated. The required I-X escalation factor is solved to produce ROEs from the I-X model equal to forecast allowed ROE. The 3 year average escalation factor required in this case is 3.3%. This required escalation factor is significantly greater than the forecast inflation and productivity factor of 2.5% recommended and forecast by Concentric.

/u

Witnesses: S. Kancharla
R. Fischer
M. Lister

## Analysis and Interpretation of Scenario 6

**Sc6: Same assumptions as Scenario 4 except I-X is assumed equal to the actual effective I-X during 1st Generation IR term**

| Allowed Revenues - IR ($M) | Rebase 2013 | Second Generation IR 2014 | 2015 | 2016 | *3 yr- CAGR* |
|---|---|---|---|---|---|
| | ADR | | | | |
| **Escalation factor** | | | | | |
| Escalation factor (Inflation) | | 1.7% | 1.7% | 1.7% | ***1.7%*** |
| Productivity (50% of Inflation) | | -0.9% | -0.9% | -0.9% | |
| I-X | | 0.9% | 0.9% | 0.9% | |
| Customer growth | | 1.7% | 1.7% | 1.7% | ***1.7%*** |
| Total Escalation factor | | 2.6% | 2.6% | 2.6% | ***2.6%*** |
| **2013 Revenue Requirement** | **817** | | | | |
| **Allowed Revenues - IR with escalation** | | **838** | **860** | **882** | ***2.6%*** |
| **Y factor** | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | |
| Pension cost | 43 | 37 | 34 | 31 | |
| DSM | 31 | 32 | 33 | 33 | |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | |
| Y factor for GTA&Ottawa | - | 5 | 12 | 62 | |
| SRC impact | - | (61) | (55) | (48) | |
| | 1,021 | 148 | 162 | 223 | |
| **Total Allowed Revenues -IR** | **1,021** | **986** | **1,022** | **1,105** | ***2.6%*** |
| **Achieved ROE** | **8.9%** | **8.1%** | **8.2%** | **7.7%** | ***8.0%*** |
| **Forecast Allowed ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | ***9.7%*** |
| **ROE Variance (Achieved vs Allowed)** | | **-1.2%** | **-1.5%** | **-2.4%** | **-1.7%** |

/u

29. In this scenario, the major reinforcement projects in the GTA and Ottawa were considered as new Y factors in the I-X model, with I-X assumed to be equal to the actual effective I-X during the 1st Generation IR term. The 3 year average escalation factor is 1.7% and with customer growth, the IR escalation is 2.6%.

Witnesses: S. Kancharla
R. Fischer
M. Lister

Layering on the existing and new Y factors, and impacts of the new depreciation study results, IR revenue growth of 2.6% was calculated. The forecast average annual ROE over the IR term under the I-X model is 1.7% less than forecast allowed ROE. /u /u

Summary of Financial Scenario Analysis

30. The following table provides the summary of all the scenarios analysed above.

**Summary of Scenarios**

| | **Annual Average Allowed ROE Deficiency 2014-2016** |
|---|---|
| S1: No New Y factors | -1.8% |
| S2: GTA and Ottawa as new Y factors | -0.7% |
| S4: New Y factors and impacts of changes to site restoration costs | -0.6% |
| S6: Same as S4 except I-X equal to the actual effective I-X during 1st Generation IR | -1.7% |

/u

| | **Average Breakeven Escalation factor to achieve the Allowed ROE** |
|---|---|
| S3: Breakeven for S2 | 3.4% |
| S5: Breakeven for S4 | 3.3% |

31. Significant deficiencies below forecast allowed ROEs were determined for each I-X scenario, even assuming Y factor treatment for the major GTA and Ottawa reinforcement projects. This indicates that under continued application of the 1st Generation IR plan, EGD would be highly unlikely to earn the fair return. From another perspective, to earn a fair return and have a reasonable opportunity for timely recovery of capital investment, the escalation factor in an I-X model would need to be significantly higher than traditional values for I and X factors. To

mitigate this under-earning, if the only lever was operating expenses, annual operating expenses would need to be reduced by approximately $43 million, which is clearly unattainable and not reasonable. /u

32. As demonstrated above, the primary reason why a model with features consistent with Enbridge's 1st Generation IR plan, fails to offer an appropriate opportunity to earn a Fair Return, is due to the increased capital needs of the business. In large part, this is caused by increases in depreciation expense, which is addressed in the next section of this evidence.

<u>The Challenge of Increasing Depreciation and Amortization Expense in an I-X Framework</u>

33. Depreciation and amortization expense is a major revenue requirement component in a traditional cost of service build up of cost elements. For EGD, in 2013, depreciation and amortization is forecast to equal $279 million, representing almost 30% of the total estimated revenue requirement. Even with the reduction in depreciation expense due to the proposed adjustment to depreciation rates, in 2014 (related to site restoration costs), depreciation and amortization expense is forecast to increase from an adjusted level of $250 million[1] in 2013 to $304 million in 2016, an increase of $54 million over 3 years. The majority of this increase is due to the capital additions forecast during those years. /u /u

34. In Scenario 4, which includes Y factors for the major reinforcement projects and the impact of changes to SRC, revenue from an I-X and revenue cap per customer escalator is forecast to grow from $817 million in 2013 to $925 million in 2016, an increase of $108 milllion. In other words, around 50% of the forecast revenue /u /u

[1] The "adjusted level" is determined by applying the impact of the depreciation rate change to the 2013 base.

growth must be attributed to growth in depreciation and amortization, leaving an estimated $54 million to "pay for" increases in the remaining cost elements, including O&M, cost of capital and tax. Stated another way, though depreciation and amortization expense represents less than 30% of the estimated revenue requirement in 2013, 50% of the forecast revenue growth from the formula must cover forecast growth in depreciation and amortization over the IR term. That leaves an insufficient amount to cover increases in all other items. /u /u

35. Depreciation and amortization expense is growing at more than twice the rate of forecast revenue growth. The remaining incremental revenue is insufficient to cover the growing costs associated with O&M, cost of capital and tax, and therefore growing depreciation and amortization expense is a major contributor to the forecast revenue deficiencies and challenge of a formulaic IR model for EGD.

Conclusion

36. The analyses demonstrate that significant revenue and ROE deficiencies are likely to occur if EGD were to adopt an I-X model for the 2nd Generation IR Plan similar to that adopted in EGD's 1st Generation IR.

37. The analyses also show that, the escalation factor that is required to allow for capital recovery and the opportunity to earn a Fair Return is well in excess of traditional values for I and X. This condition has arisen as a result of significantly higher reinforcement requirements, and safety, integrity, and reliability drivers. EGD does not believe that the introduction of additional adders to the formula could accommodate the total required increase in capital spending, as the inevitable result would include many more Y factors and capital trackers, adding further complexity to the IR model framework. This would cause the IR framework to

become too unwieldy and invite criticism of a model that includes too much patchwork and complexity.

38. Instead, the Company is proposing a Customized IR plan for its 2nd generation IR model which includes productivity, appropriate incentives, a mechanism for ratepayers to share in additional savings beyond productivity build into the forecast, and other features to mitigate the probability of unintended consequences. The Customized IR plan, in addition to greatly simplifying the IR model construct, is appropriate to meet the needs of the utility.

# 2014 to 2018 CAPITAL BUDGET OVERVIEW

1. The purpose of this evidence is to provide the Ontario Energy Board (the "Board", or the "OEB") with an Overview of Enbridge Gas Distribution's ("Enbridge", "EGD" or the Company") detailed Capital Budget for the years from 2014 to 2016. As described in Exhibit A2-1-1, the Company has used its 2016 Capital Budget as the basis for forecasting its spending requirements for each of 2016, 2017 and 2018. While details of the components of the Capital Budget are found in the balance of the B2 series of exhibits, this Overview sets out how and why the Company has chosen to set out details of a three year Capital Budget and explains the main components of the Capital Budget.

2. The Company's forecast capital expenditures for 2014 to 2016 have been identified as the outcome of a lengthy budgeting process that commenced with the Board approval of the 2013 rates case settlement (EB-2011-0354), followed by a lengthy Company process to identify, evaluate and determine its capital spending needs in coming years. The budgeting process has ensured that Enbridge's 2014 to 2016 Capital Budget reflects the level of spending necessary to meet the growth, safety and operational requirements of the business. The 2016 Capital Budget reflects the level of spending required in 2016, and a base level of spending in 2017 and 2018.

3. What has become clear through the budgeting process is that the Company's necessary level of capital spending is higher than in past years, and the spending requirements become unacceptably unpredictable when one looks out further than three years. As explained in Exhibit A2-1-1, it is this combination of high capital spending requirements and uncertainty in the longer term that have driven Enbridge to request approval of its Customized IR plan.

Witnesses: J. Sanders
P. Squires

4. The Company's Capital Budget forecast for 2014 to 2016 indicates required capital expenditures of $682.3 million in 2014, $832.0 million in 2015 and $450.0 million in 2016. These budgets are substantially higher than prior year budgets. There are two main reasons for this. First, there are very high levels of spending associated with three major projects which the Company must undertake in the next three years. Second, there are substantial cost pressures associated with a higher level of required System Integrity and Reliability spending.

5. This Overview evidence sets out the main components of the 2014 to 2018 Capital Budget, including the process used to arrive at that budget, under the following topic headings:

   A. A summary of Enbridge's forecast capital expenditures over the period of 2014 to 2016,

   B. An explanation of the main drivers of the Capital Budget for 2014 to 2016,

   C. A description of the budgeting process that identified the necessary expenditures that form the Capital Budget,

   D. Explanation of the outcomes from the Capital Budget process,

   E. Explanation of how management incorporated productivity in the proposed Capital Budget for 2014 to 2016,

   F. Explanation of year over year variances in the 2014 to 2016 Capital Budget, and

   G. Explanation of why and how the 2016 Capital Budget is used as the basis for the 2017 and 2018 Capital Budget.

Witnesses: J. Sanders
P. Squires

A. Summary of the Capital Budget 2014 - 2016

6. Table 1 provides a summary view of the planned capital expenditures for the Company, totaling $682.3 million in 2014, $832.0 million in 2015 and $450.0 million in 2016. These amounts are categorized in a standard summary view of the Capital Budget, as provided in previous applications.

Table 1
Summary of Capital Expenditures

| ($Millions) | Col 1<br>Board Approved Budget 2013 | Col 2<br>Forecast 2014 | Col 3<br>Forecast 2015 | Col 4<br>Forecast 2016 |
|---|---|---|---|---|
| Customer Related Distribution Plant | 123.0 | 119.0 | 126.8 | 137.1 |
| NGV Rental Equipment | 0.3 | 3.4 | 3.6 | 3.7 |
| System Improvements and Upgrades | 192.8 | 243.2 | 247.8 | 242.2 |
| General and Other Plant | 47.6 | 56.3 | 52.7 | 48.4 |
| Underground Storage Plant | 22.4 | 21.9 | 15.7 | 10.5 |
| Sub total "Core" Capital Expenditures | 386.1 | 443.8 | 446.6 | 441.9 |
| Work and Asset Management System (WAMS) | 0.5 | 36.3 | 25.7 | 8.1 |
| Leave to Construct - Major Reinforcements | 63.3 | 202.2 | 359.7 | - |
| Total Capital Expenditures | 449.9 | 682.3 | 832.0 | 450.0 |

7. The Company will use the term “Core Capital” to include all capital spending, except for three identified major projects: the GTA and Ottawa Reinforcements and the Work and Asset Management Project (WAMS). The “Core Capital” term essentially captures the spending amounts that were included within the 2013 Board Approved Capital amount (after taking into account, as seen in Table 1 above, that there was $0.5M of initial WAMS project spending included within the 2013 Board Approved Capital amount).

Witnesses: J. Sanders
P. Squires

8. Table 2 provides a standard detailed schedule of the proposed Capital Budgets for 2014 to 2016, as compared to the 2013 Board approved Capital Budget amount of $386.6 Million.

Table 2

COMPARISON OF UTILITY CAPITAL EXPENDITURES
2013 BOARD APPROVED BUDGET AND 2014 -2016 FORECASTS
(EXPRESSED IN $MILLION)

| Item No. | | Col. 1 Board Approved Budget 2013 | Col. 2 Forecast 2014 | Col. 3 Forecast 2015 | Col. 4 Forecast 2016 |
|---|---|---|---|---|---|
| A. | Customer Related | | | | |
| 1.1.1 | Sales Mains | 44.6 | 39.6 | 42.1 | 49.1 |
| 1.1.2 | Services | 68.1 | 69.0 | 73.7 | 76.3 |
| 1.1.3 | Meters and Regulation | 10.3 | 10.4 | 11.0 | 11.7 |
| 1.1.4 | Customer Related Distribution Plant | 123.0 | 119.0 | 126.8 | 137.1 |
| 1.1.5 | NGV Rental Equipment | 0.3 | 3.4 | 3.6 | 3.7 |
| 1.1 | TOTAL CUSTOMER RELATED CAPITAL | 123.3 | 122.4 | 130.4 | 140.8 |
| B. | System Improvements and Upgrades | | | | |
| 1.2.1 | Mains - Relocations | 27.5 | 28.6 | 24.9 | 26.0 |
| 1.2.2 | - Replacement | 71.0 | 105.6 | 94.2 | 82.5 |
| 1.2.3 | - Reinforcement | 27.0 | 21.3 | 31.6 | 18.1 |
| 1.2.4 | Total Improvement Mains | 125.5 | 155.5 | 150.7 | 126.6 |
| 1.2.5 | Services - Relays | 17.3 | 29.8 | 34.5 | 52.1 |
| 1.2.6 | Regulators - Refits | 9.7 | 9.8 | 10.0 | 10.1 |
| 1.2.7 | Measurement and Regulation | 24.3 | 31.5 | 34.1 | 32.6 |
| 1.2.8 | Meters | 16.0 | 16.6 | 18.5 | 20.8 |
| 1.2 | TOTAL SYSTEM IMPROVEMENTS AND UPGRADES | 192.8 | 243.2 | 247.8 | 242.2 |
| C. | General and Other Plant | | | | |
| 1.3.1 | Land, Structures and Improvements | 7.8 | 12.9 | 11.2 | 6.8 |
| 1.3.2 | Office Furniture and Equipment | 1.6 | 4.6 | 4.7 | 4.4 |
| 1.3.3 | Transp/Heavy Work/NGV Compressor Equipment | 4.8 | 4.6 | 4.7 | 4.7 |
| 1.3.4 | Tools and Work Equipment | 1.4 | 1.5 | 1.5 | 1.5 |
| 1.3.5 | Computers and Communication Equipment | 32.0 | 32.7 | 30.6 | 31.0 |
| 1.3 | TOTAL GENERAL AND OTHER PLANT | 47.6 | 56.3 | 52.7 | 48.4 |
| D. | Underground Storage Plant | 22.4 | 21.9 | 15.7 | 10.5 |
| E. | SUBTOTAL "CORE" CAPITAL EXPENDITURES | 386.1 | 443.8 | 446.6 | 441.9 |
| F. | Work and Asset Management System (WAMS) | 0.5 | 36.3 | 25.7 | 8.1 |
| G. | SUBTOTAL CAPITAL EXPENDITURES | 386.6 | 480.1 | 472.3 | 450.0 |
| H. | Leave to Construct | | | | |
| 1.7.1 | Ottawa Reinforcement | 44.0 | 5.1 | - | - |
| 1.7.2 | GTA Reinforcement | 19.3 | 197.1 | 359.7 | - |
| 1.7 | TOTAL LEAVE TO CONSTRUCT | 63.3 | 202.2 | 359.7 | 0.0 |
| I. | TOTAL CAPITAL EXPENDITURES | 449.9 | 682.3 | 832.0 | 450.0 |

Witnesses: J. Sanders
P. Squires

9. The first step in the budget process that led to the 2014 to 2016 Capital Budget was the finalizing of the 2013 capital budget to match the necessary capital needs of the business to the 2013 Board approved settlement amount of $386.6 Million (note that the Ottawa and GTA Reinforcement projects were outside of the $386.6 Million amount). In conducting the 2013 budget process, the Company determined that the necessary business expenditures and costs for 2013 were greater than the Board approved settlement amount. The Company is not seeking any recoveries in the Customized IR plan proposal for the additional capital spending in 2013 (nor the spending above forecast levels in 2012). The Company expects to bring forth in the Rebasing Rates Application any amounts of additional Capital spend for 2012 and 2013.

10. Based on the learnings from the 2013 budgeting process, including the recognition of increasing spending requirements for safety and integrity projects, the Company undertook a “Capital Budget Refresh” process to understand its capital spending needs for the period 2014 to 2018. That process, which involved several iterations of scrutinizing and prioritizing proposed capital spending, ultimately resulted in the three year detailed Capital Budget.

11. As explained within the updated evidence in the A2 series of exhibits, Enbridge has used the 2016 Capital Budget to represent its 2017 and 2018 capital spending requirements within the Allowed Revenue amounts for 2017 and 2018. Enbridge has made this change to the Customized IR plan to address the expectation that the Company will set Allowed Revenue amounts for all five years of this Customized IR term in this proceeding, and not revisit capital spending requirements midway through the term. While Enbridge is not currently able to specifically forecast all elements of its 2017 and 2018 Capital Budget, the Company believes that the best overall forecast of its capital spending requirements during those years can be seen

in the 2016 Capital Budget. Although some of the detailed spending requirements will change each year, Enbridge expects that the overall capital spending requirements for 2017 and 2018 will be in line with 2016. The one change that Enbridge has made to the 2016 Capital Budget is that, for purposes of 2017 and 2018, the $8 million forecast spending on WAMS has been removed, since that project will have been completed. Therefore, the Capital Budget used for 2017 and 2018 is the same as set out in the "Forecast 2016" column within Tables 1 and 2 above, except that the $8.1 million associated with WAMS is removed, leaving a forecast Capital Budget of $441.9 million for each of 2017 and 2018.

12. Further details about the application of the 2016 Capital Budget to 2017 and 2018 are set out below, in section "G" of this evidence.

13. The Capital Budget as proposed for 2014 to 2016 reflects the continued application of the Company's capitalization policy. In EB-2011-0354, the Board approved Enbridge's continued use of that capitalization policy notwithstanding the transition to US GAAP accounting policies.

14. The proposed overall capital expenditures for 2014 to 2016 represent a significant increase from the 2013 Board Approved Capital amount. The majority of the increase in expenditures can be attributed to three business needs:

    - First and most significant is the need for the GTA and Ottawa Reinforcement projects,
    - Second, the need for investment in WAMS, and
    - Third, is the need for a variety of new and increased work to address System Integrity and Reliability requirements of the Company's distribution

system. It is this need that is primarily driving the increase in Core Capital Spending.

15. Details about the high-level drivers of the Capital Budget for 2014 to 2016 are set out in the next section of this Overview.

B. Main Drivers of the Capital Budget For 2014 To 2016

16. The Capital Budget for 2014 to 2016 is driven by new and ongoing spending requirements. The ongoing requirements include the continuation of historic activities to: (i) maintain the distribution system (including storage), (ii) add new customers, and (iii) maintain the Company's other infrastructure (such as buildings and IT systems). The new requirements relate to: (i) Major Reinforcement projects in the GTA and Ottawa, (ii) a need to implement WAMS to provide primary work and asset management functionality and support the increasing amount of asset-related work, (iii) increasing System Integrity and Reliability work to address identified risks within the Company's distribution system, and (iv) the need to act on increasing relocation work (especially in 2014) that is driven by external third-party projects.

17. The following sections provide information on the main drivers of Enbridge's 2014 to 2016 Capital Budget. The balance of the B2 series of exhibits contains further details about the Company's individual business area capital budgets, including descriptions of projects of $2 million or more, that cumulate to form the overall 2014 to 2016 Capital Budget.

*Continuation of Historic Activities and Costs (Business as Usual)*

18. The Capital Budget for 2014 to 2016 include a continuation of historic activities that: (i) maintain the distribution system (including storage), (ii) add new customers, and (iii) maintain the Company's other infrastructure (such as buildings

and IT systems); and historic costs such as (iv) departmental labour costs, (v) Capital Overheads (Administrative and General), and (vi) Interest During Construction.

(i) maintain the distribution system (including storage)

19. Within the Capital Budget, the Company will continue to undertake activities that are “keeps the lights on” type of capital work. Examples of these activities that the Company will continue to perform are the code and regulation based Meter Exchange Government Inspection program and the spending on base maintenance activities in the Reinforcements and Relocations areas.

(ii) add new customers

20. From 2009 and 2012, Enbridge’s annual customer additions rose from approximately 32,000 to 36,000 new customers per year. Enbridge forecasts this trend to continue for the next few years with the addition of new customers being approximately 38,000 in 2013, 36,500 in 2014, 38,500 in 2015 and 39,500 in 2016. The Capital Budget includes the costs to add the annual forecasted new customers.

(iii) maintain the Company’s other infrastructure (such as buildings and IT systems)

21. The Capital Budget includes costs to maintain facilities in a safe state and replacing out of date or end of life IT systems through the period of 2014 to 2016. In finalizing the necessary spending proposed in the Capital Budget, the Company has decided to defer some facilities-related activities, such as replacing aging building facilities.

(iv) Departmental Labour Costs

22. Departmental labour costs are primarily the salaries and employee expenses for the departments within Engineering and Operations. The respective functions of these departments contribute to putting Core Capital activities (Mains, Services and Stations) into service. Examples of these functions include system capacity planning, distribution plant drafting, pipeline inspection, field operations, customer attachment and records management.

23. The Capital Budget process reviewed each department and assessed staffing needs for the period of 2014 to 2016. Overall, the Company expects to deliver its Core Capital spending without adding additional Departmental Labour costs. The costs going down from 2013 levels and being maintained below 2013 levels for the period of 2014 to 2016 reflects that the Company expects to replace staff that have left through natural attrition with staff that have lower salaries. Through the period of 2014 to 2016 management expects turnover of employees to be as much as 100 employees annually. By not adding departmental labour costs for base programs, the Company is committing to accommodating any additional work in these programs by finding efficiencies in operations between these departments.

24. The following Table 3 sets out the amounts of Departmental Costs from 2014 to 2016 and are included in Tables 1 and 2.

**Table 3**
**Departmental Labour Costs 2013 - 2016**
**($ ,000)**

| | | 2013 Budget Capitalized Departmental Labour Costs | 2014 Forecast Capitalized Departmental Labour Costs | 2015 Forecast Capitalized Departmental Labour Costs | 2016 Forecast Capitalized Departmental Labour Costs |
|---|---|---|---|---|---|
| B1-2-1 | **Total Departmental Labour Expenditures** | **76,563** | **74,843** | **73,428** | **75,551** |

Witnesses: J. Sanders
P. Squires

(v) Capital Overheads (Administrative and General Costs)

25. Capital Overheads are recognized as Administrative and General Costs (A&G) and are a function of Operations and Maintenance expenses. The A&G costs represent the common services that support capital activities. As per Board approved methodology, specific categories of Operations and Maintenance expense are capitalizable by applying specific percentages (i.e.: Human Resources, Information Technology and Corporate Departments).

26. A&G is charged to Distribution plant; Storage plant and IT asset classes and allocated to each area as a percentage of that areas cost to the total Distribution Plant, Storage Plant and IT costs. Capital Overheads increase slightly over the period of 2014 to 2016 from their 2013 Budget. The increase between 2014 and 2013 is reflective of the slight increase in Corporate Department expenses and the increases in 2015 and 2016 reflect the increases in O&M salaries and expenses. Capital Overheads represent approximately 8% of the annual Core Capital Budget.

27. The following Table 4 sets out the amounts of A&G amounts within the Capital Budget from 2014 to 2016 and are included in Tables 1 and 2.

**Table 4**
**Capital Overheads (A&G) Costs 2013 - 2016**
**($ ,000)**

| | | 2013 Budget Capital Overheads (A&G) | 2014 Forecast Capital Overheads (A&G) | 2015 Forecast Capital Overheads (A&G) | 2016 Forecast Capital Overheads (A&G) |
|---|---|---|---|---|---|
| B1-2-1 | **Total Capital Overheads (A&G) Expenditures** | **33,602** | **35,500** | **36,440** | **37,140** |

(vi) Interest During Construction

28. Interest During Construction (IDC) is the recoverable amount of interest that the Company must spend in order to fund its capital initiatives. The calculation of IDC

is a function of work in progress balances. This is applicable to pipeline construction, storage plant construction and software applications that are in progress and not yet used or useful.

29. The following Table 5 sets out the amounts of IDC amounts within the Capital Budget from 2014 to 2016 and are included in Tables 1 and 2.

**Table 5**
**Interest During Construction (IDC) Costs 2013 - 2016**
**($ ,000)**

| | | 2013 Budget Interest During Construction (IDC) | 2014 Forecast Interest During Construction (IDC) | 2015 Forecast Interest During Construction (IDC) | 2016 Forecast Interest During Construction (IDC) |
|---|---|---|---|---|---|
| B1-2-1 | **Total Interest During Construction (IDC) Expenditur** | **5,356** | **8,400** | **9,251** | **7,399** |

30. The forecast costs of Departmental Labour, Capital Overheads (A&G) and IDC are included and allocated across the major accounts set out within Tables 1 and 2.

*GTA and Ottawa Reinforcements*

31. The proposed GTA and Ottawa Reinforcements address critical distribution infrastructure requirements in the Greater Toronto Area and Ottawa. The Company has outlined the needs and benefits of these projects in its Leave to Construct applications (EB-2012-0099 and EB-2012-0451).

32. The Ottawa Reinforcement project is intended to increase the capacity of the Ottawa area distribution system to meet existing and forecast loads as well as to provide additional security of supply and operational flexibility. The Ottawa Reinforcement project has been approved through the Board's Decision on the Leave To Construct application, issued on November 29, 2012.

33. The GTA Reinforcement project is intended to maintain system safety and reliability through enabling pressure reduction on several key pipelines in the Greater Toronto Area. The project is also intended to support diversification of supply. The GTA Reinforcement Leave To Construct application is currently being heard by the OEB.

34. The forecast costs of these Major Reinforcement projects are set out separately within Tables 1 and 2.

*Work and Asset Management System (WAMS)*

35. The proposed Work and Asset Management System (WAMS) is a requirement for the future operations of the Company servicing our customers. The WAMS project is fully described in Exhibit B2-6-2. The need for this project stems from technology drivers and the need to support primary work and asset management functions.

36. The primary driver is the coming end of the Accenture Services Agreement which was part of the EnVision Project that the Board approved in its 2004 decision of RP-2003-0203. The Company has decided that a more cost effective solution to the services approach that currently provides Work and Asset Management services would be to implement an in-house IT system. Timing is also driven by technology obsolescence of the decade old solution. It is also recognized in the industry that the area of asset management information systems has evolved substantively since 2004. WAMS will be the primary system for creating and tracking work requests and transactional asset information related to functions such as construction, maintenance, service, etc. Aligning asset related work with other work activities will provide an opportunity to package activities in an efficient

manner. An example of the packaged approach would be scheduling an AMP Fitting replacement to coincide with a leak survey or service relay.

37. Another driver is the need for the Company to meet more stringent safety and reliability standards, which necessitates more flexible information technology.

38. Finally, the WAMS project will support the proposed performance measurement tracking and reporting on productivity over the Customized IR Plan term, including productivity of outside partners.

39. These business drivers have established a priority for the Company to implement the WAMS Program. Over the next two years this project will source and implement technology that will enable Enbridge to continue to operate its core functions, and implement systems that complement the Company's holistic asset management approach.

40. The forecast costs of the WAMS project are set out separately within Tables 1 and 2.

*System Integrity and Reliability Activities*

41. The Company has identified that a continuation of increased activities and expenditures associated with System Integrity and Reliability is necessary for the period of 2014 to 2016 and beyond. The Company has also determined that the System Integrity and Reliability costs for 2017 and 2018 are uncertain, but very likely to be as much or more than the corresponding costs in 2016.

42. From November 1, 2012 the Company is obligated to implement and operate a fulsome program as a natural gas distributor in the province of Ontario. The increase in activity and expenditures for System Integrity and Reliability which led

to an increased level of spending starting in 2011 can be attributed to the following items:

- Recent Events: safety incidents at utilities in the United States
- Changes to regulations in both the United States and Ontario
- Enbridge's ongoing review of processes and decision criteria to maintain a safe distribution system

43. The focus on integrity management programs has been heightened as a result of safety incidents at natural gas utilities in the United States. One such event was the September 2010 San Bruno pipeline rupture and ignition in California. The event resulted in the death of eight individuals, the destruction of 38 homes, and injury to several additional individuals and damage to several other properties in the area.

44. As a result of the San Bruno incident, regulation, standards and legislative obligations for natural gas utilities in the United States were amended to be more stringent with respect to integrity management of distribution systems.

45. The November 1, 2012, the Technical Standards and Safety Authority ("TSSA") Code Adoption Document (FS-196-12) requires companies to produce an Integrity Management Program to maintain a safe and reliable Distribution System. This regulation includes the Document Amendment clause 12.10 (of the Canadian standards Association Z662):

> 12.10.16: Operating companies shall establish effective procedures for managing the integrity of pipeline systems with an MOP less than 30% of SYMS (Distribution Systems) so that they are suitable for continued service, in accordance with the applicable requirements of clause 3.2 of CSA Z662-11.

46. For Enbridge, this means that all of the operating distribution assets will now need to be included and managed within an effective System Integrity and Reliability set of activities. As per clause 3.2 of CSA Z662-11 Pipeline System Integrity Management Program, this program must assess potential risks, identify steps to reduce these risks and monitor the results of the risk reduction projects or program. As per clause 10.3.10 of TSSA's November 1, 2012 Oil and Gas Systems Code Adoption Document, the Integrity Management Program shall include:

    - a management system;
    - a working records management system;
    - a condition monitoring program, and
    - a mitigation program

47. Management has taken its responsibility under the recent TSSA code change and more stringent landscape in the United States as an important change to its legislated obligations and expectations on how it manages the distribution system. Management has interpreted the code change as a requirement to proactively assess risks, propose remediation, refurbishment and replacement of the distribution system, when and where necessary, to prevent system failures.

48. Within Enbridge's proposed Integrity Management program expenditures for 2014 to 2016, examples of management decisions include:
    A. the expenditures for In-Line Inspections ("ILI") of pipelines above 20% of the Specified Minimum Yield Stress ("SMYS") and the Maximum Operating Pressure ("MOP") Verification Program;

B. adopting a proactive replacement strategy towards replaceable technology such as Compression Couplings or AMP Fittings rather than monitoring their operation and replacing after the failures have occurred; and

C. replacing critical operating assets such as specific components of Gate and District Stations (up to and including the entire station) rather than extending the active use of these assets beyond the end of their useful life through the use of Operations and Maintenance budgeted activities.

49. As set out within the Asset Plan (filed at Exhibit B2, Tab 10, Schedule 1), the Company expects to continue these activities within 2017 and 2018.

*Externally Initiated Capital Projects*

50. A further driver of incremental capital spending requirements in the coming years is the expected increase in relocation requirements resulting from third-party infrastructure projects, such as transit and the Pan Am games.

51. The main driver for the proposed increase to these costs is projects from government organizations such as:

- the 2015 Pan American Games,
- Toronto Transit Commission ("TTC"), and
- MetroLinx

52. These externally driven infrastructure projects lead to requirements for pipeline replacements or relocations. While relocation activity is not new, the level of expected activity in the coming years is a substantial increase from past experience.

Witnesses: J. Sanders
P. Squires

The forecast cost increases can be seen within the Mains-Relocations line at Table 2, above.

C. Capital Budgeting Process

53. To understand and evaluate the Company's Capital Budget, it is useful and informative to look at how the budget was created. As explained below, the lengthy and rigorous process that led to this Capital Budget has ensured that the budget is set at a level that reflects the level of spending necessary to meet the growth, safety and operational requirements of the business. Savings attributable to productivity and efficiency initiatives are included within the Capital Budget amounts.

54. The Company commenced the capital budgeting process that led to the 2014 to 2016 Capital Budget in November of 2012. The first step in the process was to align the 2013 Board-Approved Capital Budget of $386.6 million with the Company's spending requirements for 2013. That step led to a realization that complete alignment was not possible, because spending requirements for 2013 exceed that level. However, for the purpose of this Application, Enbridge has set out its 2013 Capital Budget to align with the Board-Approved Capital Budget amount. As noted above, to the extent that Enbridge spends above that level, it will not seek recovery until its Rebasing Application.

55. Immediately after the 2013 Capital Budget was set, the Company proceeded with its "Budget Refresh" process to update its forecasts of capital spending for 2014 to 2018. This began with a "Bottom-Up" list of business needs, and then proceeded through several iterations where proposed projects and spending were presented to and scrutinized by management and direction was given to make changes to the Capital Budget. Through a lengthy iterative process, Enbridge arrived at a three

year Capital Budget for 2014 to 2016, having determined that capital expenditures for 2017 and 2018 were too speculative to be included.

*Inputs to the Capital Budget*

56. As noted, the capital budget process began with a "Bottom Up" list of capital spending requirements for 2014 to 2018. There were a number of inputs into the creation of this "grassroots" budget, as described below.

(i) Asset Plan

57. The Company's long range distribution system planning tool, the Asset Plan, provides a 10 year view into customer growth, potential reinforcements, system integrity and reliability requirements, relocation projects and major reinforcements. The Asset Plan represents an information vehicle for Enbridge management to use for future planning purposes. The 2013-2022 Asset Plan is filed at Exhibit B2, Tab 10, Schedule 1.

58. The Asset Plan is an ever-evolving document, to reflect the Company's most current understanding of its distribution assets. While the actual 2013-2022 Asset Plan document filed in this case was not completed at the time that the Capital Budget process began in late 2012, the updated identification of the Company's asset requirements (which forms the basis for much of the Asset Plan) had been completed by that time. That information was used as an input into the creation of the "Bottom Up" budgets used at the outset of the Capital Budget process.

(ii) GTA and Ottawa Reinforcement Projects and WAMS

59. The GTA and Ottawa Reinforcements and WAMS project had all been identified as necessary projects by the time that the Capital Budget process began. Each of these projects has been subject to separate budgeting processes, and the outputs

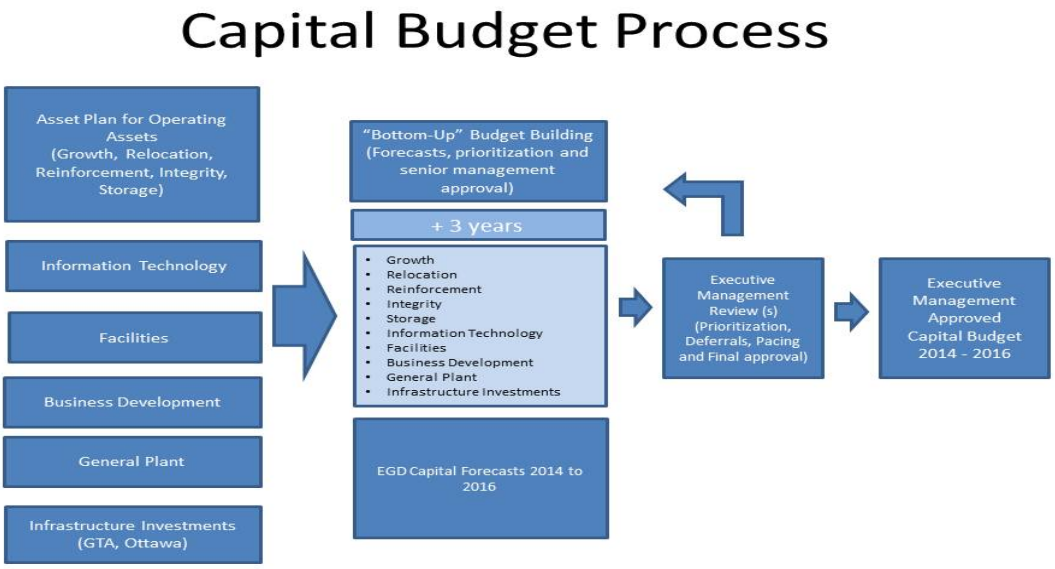
of those project specific reviews were used as inputs into the Capital Budget process.

(iii) All Other Inputs

60. The Asset Plan only addresses the Company's distribution asset requirements. Therefore, to determine the capital spending requirements for other aspects of the Company's operations, information was sought and received from additional capital business areas including Information Technology, Gas Storage, Business Development, Facilities and General Plant. That information was an input into the creation of the "Bottom Up" budgets used at the outset of the Capital Budget process.

*Steps in the Capital Budget Process*

61. Enbridge's Capital Budget for 2014 to 2016 was determined through a lengthy iterative process. Figure 1 below depicts the process flow undertaken by the Company to finalize its Capital Budgets.




62. The process commenced with departments such as Gas Storage, Information Technology, Facilities and Business Development providing their "Bottom-Up" capital needs. The Asset Plan was used as an input for the Operations and Planning, Integrity and Engineering departments "Bottom-Up" capital needs.

63. After the initial "Bottom-Up" Capital Budget was created, the Company proceeded with an intense process to scrutinize each proposed expenditure. The process was established as a Company priority and included all departments and associated capital decision makers. The objective was to define the amount of necessary capital expenditures required to ensure the utility meets its commitments to its customers and its regulators, including spending necessary to meet the growth, safety and operational requirements of the business. The ultimate goal of this exercise was to ensure that the capital expenditures within the Capital Budget were limited to the lowest prudent level.

Witnesses: J. Sanders
P. Squires

64. A senior management committee ("Capital Owners Committee") made up of senior representatives of the operating groups within the Company, as well as Finance and Regulatory, conducted peer reviews and scrutinized the list of expenditures in each cycle of capital forecast. This resulted in changes to the budgets. For each cycle, the output of the Capital Owners Committee was then reviewed by Executive Management who made their own changes. The Executive Management team was made up of Enbridge's President and Vice Presidents.

65. The Capital Budget process went through six review cycles, culminating in Executive Management approval of the final 2014 to 2016 Capital Budget. Table 3 sets out the timing at which each review cycle was completed.

Table 6

Capital Budget Process Milestone Dates

| Date | Iteration |
|---|---|
| November 1, 2012 | 2013 Budget Setting Start Date |
| January 8, 2013 | 2014 to 2018 Budget Setting Start Date |
| January 18, 2013 | REVIEW 1 |
| February 15, 2013 | REVIEW 2 |
| March 22, 2013 | REVIEW 3 |
| April 2, 2013 | REVIEW 4 |
| April 18, 2013 | REVIEW 5 |
| May 21, 2013 | REVIEW 6 and Final Capital Budget 2014 – 2016 |

66. After the first review, it was recognized that many of the System Integrity and Reliability expenditures (along with some other items) had forecasts that were of a variable or uncertain nature. Analysis of the first review showed that the proposed spending pattern was forecasting System Integrity and Reliability activity costs that may not materialize as outcomes of the activity.

67. Executive Management requested a further segmentation of each capital forecast to identify the magnitude of the costs that were certain to be spent and those that were outcome based and therefore difficult to forecast. Each capital expenditure from Review 2 onward was broken out into Variable and Firm costs. The Firm costs category captured costs that were certain and the Variable category represented costs that may or may not materialize, largely based on the outcomes of studies and execution of certain System Integrity and Reliability programs. The Capital Budget Process retained this additional categorization through the remainder of the review cycles.

68. Through the budget review process, the Capital Owners Committee applied a number of criteria to prioritize proposed spending, and determine what items should be retained within each successive version of the Capital Budget, and which items could be altered or removed. The criteria that were applied included the following:

    - *Priority*: to identify the need for particular spending within a given year. An example of a change in priority was the decision to delay the Don River Replacement project that is identified in the Asset Plan. Another example is evident in the Facilities budget which had proposed a building expansion to the Company's Kennedy Road facility to accommodate staff who are currently being housed in "portables" in the parking lot.

Witnesses: J. Sanders
P. Squires

The final decision of the budget process was to reject building expansion and keep the additional staff in portables.

- *Probability of Spend Occurring*: High, Medium, Low. High Probability ratings were given where there was an 80% to 100% probability of the spend occurring in that year. A Medium Probability rating indicated a 50% to 80% chance and a Low Probability ranking represented a 0% to 50% chance of the project put in service that year. Items of Low Probability are not included within the Capital Budget for a given year, and items of a Medium Probability may have their spending profile changed.

- *Timing of Need*: to determine whether the pacing of the spending can be changed. An example is the Load Shed Program that the Company will continue to undertake in 2014 to 2016. The program adds valves and other assets required to establish isolatable geographic zones within the distribution system. These isolatable zones when established enable the Company to preserve supply to specific customers while neighbouring customers may have their gas supply shut-off in the event of an incident or other business requirement. Through the budget process, a decision was made to slow the pace of implementing the Load Shed Program to a range of 10 to 15 years rather than one of 5 to 10 years. This decision on Timing of Need was based on information that indicated that a longer period of implementation would not adversely increase the risk to Customers being supplied with natural gas.

- *Alternative to Need*: Review of other choices including O&M maintenance. For example, under the System Integrity and Reliability activities, Gate Stations Program, the Gas Preheat System Risk Mitigation project

conducted several alternatives to need analysis. The proposed program includes the removal, replacement and testing of the oldest heat exchanger in the system. It also includes the retrofit of the next two oldest heat exchangers with actuated valves on the heat exchanger and glycol loop of the preheat system. Alternatives that were examined included doing nothing, replacing all heat exchangers, just replacing the oldest heat exchangers.

- *Financial Analysis*: Review of Capital and O&M cost interaction, historical trends where applicable, unit cost rates etc. An example was confirmation of a decision to install remote electronic pressure sensing devices to paper chart recorders and provide real-time pressure information to a central control centre. The capital costs of this initiative were confirmed to be less than the expected long-term O&M savings arising from no longer having to operate paper chart recorders and maintain and interpret the paper charts that had been produced.

- *Productivity*: Where applicable, incorporate actions to "get more work for same unit cost". An example is the proposed capital budget for Customer Related work which shows reductions in the cost to add new customers. This is a result of a determination that the Company can find ways to save money in its actual average cost to add a new customer, as compared to those costs in 2012. Further discussion of the productivity savings within the 2014 to 2016 Capital Budget is set out below.

- *Firm vs. Variable*: as described above.

Witnesses: J. Sanders
P. Squires

69. These criteria allowed evaluation of each expenditure by several angles. The multiple angles of examination confirmed to management that the final proposed expenditure represented the lowest reasonable cost for the necessary activity.

70. The final Capital Budget review cycles examined the proposed capital expenditures by year, applying the criteria above to evaluate each capital expenditure. Executive Management provided direction and decisions through each review cycle and continued until they were fully satisfied that the Capital Budget had reached the lowest prudent level.

D. Results of the Capital Budget Process

71. There were three main outputs from the Capital Budget Process.

72. First, the identification of capital spending requirements in excess of historical levels led Enbridge to determine that it required a different IR plan from its 1st Generation IR plan. The discussion of why an "I-X" model is not appropriate is set out in a number of places within the A2 series of exhibits.

73. Second, the identification of a large amount of uncertain spending, especially in the years beyond 2016, led Enbridge to determine that it could only create a three year Capital Budget at this time. This led to the Customized IR plan as originally filed.

74. Third, the key output from the Capital Budget Process was the creation of a three year budget that reflects the level of spending necessary to meet the growth, safety and operational requirements of the business. Through the rigour of the Capital Budget Process, more than $180 million was removed from the originally submitted "Bottom Up" grassroots budgets.

*Decision to Proceed with a Three Year Capital Budget*

75. The Company had gone through three Capital Budget Review cycles at which time a decision was made to change the budgeting time frame from a five year period ending in 2018 to a three year period of 2014 to 2016.

76. At a high level, the key information that drove the reduction in the term from five years to three years was the significant variability in capital forecasts after 2016. The variability was being driven by two primary issues: (i) uncertainty with System Integrity and Reliability program outcomes; and (ii) uncertainty with externally initiated projects. The amounts in the capital budget forecasts had variability in the range of $50 to $100 million per year of additional capital costs.

77. The decision to create a three year budget was seen to be consistent with the fact that the Company's capital spending requirements over the 2014 to 2016 period will be quite different from future years, because of the need for several major projects (GTA and Ottawa Reinforcement and WAMS) over the next three years.

78. Details of each of these items that contributed to the decision to proceed with a three year Capital Budget are set out below.

(i) Uncertainty with System Integrity and Reliability program outcomes

79. There are three main causes for the variability in the System Integrity and Reliability program cost forecasts. One is the fact that the scope and requirements of many of the System Integrity and Reliability programs will not be fully known until related studies are completed and there is some practical experience with the programs. The second is the fact that the Company anticipates more stringent Pipeline Integrity Management legislation, such as that contemplated in the United States,

but does not know when this will be implemented. The third is the continue evaluation on the Companies assessment of risk to the distribution system through the asset planning process. Future risk assessment will change the risks identified and the priorities of these risks.

80. Through the first two reviews of the Capital Budget, it had become clear that capital cost requirements for a five year period were hard to quantify with any specificity. Depending on the outcomes of System Integrity and Reliability studies, and the outcomes from early experience with new System Integrity and Reliability programs, the costs would vary. While there is uncertainty about the level of required costs even within a one year timeframe, the amount of the potential variance becomes unacceptably high when one forecasts five years into the future.

81. Examples of the variability in the System Integrity and Reliability cost forecasts are seen in the potential engineering outcomes of the MOP Verification Program, the In-Line Inspection Programs and the Process Hazard Assesment (“PHA”) of the Gate and District Stations. The MOP and ILI Programs will identify segments of the distribution system that require replacing. However, the outputs of the inspection programs could identify a greater number of kilometres of pipeline or additional reinforcements than budgeted. The variability in length of pipeline replacement or predicting potential reinforcement projects has created a large swing in the Company’s ability to firmly forecast capital expenditures. Similarly, the PHA’s could yield a range of outcomes from minor component replacements to entire station replacements and/or relocations.

82. The uncertainty and variability in cost forecasts led the Company to determine that it could only create a dependable Capital Budget forecast for three future years, rather than five. At the same time, though, the Company also recognized that it may not be appropriate to include its uncertain (or potential) costs within the Capital

Budget being presented to support its Customized IR application. The solution that was reached was to identify that group of costs for each year, but not to include those costs, which are referred to as “variable costs” throughout this document, within the filed 2014 to 2016 Capital Budget. For example, Enbridge decided to implement a budget for the MOP program that would include the project costs for inspection and assessment (the “firm” costs), but not include any capital amounts for replacement of pipeline (the “variable” costs). The same approach has been taken for the ILI program.

83. The result is that Enbridge will be at risk for the “variable” costs associated with the System Integrity and Reliability studies and programs (as well as variable costs associated with other capital spending projects). The Company expects that at least some of the identified “variable” costs will materialize, so this is a real risk that will have to be accommodated by finding further efficiencies within the rest of the Company’s operations. This was one of the items driving Enbridge to a three year Capital Budget (2014 to 2016). The Company has been very uncomfortable with shouldering the risk associated with these “variable” costs for more than three years. At this time, though, as described below in section G, Enbridge has determined that it is prepared to continue to take these risks for 2017 and 2018, by using the 2016 Capital Budget as the basis for forecasts of 2017 and 2018 capital spending. However, to address two of the most real risks which are outside of Enbridge’s control, there will be variance account treatment for 2017 and 2018 capital costs related to relocations and to pipeline replacements required because of issues discovered through pipeline inspections (such as, but not limited to, the ILI and MOP programs).

84. Table 7, below, sets out the “firm” and “variable” budget amounts associated with System Integrity and Reliability studies and programs over the 2014 to 2016 term.

The total forecast of "firm" amounts is approximately $94 million, while the total forecast of "variable" amounts is approximately $116 Million. Stated differently, for the period of 2014 to 2016 the System Integrity and Reliability studies and programs have a potential "variable" spend that is approximately 108% of the budgeted "firm" amounts that are included within the Capital Budget.

**Table 7**
**System Integrity and Reliability List of Firm and Variable Forecasts**
**(Thousands)**

| Project Name or Blanket Program | Firm 2014 | Firm 2015 | Firm 2016 | Variable 2014 | Variable 2015 | Variable 2016 |
|---|---|---|---|---|---|---|
| AMP Fitting Replacement | 8,543 | 13,100 | 30,046 | - | 13,814 | 13,694 |
| Bare Steel Drips (study & removal program) | 255 | - | - | | 2,335 | 2,289 |
| Bare Steel Service Replacement | | | | | | 208 |
| Casing Study & Program | 510 | - | - | | 531 | 520 |
| EFV Program | 500 | 604 | 733 | 2,254 | 1,432 | 1,405 |
| Failure of Bonnet Bolts on Valves Study | | | | | 212 | |
| ILI for pipelines over 20% SMYS plus HCA | 4,000 | 4,080 | 4,162 | 6,200 | 6,450 | 6,324 |
| Isolated Steel Mains CP Program | 82 | - | - | | 85 | 83 |
| Load Shed Zone | 1,145 | 1,171 | 1,194 | | 1,194 | 1,170 |
| Low Pressure Delivery Meter Set Program | 1,530 | 2,341 | 2,388 | 1,530 | 2,387 | 2,341 |
| Meter boxes | | | | 179 | 186 | 182 |
| Plastic Mains (incl Services) Study | | | | | 11,143 | 10,925 |
| Remote Control Valve Study & Installation | 565 | 602 | 680 | | 3,979 | 3,901 |
| Targeted Compression Couplings Pressure Contair | 1,622 | 2,040 | 2,061 | | 1,061 | 1,041 |
| Verification of MAOP | 3,296 | 3,397 | 3,195 | 5,304 | 4,881 | 4,786 |
| WingLock Valve Study & Replacement | 204 | - | - | | 849 | 832 |
| Totals | 22,251 | 27,335 | 44,459 | 15,467 | 50,539 | 49,701 |

85. Beyond the System Integrity and Reliability studies and programs, there are other items within Enbridge's 2014 to 2016 Capital Budget which have associated "variable" costs. Graph 1 shows the total amounts of additional capital costs that could arise between 2014 and 2016 but which have not been included in the Capital Budget (the "variable" costs). These "variable" costs total more than $160 million over three years, and increase each year from 2014 to 2016. Enbridge is accepting the risk that some of these costs will likely arise, and will have to be accommodated.

Witnesses: J. Sanders
P. Squires


(ii) Externally Initiated Projects

86. Another source of budget uncertainty relates to capital projects required to accommodate works being undertaken by Municipal and Provincial governments and organizations. Examples are large-scale transit projects and other infrastructure projects. These projects often require Enbridge to relocate or change distribution assets to accommodate construction activities.

87. Enbridge has found it challenging to forecast relocation requirements beyond the next few years, because details of transit and other infrastructure projects remain fluid. At the same time, though, the Company recognizes that the associated costs may be substantial. This has contributed to the difficulty of creating reliable five year Capital Budget forecasts.

Witnesses: J. Sanders
P. Squires

(iii) Large Complex Projects over the Next Three Years

88. Enbridge determined that the use of a three year Capital Budget is consistent with the fact that the Company's capital spending requirements over the 2014 to 2016 period will be quite different from future years. The coming years are unusual because the majority of the Capital Budget increase arises from large complex capital projects that are contained within the 2014 to 2016 term (the GTA and Ottawa Reinforcements and WAMS project).

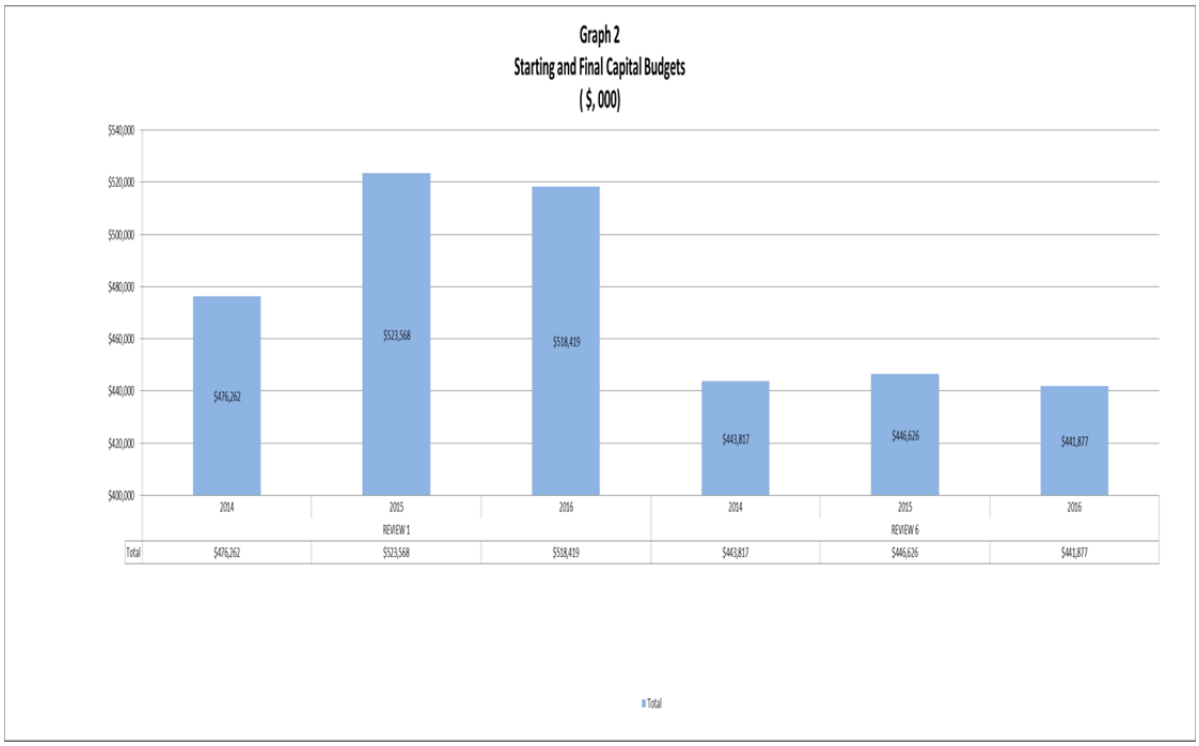
89. The Capital Budget process confirmed to the Company that the significant capital spending increase over the next three years is not a "business as usual" occurrence. Rather, this is an extraordinary period in Enbridge's history. Therefore, the Company concluded that a Capital Budget term of three years was the prudent approach to focus the utility on completing the large complex projects and to protect all parties from the consequences of presenting uncertain costs within the Company's filed budgets. At the same time, though, because the Company is taking the risk of uncertain "variable" capital costs, this approach will ensure focus on cost effectiveness.

*The 2014 to 2016 Capital Budget*

90. The 2014 to 2016 Capital Budget that resulted from the budget process is set out at Tables 1 and 2 above. From the start to end, the rigorous examination by the Capital Owners Committee and Executive Management of proposed capital budgets resulted in total reductions of approximately $185 Million for the three years or approximately 12.25% reduction from Review 1 to final approval. The annual reductions are approximately $32 Million, $76 Million and $77 Million for each year of 2014 to 2016. These annual amounts represent reductions of 6.8% in 2014, 14.7% in 2015 and 14.8% in the 2016.

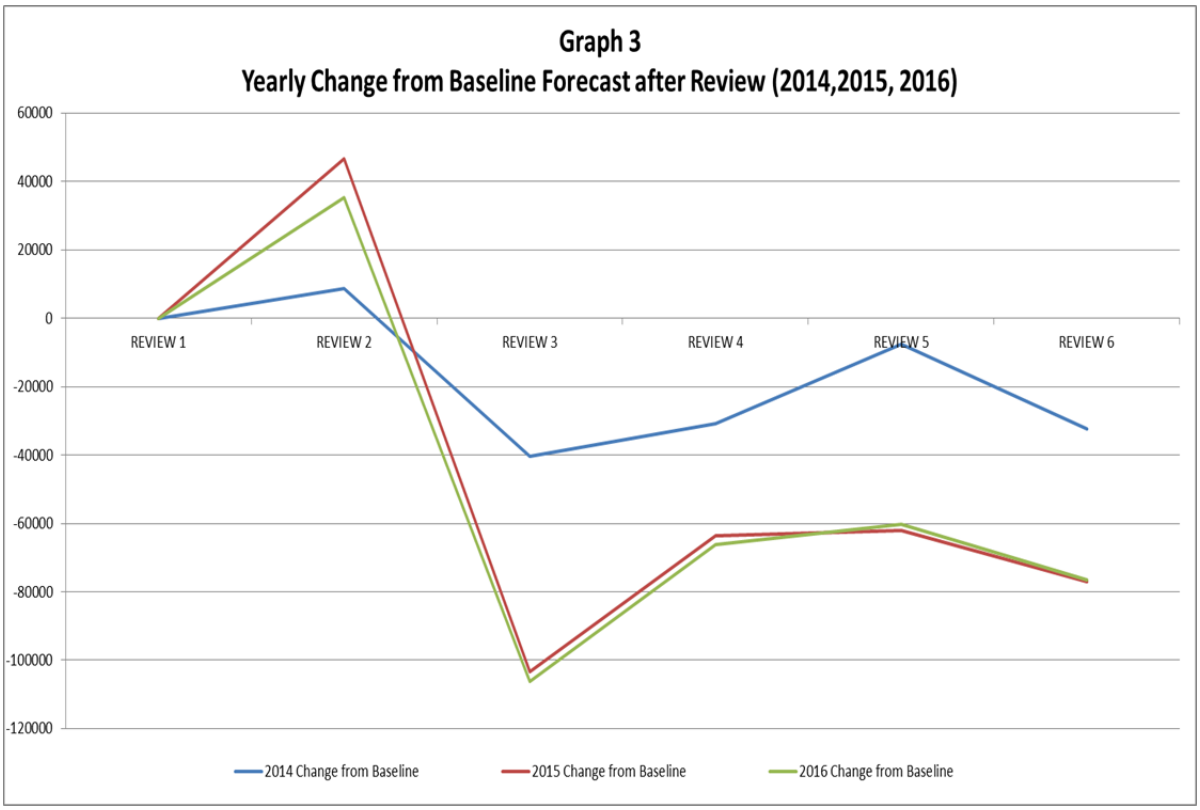
Witnesses: J. Sanders
P. Squires

91. The graph below shows the change from the opening capital forecast the final capital forecast as a result of the Capital Budget Refresh Process.




92. Given that the budgets related to the major projects were mostly unchanged from the outset of the budget review process, the changes that were made to the 2014 to 2016 Capital Budget mostly related to Core Capital amounts. The following graph sets out the Core Capital budget difference relative to the first budget after each review.

Witnesses: J. Sanders
P. Squires




93. Much of the change to the Core Capital amounts arose from the re-categorization of forecast costs as “variable”. As explained above, these costs are no longer included within the 2014 to 2016 Capital Budget; however, the Company expects that it will have to accommodate at least some of the costs. The following Table sets out the manner in which the Company’s categorization of “fixed” and “variable” costs evolved through the budget process.

**Table 8**

**Yearly Change From Baseline After Each Review**
**($ 000)**

| REVIEW CYCLE | Sum of Firm 2014 | Sum of Variable 2014 | Sum of Firm 2015 | Sum of Variable 2015 | Sum of Firm 2016 | Sum of Variable 2016 |
|---|---|---|---|---|---|---|
| REVIEW 1 | $ 476,262 | | $ 523,568 | | $ 518,419 | |
| REVIEW 2 | $ 485,010 | | $ 570,313 | | $ 553,820 | |
| REVIEW 3 | $ 435,739 | $ 120,642 | $ 420,039 | $ 45,996 | $ 411,591 | $ 108,477 |
| REVIEW 4 | $ 445,509 | $ 36,476 | $ 459,964 | $ 80,967 | $ 452,251 | $ 68,317 |
| REVIEW 5 | $ 468,627 | $ 25,142 | $ 461,631 | $ 63,031 | $ 458,054 | $ 75,937 |
| REVIEW 6 | $ 443,817 | $ 25,142 | $ 446,626 | $ 63,031 | $ 441,877 | $ 75,937 |

## E. Incorporation of Productivity in the Capital Budget

94. Throughout the Capital Budget process, the Company worked to ensure that the Capital Budget amounts included cost savings due to efficiency and productivity. The following section outlines some examples of productivity initiatives incorporated in the proposed Capital Budgets for 2014 to 2016.

### *Departmental Labour Costs Productivity*

95. As explained in the O&M evidence (for example, at Exhibit D1-3-1), the Company has resolved to maintain its overall FTE level (number of employees) flat through the 2014 to 2016 period. Executive management has determined that with a focus on efficiencies, the Core Capital programs (which are increasing to accommodate customer growth and System Integrity and Reliability programs) will be delivered within the existing FTE numbers.

96. One way of quantifying the productivity savings is to compare the departmental labour cost amounts within the 2014 to 2016 Capital Budget to the amounts that would be included using a 2% inflation rate from the 2013 levels.

Using that measure, there is a savings of approximately $14.98 million over the 2014 to 2016 term, as seen in the following table.

**Table 9**

**Departmental Labour Cost Productivity**
**($ 000)**

| | | 2013 Budget | 2014 Forecast | 2015 Forecast | 2016 Forecast | Total Productivity Savings |
|---|---|---|---|---|---|---|
| Management Approved Departmental Labour Cost Forecasts | | $ 76.50 | $ 74.84 | $ 73.43 | $ 75.55 | |
| 2013 Budgeted Departmental Labour Cost Increased by Inflation @ 2% | | $ 76.50 | $ 78.03 | $ 79.59 | $ 81.18 | |
| | | | | | | |
| **Productivity amount Forecast vs 2013 @2% Inflation** | | **$ -** | **$ 3.19** | **$ 6.16** | **$ 5.63** | **$ 14.98** |

97. To the extent that additional FTEs are needed to accomplish work, (such that the assumption of no staff additions cannot be maintained), Enbridge will accommodate the associated costs within other parts of the Capital Budget. Enbridge is committed to finding efficiencies needed to make this work.

*Productivity to Accommodate "Variable" Costs*

98. As explained above, the Company has determined that there are large amounts of uncertain or "variable" costs that may arise over the 2014 to 2016 term, primarily through the delivery of the System Integrity and Reliability initiatives. Those "variable" costs, which total more than $160 million, are not included within the Capital Budget.

99. While the Company does not expect all of these "variable" costs to materialize, there is a strong possibility that at least some of the costs will arise during the 2014 to 2016 term. As these costs are not included within the Capital Budget, they will have to be accommodated elsewhere. The result will be a requirement to find further productivity and efficiency gains, to allow for all necessary work to be completed.

Witnesses: J. Sanders
P. Squires

F. Year over Year Variance Explanations

100. The 2014 to 2016 Capital Budget is set out at Tables 1 and 2 above. Part B of this Evidence described the main drivers of the overall budget during the 2014 to 2016 term. Set out below are high-level explanations of the year-to-year changes in the Capital Budget.

*Major Changes: 2014 Capital Budget vs. 2013 Board Approved Budget*

101. The 2014 Forecast is $682.3 million, which is $232.4 million or 51.6% over the 2013 Board Approved Budget of $449.9 million. Capital expenditure net increases in the 2014 Forecast are primarily driven by the requirements of three multi-year major initiatives; the GTA Reinforcement project, the Ottawa Reinforcement project and the Work and Asset Management System ("WAMS") project and an increase in System Improvement and Upgrades. The requirements of the three major projects contribute to $175.2 million of the variance, System Improvement and Upgrades accounts for $50.4 million of the variance and General and Other Plant needs increased by $8.2 million. The increase is partially offset by a $4.0 million decrease in the Customer Related (adding a new customer) requirements.

102. Table 10 below itemizes the major variances and the related evidence.

Table 10

**2014 Forecast vs. 2013 Board Approved Budget Major Variance**

| 2014 Test Year Budget vs 2013 Board Approved Budget ($Millions) | Over/(under) | Related Capital Evidence by Business Area |
|---|---|---|
| Customer Related Distribution Plant | (4.0) | B2-2-1 Customer Growth and B2-10-1 Asset Plan |
| NGV Rental Equipment | 3.1 | B2-7-1 Business Development |
| System Improvements and Upgrades | 50.4 | B2-3-1 Reinforcements, B2-4-1/5-1 Relocations/Integrity and B2-10-1 Asset Plan |
| General and Other Plant | 8.7 | B2-9-1 Facilities and General Plant, B2-8-1 Information Technology |
| Underground Storage Plant | (0.5) | B2-6-1 Underground Storage |
| **"Core" Capital Requirements** | **57.7** | |
| Work and Asset Management System (WAMS) | 35.8 | B2-8-2 Work and Asset Management |
| Leave to Construct Projects | 138.9 | B2-3-2 Major Reinforcements |
| **Total Capital Expenditures** | **232.4** | |

*Major Changes: 2015 Capital Budget vs. 2014 Capital Budget*

103. The 2015 Forecast is $832.0 million, which is $149.7million or 21.9% over the 2014 Fiscal Year Budget of $682.3million. Capital expenditure net increases in the 2015 Forecast are primarily driven by the requirements of three multi-year major initiatives; the GTA Reinforcement project, the Ottawa Reinforcement project and the Work and Asset Management System (WAMS) project. The requirements of these three projects contribute to $146.9 million of the variance. The increase is partially offset by a $2.8 million decrease in the Core Capital requirements.

104. Table 11 below itemizes the major variances and the related evidence.

Witnesses: J. Sanders
P. Squires

Table 11

**2015 Forecast vs. 2014 Forecast Major Variance**

| 2015 Forecast vs 2014 Test Year Budget ($Millions) | Over/(under) | Related Capital Evidence by Business Area |
|---|---|---|
| Customer Related Distribution Plant | 7.8 | B2-2-1 Customer Growth and B2-10-1 Asset Plan |
| NGV Rental Equipment | 0.2 | |
| System Improvements and Upgrades | 4.6 | B2-3-1 Reinforcements, B2-4-1/5-1 Relocations/Integrity and B2-10-1 Asset Plan |
| General and Other Plant | (3.6) | B2-9-1 Facilities and General Plant, B2-8-1 Information Technology |
| Underground Storage Plant | (6.2) | B2-6-1 Underground Storage |
| **"Core" Capital Requirements** | **2.8** | |
| Work and Asset Management System (WAMS) | (10.6) | B2-8-2 Work and Asset Management |
| Leave to Construct Projects | 157.5 | B2-3-2 Major Reinforcements |
| **Total Capital Expenditures** | **149.7** | |

*Major Changes: 2016 Capital Budget vs. 2015 Capital Budget*

105. The 2016 Forecast is $450.0 million, which is $382.0 million or 45.9% under the 2015 Forecast of $832.0 million. Capital expenditure decreases in the 2016 Forecast are primarily driven by the completion of two multi-year major initiatives; the GTA Reinforcement project and the Work and Asset Management System (WAMS) project. The completion of these two projects contributes to $377.3 million of the variance. The remaining $4.7 million decrease reflects fluctuations in the Core Capital requirements.

106. Table 12 below itemizes the major variances and the related evidence.

Witnesses: J. Sanders
P. Squires

Table 12

**2016 Forecast vs. 2015 Forecast Major Variance**

| 2016 Forecast vs 2015 Forecast ($Millions) | Over/(under) | Related Capital Evidence by Business Area |
|---|---|---|
| Customer Related Distribution Plant | 10.3 | B2-2-1 Customer Growth and B2-10-1 Asset Plan |
| NGV Rental Equipment | 0.1 | |
| System Improvements and Upgrades | (5.6) | B2-3-1 Reinforcements, B2-4-1/5-1 Relocations/Integrity and B2-10-1 Asset Plan |
| General and Other Plant | (4.3) | B2-9-1 Facilities and General Plant, B2-8-1 Information Technology |
| Underground Storage Plant | (5.2) | B2-6-1 Underground Storage |
| **"Core" Capital Requirements** | **(4.7)** | |
| Work and Asset Management System (WAMS) | (17.6) | B2-8-2 Work and Asset Management |
| Leave to Construct Projects | (359.7) | B2-3-2 Major Reinforcements |
| **Total Capital Expenditures** | **(382.0)** | |

## G. 2017 and 2018 Capital Budget

107. As explained above, Enbridge is not able to forecast its 2017 and 2018 Capital Budget requirements on a line by line basis, in the same way as has been done for 2014 to 2016. However, the Company understands that some parties do not agree with the proposal to update capital costs for 2017 and 2018 midway through the IR term.

108. In response, Enbridge has updated its Customized IR proposal to allow for Allowed Revenue amounts to be set for all five years at this time. To accomplish this, Enbridge has used the 2016 Capital Budget to represent its 2017 and 2018 capital spending requirements within the Allowed Revenue amounts for 2017 and 2018. The one change that Enbridge has made to the 2016 Capital Budget is that, for purposes of 2017 and 2018, the $8 million forecast spending on WAMS has been removed, since that project will have been completed by the end of 2016. Therefore, the Capital Budget used for 2017 and 2018 is the same as set out in the "Forecast 2016" column within Tables 1 and 2 above, except that the $8.1 million

associated with WAMS is removed, leaving a forecast Capital Budget of $441.9 million for each of 2017 and 2018.

109. The Company believes the 2016 Capital Budget sets out a reasonable forecast of its capital spending requirements for 2017 and 2018. The 2016 Capital Budget sets out Enbridge's capital spending requirements within the context of continuing customer growth, and new system reliability and integrity requirements. While some of the line item requirements within the Capital Budget will change each year, Enbridge believes that the overall capital spending requirements for 2017 and 2018 will be in line with 2016.

110. Indeed, using the 2016 Capital Budget to represent Enbridge's capital spending requirements for 2017 and 2018 likely understates the Company's actual requirements for those years.

111. One way this can be seen in within the Asset Plan. In that document, Enbridge has forecast that its distribution plant capital spending requirements for 2017 and 2018 will be $23 million and $50 million higher as compared to 2016 (see Exhibit B2, Tab 10, Schedule 1, at page 91). The Asset Plan also indicates that Enbridge expects its customer growth for 2017 and 2018 to continue at the same rate as forecast for 2016 (around 40,000 new customers per year).

112. Another way that the 2017 and 2018 Capital Budgets can be seen to be understated is from the fact that there is no allowance for cost inflation in an approach which keeps the 2016 Capital Budget flat for the following two years.

113. As explained above, there are large amounts of uncertain, or "variable", capital costs that may arise within the 2014 to 2016 period associated with the System Integrity and Reliability studies and programs (as well as variable costs associated with other capital spending projects). Exposure to these variable amounts, which

are not included within the 2014 to 2016 Capital Budgets, will continue in 2017 and 2018.

114. While Enbridge is prepared to take most of the risk associated with these "variable" capital costs for 2017 and 2018, there are two areas (relocations, and replacement mains requirements identified through pipeline inspection activities (including the ILI and MOP programs)) where a different approach is proposed. For each of these areas, Enbridge proposes variance accounts for 2017 and 2018, through which the allowed revenue implications of spending that is significantly higher or lower than included within the budget would be recoverable from ratepayers. Details of the proposed variance accounts can be found at Exhibit D1, Tab 8, Schedule 6. It should be noted that the variance accounts are only operative if the actual Allowed Revenue consequences of required additional spending in either area are more than $1.5 million above or below the forecast amount for that area (which is the same threshold as applies for Z Factors).

115. It is very difficult to forecast costs associated with relocations with any accuracy. This is described above, and within Exhibit B2, Tab 4, Schedule 1. That difficulty is exacerbated in years further into the future. Relocations requirements arise because of third party activities over which Enbridge has no control. Given the amount of development activity being undertaken within the Company's franchise areas, Enbridge observes that the amount and cost of relocation requirements is increasing even since the original filing in this proceeding. Therefore, the actual capital costs associated with relocations activity for 2017 and 2018 may be significantly higher than that forecast for 2016. It is for this reason that Enbridge proposes variance account treatment for 2017 and 2018 related to this category of activity.

116. One key “variable” cost that is not included within Enbridge’s capital cost forecasts for 2014 to 2016 is capital amounts related to pipeline replacement that is identified through the pipeline inspection programs. The Capital Budgets include the project costs for inspection and assessment of pipelines, but do not include the cost for replacements that result from the programs. The Miscellaneous Mains Replacement category of cost does not include any costs for pipeline replacement requirements identidifed through pipeline inspection programs. While Enbridge has indicated that it is prepared to take on the risk of the variable costs associated with these activities (capital amounts related to pipeline replacement) for 2014 to 2016, the Company believes that it is reasonable and appropriate to include variance account treatment for the revenue requirement implications of such costs for 2017 and 2018.

H. Conclusion

117. The balance of the B2 series of exhibits sets out the details of Enbridge’s 2014 to 2016 Capital Budget, organized by categories of capital spending (business areas). For each of the categories, the Company will provide Overview evidence, an explanation of the category’s capital budget, explanation of year-over-year budget variances, and individual project description documents for initiatives that have a capital budget over $2 Million during the three year term.

118. The following Table 13 sets out the direct costs for each of the major business areas detailed within the B2 series of Exhibits.

Table 13
Summary of Capital Expenditures by Business Area
($Millions)

| | | Col 1 | Col 2 | Col 3 | Col 4 |
|---|---|---|---|---|---|
| | | Board Approved Budget | Forecast | Forecast | Forecast |
| Exhibit Reference | Business Area | 2013 | 2014 | 2015 | 2016 |
| B2-2-1 | Customer Growth | 95.9 | 91.2 | 97.5 | 102.3 |
| B2-3-1 | Reinforcements | 11.4 | 11.4 | 16.9 | 8.8 |
| B2-3-2 | Major Reinforcements | 63.4 | 202.2 | 359.7 | - |
| B2-4-1 | Relocations | 15.2 | 15.2 | 13.4 | 12.6 |
| B2-5-1 | Sytem Integrity and Reliability | 84.7 | 132.3 | 135.1 | 141.1 |
| B2-6-1 | Storage | 19.0 | 19.2 | 13.8 | 8.9 |
| B2-7-1 | Business Development | 0.3 | 3.5 | 3.6 | 3.7 |
| B2-8-1 | Information Technology | 28.0 | 29.3 | 27.2 | 27.5 |
| B2-8-2 | Work and Asset Management System (WAMS) | 0.5 | 35.7 | 23.7 | 7.7 |
| B2-9-1 | Facilities and General Plant (includes Fleet) | 15.5 | 23.6 | 22.0 | 17.3 |
| | Sub total Capital by Business Area | 333.9 | 563.6 | 712.9 | 329.9 |
| B2-1-1 | Departmental Labour Costs | 76.6 | 74.8 | 73.4 | 75.6 |
| B2-1-1 | Capitalized Administrative and General | 33.6 | 35.5 | 36.4 | 37.1 |
| B2-1-1 | Interest During Construction | 5.4 | 8.4 | 9.3 | 7.4 |
| B2-1-1 | Total Capital Expenditures | 449.5 | 682.3 | 832.0 | 450.0 |

119. This Capital Budget Overview and Budget Process exhibit has explained the Company's approach, reasoning and decisions that led to the 2014 to 2016 Capital Budget. The budgeting process has ensured that Enbridge's Capital Budget reflects the level of spending necessary to meet the growth, safety and operational requirements of the business. The inclusion of productivity savings within the Capital Budget reflects Enbridge's commitment to demonstrate cost effective operation during an extraordinary period of expenditure.

120. As explained at Exhibit A2, Tab 3, Schedule 1, the Capital Budgets for 2014 to 2016 are used as an input into the Allowed Revenue amounts for each year of the Customized IR term, with the adjusted 2016 Capital Budget (exclusive of WAMs spending) used as the relevant input for 2017 and 2018. This updated approach enables Allowed Revenue to be set for each of the five years of the Customized IR term.

Witnesses: J. Sanders
P. Squires

## Update to 2013 Actual Capital Expenditures

121. Set out below are updates to Tables 2 and 13, to include 2013 actual capital expenditures.

Table 2 - Updated
COMPARISON OF UTILITY CAPITAL EXPENDITURES
2013 BOARD APPROVED BUDGET AND 2014 -2016 FORECASTS
(EXPRESSED IN $MILLION)

| Item No. | | Col. 1 Board Approved Budget 2013 | Col. 2 Actual 2013 | Col. 3 Forecast 2014 | Col. 4 Forecast 2015 | Col.5 Forecast 2016 |
|---|---|---|---|---|---|---|
| A. | Customer Related | | | | | |
| 1.1.1 | Sales Mains | 44.6 | 52.6 | 39.6 | 42.1 | 49.1 |
| 1.1.2 | Services | 68.1 | 82.8 | 69.0 | 73.7 | 76.3 |
| 1.1.3 | Meters and Regulation | 10.3 | 10.8 | 10.4 | 11.0 | 11.7 |
| 1.1.4 | Customer Related Distribution Plant | 123.0 | 146.2 | 119.0 | 126.8 | 137.1 |
| 1.1.5 | NGV Rental Equipment | 0.3 | 0.2 | 3.4 | 3.6 | 3.7 |
| 1.1 | TOTAL CUSTOMER RELATED CAPITAL | 123.3 | 146.4 | 122.4 | 130.4 | 140.8 |
| B. | System Improvements and Upgrades | | | | | |
| 1.2.1 | Mains - Relocations | 27.5 | 40.3 | 28.6 | 24.9 | 26.0 |
| 1.2.2 | - Replacement | 71.0 | 83.4 | 105.6 | 94.2 | 82.5 |
| 1.2.3 | - Reinforcement | 27.0 | 11.8 | 21.3 | 31.6 | 18.1 |
| 1.2.4 | Total Improvement Mains | 125.5 | 135.6 | 155.5 | 150.7 | 126.6 |
| 1.2.5 | Services - Relays | 17.3 | 28.1 | 29.8 | 34.5 | 52.1 |
| 1.2.6 | Regulators - Refits | 9.7 | 15.1 | 9.8 | 10.0 | 10.1 |
| 1.2.7 | Measurement and Regulation | 24.3 | 22.2 | 31.5 | 34.1 | 32.6 |
| 1.2.8 | Meters | 16.0 | 15.1 | 16.6 | 18.5 | 20.8 |
| 1.2 | TOTAL SYSTEM IMPROVEMENTS AND UPGRADES | 192.8 | 216.1 | 243.2 | 247.8 | 242.2 |
| C. | General and Other Plant | | | | | |
| 1.3.1 | Land, Structures and Improvements | 7.8 | 7.6 | 12.9 | 11.2 | 6.8 |
| 1.3.2 | Office Furniture and Equipment | 1.6 | 2.1 | 4.6 | 4.7 | 4.4 |
| 1.3.3 | Transp/Heavy Work/NGV Compressor Equipment | 4.8 | 3.8 | 4.6 | 4.7 | 4.7 |
| 1.3.4 | Tools and Work Equipment | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 |
| 1.3.5 | Computers and Communication Equipment | 32.0 | 38.3 | 32.7 | 30.6 | 31.0 |
| 1.3 | TOTAL GENERAL AND OTHER PLANT | 47.6 | 53.2 | 56.3 | 52.7 | 48.4 |
| D. | Underground Storage Plant | 22.4 | 25.9 | 21.9 | 15.7 | 10.5 |
| E. | SUBTOTAL "CORE" CAPITAL EXPENDITURES | 386.1 | 441.6 | 443.8 | 446.6 | 441.9 |
| F. | Work and Asset Management System (WAMS) | 0.5 | - | 36.3 | 25.7 | 8.1 |
| G. | SUBTOTAL CAPITAL EXPENDITURES | 386.6 | 441.6 | 480.1 | 472.3 | 450.0 |
| H. | Leave to Construct | | | | | |
| 1.7.1 | Ottawa Reinforcement | 44.0 | 61.9 | 5.1 | - | - |
| 1.7.2 | GTA Reinforcement | 19.3 | 14.3 | 197.1 | 359.7 | - |
| 1.7 | TOTAL LEAVE TO CONSTRUCT | 63.3 | 76.2 | 202.2 | 359.7 | - |
| I. | TOTAL CAPITAL EXPENDITURES | 449.9 | 517.8 | 682.3 | 832.0 | 450.0 |

Witnesses: J. Sanders
P. Squires

Table 13 - Updated

Summary of Capital Expenditures by Business Area

($Millions)

| | | Col 1 | Col 2 | Col 3 | Col 4 | Col 5 |
|---|---|---|---|---|---|---|
| | | Board Approved | | | | |
| | | Budget | Actual | Forecast | Forecast | Forecast |
| Exhibit Reference | Business Area | 2013 | 2013 | 2014 | 2015 | 2016 |
| B2-2-1 | Customer Growth | 95.9 | 110.7 | 91.2 | 97.5 | 102.3 |
| B2-3-1 | Reinforcements | 11.4 | 6.4 | 11.4 | 16.9 | 8.8 |
| B2-3-2 | Major Reinforcements | 63.4 | 74.4 | 202.2 | 359.7 | - |
| B2-4-1 | Relocations | 15.2 | 22.2 | 15.2 | 13.4 | 12.6 |
| B2-5-1 | Sytem Integrity and Reliability | 84.7 | 114.0 | 132.3 | 135.1 | 141.1 |
| B2-6-1 | Storage | 19.0 | 22.6 | 19.2 | 13.8 | 8.9 |
| B2-7-1 | Business Development | 0.3 | 0.2 | 3.5 | 3.6 | 3.7 |
| B2-8-1 | Information Technology | 28.0 | 33.9 | 29.3 | 27.2 | 27.5 |
| B2-8-2 | Work and Asset Management System (WAMS) | 0.5 | - | 35.7 | 23.7 | 7.7 |
| B2-9-1 | Facilities and General Plant (includes Fleet) | 15.5 | 14.7 | 23.6 | 22.0 | 17.3 |
| | Sub total Capital by Business Area | 333.9 | 399.1 | 563.6 | 712.9 | 329.9 |
| B2-1-1 | Departmental Labour Costs | 76.6 | 73.7 | 74.8 | 73.4 | 75.6 |
| B2-1-1 | Capitalized Administrative and General | 33.6 | 38.1 | 35.5 | 36.4 | 37.1 |
| B2-1-1 | Interest During Construction | 5.4 | 6.9 | 8.4 | 9.3 | 7.4 |
| B2-1-1 | Total Capital Expenditures | 449.5 | 517.8 | 682.3 | 832.0 | 450.0 |

Witnesses: J. Sanders
P. Squires

# 2014 to 2016 Capital Requirements – Reinforcements

## Introduction

1. Reinforcement projects are the installation of new or modification of existing gas distribution plant to maintain minimum required system pressures. Adequate system pressures are required to maintain the capacity to meet customer demand. These projects are driven by Customer Growth and System Reliability considerations. This pre-filed evidence supports the requested total expenditure of $49.9 million for pipeline reinforcements over 2014 to 2016.

2. 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 Enbridge's franchise. The objective at Enbridge for network design is that the system must meet anticipated peak hourly demand. The peak hourly demand is the combination of the base load demand and the temperature-dependent demand. All load additions to the system are modeled based on this design temperature as shown in Table 1.

Table 1: Regional Peak Daily Design Temperature

| **Temperature Region** | **Peak Temperature[1]** | **Degree Day** |
|---|---|---|
| Peterborough & Lindsay | -28 °C | 46 |
| Georgian Bay & Barrie | -26 °C | 44 |
| Ottawa Area | -29 °C | 47 |
| Greater Toronto Area | -23 °C | 41 |
| Niagara Area | -21 °C | 39 |

Note: 1. This peak temperature is the average temperature on the peak day.

Reinforcement Planning Process

3. On an annual basis the System Analysis and Design group completes 4 major functions as part of planning for reinforcements. These are Load Gathering, Simulation, Annual Forecast and long range Planning, each of which is discussed below. This process allows Enbridge to build and validate the piping system models based on actual field conditions. Enbridge uses SynerGEE Gas, a pipeline simulation software produced by GL Noble Denton, to simulate the pressures and flows in the gas distribution network. Forecasted growth, both short and long term, are incorporated into these models to predict system performance. The two outcomes of this process are small localized reinforcements that are required for the upcoming heating season, and larger projects that are to be incorporated into the Company's Asset Plan.

Load Gathering

4. The Load Gathering process extracts actual billed customer consumption data for all accounts and matches this with locally recorded temperatures for each customer. This data gathering process provides Enbridge with a reliable, repeatable and predictable process that generates individual customer consumption. Based upon the temperature inputs and the predicted customer consumption, a load for each customer is assigned to selected points within the system models. Specific large volume customers are reviewed on an annual basis and loads are assigned based on actual consumption and contractual parameters.

Simulation

5. The Simulation function is performed after the heating season by utilizing the system models with the customer consumption from the Load Gathering process. This combination of inputs provides the basis for the pipeline pressure and flow analysis. The resultant pressure and flow information is then compared to actual field chart or recorder readings taken during seasonally cold temperatures throughout the gas distribution system. The loads and pressure inputs of the final system models are adjusted to simulate field conditions. This verified model then becomes the piping system of record that can then be used for all subsequent piping system analysis.

Annual Forecast

6. Using the verified model described above, additional customer loads that are forecasted for the upcoming heating season are applied. Overall system pressures and station flows are assessed to ensure that all system minimum pressures are maintained and all stations are operating within design parameters. Locations that are approaching minimum system pressure are selected for pressure monitoring and in some cases small localized reinforcements will be required.

Planning

7. Enbridge engages in long range planning that considers a minimum of 10 years of customer growth to ensure the adequacy of system performance over the longer term.

8. The forecasted future customer growth is obtained from a number of different sources. The primary source of information is the growth forecast by operating

region provided by the Customer Portfolio & Policy group as presented in Exhibit B3, Tab 2, Schedule 1 (Growth Customer Additions and Average Cost Per Customer) of the pre-filed evidence. Information obtained from development correspondence with government agencies, municipalities, consultants, and developers, is used to allocate customer growth and loads. The information regarding additions is used to better predict various local growth trends and planned developments.

9. Reinforcement solutions are considered if minimum system pressures cannot be maintained with forecasted loads applied. Each of the reinforcement segments identified is evaluated on a case by case basis considering any or all of the following: existing system capacity, system redundancy or looping, operating pressure, past operational history, integrity, damage history, constructability, cost, environmental impacts and future expansion or development potential.

10. The results of the long range planning process is an input to the capital budget and planning of construction activities to minimize disruptions and proactively maintain the gas piping systems in an efficient and reliable manner.

11. These larger reinforcement projects are itemized and incorporated into the Asset Plan.

Reinforcement Requirements

12. The profile for capital requirements is summarized in Table 2.

13. The year to year variances are the result of the lumpy nature of reinforcement projects, such as the York Region Reinforcement. These projects, identified by the planning process above, are each estimated to determine the capital requirement.

| Table 2: Capital Requirement Summary ($000) | | | | |
|---|---|---|---|---|
| | Budget | Forecast | | |
| DESCRIPTION | 2013 | 2014 | 2015 | 2016 |
| Alliston Reinforcement | - | - | 1,040[1] | 2,111 |
| Harmony Conlin Reinforcement | - | - | - | 3,714 |
| York Region Reinforcement Phase 1 | - | 510 | 10,404 | - |
| Identified Projects Less than $2M | 6,995 | 8,078 | 2,653 | - |
| Other Localized Small Reinforcements | 4,405 | 2,805 | 2,861 | 2,918 |
| Total | 11,400 | 11,393 | 16,958 | 8,743 |

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Note: 1. Contingent on customer timing.

# CAPITAL BUSINESS AREA: FACILITIES AND GENERAL PLANT (2014 – 2016)

1. The purpose of this evidence is to present the Facilities and General Plant capital expenditures budget for the 2014, 2015 and 2016 forecast period. Facilities and General Plant expenditures relate to Facilities Services and Fleet & Equipment. This exhibit provides the Ontario Energy Board (the "Board") with a detailed breakdown and explanation of the various categories of capital expenditure spends and justification for planned major projects over $2 million.

## Role of Facilities Services and Fleet & Equipment

2. The Facilities Services department manages all Enbridge Gas Distribution Inc. ("Enbridge", or the "Company") facilities (currently 20 properties, 11 owned and 9 leased, totaling 818,000 square feet) ensuring that appropriate facilities and workspace is available to support and respond to the operational requirements of the Company and provides 24/365 response to all building emergencies. The department is responsible for the planning and utilization of buildings to provide a safe and healthy work environment for all building occupants while optimizing the use of and efficiency of all facilities and ensuring adherence to building codes and by-laws, fire codes, and environmental regulations.

3. Facilities Services conducts strategic property planning, acquisition and disposal of properties, lease administration, asset management and internal project management of all reconfiguration, relocation, renovation and construction projects. The daily operation of buildings and grounds entails the maintenance and upgrade of building systems, energy management initiatives, premise security, life safety systems, business continuity planning, mail and delivery and housekeeping services.

Witnesses: D. Lapp
P. Rapini
R. Riccio

4. The Fleet & Equipment group has the overall responsibility for the administration, operation and maintenance of the utility fleet including cars and trucks, utility trucks and service vans. In addition, this group administers and maintains the heavy equipment employed such as backhoes, lifting equipment and welding machines. This group also maintains the smaller tools utilized by the Company including jackhammers and drills.

5. The Fleet & Equipment group manages the purchase and acquisition of all transportation equipment, including light duty and medium duty vehicles required for the safe and reliable operation of the utility. It also includes the purchase and acquisition of all heavy work equipment and small tools. Included with the capital associated with transportation equipment are the capital costs associated with converting and operating the fleet using compressed natural gas for fuel (NGV).

Capital Budget for Facilities and General Plant

6. Table 1 provides a summary of forecast capital expenditures by plant account for Facilities and General Plant for the 2013 to 2016 forecast period.

Table 1

| | ($000) | Col. 1 | Col. 2 | Col. 3 | Col. 4 |
|---|---|---|---|---|---|
| Item No. | | Estimate 2013 | Budget 2014 | Budget 2015 | Budget 2016 |
| 1.1 | Structures and Improvements | 6,865 | 8,000 | 8,100 | 6,500 |
| 1.2 | Leasehold Improvements | 558 | 4,920 | 3,120 | 270 |
| 1.3 | Office Furniture and Equipment | 1,932 | 4,630 | 4,680 | 4,380 |
| 1.4 | Fleet & Equipment | 6,310 | 6,064 | 6,129 | 6,143 |
| 1. | Total | 15,665 | 23,614 | 22,029 | 17.293 |

Witnesses: D. Lapp
P. Rapini
R. Riccio

7. Table 2 provides a detailed breakdown of Facilities and General Plant capital expenditures into categories of spend and major projects over $2 million for the 2014 to 2016 forecast period.

Table 2

| | ($000) | Col. 1 | Col. 2 | Col. 3 | Col. 4 |
|---|---|---|---|---|---|
| Item No. | | Estimate 2013 | Budget 2014 | Budget 2015 | Budget 2016 |
| | Categories of Spend: | | | | |
| 1.1 | New Workspace and Alterations | 3,208 | 3,745 | 2,685 | 2,810 |
| 1.2 | Building Improvements and Upgrades | 4,215 | 5,625 | 3,435 | 3,960 |
| 1.3 | Office Furniture and Equipment | 1,932 | 4,630 | 4,680 | 4,380 |
| 1.4 | Light & Medium Duty Transportation Equipment | 3,260 | 3,080 | 3,080 | 3,080 |
| 1.5 | Heavy Work Equipment | 815 | 770 | 770 | 770 |
| 1.6 | Small Tools & Equipment | 1,618 | 1,575 | 1,575 | 1,575 |
| 1.7 | NGV Equipment | 617 | 639 | 703 | 719 |
| 1. | Sub-Total | 15,665 | 14,000 | 10,800 | 11,150 |
| | Projects over $2 million: | | | | |
| 2. | Relocation of the Meter Shop to a Leased Property | 0 | 3,550 | 0 | 0 |
| 3. | Convert Vacated Space at VPC into Offices | 0 | 0 | 2,100 | 0 |
| 4. | Relocation of Fleet Garage to a Leased Property | 0 | 0 | 3,000 | 0 |
| 5. | Total | 15,665 | 23,614 | 22,029 | 17.293 |

/C

8. A description of the items addressed within each of the categories of spends identified are as follows:

   a. New Workspace and Alterations. This category includes capital expenditures required to build new offices, conference rooms and common areas as well as industrial workspace such as warehousing and

operations yards at any of the existing owned and leased buildings as well as any new additional facilities that are acquired. The needs of the Company are changing constantly and it is critical that the facilities meet the demands in an effective and timely manner. While the workspace standards and designs are developed to allow maximum flexibility without constant staff workspace reconfigurations and relocations, it is necessary to adapt to meet the changing demands.

b. Building Improvements and Upgrades. This category includes capital expenditures required to maintain the existing portfolio of buildings and includes replacement of building components such as roofs, windows, doors, carpet and ceiling tiles, building system upgrades (HVAC, electrical, life safety systems, data center), site improvements (landscaping, parking lots, fencing, gates, equipment yards) and energy efficiency projects (lighting, automated building controls). The individual building components have a finite life from a functional, operating cost and risk perspective. Several examples include:

- A roof or a chiller may have a useful life of 15 to 20 years depending on the maintenance performed over the years; however, failing to replace it at the end of its life cycle time will eventually result in equipment failure, high operating costs and occupant disruption.
- Site improvements are essential in upgrading to meet current municipal and Enbridge safety standards.
- Structural components of buildings such as exterior walls, staircases, do not age gracefully may require major restoration.

c. Office Furniture and Equipment. This category includes capital expenditures required to both replace existing furniture and equipment and furnish all new planned building space. This grouping includes system furniture, chairs, conference room and common space furniture, file cabinets and bookcases. Furniture replacement is required as the existing system furniture was implemented over 25 years ago and is at end of its life cycle.

The Company's existing REFF furniture systems were purchased in the mid-1980s when the concept of systems furniture was first implemented. The office environment has evolved immensely over the past thirty years.

- Warranty, obsolescence & fatigue: existing REFF furniture systems had a 10 year warranty which reflected anticipated use length. Today, that has increased to 15 or 20 years which is recognized by LEED and well beyond the expected lifecycle of the product. Enbridge systems furniture is approaching 30 years and if a replacement program is not initiated, fatigue and failure will become an issue.
- Ergonomic requirements are changing; supporting the Company's goal to zero injuries in the office, the height of the existing fixed workstation at 29" is a contributing factor of repetitive strain injury. Current standard workstations allow for adjustable height work surfaces - allowing the employee to adjust their primary work surface to the appropriate height or to stand - the current approach to ergonomics.
- A growing body of research links high quality indoor environments with access to natural light and views to gains in productivity, decreased absenteeism and improved employee morale. Providing for the

building occupants a connection between indoor spaces and the outdoors through the introduction of mid height workspace systems and perimeter placement. These strategies will improve the indoor environment of Enbridge facilities by exposing occupants to natural light.

- Workstation design to make use of materials and features reducing the "cubical feel". New systems are designed to allow for wiring of power and networks.
- Attraction and engagement is a concern of many organizations today. It's not just about attracting and retaining - it's about engaging employees while they are in their workplace. The Company's new systems furniture helps create an engaging and collaborative environment.

d. Light & Medium Duty Transportation Equipment. This category includes light duty vehicles, which are all vehicles under 4500 kg, including cars, pick-up trucks and vans, and medium duty vehicles, which are vehicles over 4500 kg, including utility trucks, flat-bed trucks, dump trucks and trailers.

e. Heavy Work Equipment. This category includes pieces of heavy work equipment including backhoes, welding machines, compressors and lifting devices such as hiabs and sidebooms.

f. Small Tools & Equipment. This category includes small tools and equipment, including jackhammers, drills, soil compactors, combustible gas indicators, generators, etc.

g. NGV Equipment. This category includes fleet vehicle NGV conversion kits and their installation as well as the associated NGV cylinders. Currently, about 75% of the Company's fleet vehicles are either dedicated natural gas or bi-fuel (natural gas and gasoline). Also included are the capital costs associated with the NGV compressor station facilities used for refueling the Company fleet at Enbridge facilities.

9. There is one major project within the Facilities and General Services capital expenditures for 2014 to 2016. That project relates to activities to remove non-office functions from the Company's Victoria Park Complex ("VPC") site to other locations, and then to use the vacated space for office functions. The costs related to this major project are set out at Items 2 to 4 of Table 2 above. This project is discussed within the project description document appended as "Attachment 1".

10. The following sections provide details about the forecast budgets for Facilities and General Plant for 2014 to 2016.

2014 Budget

11. The 2014 capital expenditure budget for Facilities and General Plant is $23.6 million. Set out below is a breakdown of the categories of spend and major projects for 2014:

i. New Workspace and Alterations – $3.8 million. The general activities under this category are described above. The most significant projects planned for 2014 include:

- Thorold Data Center expansion (phase 2) - $350,000
- Thorold mezzanine conference center - $500,000
- Thorold parking lot expansion - $240,000
- Building addition to the Technical Operations Centre for Engineering Materials Evaluation Center - $1.25 million ($625,000 in 2014 and $625,000 in 2015)
- Leasehold improvements for a new operations facility replacing the Casselman operations depot - $500,000

The balance of the budget for this category of spend is required for workspace reconfigurations and relocations necessary to meet the changing demands in the various owned and leased facilities.

ii. Building Improvements and Upgrades – $5.6 million. The general activities under this category are described above. The most significant projects planned for 2014 include:

- VPC Head Office parking lot repaving and sidewalks and lighting - $560,000
- Brampton Colony Court Operations Depot renovations and upgrades - $750,000
- Scarborough Kennedy Road Operations Depot renovations and upgrades - $750,000
- Thorold office renovation - $300,000
- Ottawa Coventry Road Administrative building 1st floor office renovation - $350,000

The balance of the budget for this category of spend is required for upgrades to maintain the existing portfolio of buildings.

iii. Office Furniture and Equipment – $4.6 million. The general activities under this category are described above. For 2014, much of the budget is required to replace existing furniture that is well beyond its expected lifecycle for the planned office renovation projects at the both Brampton Colony Court and Scarborough Kennedy Road operations depots and both the Thorold and Ottawa Coventry Road administrative offices. This grouping includes system furniture, chairs, conference room and common space furniture, file cabinets and bookcases.

iv. Fleet & Equipment - $5.4 million. The Capital costs for these items relates to replacement of these assets, or additions to the asset pool. Replacement occurs when the assets come to the end of their serviceable life, or the required maintenance costs are not justified relative to replacement. The Company's budget assumes that Enbridge will maintain the same pool of fleet vehicles over the 2014 to 2016 period.

- Light & Medium Duty Transportation Equipment - $3.08 million. There are no forecast increases in the light & medium duty transportation equipment units through the forecast period. This number is expected stay at the 2013 levels of 815 units. The cost forecast is based on review of the list of vehicles likely to require replacement (based on age and repair history) and forecasting the replacement cost for such vehicles.
- Heavy Work Equipment - $0.77 million. There are no forecast increases in the heavy work equipment units through the forecast period. This number

is expected stay at the 2013 levels of 405 units. The cost forecast is based on review of the list of vehicles likely to require replacement (based on age and repair history) and forecasting the replacement cost for such vehicles.

- Small Tools & Equipment - $1.58 million. Due to the variety of items in this category and their associated unit costs, the number of tool and equipment units varies from year to year. The cost forecast is based on estimates of replacement requirements for tools and equipment, as well as allowance for new technologies and tools that may enhance safety and efficiency of operations (ie. keyhole technology) that become available over the 2014 to 2016 term.

iii. NGV Equipment - $0.64 million. The NGV costs primarily relate to three items:

a. Compressed Natural Gas (CNG) cylinders for Company fleet vehicles. These are the fuel storage cylinders onboard the vehicles. When a gasoline vehicle is converted to run on natural gas, a new cylinder is installed. There are mandated inspection and retesting / recertification requirements for these cylinders they have been installed. The associated cost is estimated from the number of cylinders due to expire in any given year multiplied by the historical cost to retest/recertify

b. Conversion of new fleet vehicles. There are two cost components associated with converting new vehicles purchased by the Company to NGV. The first is the cost to buy and install conversion kits for the new vehicles, while the second is the cost to buy and install fuel storage cylinders for these same vehicles.

c. CNG refueling stations. There are costs associated with capital improvements to allow ongoing operation of the refueling stations used to fuel Enbridge's fleet. This includes replacement or refurbishment of worn major components (dispenser nozzle replacements, dryers refurbishment, compressor rebuilds, etc).

iv. Planned major projects over $2 million in 2014 are as follows:

- Relocation of the Meter Shop from VPC to a Leased Property - $3.6 million. This project is required to relocate the meter shop operation from its current VPC head office location to a more appropriate location in a leased facility. Details for this project are discussed within the project description document at Exhibit B2, Tab 10, Schedule 1, Attachment 1.

2015 Budget

12. The 2015 capital expenditure budget for Facilities and General Plant is $22.0 million. Set out below is a breakdown of the categories of spend and major projects for 2015 :

i. New Workspace and Alterations - $2.7 million. Included in the 2015 budget is $625,000 for the completion of the building addition to the Technical Operations Centre for EMEC warehouse space expansion. This project is planned to start in 2014 for a total cost of $1.25 million over the two year period. The balance of the budget for this category of spend is required for workspace reconfigurations and relocations necessary to meet the changing demands in the various owned and leased facilities.

ii. Building Improvements and Upgrades – $3.4 million. There are two significant projects planned for 2015:

- Ottawa Coventry Road Administrative building 2nd and 3rd floor office renovation project - $350,000.
- Emergency Operations Centre ("EOC") at the VPC Head Office - $1.2 million over the 2015 and 2016 forecast period ($500,000 in 2015 and $700,000 in 2016). As the Company has adopted the Incident Command System ("ICS") model for emergency response, the need for a dedicated EOC was identified to improve the emergency response capacity within Enbridge Gas Distribution.

The balance of the budget for this category of spend is required for upgrades to maintain the existing portfolio of buildings.

iii. Office Furniture and Equipment – $4.7 million. In 2015, significant planned projects include replacement of existing furniture that is well beyond its expected lifecycle for the planned office renovation at the Ottawa Coventry Road administrative offices and approximately one half of the furniture required for the new office space planned for the VPC head office facility will be purchased.

iv. Fleet & Equipment - $5.4 million. The Fleet & Equipment budget is forecast to remain flat through the 2014 to 2016 period. The explanation of these costs is set out above. category are developed based on the depreciation of these assets, where replacement generally occurs, either once they have come to the end of their useful life, or the required maintenance costs are not justified relative to replacement.

v. NGV Equipment - $0.70 million. See above.

vi. Planned major projects over $2 million in 2015 are the following:

- Conversion of the vacated space at VPC into office space - $2.1 million. Once the meter shop relocation project is completed, the vacated space at the Victoria Park Complex will be transformed into office space to accommodate forecasted office space needs at the head office, thus avoiding significant lease costs and associated build out costs to occupy nearby office towers. Details for this project are discussed within the project description document at Exhibit B2, Tab 10, Schedule 1, Attachment 1.
- Relocation of the Fleet Garage to a Leased Property - $3 million. The fleet garage at the VPC head office services the entire GTA with a primary focus on Operations with heavy vehicles, construction equipment, pickup trucks and smaller support vehicles. There are several safety issues regarding the mixed use nature of the VPC head office facility with both industrial and office functions on the same site. The project plan is to secure a new building shell on a suitable site and to retire the current building. Details for this project are discussed within the project description document at Exhibit B2, Tab 10, Schedule 1, Attachment 1.

2016 Budget

13. The 2016 capital expenditure budget for Facilities and General Plant is $17.3 million. Set out below is a breakdown of the categories of spend and major projects for 2016 :

i. New Workspace and Alterations – $2.8 million. In 2016, the most significant project planned is $550,000 for the expansion of the parking lot at the VPC head office facility. The project plan is to demolish the 45 year old fleet garage and construct a new parking lot in its place to meet the parking space requirements at the VPC head office. The balance of the budget for this category of spend is required for workspace reconfigurations and relocations necessary to meet the changing demands in the various owned and leased facilities.

ii. Building Improvements and Upgrades – $4.0 million. There is one significant project planned for 2016:

- A budget of $700,000 is for the completion of the Emergency Operations Centre ("EOC") at the VPC Head Office. This project is planned to start in 2015 for a total cost of $1.2 million over the two year period.

The balance of the budget for this category of spend is required for upgrades to maintain the existing portfolio of buildings.

iii. Office Furniture and Equipment – $4.4 million. In 2016, replacement of existing furniture that is well beyond its expected lifecycle will continue and the balance of the new furniture required for the new office space planned for the VPC head office facility will be purchased.

iv. Fleet & Equipment - $5.4 million. The Fleet & Equipment budget is forecast to remain flat through the 2014 to 2016 period. The explanation of these costs is set out above. .

Witnesses: D. Lapp
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R. Riccio

v. NGV Equipment - $0.72 million. See above.

vi. There are no planned major projects over $2 million in 2016.

Productivity

14. There are productivity savings that are included within the Facilities and General Plant budget for the 2014 to 2016 forecast period. Examples of productivity savings include the following:

i. Enbridge has negotiated directly with its preferred furniture manufacturer, in order to obtain the maximum discount pricing available, and has locked in this pricing for five years;

ii. Enbridge has implemented a process through which high value construction materials (such as wall systems, flooring and HVAC) are directly procured by Facilities Services and supplied to the general contractor, thus avoiding significant mark-ups on construction projects;

iii. The plan to create additional office and parking space at VPC will be cost-effective. This will allow the Company to reduce the amount of high-cost office space being leased, as employees currently in leased space can move to the VPC site. By doing this, the Company can take advantage of the tenant common areas and support space that already exists at VPC, rather than paying for such amenities as part of the rent for the currently leased space. The cost of the leased space to house the relocated meter shop and fleet garage will be less than the cost of the office space that Enbridge will be

vacating, since industrial building lease rates are 40% to 50% lower than office space lease rates.

iv. Enbridge has negotiated transportation and heavy work equipment pricing through a strategic sourcing initiative where savings are achieved through single sourcing with automobile manufacturers over a multi-year period, with savings based on volume discounts.

v. Minor increases or variations in fleet and equipment units over the 2014 to 2016 period will be accommodated through efficiencies in the management of the fleet and equipment inventory.

vi. Currently, compressed natural gas for vehicles is approximately 40 per cent less expensive than gasoline or diesel. The increased utilization of compressed natural gas for vehicles will improve efficiencies in the operation of the Company fleet. With vehicle manufacturers re-emerging in the production of natural gas powered cars and trucks as Original Equipment Manufacturers ("OEMs"), the availability of these vehicles will continue to increase the penetration of NGVs in the Company fleet.

# OVERVIEW – 2014 – 2016 OPERATING AND MAINTENANCE COSTS

1. The purpose of this evidence is to provide an overview of Enbridge Gas Distribution Inc.'s ("Enbridge" or the "Company") Operating and Maintenance ("O&M") forecast expenses for three years from 2014 to 2016 within the Company's Customized Incentive Regulation ("IR") Application. The Company's forecast of O&M expenses within the Allowed Revenue amounts for 2014 to 2015 is $425.3 million in 2014, $428.5 million in 2015, and $439.5 million in 2016. This Overview explains the main components of the 2014 to 2016 O&M Budget referred to as the P&M Budget", including embedded productivity savings, and sets out how the three year O&M Budget was created. Details of the components of the O&M Budget are found in the balance of the D1 series of exhibits.

2. The O&M Budget presented in this evidence is the result of a recent budget process. That process began with the preparation of "Bottom-Up" budgets, by O&M departments across the Company (collectively, the "Other O&M"). Those budgets were to be combined with O&M budgets in areas like DSM, Customer Care, pensions and RCAM, where the related costs are forecast using approaches that have previously been reviewed by the Ontario Energy Board ("OEB", or the "Board").

3. When those proposed O&M budgets were collected and combined, and then reviewed by Enbridge's Executive Management Team (the "EMT"), it was determined that the proposed increases in Other O&M were too high. Direction was provided to limit budget increases to a level at or near inflation, and to accomplish this in part by finding ways to manage the business without increasing

Witnesses: S. Kancharla
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the size of the workforce (effectively freezing the number of Full Time Equivalent ("FTE") positions. Given growth in work requirements across the Company, the expectation is that limiting O&M budget increases to around the level of inflation will require the Company to find and take advantage of productivity initiatives over the 2014 to 2016 period.

4. Throughout the budget process, the Company has taken steps to ensure a reasonable and modest rate impact resulting from the O&M growth, while taking into account the Company's key business objectives of a continued focus on safety and reliability, customer service, and compliance with legislative and regulatory requirements. The final 2014 to 2016 O&M Budget represents an outcome that incorporates expected productivity savings and allows the Company to safely operate and maintain the distribution system and meet its obligations to customers.

5. This Overview evidence sets out the main components of the 2014 to 2016 O&M Budget, including the process used to arrive at that budget, under the following topics:

   A. Explanation of the components of Enbridge's forecast O&M expenditures over the period of 2014 to 2016,

   B. Description of the budgeting process that identified the O&M budget, including explanation of the main drivers of the cost changes in the O&M budget,

   C. Explanation of how the Company incorporated productivity in the proposed O&M Budget for 2014 to 2016,

Witnesses: S. Kancharla
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D. Explanation of year over year variances in the 2014 to 2016 O&M Budget, and

E. Evaluation of the Reasonableness of Enbridge's Overall O&M Budget for 2014 to 2016.

A. O&M Budget Components

6. The Company's total O&M Budget is grouped into five categories: Customer Care/CIS Service Charges ("CC/CIS"), Demand Side Management ("DSM"), Pension and OPEB Costs, Regulatory Cost Allocation Methodology ("RCAM"), and Other O&M. This grouping is consistent with the approach that has previously been presented to the Board.

7. A summary of the overall O&M Budget from 2013 Board Approved to 2016 Budget, sorted by these five categories, is provided in Table1.

Table 1
Enbridge Gas Distribution
Summary of Operating and Maintenance Expense by Category
From 2013 Board Approved to 2016 Budget

| Line No. | Categories ($ Millions) | Col. 1 Board Approved 2013 | Col. 2 Budget 2014 | Col. 3 Budget 2015 | Col. 4 Budget 2016 | Col. 5 2014 vs. 2013 | Col. 6 2015 vs. 2014 | Col. 7 2016 vs. 2015 |
|---|---|---|---|---|---|---|---|---|
| 1. | Customer Care/CIS Service Charges | $89.4 | $92.6 | $96.5 | $100.4 | $3.2 | $3.9 | $3.9 |
| 2. | Demand Side Management ("DSM") [(1)] | 31.6 | 32.2 | 32.8 | 33.5 | 0.6 | 0.6 | 0.7 |
| 3. | Pension and OPEB Costs | 42.8 | 37.2 | 33.8 | 30.9 | (5.6) | (3.5) | (2.9) |
| 4. | Regulatory Cost Allocation Methodology("RCAM") | 32.1 | 35.3 | 34.0 | 33.8 | 3.2 | (1.3) | (0.2) |
| 5. | Other O&M | 219.2 | 228.0 | 231.5 | 241.0 | 8.8 | 3.5 | 9.5 |
| 6. | Total Net Utility O&M Expense | $415.1 | $425.3 | $428.5 | $439.5 | $10.2 | $3.2 | $11.0 |

*[(1)] 2013 DSM reflects the final Board approved amount of $31.6M*

Witnesses: S. Kancharla
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8. The first four categories of O&M budgets set out above are determined through the application of mechanisms or approaches that have previously been presented to and accepted by the OEB. Each of these are described below:

   a. *Customer Care/CIS*: As a result of the EB-2011-0226 proceeding, the Board approved a mechanism to establish Enbridge's Customer Care O&M Costs and Customer Information System ("CIS") costs for each year from 2013 to 2018. This mechanism is detailed in the EB-2011-0226 Enbridge Gas Distribution Customer Care and Customer Information Settlement Agreement (the "CC Settlement"). Essentially, it sets a per customer cost for Customer Care and CIS services, which is applied to an updated customer forecast each year (using the definition of customer numbers in the Accenture contract) to determine the revenue requirement associated with those services. The CC Settlement does not address the determination of the Company's Bad Debt expense in each of these years. As contemplated in the CC Settlement, the Customer Care CIS Rate Smoothing Deferral Account ("CCCISRSDA") was established to facilitate a rate smoothing mechanism agreed to in order to defer some of the impact of completing the recovery of the CIS capital and related costs on rates in 2013 into future years. Please refer to Exhibit D1, Tab 10, Schedule 1 for a review of the treatment of CC/CIS costs as a result of the CC Settlement.

   b. *RCAM (Regulatory Cost Allocation Methodology)*: The RCAM amount for 2014 to 2016 utilizes the RCAM methodology which was approved by the

Board in EB-2006-0034. Under the RCAM methodology, the Company completes an annual review of the services it requires and receives from its corporate parent Enbridge Inc. The service schedules which govern the services received are amended as required. RCAM results are the subject of an annual review by interveners through the RCAM consultative. Although the RCAM costs for 2013 were part of the overall Board-approved Other O&M amount of $251.3 million, Enbridge has removed the RCAM forecast costs of $32.1 million from that figure, in order to present RCAM separately within its 2014 to 2016 O&M Budget. The details of RCAM expenses for 2013 to 2016 are explained in evidence at Exhibit D1, Tab 4, Schedule 1.

c. *Pension and OPEB (Other Post-Employment Benefit) Costs*: Through the EB-2011-0354 proceeding, Enbridge and other parties agreed that the Company should recover only its actual pension and OPEB costs over the coming IR term. As a result of the Settlement Agreement for EB-2011-0354, a new variance account, the Post-Retirement True-up Variance Account (the “PTUVA”) was created to true-up both pension and OPEB costs in 2013, so that variances from forecast amounts would be recovered from or credited to ratepayers. The Company is proposing the continuation of this approach, including the use of the PTUVA for the 2014 through 2018 years within this Customized IR Application. The PTUVA evidence is provided at Exhibit D1, Tab 8, Schedule 1. For the 2014 to 2018 period, the forecast pension expense included within the O&M Budget was derived from Mercer Report - Updated Estimated 2014 to 2018 Accrual Costs as of March 28, 2013 (Exhibit D1, Tab 16, Schedule 1

Appendix 1), and the forecast OPEB expense included within the O&M

Budget was derived from a Mercer report, dated April 1, 2013 (Exhibit D1, Tab 16, Schedule 1, Appendix 2).

d. *DSM (Demand Side Management)*: The DSM budget has a separate regulatory process for application and approval of costs. The 2014 DSM budget is based on the recently filed DSM Plan updated for the 2013 and 2014 rate years in EB-2012-0394. The 2014 DSM budget will be approved by the Board in this proceeding. The 2015 and 2016 DSM budgets have been escalated by inflation of 2.0% each year. The DSM evidence can be found at Exhibit D1, Tab 7, Schedule 1.

9. The balance of the Company's O&M Budget is categorized as "Other O&M". This category consists of HR related costs (net of capitalization) including salaries and wages, employee benefits, short term incentive program, employee training and development, materials and supplies, outside services, consulting, repairs and maintenance, fleet, rents and leases, telecommunications, travel and other business expenses, memberships, provision for uncollectables, claims, damages, legal fees, audit fees, A&G capitalization, and other.

10. As the O&M budgets related to CC/CIS, pension and OPEB costs, DSM, and RCAM are determined in accordance with the Board approved approaches and methodologies set out above, and are described in their respective D1 exhibits, the primary focus of this O&M Overview evidence is on the Other O&M Budget.

Witnesses: S. Kancharla
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11. Table 2, below, provides a standard detailed schedule of the proposed Other O&M Budgets for 2014 to 2016 by cost type, as compared to the 2013 Board approved Capital Budget amount of $219.2 Million. The listing of Other O&M by department is provided in Table 10, at the end of this exhibit.

Table 2
Enbridge Gas Distribution
Other Operating and Maintenance Expense by Cost Type
2013 Board Approved to 2016 Budget

| Line No. | Particulars ($ millions) | Board Approved 2013 (a) | Budget 2014 (b) | Budget 2015 (c) | Budget 2016 (d) | 2014 vs. 2013 (b)-(a) | 2015 vs. 2014 (c)-(b) | 2016 vs. 2015 (d)-(c) |
|---|---|---|---|---|---|---|---|---|
| 1. | Salaries and Wages | $167.7 | $170.6 | $174.6 | $179.0 | $2.9 | $4.0 | $4.4 |
| 2. | Benefits | 25.3 | 25.8 | 26.4 | 26.9 | 0.5 | 0.6 | 0.6 |
| 3. | Short Term Incentive Program | 20.7 | 21.2 | 21.6 | 22.1 | 0.5 | 0.5 | 0.5 |
| 4. | Employee Training and Development | 4.8 | 5.0 | 4.8 | 4.8 | 0.2 | (0.2) | 0.0 |
| 5. | Materials and Supplies | 5.3 | 5.2 | 5.2 | 5.3 | (0.1) | 0.1 | 0.1 |
| 6. | Outside Services | 83.7 | 86.1 | 85.7 | 91.2 | 2.4 | (0.4) | 5.5 |
| 7. | Consulting | 5.1 | 4.7 | 4.9 | 5.2 | (0.4) | 0.1 | 0.3 |
| 8. | Repairs and Maintenance | 2.3 | 2.4 | 2.4 | 2.4 | 0.0 | 0.0 | 0.0 |
| 9. | Fleet | 10.2 | 10.4 | 10.5 | 10.7 | 0.1 | 0.2 | 0.2 |
| 10. | Rents and Leases | 7.3 | 7.4 | 7.5 | 7.8 | 0.0 | 0.1 | 0.3 |
| 11. | Telecommunications | 3.6 | 3.7 | 3.8 | 3.9 | 0.1 | 0.1 | 0.1 |
| 12. | Travel and Other Business Expenses | 5.4 | 5.0 | 5.1 | 5.1 | (0.3) | 0.0 | 0.0 |
| 13. | Memberships | 5.0 | 5.0 | 5.1 | 5.2 | 0.0 | 0.1 | 0.1 |
| 14. | Claims, Damages and Legal Fees | 0.9 | 0.9 | 1.0 | 1.0 | 0.1 | 0.0 | 0.0 |
| 15. | Interest on Security Deposits | 0.8 | 1.3 | 2.0 | 2.5 | 0.5 | 0.7 | 0.5 |
| 16. | Provision for Uncollectibles | 9.5 | 9.5 | 9.5 | 9.5 | - | - | - |
| 17. | Legal Fees | 2.7 | 2.8 | 2.8 | 2.9 | 0.1 | 0.1 | 0.1 |
| 18. | Audit Fees | 1.6 | 1.6 | 1.6 | 1.7 | 0.0 | 0.0 | 0.0 |
| 19. | Other | 4.5 | 4.6 | 4.9 | 5.0 | 0.1 | 0.3 | 0.1 |
| 20. | Internal Allocations and Recoveries | (29.9) | (29.5) | (29.6) | (30.1) | 0.4 | (0.1) | (0.6) |
| 21. | Capitalization (A&G) | (37.8) | (35.5) | (36.4) | (37.1) | 2.3 | (0.9) | (0.7) |
| 22. | Capitalization | (75.5) | (76.8) | (78.7) | (80.7) | (1.4) | (1.9) | (1.9) |
| 23. | Regulatory Eliminations | (4.0) | (3.3) | (3.2) | (3.3) | 0.8 | 0.1 | (0.1) |
| 24. | Other O&M | $219.2 | $228.0 | $231.5 | $241.0 | $8.8 | $3.5 | $9.5 |

Witnesses: S. Kancharla
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B. O&M Budget Process, including Main Drivers of the Cost Changes

12. In early March 2013, the Company made the decision to proceed with this Customized IR plan, which includes forecasts of 2014 to 2016 costs to inform the building up of Allowed Revenue amounts. At that time, the Company initiated a process to create its O&M Budget for 2014 to 2016, to support the Customized IR Application.

13. The O&M budgeting process began with a request to individual O&M departments to create three-year budgets setting out their spending requirements, while trying to limit budget increases to the level of inflation. Shortly thereafter, the Budget Letter which sets out economic assumptions and general guidelines was issued to departments to develop their “Bottom-Up” (or “grass-roots”) budget. The Budget Letter indicated an expectation that overall budget increases for each department will be at or less than the applicable inflation rate, and that each department would be asked to find cost saving and efficiencies.

14. In response to this direction, individual O&M budgets were prepared. These budgets represented the costs that each department reasonably expected will be experienced over the 2014 to 2016 term. Before each budget was finalized, it was reviewed and endorsed by the relevant leadership within each group.

15. The individual budgets were then provided to the Finance Department to be combined together into an overall O&M Budget for 2014 to 2016. That activity was completed by early April 2013, and the results were presented to the EMT for review and approval.

Witnesses: S. Kancharla
R. Lei
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M. Torriano

16. The O&M Budget that was presented to the EMT contained cost increases significantly higher than applicable inflation levels. Notwithstanding the concerns raised by representatives of the various operating groups within the Company that these budgets were reasonable and necessary, the EMT made the decision that overall Other O&M Budget increases had to be reduced to a level consistent with expected inflation levels. As noted, the O&M budgets for the other categories of spend identified on Table 1 were set using pre-established methodologies; they were therefore not subject to update.

17. The decision to revisit and reduce the Other O&M Budget was made in light of several factors, including the following:

    a. A desire to limit rate increases attributable to O&M cost increases, keeping in mind the significant extraordinary capital spending required for the GTA and Ottawa Reinforcement projects and the Work and Asset Management System ("WAMS") project; and

    b. A recognition that cost savings should be found in coming years, by identifying and benefitting from productivity and efficiency initiatives. These cost savings are expected to provide "headroom" to accommodate the increasing O&M demands and requirements of the business.

18. In mid-April 2013, instruction was provided to representatives of the O&M departments to create updated versions of their budgets, with cost increases limited to inflation.

Witnesses: S. Kancharla
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19. To ensure that the second budget submission met this expectation, the following approach was adopted:

    a. An inflation rate of approximately 2% was applied for 2014 to 2016 to all O&M departments;

    b. An assumption was made that salaries, wages and benefits costs would grow at this inflation rate, notwithstanding that these very significant costs would increase faster (for example, benefits are actually increasing at 6.1% per annum and merit increases are forecasted at 3.0% per annum).

    c. A decision was made to add no new FTEs from 2014 to 2016.

    d. Several discrete cost items that could not be accommodated within inflationary increases would be included separately within the budget. For example,

        i. IT incorporated $4.1 million for new WAMS hosting and support costs in 2016 over and above the business as usual inflationary increase.
        ii. Interest on Security Deposits will increase in line with expectations of interest rate hikes.

    e. Bad debt expense will be kept flat at the 2012 level of $9.5 million for 2014 to 2016. This was expected to partly fund some of the increases described above.

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20. The updated Other O&M Budget, prepared in response to the direction above, was completed by May 2013, and was subsequently approved by the EMT.

21. Table 3, below, sets out the O&M Budget reduction from the initial first iteration to the final second iteration:

Table 3
Enbridge Gas Distribution
2014-2016 O&M Budget Changes

| Line No. | Categories ($ Millions) | Col. 1<br>1st Iteration Initial Budget 2014 | Col. 2<br>Budget Cuts | Col. 3<br>2nd Iteration Final Budget 2014 | Col. 4<br>1st Iteration Initial Budget 2015 | Col. 5<br>Budget Cuts | Col. 6<br>2nd Iteration Final Budget 2015 | Col. 7<br>1st Iteration Initial Budget 2016 | Col. 8<br>Budget Cuts | Col. 9<br>2nd Iteration Final Budget 2016 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. | CC/CIS Service Charges | $92.6 | | $92.6 | $96.5 | | $96.5 | $100.4 | | $100.4 |
| 2. | RCAM | 35.3 | | 35.3 | 34.0 | | 34.0 | 33.8 | | 33.8 |
| 3. | DSM | 32.2 | | 32.2 | 32.8 | | 32.8 | 33.5 | | 33.5 |
| 4. | Pension and OPEB Costs | 37.2 | | 37.2 | 33.8 | | 33.8 | 30.9 | | 30.9 |
| 5. | Other O&M | 247.6 | (19.6) | 228.0 | 257.4 | (25.9) | 231.5 | 270.5 | (29.5) | 241.0 |
| 6. | Total Net Utility O&M Expense | $444.9 | ($19.6) | $425.3 | $454.4 | ($25.9) | $428.5 | $469.0 | ($29.5) | $439.5 |

22. The cost drivers which influence the individual O&M budgets which underpin the overall O&M Budget are set out within the evidence for each of those budgets, found in the balance of the D1 series of exhibits.

23. On an overall basis, though, the main cost drivers that are expected to influence the Other O&M Budget include the following:

    a. Continuation of core business activities, as in the past, accounts for the largest part of the Other O&M Budget.

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b. Continued customer growth, of more than 35,000 new customers each year, along with rising customer service demands from existing customers, adds to O&M demands and requirements.

c. Heightened compliance and worker safety requirements and expectations will continue to lead to increasing costs.

d. Increasing focus on System Integrity and Reliability requirements, along with the inherent demands from an aging infrastructure, also contribute to rising O&M costs.

24. In advancing this Other O&M Budget, which limits cost increases to a level at or near inflation, the Company recognizes that it is taking on real risks in terms of being able to operate at that cost level. That is seen by the fact that the "grass-roots" budgets that were prepared within the Company requested significantly more. It is also seen in the fact that there are known items whose costs will exceed the rate of increase set out within the Other O&M Budget. Examples include the following:

a. Expected higher salary and wage increase requirements of around 3% per year.

b. Expected increases in benefits costs – these costs are expected to increase 6.1% annually in 2014 and onwards.

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c. Expected increases in work requirements resulting from a growing customer base. For example, the service work associated with adding new customers will drive an incremental cost of approximately $2 million each year, which is not covered by the inflation escalation.

d. Expected increases in work requirements resulting from increased requirements for safety and integrity work.

e. Expected increases in Outside Services costs, as external contractors for the Operations Department are expected to increase their rates by between 3% and 6% during the IR period.

f. Costs that will result from compliance with new legislation and regulations (e.g. Bill 8, which is expected to drive higher costs as requests for locates will increase substantially).

g. Risk of increases to bad debt expense, which has been forecast to stay flat through the IR term. Bad debt expense is sensitive to several significant, non-controllable, external factors such as gas prices, weather, and economy. In the event of higher gas prices and/or colder weather and/or weakening economy, bad debt expense would be expected to increase significantly.

C. Incorporation of Productivity in the O&M Budget

25. As explained above, the Other O&M Budget for 2014 to 2016 is set at a level that will be very challenging to achieve. By taking this approach, the Company

recognizes that it will only be able to operate within the Other O&M Budget by being able to find productivity and efficiency gains.

26. To accomplish this, there are a number of productivity initiatives embedded within the Other O&M Budget.

27. First, and most significant, is the decision to add no new incremental FTEs from 2014 to 2016. The FTE budget for 2014 to 2016 is expected to decrease slightly year over year. The FTEs presented in Table 4, below, represent the Company's total gross FTEs before capitalization.

Table 4
Enbridge Gas Distribution
Full Time Equivalents (FTE's)
From 2013 Estimate to 2016 Budget

| Line No. | Salary Bands | Col. 1 Estimate 2013 | Col. 2 Budget 2014 | Col. 3 Budget 2015 | Col. 4 Budget 2016 | Col. 5 2016 vs. 2015 | Col. 6 2015 vs. 2014 | Col. 7 2014 vs. 2013 |
|---|---|---|---|---|---|---|---|---|
| 1. | Management | 157 | 154 | 153 | 152 | (1) | (1) | (3) |
| 2. | Supervisory | 1,492 | 1,484 | 1,472 | 1,470 | (1) | (12) | (8) |
| 3. | Union | 739 | 739 | 739 | 739 | - | - | (0) |
| 4. | Total FTE | 2,388 | 2,377 | 2,364 | 2,361 | (2) | (13) | (11) |

28. The decision to not add any incremental FTEs means that all employees will have to be more productive in order to accommodate increasing work requirements with the same staffing levels. By continuing to focus on prioritizing and streamlining

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their work, O&M departments are anticipated to accomplish significant productivity gains during the three years. Maintaining the existing FTE levels will partially relieve the cost pressure in the HR related costs: salaries and wages, employee benefits, STIP, IT, and facility costs. Should it be determined that additional FTEs are required this will have to be funded by savings elsewhere within O&M costs.

29. Examples of individual productivity initiatives within the Company's O&M departments are set out in the evidence for each department. One such example is seen in efforts to reduce locate and damages costs. Locate volumes have been rising over time due to improved excavator awareness and enhanced enforcement activities from the TSSA. Further increases are expected as a result of the passage of Bill 8 (Ontario Underground Infrastructure Notification System Act). However, incremental cost increases are expected to be partially offset by savings driven by fewer damages to the Company's pipeline system and greater workforce efficiency. Further details are set out at Exhibit D1, Tab 17, Schedule 1.

30. Above and beyond the productivity gains previously identified above, and within the individual evidence for the O&M departments, Enbridge will need to find further significant productivity savings in order to operate within the cost levels indicated in the Other O&M Budget. As noted, the Other O&M Budget contains conservative assumptions that are unlikely to materialize, such as limiting wage and benefit costs increases to 2%, assuming no increase in bad debt costs, and assuming no incremental requirements for new customers. To accommodate likely additional cost increases in those areas, the Company is committed to pursuing further productivity initiatives to maintain its O&M costs at modest inflationary levels without sacrificing safety, compliance, and customer service.

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D. Year over Year Variance Explanations

31. The 2014 to 2016 O&M Budget is set out at Tables 1 and 2 above. Set out below are high-level explanations of the year-to-year changes in the Other O&M Budget.

32. Discussion of the year-to-year changes in the level of the O&M Budgets for DSM, Customer Care/CIS, RCAM and Pension/OPEBs can be found in the specific evidence addressing each of those items.

2014 Budget Comparison to 2013 Board Approved – Other O&M

33. The 2013 Board Approved "All other O&M" amount of $251.3 million is an envelope amount which combines both RCAM and Other O&M by department, and is not specifically allocated to any particular O&M expense. Subsequently, the Company allocated $32.1 million to RCAM (because that was the cost forecast within the 2013 rates proceeding) and the remaining Other O&M amount of $219.2 million was allocated to departments as shown in Table 10. As a result, the $219.2 million Other O&M amount within the 2013 Budget is compared to 2014 Budget in the category of Other O&M.

34. The 2014 Other O&M is budgeted at $228.0 million. This is an increase of $8.8 million or 4.0% over the 2013 Board Approved. Exclusive of effectiveness of staff adds in 2013 ($3.3 million), increase for Ontario hearing costs ($0.7 million), increase for interest on security deposits ($0.5 million), the increase at the departmental baseline level represents $4.3 million or 2.0%, which is consistent with the inflation rate. The variances by major drivers between the two years are

summarized on Table 5. The variances by cost type within the O&M Budget for these years can be seen in Table 2.

Table 5
Enbridge Gas Distribution
Other O&M Year over Year Analysis
2014 Budget vs. 2013 Board Approved

| | $ million | | |
|---|---|---|---|
| **2013 Budget** | **$219.2** | | |
| Major Drivers for Change | | | Rationale for changes |
| 1. Salary and wage increases (net) | 1.5 | | Salary increase at inflation net of capitalization |
| 2. HR related costs: Benefits, STIP and training | 1.2 | | The increases are driven by salary increase |
| 3. External contractors rate increase | 0.8 | | The contractors used by Operations to conduct maintenance work |
| 4. Locates, ILI, and leak and corrosion | 0.3 | | The increased work for safety compliance |
| 5. Other inflationary pressures | 0.5 | | |
| | 4.3 | 2.0% | |
| 6. Effectiveness of staff adds in 2013 | 3.3 | | 2013 staff adds become fully effective in 2014 and onwards |
| 7. Ontario hearing costs | 0.7 | | Greater complexity, time, and cost required for 2nd Gen IR proceeding |
| 8. Interest on security deposits | 0.5 | | Higher forecasted interest rates for 2014 |
| | 4.5 | 2.1% | |
| 9. Total increase | 8.8 | 4.0% | |
| **2014 Budget** | **$228.0** | | |

2015 Budget Comparison to 2014 Budget – Other O&M

35. The 2015 Other O&M Budget is $231.5 million. This is an increase of $3.5 million or 1.5% over the 2014 Budget. Exclusive of the increase for interest on security deposits ($0.7 million) and the decrease for Ontario hearing costs (-$2.0 million), the departmental O&M will go up by $4.8 million or 2.1% over 2014, which is in line with the inflation rate. The variances by principal drivers between the two years are summarized on Table 6. The variances by cost type within the O&M Budget for these years can be seen in Table 2.

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Table 6
Enbridge Gas Distribution
Other O&M Year over Year Analysis
2015 Budget vs. 2014 Budget

| | $ million | | |
|---|---|---|---|
| **2014 Budget** | **$228.0** | | |
| Major Drivers for Change | | | Rationale for changes |
| 1. Salary and wage increases (net) | 2.1 | | Salary increase at inflation net of capitalization |
| 2. HR related costs: Benefits, STIP and training | 0.9 | | The increases are driven by salary increase |
| 3. Locates, ILI, and leak and corrosion | 0.7 | | Anticipated higher cost related to safety compliance |
| 4. External contractors rate increase | 0.4 | | The contractors used by Operations to conduct maintenance work |
| 5. IT HW/SW maintenance costs | 0.2 | | Cost increase reflecting market changes and Finance Renewal Project |
| 6. Other inflationary pressure | 0.5 | | |
| | | 4.8 | 2.1% |
| 7. Interest on security deposits | 0.7 | | Higher forecasted interest rates for 2015 |
| 8. Ontario hearing costs | (2.0) | | Anticipated reduction in the complexity of the main rate case proceeding |
| | | (1.3) | -0.6% |
| 9. Total increase | | 3.5 | 1.5% |
| **2015 Budget** | **$231.5** | | |

2016 Budget Comparison to 2015 Budget – Other O&M

36. The 2016 Other O&M Budget is $241.0 million. This is an increase of $9.5 million or 4.1% over the 2015 Budget. Exclusive of new WAMS hosting and support costs ($4.1 million) and the increase for interest on security deposits ($0.5 million), the departmental O&M will increase $4.9 million or 2.1% over 2015, which aligns with the inflation rate. The variances by principal drivers between the two years are summarized on Table 7. The variances by cost type within the O&M Budget for these years can be seen in Table 2.

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Table 7
Enbridge Gas Distribution
Other O&M Year over Year Analysis
2016 Budget vs. 2015 Budget

| | $ million | | | |
|---|---|---|---|---|
| **2015 Budget** | **$231.5** | | | |
| Major Drivers for Change | | | | Rationale for changes |
| 1. Salary and wage increases (net) | 2.4 | | | Salary increase at inflation net of capitalization |
| 2. HR related costs: Benefits, STIP and training | 1.1 | | | The increases are driven by salary increase |
| 3. IT HW/SW maintenance costs | 0.3 | | | Cost increase reflecting market changes and FRP project |
| 4. External contractors rate increase | 0.4 | | | The contractors used by Operations to conduct maintenance work |
| 5. Locates, ILI, and leak and corrosion | 0.3 | | | Anticipated higher cost related to safety compliance |
| 6. Other inflationary pressure | 0.4 | | | |
| | | 4.9 | 2.1% | |
| 7. WAMS IT hosting and support costs | 4.1 | | | New WAMS system is expected to be in service in 2016 |
| 8. Interest on security deposits | 0.5 | | | Higher forecasted interest rates for 2016 |
| | | 4.6 | 2.0% | |
| 9. Total increase | | 9.5 | 4.1% | |
| **2016 Budget** | | **$241.0** | | |

## E. Reasonableness of Enbridge's Overall 2014 to 2016 O&M Budget

37. As explained, the process used to establish Enbridge's O&M Budget for 2014 to 2016 ensures that the resulting budgets limit any increases to a reasonable level, which includes productivity challenges that the Company will have to meet.

38. In order to confirm the reasonableness of the resulting O&M Budget, the Company (with assistance from Concentric Energy Advisors Inc. ("Concentric") examined the O&M Budget from a number of perspectives. All the results indicate that the Company is productive and the O&M Budget for 2014 to 2016 is reasonable.

39. One way that the Company's O&M spending was evaluated was through benchmarking. Enbridge asked Concentric to update the benchmarking study that had been filed in the Company's 2013 rate case. The updated benchmarking study is set out as Appendix A to the Concentric Incentive Ratemaking Report, which is

filed as Exhibit A2, Tab 9, Schedule 1. As noted in the benchmarking discussion, the Company's O&M costs per customer are already among the lowest in the industry. In 2011 the Company had the fifth lowest O&M cost per customer in an industry study group comprised of 28 U.S. natural gas utilities. The Company's forecasted O&M cost per customer for 2014 to 2016 is expected to be higher than recent history, but not by a significant amount. It should be highlighted that Enbridge's forecasted O&M cost per customer of $208 in 2014 is lower than the industry study group average for 2011.

40. The Company conducted an analysis to compare the Company's forecast O&M cost per customer from 2014 to 2016 with the Company's historical trend of O&M costs per customer.

41. Table 8 and Chart 1, below, set out the results of this work, confirming that the Company's total O&M cost per customer will continue to decline (on a constant dollar basis) throughout the 2014 to 2016 IR term.

Table 8
Enbridge Gas Distribution
Total Operation and Maintenance Expense
Cost Per Customer

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2016 Constant Dollars per Customer | | | | | | | | | | |
| Total Utility O&M Cost Per Customer [1] | $199.5 | $189.4 | $191.2 | $189.5 | $189.2 | $200.1 | $202.3 | $199.6 | $193.1 | $190.5 |
| Nominal Dollars per Customer | | | | | | | | | | |
| Total Utility O&M Cost Per Customer [1] | $164.4 | $161.0 | $165.6 | $166.8 | $170.3 | $183.3 | $189.4 | $190.9 | $188.9 | $190.5 |
| Number of Customers (000's) [2] | 1,825 | 1,865 | 1,888 | 1,926 | 1,960 | 1,995 | 2,025 | 2,060 | 2,095 | 2,132 |

Notes:
1. Does not include ancillary program costs, or demand side management costs
2. Number of Customers represent total unlock customers

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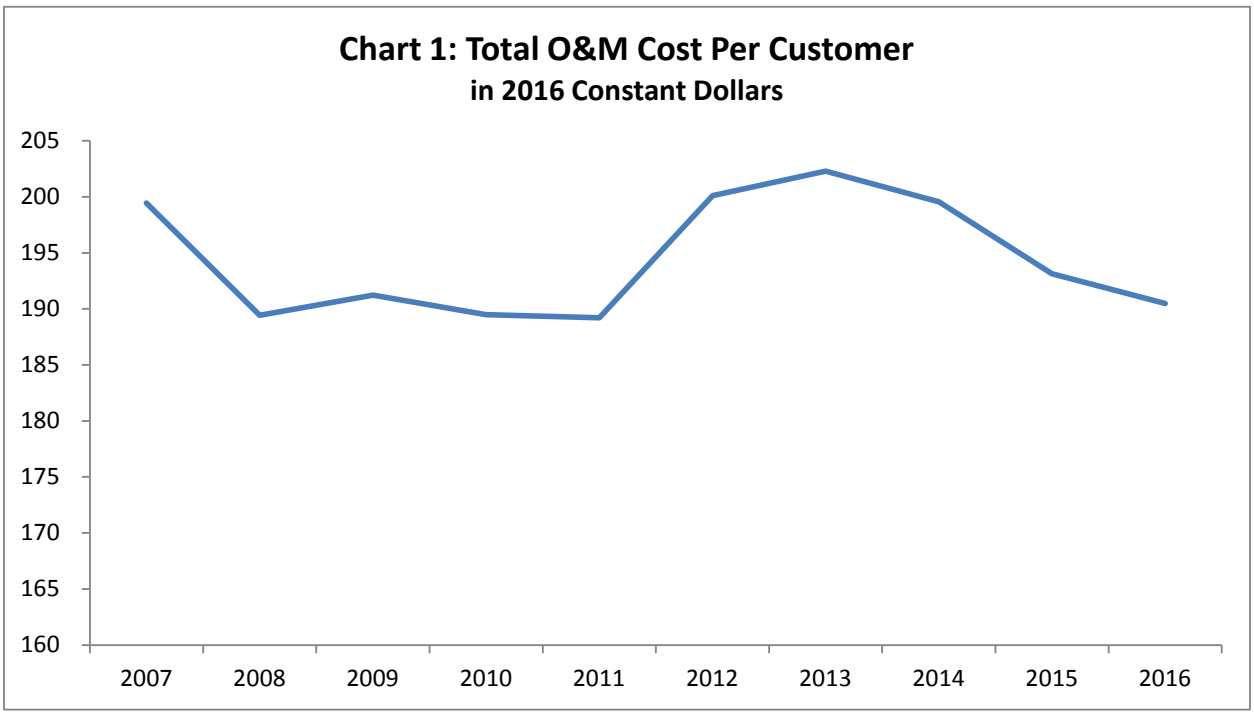


42. Table 9 and Chart 2, below, quantify the Company's cost per customer for "Other O&M" only, over the same time period. Again, this analysis confirms that Company's Other O&M cost per customer will continue to decline (on a constant dollar basis) throughout the 2014 to 2016 IR term.

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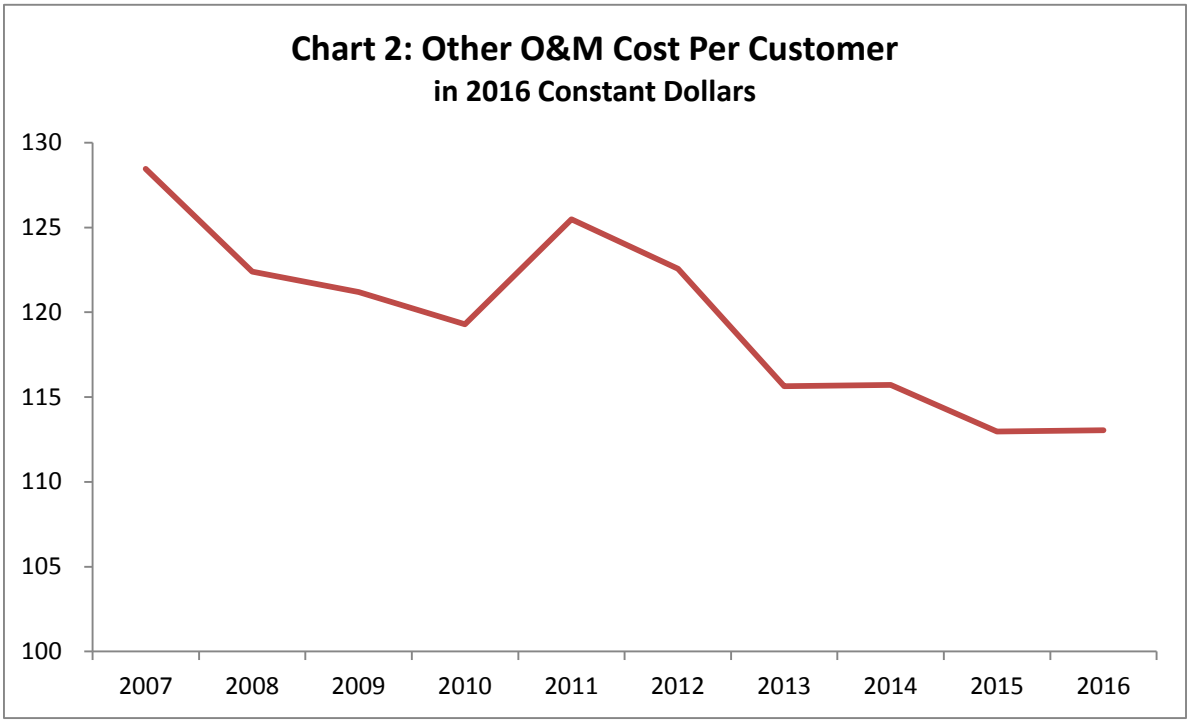
Table 9
Enbridge Gas Distribution
Other Operation and Maintenance Expense
Cost Per Customer

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2016 Constant Dollars per Customer | | | | | | | | | | |
| Other Utility O&M Cost Per Customer | $128.5 | $122.4 | $121.2 | $119.3 | $125.5 | $122.6 | $115.6 | $115.7 | $113.0 | $113.0 |
| Nominal Dollars per Customer | | | | | | | | | | |
| Other Utility O&M Cost Per Customer | $105.9 | $104.0 | $105.0 | $105.0 | $112.9 | $112.3 | $108.2 | $110.7 | $110.5 | $113.0 |
| Number of Customers (000's) [1] | 1,825 | 1,865 | 1,888 | 1,926 | 1,960 | 1,995 | 2,025 | 2,060 | 2,095 | 2,132 |

Notes:
1. Number of Customers represents total unlock customers

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43. The ten year trend set out in the Tables and Charts above indicates that both the Total O&M and Other O&M cost per customer in 2016 constant dollars are on the decline, which demonstrates that the Company not only has achieved productivity gains in the past years but also continues to drive productivity on a cost per customer basis in 2014 and onwards.

44. A third way that the Company's O&M spending was evaluated was through a Partial Factor Productivity ("PFP") study conducted by Concentric. For that analysis, Concentric compared the Company's forecasted All Other O&M cost per customer (including RCAM and Other O&M) over the 2014 to 2016 period with All Other O&M cost per customer that would be expected using the inflation and productivity factors that would be applied to Enbridge's O&M costs within an I-X incentive regulation ratemaking model. As explained in Concentric's report, the conclusion is that All Other O&M cost per customer would be expected to increase by 2.24% under a PFP I-X framework applied to All Other O&M costs. Enbridge's All Other O&M cost per customer is forecast to increase by a lesser amount. A comparison of the Company's forecasted All Other O&M cost per customer and the All Other O&M cost per customer derived from applying the PFP I-X formula is shown in the Chart 3 below. The difference between the expected O&M cost level and Enbridge's actual O&M Budget can be considered to be productivity savings. Concentric's full analysis is set out within the Concentric Incentive Ratemaking Report, which is filed as Exhibit A2, Tab 9, Schedule 1.

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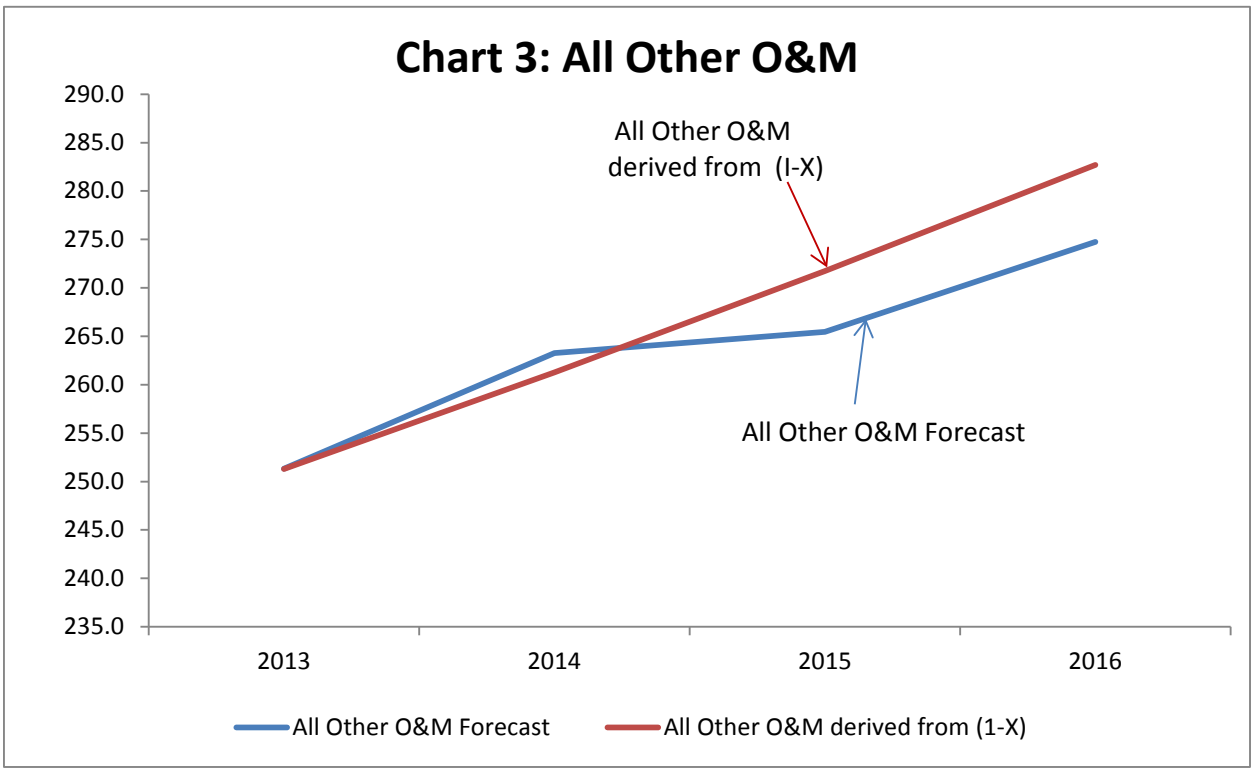


45. The conclusion to be taken from the analyses presented above (benchmarking analysis, PFP analysis, O&M cost per customer in 2016 constant dollars) is that the Company's 2014 to 2016 O&M Budget is at a reasonable level that incorporates productivity.

F. Conclusion

46. This O&M Budget Overview exhibit has explained the Company's approach, reasoning and decisions that led to the 2014 to 2016 O&M Budget. The

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determination to limit O&M Budget increases to a level consistent with inflation, even at a time of growing cost pressures, indicates that the Company is dedicated to cost effective operation during an extraordinary period of capital spending pressures. The inclusion of productivity savings within the O&M Budget enables and confirms this approach.

47. The balance of the D1 series of exhibits set out the details of Enbridge's 2014 to 2016 O&M Budget, organized by categories of spending (departments). Table 10 below shows the O&M budgets by department, and provides exhibit cross-references setting out where the full evidence for each individual O&M budget is found.

Table 10
Enbridge Gas Distribution
Operating and Maintenance Expense by Department
2013 Board Approved to 2016 Budget

| Line No. | Particulars ($000's) | Evidence Reference | Board Approved 2013 (a) | Budget 2014 (b) | Budget 2015 (c) | Budget 2016 (d) | 2014 vs. 2013 (b)-(a) | 2015 vs. 2014 (c)-(b) | 2016 vs. 2015 (d)-(c) |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Operations | D1-13-1 | $ 63,894 | $ 65,800 | $ 67,300 | $ 68,800 | $ 1,905 | $1,500 | $ 1,500 |
| 2. | Pipeline Integrity & Engineering | D1-17-1 | 38,158 | 39,004 | 39,874 | 40,775 | 846 | 870 | 900 |
| 3. | Human Resources and Facilities | D1-16-1 | 21,460 | 21,972 | 22,462 | 22,970 | 512 | 490 | 508 |
| 4. | Employee Benefits | D1-16-1 | 25,261 | 25,756 | 26,350 | 26,925 | 495 | 594 | 575 |
| 5. | Short Term Incentive Program | D1-16-1 | 20,700 | 21,156 | 21,628 | 22,116 | 456 | 472 | 488 |
| 6. | Information Technology | D1-14-1 | 25,846 | 26,387 | 26,976 | 31,680 | 541 | 589 | 4,704 |
| 7. | Regulatory, Public and Government Affairs | D1-18-1 | 22,107 | 22,589 | 20,914 | 21,251 | 482 | (1,675) | 336 |
| 8. | Finance | D1-11-1 | 11,453 | 11,717 | 11,979 | 12,249 | 264 | 262 | 270 |
| 9. | Provision for Uncollectibles (Bad Debts) | D1-3-1 | 9,500 | 9,500 | 9,500 | 9,500 | - | - | - |
| 10. | Customer Care (Exclude CC/CIS and Bad Debts) | D1-15-1 | 2,447 | 2,334 | 2,399 | 2,449 | (113) | 66 | 50 |
| 11. | Business Development & Customer Strategy (excluding DSM) | D1-15-1 | 6,493 | 6,185 | 6,363 | 6,506 | (308) | 177 | 144 |
| 12. | Legal and Corporate Security | D1-12-1 | 5,161 | 5,253 | 5,370 | 5,491 | 92 | 117 | 121 |
| 13. | Energy Supply and Policy | D1-19-1 | 4,228 | 4,243 | 4,348 | 4,449 | 16 | 105 | 101 |
| 14. | Non-Departmental | D1-20-1 | 3,554 | 3,589 | 3,669 | 3,752 | 34 | 80 | 83 |
| 15. | Capitalization (A&G) | | (37,795) | (35,500) | (36,440) | (37,140) | 2,295 | (940) | (700) |
| 16. | Interest on Security Deposit | | 780 | 1,313 | 2,019 | 2,521 | 533 | 706 | 501 |
| 17. | Regulatory Eliminations | | (4,049) | (3,276) | (3,192) | (3,295) | 773 | 84 | (103) |
| 18. | Other O&M | | 219,197 | 228,022 | 231,520 | 240,999 | 8,825 | 3,498 | 9,479 |
| 19. | Customer Care/CIS Service Charges | D1-10-1 | 89,444 | 92,631 | 96,502 | 100,426 | 3,187 | 3,870 | 3,925 |
| 20. | Pensions and OPEB Costs | D1-16-1 | 42,800 | 37,248 | 33,764 | 30,887 | (5,552) | (3,484) | (2,877) |
| 20. | Corporate Cost Allocations (including direct costs) | D1-4-1 | 45,761 | 44,977 | 45,140 | 45,874 | (784) | 164 | 733 |
| 21. | Demand Side Management Programs (DSM) | D1-7-1 | 31,588 | 32,159 | 32,802 | 33,458 | 571 | 643 | 656 |
| 22. | Conservation Services | D1-15-1 | 2,728 | 1,976 | - | - | (752) | (1,976) | - |
| 23. | Subtotal | | 431,519 | 437,013 | 439,728 | 451,644 | 5,494 | 2,715 | 11,916 |
| | Other Regulatory Eliminations | | | | | | | | |
| 24. | To eliminate Corporate Cost Allocations above RCAM | D1-21-1 | (13,666) | (9,695) | (11,179) | (12,116) | 3,971 | (1,484) | (937) |
| 25. | To eliminate Conservation Services and Overheads | D1-21-1 | (2,728) | (1,976) | - | - | 752 | 1,976 | - |
| 26. | Total Eliminations | | (16,394) | (11,671) | (11,179) | (12,116) | 4,723 | 492 | (937) |
| 27. | Total Net Utility O&M Expense | | $415,125 | $425,342 | $428,549 | $439,528 | $10,217 | $3,207 | $10,979 |

Notes:
1) Departmental O&M costs are net of capitalization.
2) Budget years have been restated based on the 2013 organization structure.
3) 2013 Capitalization (A&G) includes the effectivness of staff adds in 2013 of $3.3 million

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## Update – 2013 Actual Operation and Maintenance Costs

48. Set out below are updates to Tables 1 and 2, to include 2013 actual expenses.

Table 1 Updated
Enbridge Gas Distribution
Summary of Operating and Maintenance Expense by Category
From 2013 Board Approved to 2018 Budget

| Line No. | Categories ($ Millions) | Col. 1 Board Approved 2013 (a) | Col. 2 Actuals 2013 (b) | Col. 3 Budget 2014 (c) | Col. 4 Budget 2015 (d) | Col. 5 Budget 2016 (e) | Col. 6 Budget 2017 (f) | Col. 7 Budget 2018 (g) |
|---|---|---|---|---|---|---|---|---|
| 1. | Customer Care/CIS Service Charges | $89.4 | $83.1 | $92.6 | $96.5 | $100.4 | $104.4 | $108.5 |
| 2. | Demand Side Management ("DSM") (1) | 31.6 | 31.6 | 32.2 | 32.8 | 33.5 | 34.2 | 34.9 |
| 3. | Pension and OPEB Costs | 42.8 | 44.0 | 37.2 | 33.8 | 30.9 | 28.5 | 26.2 |
| 4. | Regulatory Cost Allocation Methodology("RCAM") | 32.1 | 32.1 | 35.3 | 34.0 | 33.8 | 34.8 | 35.9 |
| 5. | Other O&M | 219.2 | 224.7 | 228.0 | 231.5 | 241.0 | 248.5 | 256.3 |
| 6. | Total Net Utility O&M Expense | $415.1 | $415.5 | $425.3 | $428.5 | $439.5 | $450.5 | $461.8 |

*(1) 2013 DSM reflects the final Board approved amount of $31.6M*

Witnesses: S. Kancharla
R. Lei
A. Mandyam
M. Torriano

Table 2 Updated
Enbridge Gas Distribution
Other Operating and Maintenance Expense by Cost Type
2013 Board Approved to 2016 Budget

| Line No. | Particulars ($ millions) | Board Approved 2013 (a) | Actuals 2013 (b) | Budget 2014 (c) | Budget 2015 (d) | Budget 2016 (e) |
|---|---|---|---|---|---|---|
| 1. | Salaries and Wages | $167.7 | $168.3 | $170.6 | $174.6 | $179.0 |
| 2. | Benefits | 25.3 | 26.2 | 25.8 | 26.4 | 26.9 |
| 3. | Short Term Incentive Program | 20.7 | 21.4 | 21.2 | 21.6 | 22.1 |
| 4. | Employee Training and Development | 4.8 | 4.4 | 5.0 | 4.8 | 4.8 |
| 5. | Materials and Supplies | 5.3 | 6.2 | 5.2 | 5.2 | 5.3 |
| 6. | Outside Services | 83.7 | 87.5 | 86.1 | 85.7 | 91.2 |
| 7. | Consulting | 5.1 | 6.4 | 4.7 | 4.9 | 5.2 |
| 8. | Repairs and Maintenance | 2.3 | 2.0 | 2.4 | 2.4 | 2.4 |
| 9. | Fleet | 10.2 | 10.9 | 10.4 | 10.5 | 10.7 |
| 10. | Rents and Leases | 7.3 | 7.2 | 7.4 | 7.5 | 7.8 |
| 11. | Telecommunications | 3.6 | 3.6 | 3.7 | 3.8 | 3.9 |
| 12. | Travel and Other Business Expenses | 5.4 | 4.0 | 5.0 | 5.1 | 5.1 |
| 13. | Memberships | 5.0 | 4.3 | 5.0 | 5.1 | 5.2 |
| 14. | Claims, Damages and Legal Fees | 0.9 | 0.8 | 0.9 | 1.0 | 1.0 |
| 15. | Interest on Security Deposits | 0.8 | 0.8 | 1.3 | 2.0 | 2.5 |
| 16. | Provision for Uncollectibles | 9.5 | 9.3 | 9.5 | 9.5 | 9.5 |
| 17. | Legal Fees | 2.7 | 3.7 | 2.8 | 2.8 | 2.9 |
| 18. | Audit Fees | 1.6 | 1.7 | 1.6 | 1.6 | 1.7 |
| 19. | Other | 4.5 | 5.3 | 4.6 | 4.9 | 5.0 |
| 20. | Internal Allocations and Recoveries | (29.9) | (33.7) | (29.5) | (29.6) | (30.1) |
| 21. | Capitalization (A&G) | (37.8) | (38.1) | (35.5) | (36.4) | (37.1) |
| 22. | Capitalization | (75.5) | (74.3) | (76.8) | (78.7) | (80.7) |
| 23. | Regulatory Eliminations | (4.0) | (3.2) | (3.3) | (3.2) | (3.3) |
| 24. | Other O&M | $219.2 | $224.7 | $228.0 | $231.5 | $241.0 |

Witnesses: S. Kancharla
R. Lei
A. Mandyam
M. Torriano

# BOMA INTERROGATORY #2

## INTERROGATORY

Can Union provide a comparison showing the amount of money (over and above Board approved revenue requirement for 2013) that it proposes to recover from ratepayers over the five year plan period (the years 2014-2018), compared to what it would recover if it were to adopt the five year Union IRM Plan, recently agreed by the parties in a Settlement Agreement (EB-2013-0202), and applied the elements of that plan to its approved 2013 rates?

## RESPONSE

Please see the table below:

**Allowed Revenues (net of Gas Cost)**

| $ Millions | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | Board Approved | | | | | |
| Customized IR (As applied for) | 1,021 | 1,012 | 1,058 | 1,171 | 1,227 | 1,287 |
| Incremental over 2013 board approved | | (10) | 37 | 149 | 205 | 265 |
| | | | | | | |
| Approximation of Union IRM | 1,021 | 983 | 1,009 | 1,102 | 1,145 | 1,188 |
| Incremental over 2013 board approved | | (38) | (12) | 81 | 124 | 167 |

**Assumptions for 'Approximation of Union IRM':**

- Escalation factor assuming GDPIPI of 1.7%, with 60% productivity factor
- Approximation of Union Model
- Y factor treatment for GTA, Ottawa and WAMS project (ROE at 8.93%, other cost of capital as forecast)
- DSM, CIS/Customer Care, Pension Cost and carrying cost of Gas in Storage as flow through items
- Factor in SRC impact

Allowed Revenue incremental to that approved by the Board for 2013 averages $129 million during each year of the IR term. The increase in Allowed Revenue is mainly a result of the rate base growth due to increased forecast safety and integrity capital spending and expected increases in forecast Allowed ROE.

Witnesses: R. Fischer
S. Kancharla

Enbridge's Customized IR plan sets out Allowed Revenue amounts for each year to allow the Company to safely and efficiently operate its business and have the opportunity to earn the Board-approved level of return. Adoption of Union's IRM plan would result in forecast annual average increases of Allowed Revenue of about $65 million, about one half of that required by Enbridge to provide it with a reasonable opportunity to earn its Allowed Return. Clearly, Union's plan will not work for Enbridge's circumstances.

Witnesses: R. Fischer
S. Kancharla

# SEC INTERROGATORY #5

## INTERROGATORY

Issue A1: Is Enbridge's proposal for a Customized IR plan for a 5 year term covering its 2014 through 2018 fiscal years appropriate?

Please provide a table that sets out forecasts of the Applicant's allowed distribution revenues, deficiency or sufficiency, and percentage rate increase/decrease for each year from 2014 to 2018, calculated on the assumption that rates are set on the basis set out for Union Gas in EB-2013-0202, Exhibit A, Tab 2, as approved by the Board. Please state explicitly any assumptions used by the Applicant (e.g. inflation rates) in calculating the amounts requested.

## RESPONSE

The Assumptions used to generate the scenario described in the question above include the following:

| Assumptions for 'Approximation of Union IRM': |
|---|
| **Escalation factor assuming GDPIPI of 1.7%, with 60% productivity factor** |
| **Approximation of Union Model** |
| **Y factor treatment for GTA, Ottawa and WAMS project (ROE at 8.93%, other cost of capital as forecast)** |
| **DSM, CIS/Customer Care, Pension Cost and carrying cost of Gas in Storage as flow through items** |
| **2013 Depreciation Rate** |

Using these assumptions, EGD has calculated the resulting revenues that would be generated for each year over the 2014 to 2018 period. The table below sets out these revenues, as well as the Allowed Revenues excluding the depreciation rate changes

Witnesses: K. Culbert
R. Fischer
A. Kacicnik
M. Lister

and SRC proposal impacts and calculates the difference between them as the resulting implied deficiency for each year.

| Allowed Revenues (net of Gas Cost) | | | | | | |
|---|---|---|---|---|---|---|
| $ Millions | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| | Board Approved | | | | | |
| **Customized IR (Excluding Depreciation & SRC)** | 1,021 | 1,073 | 1,114 | 1,223 | 1,271 | 1,314 |
| **Approximation of Union IRM (Excluding Depreciation and SRC)** | 1,021 | 1,045 | 1,066 | 1,156 | 1,191 | 1,218 |
| **Difference (Implied Deficiency)** | | (28) | (48) | (67) | (80) | (95) |
| **Cumulative Difference** | | (28) | (76) | (143) | (222) | (318) |

Finally, the estimated rate impacts associated with the revenues calculated above for "Approximation of Union IRM" are depicted below.

Estimated rate impacts for the 2014 to 2018 period are shown in the table below:

**Bundled Services**

| Rate Class | Col. 1 2014 | Col. 2 2015 | Col. 3 2016 | Col. 4 2017 | Col. 5 2018 |
|---|---|---|---|---|---|
| **1** | 0.3% | 2.2% | 4.3% | 1.6% | 1.1% |
| **6** | 0.2% | 1.6% | 2.9% | 1.2% | 0.8% |
| **100** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **110** | 0.1% | 0.7% | 1.3% | 0.5% | 0.3% |
| **115** | 0.0% | 0.4% | 0.8% | 0.3% | 0.2% |
| **135** | 0.0% | 0.5% | 1.2% | 0.4% | 0.3% |
| **145** | 0.1% | 0.8% | 1.5% | 0.6% | 0.4% |
| **170** | 0.0% | 0.4% | 0.8% | 0.3% | 0.2% |
| **200** | 0.0% | 0.5% | 0.9% | 0.3% | 0.2% |
| **Unbundled Services** | | | | | |
| **125** | 0.2% | 1.8% | 10.0% | 9.9% | 9.9% |
| **300** | 0.2% | 1.8% | 10.0% | 9.9% | 9.9% |

Witnesses: K. Culbert
R. Fischer
A. Kacicnik
M. Lister

# CME INTERROGATORY #14

## INTERROGATORY

Issue: B17

Reference: Exhibit Fl, Tab 1, Schedule 1, page 3
Exhibit Fl, Tab 1, Schedule 3, Appendix A, pages 1 to 4

The evidence indicates that the revenue deficiencies for 2015 to 2018 inclusive are $29.1M, $119.7M, $166.1M and $215.7M respectively. We calculate the total rate increases EGDI is seeking over the four (4) years 2015 to 2018, before adjustments and updates, to be $530.6M, or, on average, about $132.65M per year.

(a) Please list and briefly describe the causes of these escalating year-over-year revenue deficiencies for 2015 over 2014, 2016 over 2015, 2017 over 2016 and 2018 over 2017.

(b) Do these amounts include or exclude the credit for Site Restoration Costs ("SRC")?

## RESPONSE

a) Table A on the following page, shows the cumulative Allowed Revenue sufficiency or (deficiency) major elements or causes.

b) The amounts shown exclude the proposed SRC-related amount of $259.8 million to be credited directly as a rate rider. However, the amounts do include the impacts of the proposed change in depreciation rates as per the Gannett Fleming Net Salvage study at Exhibit D2, Tab 1, Schedule 1, and include the impact of tax deductions associated with the rate rider credit proposal.

Witness: K. Culbert

TABLE A -----EGD UPDATED ALLOWED REVENUE
AND SUFFICIENCY / (DEFICIENCY)
2014 - 2018 FISCAL YEARS

| Line No. | | Col. 1 2014 Total ($Millions) | Col. 2 2015 Total ($Millions) | Col. 3 2016 Total ($Millions) | Col. 4 2017 Total ($Millions) | Col. 5 2018 Total ($Millions) | Col. 6 Total ($Millions) |
|---|---|---|---|---|---|---|---|
| | **Elements of sufficiency / (deficiency)** | | | | | | |
| 1. | CIS/Customer Care Agreement | (3.9) | (8.5) | (13.3) | (18.4) | (23.6) | (67.7) |
| 2. | GTA project revenue requirement | - | (7.0) | (58.8) | (58.7) | (58.6) | (183.1) |
| 3. | WAMS revenue requirement | - | 8.6 | (6.3) | (15.9) | (18.1) | (31.7) |
| 4. | Ottawa reinforcement revenue requirement | (5.0) | (4.8) | (4.8) | (4.8) | (4.8) | (24.2) |
| 5. | Constant Dollar Depr. Method / SRC change impacts (excl. rate rider) | 61.5 | 54.9 | 48.2 | 40.5 | 23.7 | 228.8 [1] |
| 6. | ROE increase (gross) on base rate base | (6.8) | (15.9) | (23.9) | (24.9) | (26.9) | (98.4) |
| 7. | ROE (gross) on other rate base growth (excl. other major drivers) | (8.2) | (16.1) | (23.6) | (31.2) | (38.2) | (117.3) |
| 8. | Cost of capital (excl. ROE) change on base rate base | 6.3 | 5.9 | 6.7 | 7.3 | 5.8 | 32.0 |
| 9. | Cost of capital (excl. ROE) on other rate base growth (excl. other major drivers) | (6.2) | (11.8) | (16.5) | (21.5) | (26.5) | (82.5) |
| | O&M increases (excl. Customer Care) | | | | | | |
| 10. | DSM | (0.8) | (1.4) | (2.1) | (2.8) | (3.5) | (10.6) |
| 11. | Pension and OPEB | 5.6 | 9.0 | 11.9 | 14.3 | 16.6 | 57.4 |
| 12. | Other O&M | (12.0) | (14.2) | (23.5) | (32.1) | (40.9) | (122.7) |
| 13. | Municipal taxes | (1.9) | (3.8) | (6.2) | (8.6) | (11.1) | (31.6) |
| 14. | Fixed financing charges | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 2.0 |
| 15. | Depreciation increase on "other" rate base growth (excl. other major drivers) | (11.7) | (24.4) | (35.1) | (45.7) | (56.0) | (172.9) |
| 16. | All other incl. changes in volumes, margin, supply mix, tax adds, tax deducts, interest tax shield, etc. | 13.9 | - | 27.2 | 36.0 | 46.0 | 123.1 [1] |
| 17. | Sufficiency / (Deficiency) -cumulative | 31.2 | (29.1) | (119.7) | (166.1) | (215.7) | (499.4) |

Notes:

1. $12.6M of the previously reported total SRC element, of $241.4M, was already captured within the GTA and Ottawa revenue requirement elements. Therefore the all other amounts previously reported (Line No. 16) were subsequently impacted as well.

# VECC INTERROGATORY #15

## INTERROGATORY

ISSUE B17f: Is the Allowed Revenue amount for each of 2014, 2015 and 2016 appropriate, including: Is the Other Revenues amount appropriate?

Evidence Ref: C1/T4/S1/ page 2, Table 1, "Other Service Revenues, Variance between 2014 and 2013"

a) Please augment the referenced table with a column that provides the most up-to- date available 2013 actuals and forecasted other service revenues, e.g., if a 10- month actual plus 2-month forecast is available for 2013, please provide it; if not, please provide a 2013 9-month actual plus 3-month forecast.

b) Please provide actual 2012 other service revenues in the same format as in Table 1.

c) Please provide a breakdown of the 2012 actual other service revenues that is comparable to the 2013 forecast provided in part a) of this interrogatory. For example, if a 9 (actual) + 3 (forecast) is provided in a), please break down the 2012 other service revenues by line item, showing the first 9 months of actuals and the last 3 months of actuals separately.

d) Please provide historical values by line item as in Table 1for all previous years for which actuals are available.

## RESPONSE

a) Please see the following table that includes the Company's 9+3 Estimate amounts for the revenue amounts noted in Exhibit C1, Tab 4, Schedule 1, page 2, Table 1, "Other Service Revenues, Variance between 2014 and 2013"

Witnesses: S. McGill
M. Torriano

Other Service Revenues
Variance between 2014 and 2013

| Line No. | Particulars ($ 000's) | Budget 2014 (a) | Board Approved 2013 (b) | Variance (c) | 2011 | 2012 | 2013 9+3 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|
| 1.1 | New Account Charge | $5,509 | $5,576 | ($67) | $5,397 | $5,288 | $5,274 | $5,609 | $5,713 |
| 1.2 | Statement of Account & Lawyer Letters Charge | 16 | 52 | -36 | 13 | 6 | 12 | 16 | 17 |
| 1.3 | Cheques Returned Non-Negotiable Charge | 158 | 159 | -1 | 172 | 152 | 139 | 161 | 164 |
| 1.4 | Gas Termination Charge for Collection | 2,539 | 2,638 | -99 | 2,344 | 2,386 | 2,407 | 2,586 | 2,633 |
| 1 | Total Credit to Customer Support O&M | $8,222 | $8,425 | ($203) | $7,926 | $7,832 | $7,832 | $8,372 | $8,527 |
| 2.1 | Safety Inspection Revenue | 495 | 489 | 6 | 453 | 550 | 413 | 501 | 507 |
| 2.2 | Meter Testing Revenue | 1,049 | 813 | 236 | 900 | 1,149 | 1,036 | 1,062 | 1,074 |
| 2.3 | Street Service Alteration Revenue | 722 | 936 | -214 | 972 | 699 | 862 | 730 | 739 |
| 2 | | $2,266 | $2,238 | $28 | $2,325 | $2,398 | $2,311 | $2,293 | $2,320 |
| 3 | Total | $10,488 | $10,663 | ($175) | $10,251 | $10,230 | $10,143 | $10,665 | $10,847 |
| 4 | DPAC | 1,647 | 2,125 | -478 | 3,014 | 2,421 | 1,744 | 1,512 | 1,420 |
| 5 | Total Service Charge & DPAC | $12,135 | $12,788 | ($653) | $13,265 | $12,651 | $11,887 | $12,177 | $12,267 |
| | Late Payment Penalty Revenue | $ 10,100 | $ 12,942 | $ (2,842) | $ 13,193 | $ 10,143 | $ 10,200 | $ 10,100 | $ 10,100 |

/C

b) Please see the Company's response VECC Interrogatory #15 found at I.B17.EGDI.VECC.15 (part a) noted above.

c)

Other Service Revenues
2012 9 & 3 Estimate and Actuals

| Line No. | Particulars ($ 000's) | 2012 Jan - Sep Actual | 2012 Oct - Dec Actual | 2012 Total 2012 Actual |
|---|---|---|---|---|
| 1.1 | New Account Charge | $4,025 | $1,263 | $5,288 |
| 1.2 | Statement of Account & Lawyer Letters Charge | 7 | ($1) | $6 |
| 1.3 | Cheques Returned Non-Negotiable Charge | 114 | $38 | $152 |
| 1.4 | Gas Termination Charge for Collection | 2,179 | 207 | 2,386 |
| 1 | Total Credit to Customer Support O&M | $6,325 | $1,507 | $7,832 |
| 2.1 | Safety Inspection Revenue[1] | 392 | 158 | 550 |
| 2.2 | Meter Testing Revenue[1] | 894 | 255 | 1,149 |
| 2.3 | Street Service Alteration Revenue[1] | 519 | 180 | 699 |
| 2 | | $1,806 | $592 | $2,398 |
| 3 | Total | $8,131 | $2,099 | $10,230 |
| 4 | DPAC | 1,584 | 837 | 2,421 |
| 5 | Total Service Charge & DPAC | $9,715 | $2,936 | $12,651 |

Note: -1) 9 & 3 data is not available for the identified amounts. 7 & 5 information is presented.

Witnesses: S. McGill
M. Torriano

d)

| | | Other Service Revenues | | | | |
|---|---|---|---|---|---|---|
| | | 2007 through 2011 | | | | |
| Line No. | Particulars ($ 000's) | Actual 2007 | Actual 2008 | Actual 2009 | Actual 2010 | Actual 2011 |
| 1.1 | New Account Charge | $ 5,755 | $ 5,358 | $ 5,809 | $ 5,270 | $ 5,397 |
| 1.2 | Statement of Account & Lawyer Letters Charge | 187 | 37 | 36 | 22 | 13 |
| 1.3 | Cheques Returned Non-Negotiable Charge | 237 | 232 | 191 | 176 | 172 |
| 1.4 | Gas Termination Charge for Collection | 2,006 | 2,130 | 2,147 | 2,323 | 2,344 |
| 1. | Total Credit to Customer Support O&M | $ 8,185 | $ 7,757 | $ 8,183 | $ 7,791 | $ 7,926 |
| 2.1 | Safety Inspection Revenue | 415 | 642 | 385 | 412 | 453 |
| 2.2 | Meter Testing Revenue | 546 | 581 | 560 | 716 | 900 |
| 2.3 | Street Service Alteration Revenue | 934 | 1,177 | 901 | 836 | 972 |
| 2. | | $ 1,895 | $ 2,400 | $ 1,846 | $ 1,964 | $ 2,325 |
| 3. | Total | $ 10,080 | $ 10,157 | $ 10,029 | $ 9,755 | $ 10,251 |
| 4. | DPAC | 2,181 | 2,214 | 2,628 | 3,269 | 3,014 |
| 5. | Total Service Charge & DPAC | $ 12,261 | $ 12,371 | $ 12,657 | $ 13,024 | $ 13,265 |

Witnesses: S. McGill
M. Torriano

# BOARD STAFF INTERROGATORY #69

## INTERROGATORY

ISSUE: D33: With respect to any alternative IR plan proposed for Enbridge, does that proposal meet the Board's objectives for incentive regulation for gas distributors and is it appropriate?

Evidence Ref: A2/T1/S3/para 23

Please provide a fresh run of the "I – X Scenario Model" with a new 5-year scenario for the years 2014 to 2018.

Input Assumptions

- Inflation factor held at latest consensus forecast for Ontario (all years)
- Productivity Factor: 1% (all years)
- Customer Growth: per application (1.7%)
- SRC Depreciation and related tax impacts: yes (per application)
- Rate Base: fixed at 2013 Board-approved level (all years)
- ROE: floats each year (per application)
- Y-Factors: GTA, Ottawa, Gas-fired Power Plants, Major IT Projects
- Other Y-Factors: pension, gas in storage, DSM, Customer Care/CIS (per application).

## RESPONSE

Please see the table below.

Witnesses: K. Culbert
R. Fischer
A. Kacicnik
M. Lister

| Allowed Revenues - IR ($M) | Rebase 2013 | Second Generation IR 2014 | 2015 | 2016 | 2017 | 2018 | *5 yr Av.* |
|---|---|---|---|---|---|---|---|
| | ADR | | | | | | |
| **Escalation factor** | | | | | | | |
| Escalation factor (Inflation) | | 1.7% | 1.7% | 1.7% | 1.7% | 1.7% | ***1.7%*** |
| Productivity | | -1.0% | -1.0% | -1.0% | -1.0% | -1.0% | ***-1.0%*** |
| I-X | | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% | ***0.7%*** |
| Customer growth | | 1.7% | 1.7% | 1.7% | 1.7% | 1.7% | ***1.7%*** |
| Total Escalation factor | | 2.4% | 2.4% | 2.5% | 2.4% | 2.4% | ***2.4%*** |
| **2013 Revenue Requirement** | **817** | 817 | | | | | |
| 2013 ROE (grossed up) on 2013 Ratebase | | (179) | | | | | |
| **2013 Adjusted Revenue Requirement - subject to escalation** | | **638** | | | | | |
| **Allowed Revenues - IR with escalation** | | **653** | **669** | **686** | **702** | **719** | 3,430 |
| **Y factor** | | | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | 21 | 21 | |
| Pension cost | 43 | 37 | 34 | 31 | 30 | 28 | |
| DSM | 31 | 32 | 33 | 33 | 34 | 35 | |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | 129 | 134 | |
| Y factor for WAMS (Floating cost of capital) | - | - | (9) | 6 | 16 | 18 | |
| Y factor for GTA&Ottawa (Floating cost of capital) | - | 5 | 12 | 64 | 63 | 63 | |
| ROE (grossed up for Tax) on 2013 rate base | - | 186 | 195 | 203 | 204 | 206 | |
| SRC impact (floating cost of capital) | - | (61) | (55) | (48) | (41) | (24) | |
| | 1,021 | 334 | 349 | 433 | 456 | 481 | |
| **Total Allowed Revenues -IR** | **1,021** | **987** | **1,018** | **1,119** | **1,158** | **1,200** | ***5,482*** |
| **Achieved ROE** | **8.9%** | **8.1%** | **8.0%** | **8.2%** | **7.7%** | **7.3%** | ***7.9%*** |
| **Forecast Allowed ROE** | **8.9%** | **9.3%** | **9.7%** | **10.1%** | **10.2%** | **10.3%** | ***9.9%*** |
| **ROE Variance (Achieved vs Allowed)** | | **-1.1%** | **-1.7%** | **-1.9%** | **-2.5%** | **-3.0%** | **-2.1%** |

Witnesses: K. Culbert
R. Fischer
A. Kacicnik
M. Lister

# UNDERTAKING TCU1.14

## UNDERTAKING

Technical Conference TR 1, page 155

EGDI to calculate whether, if the average ROE is 124.5 basis points above allowed ROE during the IRM term, then the effect of the SEIM is for the ratepayers to give back all or more than all of the earnings sharing that they received.

## RESPONSE

As stated at Exhibit A2, Tab 11, Schedule 3, the purpose of the SEIM is to include stronger incentives for the Company to implement long-term sustainable efficiencies which survive beyond the IR term and to encourage productivity investments in the later years of the IR term. These sustainable efficiencies will benefit ratepayers in terms of delivering safe and reliable energy to customers at rates lower than they would otherwise be beyond the IR term. ROE is only used as an input to calculate the potential SEIM reward. The SEIM reward will not be available to the Company unless it can meet the productivity and quality of service criteria as detailed on page 7 at Exhibit A2, Tab 11, Schedule 3.

As illustrated in the table below, the potential SEIM reward is calculated using the actual, after earnings sharing ROE. As a result, with an average overage of 124.5 bp (and including specific assumptions), the ESM amounts to ratepayers are approximately $1.2 million greater than the potential SEIM reward.

If this very specific example were to unfold, ratepayers would receive the benefit of $15.0 million in earnings sharing plus an amount greater than $13.8 million in base rates provided the SEIM reward can be justified with long-term, sustainable benefits and service quality and performance have not suffered during the IR term.

Witnesses: S. Kancharla
R. Small

ESM Calculations

| ($ Millions) | 2014 | 2015 | 2016 | 2017 | 2018 | Total |
|---|---|---|---|---|---|---|
| Rate Base | 5,000.0 | 5,000.0 | 5,000.0 | 5,000.0 | 5,000.0 | |
| Equity 36% | 1,800.0 | 1,800.0 | 1,800.0 | 1,800.0 | 1,800.0 | |
| Allowed ROE | 10.00% | 10.00% | 10.00% | 10.00% | 10.00% | |
| Actual ROE before sharing | 11.245% | 11.245% | 11.245% | 11.245% | 11.245% | |
| Net overearnings after 100bp deadband | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | |
| Gross overearnings (tax rate 26.5%) | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | |
| ESM amounts returned to ratepayers | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 15.0 |
| Actual ROE after sharing | 11.122% | 11.122% | 11.122% | 11.122% | 11.122% | |

SEIM Calculation

| | | |
|---|---|---|
| 2014 - 2018 average actual ROE after sharing | 11.122% | |
| 2014 - 2018 average allowed ROE | 10.000% | |
| Variance | 1.122% | |
| ROE premium (Variance * 50% * 50%) | 0.281% | (which is less than 0.5%) |
| 2019 rate base | 5,000.0 | |
| 2019 equity component of rate base | 1,800.0 | |
| Annual SEIM reward before gross-up for taxes | 5.0 | |
| Annual grossed-up SEIM reward | 6.9 | |
| Total SEIM reward (2 X Annual Reward) | 13.8 | |

Witnesses: S. Kancharla
R. Small

# UNDERTAKING TCU2.4

## UNDERTAKING

Technical Conference TR 2, page 38

EGDI to explain how it undertook the calculations to create the table in response to BOMA Interrogatory No. 2 (Exhibit I.A1.EGDI.BOMA.2).

## RESPONSE

Table 2 on page 2 provides calculation detail with respect to the determination of an approximate revenue requirement assuming the Union IRM found in the table in Exhibit I.A1.EGDI.BOMA.2 (updated 20140212) and reproduced at Table 1 below.

Table 1

**Allowed Revenues (net of Gas Cost)**

| $ Millions | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | Board Approved | | | | | |
| Customized IR (As applied for) | 1,021 | 1,012 | 1,058 | 1,171 | 1,227 | 1,287 |
| Incremental over 2013 board approved | | (10) | 37 | 149 | 205 | 265 |
| | | | | | | |
| Approximation of Union IRM | 1,021 | 983 | 1,009 | 1,102 | 1,145 | 1,188 |
| Incremental over 2013 board approved | | (38) | (12) | 81 | 124 | 167 |

**Assumptions for 'Approximation of Union IRM':**

- Escalation factor assuming GDPIPI of 1.7%, with 60% productivity factor
- Approximation of Union Model
- Y factor treatment for GTA, Ottawa and WAMS project (ROE at 8.93%, other cost of capital as forecast)
- DSM, CIS/Customer Care, Pension Cost and carrying cost of Gas in Storage as flow through items
- Factor in SRC impact

Witnesses: R. Fischer
J. Coyne, Concentric Energy Advisors Inc.

# Table 2

**Allowed Revenues - Approximation of Union Model**

| Allowed Revenues - IR ($M) | Rebase 2013 | Second Generation IR 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | ADR | | | | | |
| Productivity | | 60% | 60% | 60% | 60% | 60% |
| **Escalation factor** | | | | | | |
| Escalation factor (Inflation) | | 1.7% | 1.7% | 1.7% | 1.7% | 1.7% |
| Productivity | | -1.0% | -1.0% | -1.0% | -1.0% | -1.0% |
| I-X | | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% |
| Customer growth | | 1.7% | 1.7% | 1.7% | 1.7% | 1.7% |
| Total Escalation factor | | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% |
| **2013 Revenue Requirement** | **817** | | | | | |
| **Allowed Revenues - IR with escalation** | | **836** | **857** | **877** | **899** | **920** |
| **Y factor** | | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | 21 | 21 |
| Pension cost | 43 | 37 | 34 | 31 | 30 | 28 |
| DSM | 31 | 32 | 33 | 33 | 34 | 35 |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | 129 | 134 |
| Y factor for WAMS | - | - | (9) | 6 | 15 | 18 |
| Y factor for GTA&Ottawa | - | 5 | 11 | 60 | 60 | 60 |
| SRC impact | - | (62) | (55) | (50) | (43) | (27) |
| | 1,021 | 147 | 153 | 225 | 246 | 268 |
| **Total Allowed Revenues -IR** | **1,021** | **983** | **1,009** | **1,102** | **1,145** | **1,188** |
| **Achieved ROE (based on EGD required budgets)** | **8.9%** | **8.0%** | **7.6%** | **7.6%** | **7.2%** | **6.8%** |

**Calculation of Achieved ROE**

| | | | | | |
|---|---|---|---|---|---|
| Ratebase | 4,442 | 4,798 | 5,524 | 5,737 | 5,906 |
| Equity thickness | 36% | 36% | 36% | 36% | 36% |
| Deened Equity | 1,599 | 1,727 | 1,989 | 2,065 | 2,126 |
| Utility Earnings | 127 | 131 | 150 | 149 | 145 |
| Achieved ROE (based on EGD required budgets) | 8.0% | 7.6% | 7.6% | 7.2% | 6.8% |

Witnesses: R. Fischer
J. Coyne, Concentric Energy Advisors Inc.

# UNDERTAKING TCU2.14

## UNDERTAKING

Technical Conference TR 2, page 109

EGDI to respond to Energy Probe's Technical Conference Question 1(c) (Exhibit TC 2.2).

## RESPONSE

Please see the tables below. The cumulative difference in Revenue Requirement is reduced from the $318 million in Exhibit I.A1.EGDI.SEC.5 updated 20140212 to $228 million assuming return on equity, cost of debt, cost of preferred shares, and capital structure are set to levels approved by the Board for 2013.

Witnesses: R. Fischer
R. Small

**Allowed Revenues (net of Gas Cost)**

| $ Millions | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | Board Approved | | | | | |
| **Customized IR (Excluding Depreciation & SRC, assuming 2013 capital structure for 2014-2018)** (Refer to Table 2) | 1,021 | 1,072 | 1,103 | 1,201 | 1,248 | 1,285 |
| **Approximation of Union IRM (Excluding Depreciation and SRC)** (Refer to Table 1) | 1,021 | 1,045 | 1,066 | 1,158 | 1,193 | 1,220 |
| **Difference (Implied Deficiency)** | | (27) | (37) | (43) | (55) | (66) |
| **Cumulative Difference** | | (27) | (64) | (107) | (162) | (228) |

**Table 1**
**Allowed Revenues - Approximation of Union Model (Exclusive of SRC impact)**

| | Rebase | Second Generation IR | | | | |
|---|---|---|---|---|---|---|
| **Allowed Revenues - IR ($M)** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** |
| | ADR | | | | | |
| **Escalation factor** | | | | | | |
| Escalation factor (Inflation) | | 1.7% | 1.7% | 1.7% | 1.7% | 1.7% |
| Productivity | | -1.0% | -1.0% | -1.0% | -1.0% | -1.0% |
| I-X | | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% |
| Customer growth | | 1.7% | 1.7% | 1.7% | 1.7% | 1.7% |
| Total Escalation factor | | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% |
| **2013 Revenue Requirement** | **817** | | | | | |
| **Allowed Revenues - IR with escalation** | | **836** | **857** | **877** | **899** | **920** |
| **Y factor** | | | | | | |
| Carrying cost for Gas in Storage | 20 | 20 | 20 | 21 | 21 | 21 |
| Pension cost | 43 | 37 | 34 | 31 | 30 | 28 |
| DSM | 31 | 32 | 33 | 33 | 34 | 35 |
| Y factor for Customer Care | 110 | 114 | 119 | 124 | 129 | 134 |
| Y factor for WAMS (2013 cost of capital) | - | - | (9) | 6 | 16 | 18 |
| Y factor for GTA&Ottawa (2013 cost of capital) | - | 5 | 12 | 65 | 65 | 64 |
| SRC impact | - | - | - | - | - | - |
| | 1,021 | 209 | 209 | 280 | 294 | 300 |
| **Total Allowed Revenues -IR** | **1,021** | **1,045** | **1,066** | **1,158** | **1,193** | **1,220** |

Witnesses: R. Fischer
R. Small

**Table 2**

**ALLOWED REVENUE AND DEFICIENCIES (INCL. CIS/CC)**
**ASSUMING PROPOSED SITE RESTORATION COST CHANGES ARE REMOVED**
**AND ASSUMING 2013 CAPITAL STRUCTURE RATIOS AND RATES ARE MAINTAINED**
**2014 - 2018 FISCAL YEARS**

| Line No. | | Col. 1<br>2014<br>EGD<br>Total | Col. 2<br>2015<br>EGD<br>Total | Col. 3<br>2016<br>EGD<br>Total | Col. 4<br>2017<br>EGD<br>Total | Col. 5<br>2018<br>EGD<br>Total |
|---|---|---|---|---|---|---|
| | | ($Millions) | ($Millions) | ($Millions) | ($Millions) | ($Millions) |
| | **Cost of Capital** | | | | | |
| 1. | Rate base | 4,377 | 4,647 | 5,280 | 5,400 | 5,500 |
| 2. | Required rate of return | 6.80% | 6.81% | 6.81% | 6.81% | 6.81% |
| 3. | | 298 | 316 | 360 | 368 | 375 |
| | **Cost of Service** | | | | | |
| 4. | Gas costs | 1,456 | 1,607 | 1,633 | 1,633 | 1,633 |
| 5. | Operation and maintenance | 425 | 429 | 440 | 451 | 462 |
| 6. | Depreciation and amortization | 293 | 308 | 340 | 351 | 361 |
| 7. | Fixed financing costs | 2 | 2 | 2 | 2 | 2 |
| 8. | Municipal and other taxes | 41 | 43 | 46 | 48 | 50 |
| 9. | | 2,217 | 2,389 | 2,459 | 2,484 | 2,508 |
| | **Miscellaneous operating and non operating revenue** | | | | | |
| 10. | Other operating revenue | (41) | (41) | (41) | (41) | (41) |
| 11. | Other income | (0) | (0) | (0) | (0) | (0) |
| 12. | | (41) | (41) | (41) | (41) | (41) |
| | **Income taxes on earnings** | | | | | |
| 13. | Excluding tax shield | 91 | 73 | 68 | 73 | 73 |
| 14. | Tax shield provided by interest expense | (41) | (44) | (49) | (50) | (51) |
| 15. | | 50 | 30 | 19 | 22 | 21 |
| | **Taxes on deficiency** | | | | | |
| 16. | Gross deficiency | (26) | (65) | (136) | (169) | (191) |
| 17. | Net deficiency | (19) | (48) | (100) | (124) | (141) |
| 18. | | 7 | 17 | 36 | 45 | 51 |
| 19. | Sub-total Allowed Revenue | 2,531 | 2,711 | 2,832 | 2,877 | 2,913 |
| 20. | Customer Care Rate Smoothing Var. Adj. | (3) | (1) | 1 | 3 | 5 |
| 21. | **Allowed Revenue** | 2,528 | 2,710 | 2,833 | 2,880 | 2,918 |
| | **Revenue at existing Rates** | | | | | |
| 22. | Gas sales | 2,254 | 2,404 | 2,465 | 2,480 | 2,496 |
| 23. | Transportation service | 243 | 230 | 217 | 211 | 205 |
| 24. | Transmission, compression and storage | 2 | 2 | 2 | 2 | 2 |
| 25. | Rounding adjustment | (0) | - | (0) | - | (0) |
| 26. | Total | 2,498 | 2,636 | 2,683 | 2,693 | 2,703 |
| 27. | **Gross revenue deficiency** | (30) | (74) | (150) | (187) | (215) |
| 28. | **Allowed Revenue (Net of Gas Cost)** | 1,072 | 1,103 | 1,201 | 1,248 | 1,285 |

Witnesses: R. Fischer
R. Small

# UNDERTAKING TCU3.5

## UNDERTAKING

Technical Conference TR 3, pages 24 and 30

A. Enbridge to provide a table (or graph) of capital expenditures, 2000-2018 showing:

   (a) capital expenditures as percentage of depreciation costs;

   (b) capital expenditures on a per-customer basis;

B. Enbridge to then provide a similar table of capital expenditures, 2000 to 2018, after removing expenditures related to municipal relocations and the GTA project.

C. Enbridge to provide a list of the agencies that could trigger relocations of Enbridge plant, and the cost-sharing arrangements that apply to each agency.

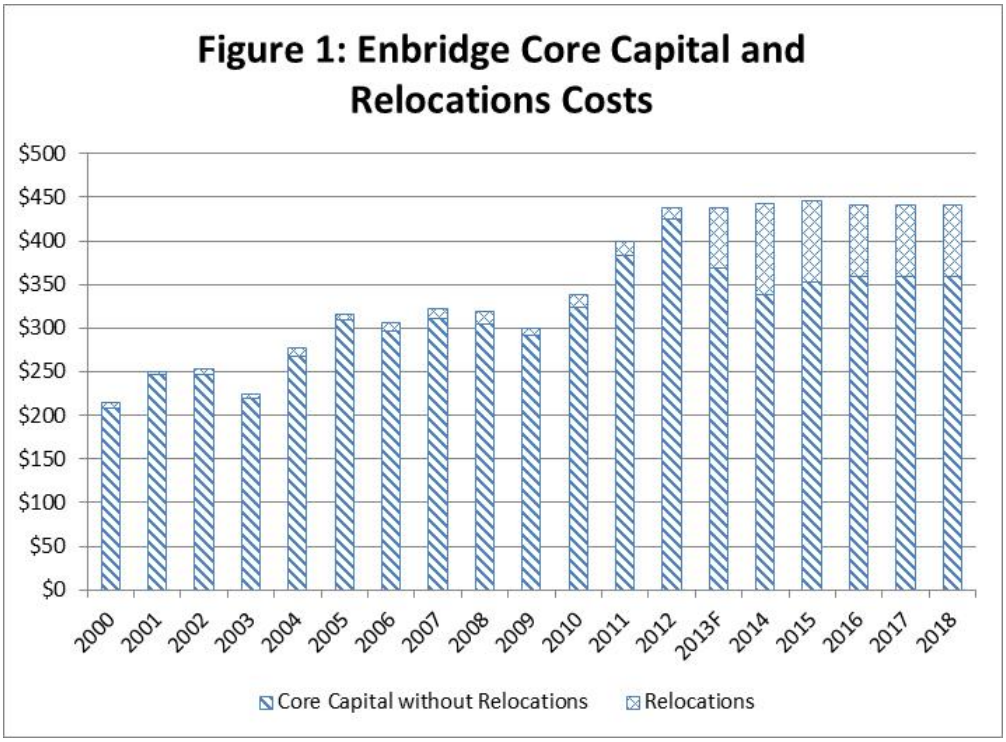
## RESPONSE

For Part A (a) see Table 3 and Figure 3, Part A (b) see Table 2 and Figure 2 on the following pages.

For Part B please see Table 1 and Figure 1 on the following page.

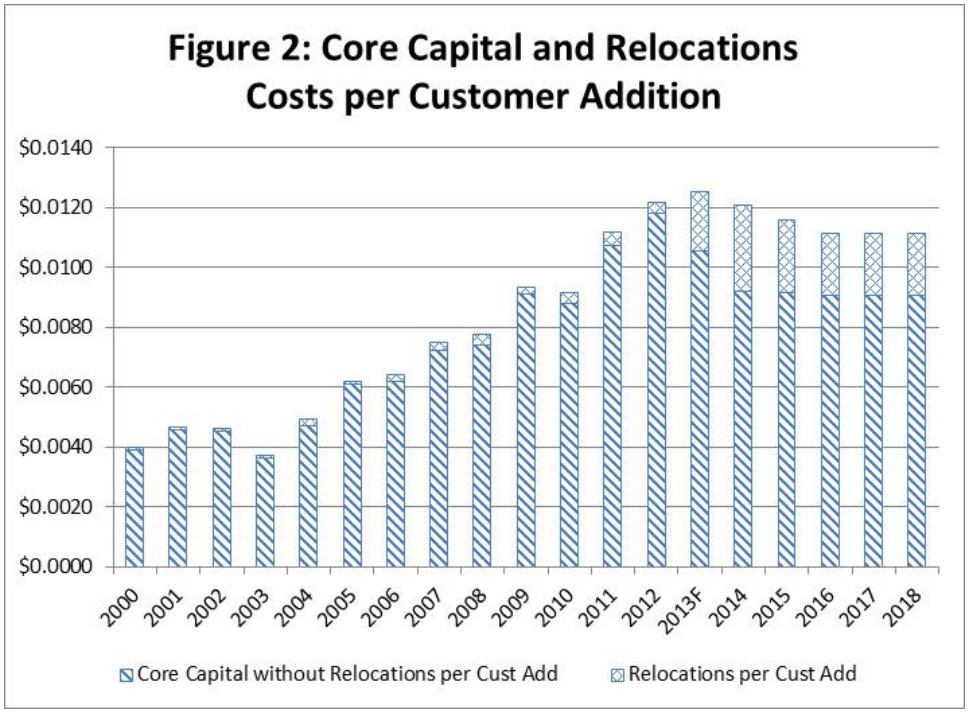
Witnesses: P. Squires
T. Teed-Martin

| Table 1: Enbridge Core Capital and Relocations | | | |
|---|---|---|---|
| | Core Capital ($ millions) | Core Capital without Relocations ($ millions) | Relocations Costs ($ millions) |
| 2000 | $215 | $209 | $6 |
| 2001 | $250 | $246 | $3 |
| 2002 | $253 | $248 | $5 |
| 2003 | $225 | $220 | $5 |
| 2004 | $278 | $267 | $11 |
| 2005 | $316 | $309 | $7 |
| 2006 | $306 | $296 | $10 |
| 2007 | $323 | $311 | $11 |
| 2008 | $320 | $305 | $15 |
| 2009 | $300 | $292 | $8 |
| 2010 | $338 | $325 | $13 |
| 2011 | $399 | $384 | $16 |
| 2012 | $438 | $425 | $13 |
| 2013F | $439 | $369 | $69 |
| 2014 | $444 | $338 | $106 |
| 2015 | $447 | $352 | $94 |
| 2016 | $442 | $359 | $83 |
| 2017 | $442 | $359 | $83 |
| 2018 | $442 | $359 | $83 |




Witnesses: P. Squires
T. Teed-Martin

| Table 2: Enbridge Core Capital and Relocations per Customer Addition | | | | | | |
|---|---|---|---|---|---|---|
| | Core Capital ($ millions) | Core Capital without Relocations ($ millions) | Relocations Costs ($ millions) | Customer Adds | Core Cap w/o reloc. Per cust add | Relocations costs per cust add |
| 2000 | $215 | $209 | $6 | 53,676 | $3,901 | $108 |
| 2001 | $250 | $246 | $3 | 53,688 | $4,589 | $63 |
| 2002 | $253 | $248 | $5 | 54,649 | $4,531 | $97 |
| 2003 | $225 | $220 | $5 | 60,473 | $3,643 | $74 |
| 2004 | $278 | $267 | $11 | 56,485 | $4,734 | $195 |
| 2005 | $316 | $309 | $7 | 50,697 | $6,095 | $128 |
| 2006 | $306 | $296 | $10 | 47,622 | $6,220 | $206 |
| 2007 | $323 | $311 | $11 | 42,920 | $7,253 | $261 |
| 2008 | $320 | $305 | $15 | 41,052 | $7,425 | $361 |
| 2009 | $300 | $292 | $8 | 32,089 | $9,112 | $249 |
| 2010 | $338 | $325 | $13 | 36,902 | $8,799 | $358 |
| 2011 | $399 | $384 | $16 | 35,657 | $10,761 | $435 |
| 2012 | $438 | $425 | $13 | 35,971 | $11,812 | $361 |
| 2013F | $439 | $369 | $69 | 34,996 | $10,553 | $1,980 |
| 2014 | $444 | $338 | $106 | 36,647 | $9,229 | $2,882 |
| 2015 | $447 | $352 | $94 | 38,489 | $9,156 | $2,447 |
| 2016 | $442 | $359 | $83 | 39,645 | $9,065 | $2,081 |
| 2017 | $442 | $359 | $83 | 39,645 | $9,065 | $2,081 |
| 2018 | $442 | $359 | $83 | 39,645 | $9,065 | $2,081 |




Witnesses: P. Squires
T. Teed-Martin

| Table 3: Enbridge Core Capital and Relocations per $ Depreciation Expense | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Core Capital ($ millions) | Core Capital without Relocations ($ millions) | Relocations Costs ($ millions) | Depreciation without SRC ($ millions) | SRC contribution to Annual Depreciation ($ millions) | Depreciation with SRC (As Filed) ($ millions) | Core Cap w/o reloc. Per $ Depreciation | Relocations costs per $ Depreciation |
| 2000 | $215 | $209 | $6 | $170 | | $170 | $1.23 | $0.034 |
| 2001 | $250 | $246 | $3 | $156 | | $156 | $1.58 | $0.022 |
| 2002 | $253 | $248 | $5 | $162 | | $162 | $1.53 | $0.033 |
| 2003 | $225 | $220 | $5 | $170 | | $170 | $1.30 | $0.026 |
| 2004 | $278 | $267 | $11 | $178 | | $178 | $1.50 | $0.062 |
| 2005 | $316 | $309 | $7 | $245 | | $245 | $1.26 | $0.027 |
| 2006 | $306 | $296 | $10 | $210 | | $210 | $1.41 | $0.047 |
| 2007 | $323 | $311 | $11 | $226 | | $226 | $1.38 | $0.050 |
| 2008 | $320 | $305 | $15 | $237 | | $237 | $1.29 | $0.062 |
| 2009 | $300 | $292 | $8 | $251 | | $251 | $1.16 | $0.032 |
| 2010 | $338 | $325 | $13 | $267 | | $267 | $1.22 | $0.049 |
| 2011 | $399 | $384 | $16 | $277 | | $277 | $1.39 | $0.056 |
| 2012 | $438 | $425 | $13 | $293 | | $293 | $1.45 | $0.044 |
| 2013F | $439 | $399 | $40 | $279 | | $279 | $1.43 | $0.143 |
| 2014 | $444 | $415 | $29 | $292 | ($30) | $262 | $1.42 | $0.098 |
| 2015 | $447 | $422 | $25 | $305 | ($31) | $274 | $1.38 | $0.082 |
| 2016 | $442 | $416 | $26 | $322 | ($33) | $289 | $1.29 | $0.081 |
| 2017 | $442 | $416 | $26 | $333 | ($34) | $299 | $1.25 | $0.078 |
| 2018 | $442 | $416 | $26 | $343 | ($36) | $307 | $1.21 | $0.076 |

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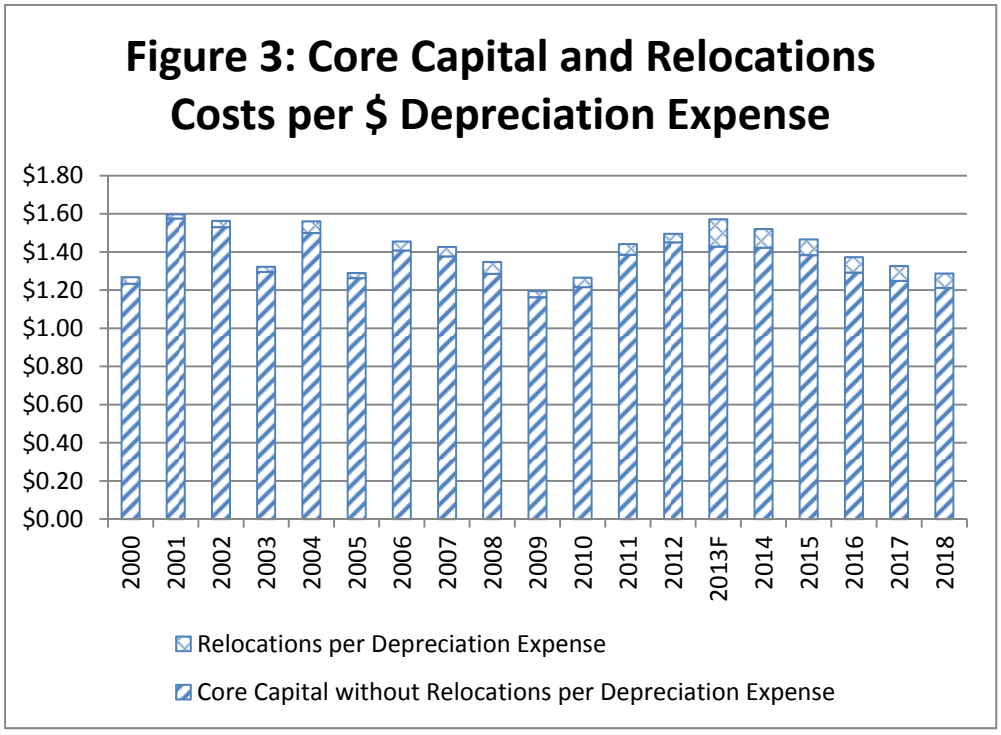


Witnesses: P. Squires
T. Teed-Martin

Part C:
Enbridge deals with well over 200 different municipalities and agencies which fall into one of the four cost sharing arrangements described below.

- Public Service Works on Highways Act– 50% labour and labour saving devices
- Franchise – 35%/65%
- 100% re-billable – third party pays 100% of costs
- Non re-billable – Enbridge Gas Distribution Inc. pays 100% of costs

Public Service Works on Highways Act ("PSWHA") – used in the absence of a franchise agreement or encroachment permit. The Act spells out that the road authority is responsible for 50% of labour and labour saving devices and the utility is responsible for the remainder of all costs. Labour is all costs paid to all workmen up to and including the foreman including wages, travelling time, food, lodging, and transportation to carry out the work. A labour saving device is anything during construction that by exception will cause an increase to labour costs such as a back-hoe.

Franchise Agreement – The model franchise agreement which is used in most municipalities follows a cost sharing mechanism for road improvements instituted by the municipality within the right of way (R.O.W.). All costs are tallied and shared on a 35% municipality and 65% EGD basis.

100% re-billable - If a third party (other than a municipality) is requesting the relocation within the R.O.W., they will pay 100% of the costs.

Non-rebillable – A non-rebillable relocation will occur in instances where, whether due to change in ownership or improper initial installation, EGD plant is discovered to be on private property or it has been discovered that EGD has installed gas main in a location other than that agreed to in the municipal application. A non-rebillable relocation may also occur where EGD has agreed to relocate in the event of future need, through the terms laid out in an encroachment permit, with the agency holding the private ROW.