

**PROCEDURAL ORDER NO.1**

**GUELPH HYDRO ELECTRIC SYSTEMS INC. (“Guelph Hydro”)**

**PART 2\_RESPONSES TO THE BOARD STAFF’S INTERROGATORIES ON**

**2012 ELECTRICITY DISTRIBUTION COST OF SERVICE RATES**

**FILE NUMBER EB-2011-0123**

*October 11, 2011*

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## Rate Base

### Issue 2.3 Is the capital expenditure forecast for the test year appropriate?

#### IR 9 c - Ref: E1/T4/S3 Appendix A and Appendix B – Total Feeder – General

On page 2 of Appendix A Guelph Hydro shows 2011 Distribution Capital Projects and page 2 of Appendix B shows the 2012 capital expenditures for the General Feeder category. Board staff noted an increase of 88% or \$1.12M in 2011 over 2010 actual and 86% or \$1.2M over the 2010 actual in 2012.

- c. If confirmed, please provide a detailed explanation as well as a business case for each of these capital investments.

#### Guelph Hydro's Response:

<b>Guelph Hydro Electric Systems Inc.</b>	
<b>2011 Capital Project Expenditures</b>	
Project Name:	Arlen MTS Feeder Egresses and Future Underground Duct Banks
Project Number:	2010-002-NC46
Project Investment Category:	Development
Project Category:	CFDR
Key Project Drivers :	Growth Capacity Constraints
Project Description:	As part of the construction of Arlen MTS, this project involves the construction of a 0.9km underground duct structure to accommodate future feeders from Arlen MTS. This underground duct structure runs from Arlen MTS to Clair Road West and Southgate Drive and will allow for 9 future underground distribution feeders. This project will permit the needed installation of 3-13.8kV feeders from Arlen MTS to start serving load in the South end of Guelph in 2011.

Future Benefit: Increased Capacity to accommodate future growth. Relieve capacity from Hanlon TS.			
Project Start Date:2011		Project In-Service Date: 2011	
Total Project Cost: \$571,579			
2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$571,579	\$0

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Hanlon Creek Business Park Phase 1A

Project Number: 2010-026-NC42

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :  
Growth

**Project Description:**

This project involves the construction of a 0.5km, 13.8kV overhead distribution pole line with composite poles to provide service to the Hanlon Creek Business Park in the South end of Guelph. A portion of the cost for this project was contributed by the land developer for the use of composite poles for aesthetics reasons. This project was put into service in May 2011.

**Future Benefit:**

Accommodate new load

Increased capacity to accommodate future growth in industrial area

Project Start Date:2011

Project In-Service Date: 2011

Total Project Cost: \$99,640

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$99,640	\$0

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Hanlon Creek Business Park Phase 1B

Project Number: 2010-002-NC42

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :  
Growth

**Project Description:**

This project involves the construction of a 1.9km 13.8kV overhead distribution pole line with composite poles to provide service to the Hanlon Creek Business Park in the south end of Guelph. A portion of the cost for this project was contributed by the land developer for the use of composite poles for aesthetic reasons. This project is scheduled to start construction in October 2011 and be completed by the end of November 2011.

**Future Benefit:**

Accommodate new load

Increased capacity to accommodate future growth in industrial area

Project Start Date:2011

Project In-Service Date: 2011

Total Project Cost: \$456,144

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$456,144	\$0

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Hanlon Creek Business Park Phase 2

Project Number: 2010-032-NC52

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :  
Growth

**Project Description:**

This project involves the construction of a 13.8kV overhead distribution pole line with composite poles to provide service to the Hanlon Creek Business Park in the South end of Guelph. A portion of the cost for this project was contributed by the land developer for the use of composite poles for aesthetic reasons. This project is scheduled to start construction in November 2011 and be completed by the end of 2011.

**Future Benefit:**

Accommodate new load  
Increased Capacity to accommodate future growth

Project Start Date:2011

Project In-Service Date: 2011

Total Project Cost: \$669,265

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$669,265	\$0

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Clair Road W, Crawley Road to Southgate Drive

Project Number: 2011-040-RC46

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :

Growth

Capacity constraints

Project Description:

As part of the construction of Arlen MTS, this project involves the reconstruction of a 0.4km, 13.8 kV overhead distribution pole line outside Arlen MTS. The new overhead pole line will accommodate 3 overhead distribution circuits and will utilize composite poles. This project is scheduled to start in November 2011 and be completed in 2011.

Future Benefit:

Increased capacity to accommodate future growth

Accommodate new load

Increase safety by implementing new design standards and clearances

Project Start Date:2011

Project In-Service Date: 2011

Total Project Cost: \$137,693

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$137,693	\$0



**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Crawley Road , Clair Rd to 500m south of Clair Rd - Transmission Tap accommodation

Project Number: 2011-020-RC46

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :  
Growth  
Capacity constraints

Project Description:  
This project involves the relocation of a 100m section of overhead distribution lines to underground to accommodate a transmission tap connection to Arlen MTS. In order for Hydro One to provide 115kV service to Arlen MTS, Guelph Hydro's distribution circuits needed to be relocated underground. This project also involves the relocation of Hydro One distribution circuits as they were joint use tenants on Guelph Hydro owned poles. This project started construction in August of 2011 and was completed in September 2011. The costs for the relocation of Hydro One's distribution system facilities were covered by Hydro One.

Future Benefit:  
Compliance with CSA clearances for transmission tap to Guelph Hydro Arlen MTS.  
Increased safety for workers

Project Start Date:2011

Project In-Service Date: 2011

Total Project Cost: \$154,014

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$154,014	\$0

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Arlen MTS feeder to Pole 86 Clair Road West

Project Number: 2011-034-NC46

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :

Growth

Capacity constraints

Project Description:

This project involves the construction of a 135m underground 13.8kV feeder from Arlen MTS to tie into the distribution system on the newly built overhead distribution pole line on Clair Road West in order relieve capacity at Hanlon TS. This project is scheduled to start in November 2011 and to be completed by the end of November 2011. The feeder is needed due to an increase in load growth in the South end of Guelph.

Future Benefit:

Accommodate new load

Relieve capacity at Hanlon TS

Project Start Date:2011

Project In-Service Date: 2011

Total Project Cost: \$40,057

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$40,057	\$0

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Arlen MTS feeder to Pole 171 Southgate Drive

Project Number: 2011-035-NC46

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :

Growth

Capacity constraints

Project Description:

This project involves the construction of a 400m underground 13.8kV feeder from Arlen MTS to tie into the distribution system on Southgate Drive in order relieve capacity at Hanlon TS. This project is scheduled to start in November 2011 and to be completed by the end of November 2011. The feeder is needed due to an increase in load growth in the South end of Guelph.

Future Benefit:

Accommodate new load

Relieve capacity from Hanlon TS

Project Start Date:2011

Project In-Service Date: 2011

Total Project Cost: \$53,912

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$53,912	\$0

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Victoria Road, Arkell Road To McAlister Blvd.

Project Number: 2011-021-RC50

Project Investment Category: Development

Project Category: CREL

Key Project Drivers :  
City of Guelph Request

Project Description:  
The City of Guelph has requested that Guelph Hydro relocate an overhead distribution pole line to accommodate their road reconstruction work. Due to changes in the City of Guelph's construction schedule, this project has been deferred to 2012.  
There are no alternatives to these activities and the expenditures are not discretionary as compliance is mandated by the Public Service Works on Highway Act, R.S.O. 1990

Future Benefit:  
Compliance to road authority requirements

Project Start Date:2012

Project In-Service Date: 2012

Total Project Cost: \$157,500

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$0	\$157,500

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Highway 6 Laird Road Interchange

Project Number: 2011-018-RC46

Project Investment Category: Development

Project Category: CREL

Key Project Drivers :  
Ministry of Transportation request

**Project Description:**

This project involves the relocation of overhead distribution system facilities to accommodate the Ministry of Transportation interchange work at Highway 6 and Laird Road. The MTO is constructing an overpass of Laird Road on Highway 6 and requires all utilities in the area to relocate their facilities. Part of this project requires Guelph Hydro to bore under Highway 6 to relocate distribution circuits as the MTO does not allow an open cut of the Highway. A portion of the cost for this project is recovered through capital contributions. Project construction is scheduled to start in October 2011 and be completed in 2011.

There are no alternatives to these activities and the expenditures are not discretionary as compliance is mandated by the Public Service Works on Highway Act, R.S.O. 1990

Future Benefit:  
Compliance to road authority requirements

Project Start Date: 2011

Project In-Service Date: 2011

Total Project Cost: \$1,592,274

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$1,592,274	\$0

**Guelph Hydro Electric Systems Inc.**

**2011 Capital Project Expenditures**

Project Name: Rockwood - MTO relocations

Project Number: 2011-005-RC80

Project Investment Category: Development

Project Category: CREL

Key Project Drivers :  
Ministry of Transportation request

Project Description:  
This project involves the relocation of overhead distribution poles as well as the installation of underground road crossings for future work to accommodate the Ministry of Transportation road work on Highway 7 and Main St in the Village of Rockwood. This project was completed as of September 2011. Parts of the distribution system in Rockwood are supplied radially and the installation of these underground duct structures under Highway 7 will allow a loop supply to customers. There are no alternatives to these activities and the expenditures are not discretionary as compliance is mandated by the Public Service Works on Highway Act, R.S.O. 1990

Future Benefit:  
Compliance to road authority requirements  
Increased capacity to accommodate future growth  
Improved distribution system reliability

Project Start Date:2011

Project In-Service Date: 2011

Total Project Cost: \$115,500

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$115,500	\$0

**Guelph Hydro Electric Systems Inc.**

**2012 Capital Project Expenditures**

Project Name: Maltby Road- Gordon St to Crawley Road

Project Number: 2010-039-RC56

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :  
Growth

**Project Description:**

This project involves the construction of a 2.1 km single circuit 13.8kV overhead distribution pole line on Maltby Road between Gordon St and Crawley Road to prepare for new growth in the south end of Guelph. This project also involves the construction of 3 sections of underground distribution system in order to accommodate a wet land area. Design and construction of this project is scheduled to begin in early 2012.

**Future Benefit:**

Increased Capacity to accommodate future growth

Project Start Date: 2012

Project In-Service Date: 2012

Total Project Cost: \$530,000

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$0	\$530,000

**Guelph Hydro Electric Systems Inc.**

**2012 Capital Project Expenditures**

Project Name: Gordon St- Clair Road W to Maltby Rd

Project Number: N/A

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :

Growth

City of Guelph request

Project Description:

This project involves the construction of a 1.8km double circuit, 13.8kV overhead distribution pole line to accommodate future load in the area. The City of Guelph was scheduled to begin work on this project in 2012, however they have decided to defer the project to beyond 2012. Guelph Hydro expects to rebuild this pole line at the same time as the road authority work completes their work.

Future Benefit:

Increased capacity to accommodate future growth

Compliance to road authority requirements

Project Start Date: Beyond 2012

Project In-Service Date: Beyond 2012

Total Project Cost:

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$0	\$0



**Guelph Hydro Electric Systems Inc.**

**2012 Capital Project Expenditures**

Project Name: York Road - Railway to Watson Pkwy

Project Number: N/A

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :  
Growth

**Project Description:**

This project involves the reconstruction of a 2.1km double circuit, 13.8kV overhead distribution pole line. Currently Guelph Hydro is a joint use tenant on the Bell Canada owned pole line. Based on inspection data, Guelph Hydro has determined that this overhead distribution line needs to be rebuilt due to its condition and the need for additional capacity. Design and construction of this project is scheduled to begin in 2012.

**Future Benefit:**

Increased safety of new design standards

Increase line capacity

Increase reliability of new distribution equipment and materials

Project Start Date: 2012

Project In-Service Date: 2012

Total Project Cost: \$636,000

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$0	\$636,000

**Guelph Hydro Electric Systems Inc.**

**2012 Capital Project Expenditures**

Project Name: Distribution Feeders

Project Number: N/A

Project Investment Category: Development

Project Category: CFDR

Key Project Drivers :  
Growth

Project Description:  
The scope of this category includes general distribution feeder projects as required to provide system capacity for new residential, commercial and industrial developments. Projects within this category include new pole line builds and feeders for station egresses.

Future Benefit:  
Increased capacity to accommodate future growth

Project Start Date:2012

Project In-Service Date: 2012

Total Project Cost: \$782,017

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$0	\$782,017

**Guelph Hydro Electric Systems Inc.**

**2012 Capital Project Expenditures**

Project Name: Line Relocations

Project Number: N/A

Project Investment Category: Development

Project Category: CREL

Key Project Drivers :  
Road Authority requests

Project Description:  
The scope of this category includes line relocation projects to accommodate expansion work by the road authority. A portion of the cost for these projects is recovered through capital contributions from the road authority.  
There expenditures are not discretionary as compliance is mandated by the Public Service Works on Highway Act, R.S.O. 1990

Future Benefit:  
Compliance to road authority requirements

Project Start Date:2012

Project In-Service Date: 2012

Total Project Cost: \$565,015

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$0	\$565,015

**Guelph Hydro Electric Systems Inc.**

**2012 Capital Project Expenditures**

Project Name: Line Modifications

Project Number: N/A

Project Investment Category: Development

Project Category: CMOD

Key Project Drivers :  
Growth

Project Description:  
The scope of this category includes line modification projects related to additions or modifications to the distribution system to accommodate new commercial and industrial development. A significant portion of this cost is recovered through capital contributions.

Future Benefit:  
Required to meet customer load requests  
Maintain reliability of power supply to customers

Project Start Date:2012

Project In-Service Date: 2012

Total Project Cost: \$180,453

2005	2006	2007	2008
\$0	\$0	\$0	\$0
2009	2010	2011	2012
\$0	\$0	\$0	\$180,453

## Operating Costs

### Issue 4.6 Is the test year forecast of PILs appropriate?

#### IR 33 - Ref: E9/T2/S1, p. 1 – Account 1562 Deferred PILs

On page 1 Guelph Hydro stated that:

The OEB's Notice of Combined Proceeding and Notice of Hearing (EB-2008-0381) regarding historical variances arising from the recording of Payments in Lieu of Taxes by electricity distributors, states that the OEB intends to proceed with the review and disposition of account 1562 for all distributors once a decision confirming the methodology to be used for the calculation of balances in account 1562 – Deferred Payments in Lieu of Taxes - has been issued by the Board....Therefore, Guelph Hydro is not requesting disposition of accounts 1562 or 1592- subaccount PILs in this Application.

The Board issued its decision and order in the combined proceeding on account 1562 deferred PILs (EB-2008-0381) on June 24, 2011. In this decision and order the Board stated that it expected distributors subject to section 93 of the *Electricity Act* to apply for final disposition of the balance in account 1562 in their next general rates application (either IRM or cost of service)<sup>1</sup>.

The evidence filed must be consistent with the level of detail found in the combined proceeding, including the findings in the Board's decision and the settled issues found in the settlement agreement.

The following questions are intended to place on the record of this application, the minimum evidence required for the review and disposition of account 1562.

- a. Please provide the active Excel workbooks for rate applications, PILs proxies, SIMPIL models and the PILs 1562 continuity schedule as follows:
  - i. Rate application filing models (final versions) that support the Board's decisions for 2001 to 2005 for rates and the PILs proxies. Please verify that the rate schedule attached to the Board decision is the same as the rate schedule in the application filing model; otherwise you do not have the final model to use in the SIMPIL reconciliation.

### Guelph Hydro's response:

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<sup>1</sup> Implementation, pages 27-28

**Please see Appendix Guelph\_BrdStaff\_IRR\_33\_a\_i (2001, 2002, 2004, and 2005). The 2002 to 2005 Rate applications filing models are provided in Excel format. The 2001 Rate application filing model is provided in PDF because Guelph Hydro could not find the Excel version in its archive. The files of the above mentioned appendix will be submitted electronically. Please note that Guelph Hydro presents both Guelph Hydro Electric Systems Inc. (GHESI) and Wellington Electric Distribution Company (WEDCO) Rate application and PILs models.**

- ii. Signed Board decisions for each year that an application was filed requesting PILs to be included in rates

**Guelph Hydro's response:**

**Please see Appendix Guelph\_BrdStaff\_IRR\_33\_a\_ii\_Decisions.**

- iii. Final tax returns, notices of assessment, reassessment and statements of adjustments for each tax period 2001-2005.

**Guelph Hydro's response:**

**Please see Appendix Guelph\_BrdStaff\_IRR\_33\_iii\_Tax Returns.**

- iv. Revised SIMPIL models for the tax years 2001-2005 that eliminate any errors that may have arisen. Halton Hills in the combined proceeding, and Hydro One Brampton in EB-2010-0132 (draft Rate Order), filed revised SIMPIL models that can be used.

**Guelph Hydro's response:**

**Please see Appendixes Guelph\_BrdStaff\_IRR\_33\_a\_iv\_SIMPIL Models provided in Excel format.**

- v. Account PILs 1562 continuity schedule for the period October 1, 2001 to April 30, 2006 that shows:
  - The PILs proxy amounts allowed for the number of months in each tax period. Please provide the supporting calculations and references to Board documents such as the Accounting Procedures Handbook and Frequently Asked Questions.

**Guelph Hydro's response:**

**Please see the Appendix Guelph\_BrdStaff\_IRR\_33\_a\_v\_1562 Continuity Schedule submitted electronically in Excel format (GHESI and WEDCO/Rockwood)**

- The amounts billed to customers during the same tax periods. Collections from customers have been defined as the amounts billed to customers. The PILs associated with unbilled revenue accruals must be included in collections. Please provide the supporting Excel workbooks used to calculate the amounts billed to customers.

**PILs Proxy (Entitlement) Amounts**

The PILs Entitlements utilized *in Appendix Guelph\_BrdStaff\_IRR\_33\_a\_v\_1562 Continuity Schedule* are based on approved PILS Entitlement amounts included in approved distribution rates which are summarized in the tables below.

The referenced appendices in the tables below support the calculation of the approved PILs Entitlement amounts.

Guelph Hydro Electric Systems Inc.

Tax Year	PILs Entitlement	Effective Start Date	Effective End Date	Monthly Amount	REFERENCES			Comments
					Rate Model Appendix	SIMPIL Model Appendix	Decision	
2001	1,055,321.00	1-Oct-01	31-Dec-01	351,773.67	Guelph_BrdStaff_IRR_33_a_i_GHESI_2001_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2001 GHESI SIMPIL_20111011	GHESI_Rate_Decision_12212001	Q4 2001 Entitlement/ 3mths
2002	3,379,755.00	1-Jan-02	31-Dec-02	281,646.25	Guelph_BrdStaff_IRR_33_a_i_GHESI_2002_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2002 GHESI SIMPIL_20111011	GHESI_Rate_Decision_02282002	2002 Entitlement/12 months
2003	4,435,076.00	1-Jan-03	28-Feb-04	369,589.67	Guelph_BrdStaff_IRR_33_a_i_GHESI_2001_Rate APPL_20111011 AND Guelph_BrdStaff_IRR_33_a_i_GHESI_2002_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2003 GHESI SIMPIL_20111011	GHESI_Rate_Decision_12212001 AND GHESI_Rate_Decision_02282002	(Q4 2001 + 2002 Entitlement)/12 months
2004	3,379,755.00	1-Mar-04	28-Feb-05	281,646.25	Guelph_BrdStaff_IRR_33_a_i_GHESI_2004_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2004 GHESI SIMPIL_20111011	GHESI_Rate_Decision_03112004	2002 Entitlement/12 months
2005	3,215,619.00	1-Mar-05	30-Apr-06	267,968.25	Guelph_BrdStaff_IRR_33_a_i_GHESI_2005_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2005 GHESI SIMPIL_20111011	GHESI_Rate_Decision_2005_1803_05_	2005 Entitlement/12 months

Wellington Electric Distribution Company Inc.

Tax Year	PILs Entitlement	Effective Start Date	Effective End Date	Monthly Amount	REFERENCES			Comments
					Rate Model Appendix	SIMPIL Model Appendix	Decision	
2001	20,735.00	1-Oct-01	31-Dec-01	6,911.67	Guelph_BrdStaff_IRR_33_a_i_ WEDCO_2001_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2001 WEDCO SIMPIL_20111011	WEDCO_Rate_Decision_03262001	Q4 2001 Entitlement/ 3mths
2002	68,074.00	1-Jan-02	31-Dec-02	5,672.83	Guelph_BrdStaff_IRR_33_a_i_ WEDCO_2002_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2002 WEDCO SIMPIL_20111011	WEDCO_Rate_Decision_02282002	2002 Entitlement/12 months
2003	88,809.00	1-Jan-03	28-Feb-04	7,400.75	Guelph_BrdStaff_IRR_33_a_i_ WEDCO_2001_Rate APPL_20111011 AND Guelph_BrdStaff_IRR_33_a_i_ WEDCO_2002_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2003 WEDCO SIMPIL_20111011	WEDCO_Rate_Decision_03262001 AND WEDCO_Rate_Decision_02282002	(Q4 2001 + 2002 Entitlement)/12 months
2004	68,074.00	1-Mar-04	28-Feb-05	5,672.83	Guelph_BrdStaff_IRR_33_a_i_ WEDCO_2004_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2004 WEDCO SIMPIL_20111011	WEDCO_Rate_Decision_03152004	2002 Entitlement/12 months
2005	30,593.00	1-Mar-05	30-Apr-06	2,549.42	Guelph_BrdStaff_IRR_33_a_i_ WEDCO_2005_Rate APPL_20111011	Guelph_BrdStaff_IRR_33_a_iv_2005 WEDCO SIMPIL20111011	WEDCO_Rate_Decision_2005_230305	2005 Entitlement/12 months

**Guelph Hydro's response:**

Please see Appendixes: Guelph\_BrdStaff\_IRR\_33\_a\_v\_PILs Amounts Billed.

For the period March 1, 2002 to March 31, 2004, the PILs recovery utilized in the continuity schedule (Appendix Guelph\_BrdStaff\_IRR\_33\_a\_v\_1562 Continuity Schedule) were derived from billing determinants multiplied by approved PILs rate slivers.

Starting April 1, 2004, receivable codes were set-up to collect the amount billed for PILs; each customer class had its own PILs G/L account. Therefore, starting April 1, 2004, PILs recoveries utilized in the continuity schedule are the actual PILs billed to customers.

The PILs associated with unbilled revenue accruals were included in collections in 2002 and 2003. No unbilled revenue was included past December 2003.

- The deferral account and true-up variances that are calculated in the SIMPIL workbook TAXCALC sheet for each tax period.



**Guelph Hydro's Response:**

Please see reference to **SIMPIL Model Appendix in Tables noted above.**

- The proportion of the Large Corporation Tax (LCT) included in 2005 rates that relates to the period January 1, 2006 to April 30, 2006. LCT was repealed with effect from January 1, 2006.

**Guelph Hydro's Response:**

**Guelph Hydro did not have any LCT included in 2005 rates that relate to the period January 1, 2006 to April 2006. WEDCO had \$1,606 of LCT included in 2005 rates that relate to the period January 1, 2006 to April 30, 2006.**

- Interest carrying charges for each tax period. Please provide the interest rate chosen for each tax period. Please explain how interest carrying charges were calculated and provide the supporting worksheets.

**Guelph Hydro's Response:**

**The continuity schedules show an annual interest rate of 7.25% for the period Q4 2001 to April 2006 (approved long-term debt rate). Interest rates used from May 2006 to September 2011 are based on the OEB prescribed interest rates. Interest carrying charges have been determined using month opening balances with no interest compounding as per OEB requirements.**

- b. In the years from 2001 to 2005, if the applicant generated or utilized tax losses, and had no taxable income, please explain how it choose the income tax rates used in calculating the tax impact and the gross-up amounts in the SIMPIL reconciliations. Please explain why the applicant believes that it chose the correct income tax rates for determining the true-up amounts under the SIMPIL methodology.

**Guelph Hydro's Response:**

**In the 2003 and 2004 SIMPIL calculations where WEDCO generated tax losses and had no taxable income, the income tax rates used in calculating the tax impact and gross-up amounts in the SIMPIL reconciliations was the combined Federal and Ontario corporate tax rates less the Federal surtax amount of 1.12%.**

- c. Please explain why the applicant correctly accounts for the declining income tax rates and other changes in tax rules and legislation during the period 2001-2005 in its SIMPIL model reconciliations. Specifically, there were errors in the 2001 and 2003 SIMPIL models that were released for reporting to the Board. Please explain how the applicant overcame the errors that would have arisen from following the formula logic in the original models.

**Guelph Hydro's Response:**

**Guelph Hydro used the 2001 and 2003 SIMPIL models as released for reporting to the Board.**

- d. Please confirm whether or not the applicant used data from its final tax returns, and any tax adjustments that appeared in notices of reassessment and statements of adjustments rendered by the Ontario Ministry of Revenue, for the tax years 2001 through 2005 in calculating the final balance in PILs account 1562.

**Guelph Hydro's Response:**

**Guelph Hydro confirms that it used data from its final tax returns, and any tax adjustments that appeared in notices of reassessment and statements of adjustments rendered by the Ontario Ministry of Revenue, for the tax years 2001 through 2005 in calculating the final balance in PILs account 1562.**

- e. Please confirm that the applicant excluded regulatory assets and liabilities, when they were created or collected, in the calculation of the final balance in its PILs account 1562 regardless of the actual tax treatment accorded those amounts. This includes accounting adjustments, provisions for impairment, changes in the impairment reserve, and any other transactions related to regulatory assets and liabilities.

**Guelph Hydro's Response:**

**Guelph Hydro confirms that it included regulatory assets and liabilities, when they were created or collected, in the calculation of the final balance in its PILs account 1562.**

- f. Please confirm that the applicant treated the amortization of fees and charges related to borrowing debt as interest expense when it calculated the true-up variances charged to ratepayers. Under the PILs and SIMPIL methodology, interest expense does not true up except for excess interest above the maximum deemed interest approved by the Board in each application.

**Guelph Hydro's Response:**

**Guelph Hydro did not have fees and charges related to borrowing debt for the period impacting account 1562.**

- g. Please confirm that the applicant excluded variances associated with Ontario Capital Tax (OCT) in the income tax true-up reconciliation. Under the SIMPIL methodology, OCT does not true up for income tax purposes, only for OCT purposes in the appropriate section of SIMPIL sheet TAXCALC.

**Guelph Hydro's Response:**

**Guelph Hydro confirms that it excluded variances associated with Ontario Capital Tax (OCT) in the income tax true-up reconciliation.**

- h. Please confirm that all tax years from 2001 through 2005 are statute-barred (i.e. no longer open for audit). If any year remains open for audit by the Ministry of Revenue, please identify the year and explain the reasons why the tax year is not statute-barred.

**Guelph Hydro's Response:**

**Guelph Hydro confirms that all tax years from 2001 through 2005 are statute-barred.**

## **Deferral and Variance Accounts**

### **Issue 9.3 Are the proposed balances for Other Regulatory Assets – Sub-account Deferred IFRS Transition Costs appropriate?**

#### **IR 73 - Ref: E9T1/S6 -\_Account 1508 - IFRS Transition Costs Deferral Account**

Guelph Hydro requests disposition of \$455,814 for incremental IFRS transition costs (including \$436,933 principal balance as of December 31, 2010 and \$18,882 carrying charges up to December 31, 2011) recorded in Account 1508 other regulatory assets.

- a) Please provide a breakdown of the cost categories and explanations for each cost recorded in the IFRS deferral account.

#### **Guelph Hydro's Response:**

Exhibit 4 / Tab 2 / Section 2/ Appendix 5, page 9 contains a table that summarizes Guelph Hydro's incremental costs for transitioning to IFRS. All of the categories with the exception of "Participation of Staff" (\$11,651.94) are third party arms-length costs.

The Conversion Impact Assessment costs are related to technical accounting consultancy services that were incurred to determine a detailed work plan to transition accounting policies and procedures to IFRS.

IFRS System Impact Discovery Analysis costs are related to a detailed review of the impact IFRS would have on Guelph Hydro's financial and work order systems as well as determining various alternatives to address the requirements.

Accounting services represent the cost of a contract accountant who was hired to back fill a member of the accounting staff who was seconded to the IFRS project for a period of six months.

Participation of Staff is the cost of an incremental accounting co-op student who was hired for a four month term to work on the IFRS project full time.

- b) Please confirm if the costs recorded are incremental one-time IFRS administrative costs.

#### **Guelph Hydro's Response:**

Guelph Hydro confirms that all of the costs are incremental one-time IFRS administration costs.

## **Modified International Financial Reporting Standards**

### **Issue 11.1 Is the proposed revenue requirement determined using modified IFRS appropriate?**

#### **IRR 77 - Ref: E2/T4/S7 p. 1-2 – Capitalization Policy**

- b) Please provide the overall revenue requirement impact of all changes in capitalization policy.

#### **Guelph Hydro's Response:**

As calculated in Table 1 below, the overall revenue requirement impact of all changes in capitalization policy is a decrease of \$40,000 or 0.16%.

**Table 1 - MIFRS Impact on Revenue Requirements**

Revenue Requirement	000's				
	2010 Regulatory Trial Balance	Notes	MIFRS	Notes	Difference
OM & A (Including Amortization)	\$ 16,856	(1)	\$ 16,706	(1)	-\$ 150
Return on Capital (2010 - 7.02%)	7,693		7,749	(2)	56
Grossed up PILs	2,583		2,638	(3)	55
Service Revenue Requirement	27,132		27,093		(40)
Revenue Offsets	(2,601)		(2,601)	(5)	0
Net Revenue requirement	\$ 24,531		\$ 24,492		-\$ 40
					-0.16%

**Table 1 - MIFRS Impact on Revenue Requirements (cont'd)**

<b>Notes:</b>					
		2010 Regulatory Trial Balance		MIFRS	Difference
(1)	Operations & maintenance	\$ 2,584		\$ 5,270	\$ 2,686
	Administration	7,415		7,415	-
		9,999		12,685	2,686 (a)
	Amortization	6,857		4,021 (4)	-2,836 (b)
		\$ 16,856		\$ 16,706	-\$ 150
(a) Increase result of:					
	(1) Reclassification of capital items to OM&A under MIFRS			\$ 2,693	
	(3) Net difference in depreciation that is allocated directly to Operation expenses			-7	
				\$ 2,686	
(b) Decrease result of increase in useful lives of distribution assets					
(2)	MIFRS Return on capital amount calculated in Table 2 of this Addendum.				
(3)	Grossed up PILs amount calculated in Table 3 of this Addendum.				
(4)	Amortization of Depreciable Assets			\$ 4,869	
	Amortization of Customer Contributions			(848)	
	Net Amortization			4,021	
(5)	Amortization of customer contributions netted against amortization of depreciable assets vs. being presented as revenue offset				

<b>Table 2 -Rate Base Calculation for 2010</b>		
		<b>MIFRS</b>
Fixed Assets Opening Balance 2010, net of contributions & grants	\$	90,412,000
Fixed Assets Closing Balance 2010, net of contributions & grants		91,197,000
<b>Average Fixed Asset Balance for 2010, net of contributions &amp; grants</b>		<b>90,804,500</b>
Working Capital Allowance (calculated below)		19,532,600
<b>Rate Base</b>		<b>110,337,100</b>
Regulated Rate of Return		7.02%
<b>Regulated Return on Capital</b>	<b>\$</b>	<b>7,748,754</b>
Deemed Interest Expense	\$	3,966,398
Deemed Return on Equity	\$	3,782,356

<b>WORKING CAPITAL ALLOWANCE FOR 2010</b>		
<b>Distribution Expenses</b>		<b>MIFRS</b>
Distribution Expenses - Operation	\$	3,615,000
Distribution Expenses - Maintenance		1,655,000
Billing and Collecting		2,070,000
Administrative and General Expenses		5,345,000
<u>Less:</u> Capital Taxes within 6105		124,667
<b>Total Eligible Distribution Expenses</b>		<b>12,560,333</b>
Power Supply Expenses		117,657,000
<b>Total Working Capital Expenses</b>	<b>\$</b>	<b>130,217,333</b>
Working Capital Allowance rate of 15%	\$	19,532,600

**Table 3 - Grossed Up PILs Calculation for 2010**

Description	2010 Regulatory Trial Balance	MIFRS	Difference
<b>Revenue</b>			
Distribution Revenue	\$ 23,817,704	\$ 23,817,704	\$ -
Other Operating Revenue (Net)	2,601,204	3,449,204	848,000.00
Smart Meter Deferral Account Adjustment			
<b>Total Revenue</b>	<b>26,418,908</b>	<b>27,266,908</b>	<b>848,000</b>
<b>Costs and Expenses</b>			
Administrative & General, Billing & Collecting	7,290,333	7,290,333	0
Operation & Maintenance	2,584,000	5,270,000	2,686,000
Depreciation & Amortization	6,857,000	4,869,000	-1,988,000
Capital Taxes	124,667	124,667	-
Deemed Interest	3,937,862	3,966,398	28,536
<b>Total Costs and Expenses</b>	<b>20,793,862</b>	<b>21,520,398</b>	<b>726,536</b>
Less OCT Included Above	124,667	124,667	-
<b>Total Costs and Expenses Net of OCT</b>	<b>20,669,195</b>	<b>21,395,731</b>	<b>726,536</b>
<b>Utility Income Before Income Taxes</b>	<b>5,749,713</b>	<b>5,871,177</b>	<b>121,464</b>
<b>Income Taxes:</b>			
Corporate Income Taxes	1,782,411	1,820,065	37,654
<b>Total Income Taxes</b>	<b>1,782,411</b>	<b>1,820,065</b>	<b>37,654</b>
<b>Utility Net Income</b>	<b>\$ 3,967,302</b>	<b>\$ 4,051,112</b>	<b>\$ 83,810</b>
<b>Utility Income Before Income Taxes</b>	5,749,713	5,871,177	
Tax Rate	31.00%	31.00%	
Total PILs before gross up	1,782,411	1,820,065	
<b>Grossed up PILs</b>	<b>2,583,204</b>	<b>2,637,775</b>	

d) Please quantify the dollar impact on revenue requirement for each change identified in b) above separately.

### Guelph Hydro's Response:

The two components that make up the change in capitalization policy which have an impact on Guelph Hydro's revenue requirement are as follows:

	<u>Impact on Rev Requirement</u>
(i) Expensing non-eligible burden that had previously been capitalized	\$ 1,428,000
(ii) Extending Useful Life of the company's assets	<u>(1,468,000)</u>



**Net impact of the change in capitalization policy on rev requirements    \$ (40,000)**

e) Please provide the following information in detail for overhead costs on self-constructed assets for the bridge and test years:

<b>Nature of the overhead costs</b>	<b>Dollar Impact Bridge Year</b>	<b>Dollar Impact Test Year</b>	<b>Directly attributable ? (Y/N)</b>	<b>Reasons why the costs are allowed to be capitalized under MIFRS given the more stringent limitations on capitalized overhead</b>

**Guelph Hydro's Response:**

<b>Nature of the overhead costs</b>	<b>Dollar Impact Bridge Year</b>	<b>Dollar Impact Test Year</b>	<b>Directly attributable ? (Y/N)</b>	<b>Reasons why the costs are allowed to be capitalized under MIFRS given the more stringent limitations on capitalized overhead</b>
<b>Payroll and Operations Burden</b> – includes salaries, benefits, and other employment costs relating to supervisory staff, building maintenance, small tools, and supplies.	\$1,098,343	\$1,167,987	Y	Costs are directly attributable to the construction of assets.
<b>Fleet Burden</b> – includes salaries and benefits, building operating costs, depreciation, fuel, maintenance and supplies	\$ 649,443	\$ 690,923	Y	Costs are directly attributable to the construction of assets.
<b>Engineering Burden</b> – includes salaries and benefits, office supplies, and information technology costs	\$ 464,607	\$ 455,561	Y	Costs are directly attributable to the construction of assets.

g) Please identify all overhead related items (e.g. indirect costs, corporate centre costs) and identify the items that are ineligible and how much overhead in total has been removed from capitalization for ineligible costs.

**Guelph Hydro's Response:**

<b>Payroll and Operations</b> <ul style="list-style-type: none"> <li>• Administration Expense</li> <li>• Indirect Labour <ul style="list-style-type: none"> <li>-Line Crew</li> <li>-Maintenance</li> <li>-Metering</li> <li>-Customer Service</li> <li>-Inspection/Engineering</li> </ul> </li> <li>• Employee Benefits</li> <li>• Small Tools</li> <li>• Clothing</li> <li>• Building Maintenance</li> <li>• Insurance</li> <li>• Outside Services – Subcontract</li> <li>• Property Taxes</li> <li>• Supervisory Salaries – Line Supervisors</li> <li>• Supplies/Other</li> <li>• Vehicle Expenses</li> </ul>	<b>Stores Burden</b> <ul style="list-style-type: none"> <li>• Administration Expense</li> <li>• Building Maintenance</li> <li>• Depreciation</li> <li>• Salaries Management</li> <li>• Salaries – Bargaining Unit</li> <li>• Salaries – Temporary Staff</li> <li>• Employee Benefits</li> <li>• Equipment Maintenance</li> <li>• Freight</li> <li>• Insurance</li> <li>• Inventory Adjustment</li> <li>• Licensing Fees</li> <li>• Other</li> <li>• Outside Services</li> <li>• Property Taxes</li> <li>• P.C. Expense</li> <li>• Supplies</li> <li>• Vehicles</li> <li>• Work Order Charges</li> </ul>
<b>Fleet Burden</b> <ul style="list-style-type: none"> <li>• Administration Expense</li> <li>• Building and Operating Costs</li> <li>• Depreciation</li> <li>• Employee Benefits</li> <li>• Equipment Maintenance</li> <li>• Freight</li> <li>• Fuel</li> <li>• Insurance</li> <li>• Licensing</li> <li>• Other</li> </ul>	<b>Engineering Burden</b> <ul style="list-style-type: none"> <li>• Administration Costs</li> <li>• Employee Benefits</li> <li>• Equipment Maintenance</li> <li>• Freight</li> <li>• Memberships</li> <li>• Mini Computer</li> <li>• Other</li> <li>• Outside Services</li> <li>• P.C. Expense</li> <li>• Salary - Bargaining Unit</li> </ul>

<ul style="list-style-type: none"> <li>• Outside Services</li> <li>• Property Taxes</li> <li>• P.C. Expenses</li> <li>• Salary – Bargaining Unit</li> <li>• Salary – Temporary</li> <li>• Supplies</li> <li>• Training</li> <li>• Work Order Charges</li> </ul>	<ul style="list-style-type: none"> <li>• Salary – Management</li> <li>• Salary – Temporary</li> <li>• Supplies</li> <li>• Telephone</li> <li>• Vehicles</li> <li>• Work Order Charges</li> </ul>
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The above listing represents Guelph Hydro's 2010 overhead listing prior to the implementation of IFRS. Included in the above listing are the following costs which have been removed since they are not directly attributable to the construction of assets:

- Non-productive time (training costs, safety meetings, adverse weather)
- Property taxes
- Supervisory salaries related to administrative functions
- Insurance
- Stores costs
- Information technology expenses
- Office equipment maintenance
- Freight
- Memberships
- Office supplies

The total overhead removed from capitalization amounted to \$2.7 million in 2010.

h) Please identify the burden rates related to the capitalization of costs of self-constructed assets:

- prior to transition (from the last rebasing application to January 1, 2010), and
- after transition (on or after January 1, 2010).

### **Guelph Hydro's Response:**

Burden		Basis		Applied to	
Payroll		Work Order Payroll		Lines, Metering, Maintenance	
Operations		Work Order Payroll		Lines, Metering, Maintenance	
Payroll		Work Order Payroll		Inspectors, Customer Service	
Operations		Work Order Payroll		Inspectors, Customer Service	
Stores		Stores Issues			
Stores-Engineering		Stores Issues			
Engineering - O&M		Work Order Payroll		O&M Work Orders	
Engineering - Capital		Work Order Payroll		Capital Work Orders	
Engineering - Contracting		Contracting			
Vehicles - LC, IN, CS		Work Order Payroll		Lines, Inspectors, Customer Service	
Vehicles - MA, ME		Work Order Payroll		Maintenance, Metering	

- i) Please identify the overall level of increase in OM&A expense in the test year in relation to a decrease (or increase) in capitalized overhead. Please provide a variance analysis for this increase in OM&A expense for the test year in respect to each of the bridge year and historical years.

**Guelph Hydro's Response:**

### Appendix 2-G OM&A Cost Driver Table

OM&A	Actual 2008	Actual 2009	Actual 2010	Bridge 2011	Test 2012
<b>Opening Balance</b>		\$ 9,788,960	\$ 9,584,309	\$ 9,729,964	\$ 14,517,247
Payroll costs (Note 1)		\$ -	\$ -	\$ 1,115,930	\$ 365,812
Smart meter expenses (Note 2)		\$ -	\$ -	\$ 149,130	\$ 926,286
Energy Conservation Costs (Note 3)		\$ -	\$ -	\$ 190,476	\$ 100,976
Transformer Station operations (Note 4)		\$ -	\$ -	\$ 102,518	\$ 21,086
IFRS (Note 5)				\$ 2,768,431	\$ 109,664
Other OM&A costs (Note 6)		\$ (204,651)	\$ 145,655	\$ 460,798	\$ (429,830)
	\$ 9,788,960				
<b>Closing Balance, prior to the removal of IFRS impact</b>	\$ 9,788,960	\$ 9,584,309	\$ 9,729,964	\$ 14,517,247	\$ 15,611,241
Less: IFRS related items (non-eligible burden previously capitalized)	\$0	\$0	\$0	<b>(\$2,768,431)</b>	<b>(\$2,878,095)</b>
<b>Closing Balance, after the removal of IFRS impact</b>	\$9,788,960	\$9,584,309	\$9,729,964	\$11,748,816	\$12,733,146

See E4/T2/S6 p.1-23 for variance analysis discussions related to the increase in OM&A expenses for the test year in respect to each of the bridge year and historical years.

**IR 81 - Ref: E4/T2/S10 p. 1, line 23 and pp. 3-6 and E4/T2/S10 – Guelph Hydro's Kinectrics Study, March 24, 2010.**

In pages 3-6 Guelph Hydro provides the useful life of distribution assets used in the calculation of depreciation expenses for the 2012 test year. In page 1, line 23 Guelph Hydro stated that Guelph Hydro has used the useful and typical lives in budgeting the depreciation, amortization and depletion of its assets in the 2011 bridge year and the 2012 test years. The Kinectrics Study of March 24, 2010 provided Guelph Hydro with typical useful live (TUL) for the corresponding assets. Board staff noted that Guelph Hydro's used lower useful lives than identified by Kinectrics as the typical useful life:

- a. Please identify all differences between the TUL in the Kinectrics Report and those adopted by Guelph Hydro and provide detailed justification for these differences.

**Guelph Hydro's Response:**

Differences between Guelph Hydro Useful Life and Kinectrics Typical Useful Life						
Sub-Account	#	Category	Component	Type	GHESI USEFUL LIFE	Kinectrics TUL
OH	1	Fully Dressed Poles		Wood	40	45
				Composite	40	70
				Concrete	40	60
				Steel	40	60
				Framing	40	45
				Composite	40	45
	4	Manual Overhead Switches		Solid Blade Disconnects	40	50
				Gang-Operated LIS	40	50
	5	Local Motorized Overhead Switches	Switch		40	50
	6	Remote Automated Switches	Switch		40	50
			RTU		15	20
	7	Integral Switch	Switch	SCADAMate	30	45
			RTU		15	NA
	8	Conductors	Primary - see below	ACSR	40	60
				AAC	40	60
				Copper	40	60
				Weather Protected	40	60
				Insulated Wire	40	60
			Primary	Single-Phase	40	60
			Primary	Three-Phase	40	60
			Neutral		40	60
			Secondary	Insulated Wire	40	60
			Services	Insulated Wire	40	60
	9	Capacitor Banks		Frame and Tanks	25	30
				Switch	25	
				RTU	15	
	10	Voltage Regulators			40	20
DT	14	Pad-Mounted Transformer	Foundation	Single-Phase	40	60
				Three-Phase	40	60
	15	Network Transformer	Transformer		40	35
			Vault		40	60
			Roof		40	25
			High Voltage Switch		40	45
			Secondary Network Protector		40	35
	16	Submersible Transformer	Vault		40	60
			Roof	Changed to match vault	40	25
	17	Indoor Vault Transformer	Vault		40	60
UG	18	UG Switchgear	Riser Switch	Gang-Operated LIS	30	50
				Solid-Blade	30	40
			Air Insulated	Fused	30	40
				Live-Front	30	25
				Dead-Front	30	25
	19	Primary Cables	PILC	Three-Phase Feeder	40	75
	20	Secondary Cables	Solid Dielectric Direct Buried		40	30
	21	Ducts	Concrete Encased		40	50
			PVC (Direct Buried)		40	50
			HDPE (Direct Buried)		40	50
			FRE (Direct Buried)		40	50

Sub-Account	#	Category	Component	Type	GHESI USEFUL LIFE	Kinectrics TUL
UG	22	Cable Chambers	Large - Manhole		40	60
			Sidewalk / Field Vault		40	60
			Sidewalk / Field Vault Roof	Changed to match vault	40	25
	23	Junction Cubicle / Service Box	Pads/bases		30	60
			Junction/switching cabinets		30	40
TS & MS	25	Station Service Transformer		TS	40	45
				MS	40	45
	26	TS Power Transformer	Overall		35	45
			Bushing		35	30
			Tap Changer		35	30
	27	MS Power Transformer	Overall		30	45
	28	MV Switchgear - TS	Assembly	Air Insulated	40	50
				Gas (SF6) Insulated	40	50
			Removable Breaker	SF6	40	45
		MV Switchgear - MS	Assembly	Air Insulated	40	50
				Gas (SF6) Insulated	40	50
			Removable Breaker	SF6	40	45
	29	Independent Breakers - TS		Oil	40	45
				Gas (SF6)	40	45
				Air Magnetic	40	30
	30	Protection & Control Devices - TS	Relays	Solid State	15	30
		Protection & Control Devices - MS	Relays	Solid State	15	30
	31	Station Disconnect Switch - TS	Manual Switch		40	45
			Remote Operated Switch		40	45
		Station Disconnect Switch - MS			40	45
	33	Station Grounding System - TS		Sky Wire	40	45
				Sky Wire	40	45
	34	Bus Work & Steel Structures		TS	40	50
				MS	40	50
	35	Station Building	Structure		40	50
			Fence		30	35
S	36	Metering	Meter	Industrial/Commercial	25	30
				Wholesale	25	30
			Transformers (CTs, PT's)		40	45
	37	SCADA	Battery	5	10	15
	39	Communications		Towers	40	65

Guelph Hydro has used typical asset lives lying between the Kinectrics minimum and typical lives. In many cases, the actual asset life is determined by the requirement to replace a number of components together as a system, rather than individually. Although some individual components may last longer, we recognize that some will also need to be replaced prematurely, and have used 40 years as a practical maximum.

- b. For the bridge and test years, please provide a breakdown of the components of the underlying PP&E assets, including gross capital cost and accumulated depreciation values, revised useful lives, and the calculation of the depreciation expense based on revised service lives.

**Guelph Hydro's Response:**

Please find attached for the bridge and test years, a breakdown of the following components of the PP&E assets: gross capital cost, accumulated depreciation, revised useful lives, and the calculation of the depreciation expense based on the revised service lives.



EB-2011-0123  
Guelph Hydro Electric Systems Inc.  
Part 2\_ Responses to Board Staff Interrogatories  
Delivered October 11, 2011

			Bridge Year ending December 31, 2011			
CCA Class	OEB	Description	Gross Capital Cost	Accumulated Depreciation	Revised Useful Service Lives (In Years)	Depreciation Expense 2011
N/A	1805	Land	2,641,987	0	N/A	
CEC	1806	Land Rights	0	0		
1	1808	Buildings and Fixtures	19,995,502	3,132,110	50	426,613
N/A	1810	Leasehold Improvements	0	0		
	1815	Transformer Station Equipment - Normally Primary above 50 kV	9,983,177	358,045	30	332,773
47	1820	Distribution Station Equipment - Normally Primary below 50 kV	1,708,887	242,504	30	112,534
	1825	Storage Battery Equipment	0	0		
47	1830	Poles, Towers and Fixtures	23,598,735	8,658,122	40	656,366
47	1835	Overhead Conductors and Devices	19,104,801	7,235,948	40	526,887
47	1840	Underground Conduit	40,546,142	14,130,840	40	821,547
47	1845	Underground Conductors and Devices	38,418,577	12,979,334	40	779,871
47	1850	Line Transformers	19,221,601	7,562,205	40	368,092
47	1855	Services	7,452,758	2,750,471	40	157,326
47	1860	Meters	7,243,663	3,319,673	25	471,589
	1860	Smart Meters	7,481,445	0	15	
	1865	Other Installations on Customer's Premises	0	0		
N/A	1905	Land	0	0		
CEC	1906	Land Rights	0	0		
1	1908	Buildings and Fixtures	0	0		
	1910	Leasehold Improvements	0	0		
	1915	Office Furniture and Equipment	1,221,843	795,793	15	44,996
45	1920	Computer Equipment - Hardware	3,549,349	2,076,006	5	338,440
	1925	Computer Software	1,114,457	0	15	
10	1930	Transportation Equipment(Small Vehicles)	395,446	311,897	5	65,806
10	1930	Transportation Equipment (Large Trucks)	2,935,626	1,295,732	10	192,665
	1935	Stores Equipment	96,338	96,338	10	
8	1940	Tools, Shop and Garage Equipment	1,103,006	683,314	10	74,346
	1945	Measurement and Testing Equipment	14,872	14,872	10	
	1950	Power Operated Equipment	0	0		
	1955	Communication Equipment	0	0		
50	1960	Miscellaneous Equipment	2,439,448	2,413,197	5	163,774
	1970	Load Management Controls - Customer Premises	314,982	314,982	25	
	1975	Load Management Controls - Utility Premises	0	0		
50	1980	System Supervisory Equipment	888,022	331,963	5	156,186
	1985	Sentinel Lighting Rentals	6,158	0		
	1990	Other Tangible Property	0	0		
47	1995	Contributions and Grants	(37,914,111)	(8,359,357)	40	(914,706)
	2005	Property Under Capital Leases	0	0		
	2070	Other Utility Plant	771	476	15	51
<b>Total before Work in Process / Re-allocation of amortization</b>			<b>173,563,480</b>	<b>60,344,467</b>		<b>4,775,159</b>
95	2055	Work in Process	40,117			
		Re-allocation of amortization				(332,817)
<b>Total after Work in Process</b>			<b>173,603,597</b>	<b>60,344,467</b>		<b>4,442,341</b>

EB-2011-0123  
Guelph Hydro Electric Systems Inc.  
Part 2\_ Responses to Board Staff Interrogatories  
Delivered October 11, 2011

CCA Class	OEB	Description	Test Year ending December 31, 2012			
			Gross Capital Cost	Accumulated Depreciation	Revised Useful Service Lives (In Years)	Depreciation Expense 2012
N/A	1805	Land	2,641,987	0	N/A	
CEC	1806	Land Rights	0	0		
1	1808	Buildings and Fixtures	20,078,502	3,560,423	50	428,313
N/A	1810	Leasehold Improvements	0	0		
	1815	Transformer Station Equipment - Normally Primary above 50 kV	9,983,177	690,818	30	332,773
47	1820	Distribution Station Equipment - Normally Primary below 50 kV	1,708,887	355,039	30	112,534
	1825	Storage Battery Equipment	0	0		
47	1830	Poles, Towers and Fixtures	25,057,333	9,443,734	40	785,613
47	1835	Overhead Conductors and Devices	20,468,828	7,866,659	40	630,711
47	1840	Underground Conduit	43,212,258	14,952,387	40	821,547
47	1845	Underground Conductors and Devices	40,792,034	13,759,205	40	779,871
47	1850	Line Transformers	20,298,244	7,930,297	40	368,092
47	1855	Services	7,731,481	2,907,852	40	157,381
47	1860	Meters	7,868,663	3,801,896	25	482,223
	1860	Smart Meters	7,481,445	498,763	15	498,763
	1865	Other Installations on Customer's Premises	0	0		
N/A	1905	Land	0	0		
CEC	1906	Land Rights	0	0		
1	1908	Buildings and Fixtures	0	0		
	1910	Leasehold Improvements	0	0		
	1915	Office Furniture and Equipment	1,221,843	840,789	15	44,996
45	1920	Computer Equipment - Hardware	4,049,349	2,701,154	5	625,148
	1925	Computer Software	1,114,457	74,297	15	74,297
10	1930	Transportation Equipment(Small Vehicles)	395,446	373,102	5	61,205
10	1930	Transportation Equipment (Large Trucks)	3,420,626	1,602,703	10	306,971
	1935	Stores Equipment	96,338	96,338	10	
8	1940	Tools, Shop and Garage Equipment	1,168,006	764,730	10	81,416
	1945	Measurement and Testing Equipment	14,872	14,872	10	
	1950	Power Operated Equipment	0	0		
	1955	Communication Equipment	0	0		0
50	1960	Miscellaneous Equipment	2,598,884	2,537,521	5	124,323
	1970	Load Management Controls - Customer Premises	314,982	314,982	25	
	1975	Load Management Controls - Utility Premises	0	0		
50	1980	System Supervisory Equipment	1,088,022	528,149	5	196,186
	1985	Sentinel Lighting Rentals	6,158	0		
	1990	Other Tangible Property	0	0		
47	1995	Contributions and Grants	(40,339,111)	(9,334,688)	40	(975,331)
	2005	Property Under Capital Leases	0	0		
	2070	Other Utility Plant	771	527	15	51
<b>Total before Work in Process / Re-allocation of amortization</b>			<b>182,473,480</b>	<b>66,281,551</b>		<b>5,937,084</b>
95	2055	Work in Process	40,117			
		Re-allocation of amortization				(449,592)
<b>Total after Work in Process</b>			<b>182,513,597</b>	<b>66,281,551</b>		<b>5,487,492</b>

- c. Please confirm if the useful lives of assets used by Guelph Hydro in its application are different from the typical useful lives identified in the Board sponsored Kinectrics Report of July 2010. Please provide explanation for any differences from the Board sponsored Kinectrics Report.

**Guelph Hydro's Response:**

See response to #81 a.

## **Green Energy Act Plan**

### **Issue 12.1 Is Guelph Hydro's Green Energy Act Plan, including the Smart Grid component of the plan appropriate?**

#### **IR 86 - Ref: E2/T4/S6 Appendix D, pp.19-21**

On page 20 Guelph Hydro indicates that the Zigbee communications chip in the smart meter is an enabling technology that will permit the development of a variety of opportunities including communications and messaging through an In-Home Display(IHD). The evidence also indicated that a critical element of this project is the anticipated inclusion of IHDs in the future Tier 1 OPA Conservation program expected to replace the peaksaver™ residential demand response program.]

On page 21 Guelph Hydro indicates that part of the \$479,000 of capital investment in 2011 is for the design, acquisition, installation, system integration, commissioning and training for a back-office hardware and software solution that will manage the community's IHD inventory, smart meter – IHD pairing and device security as well as provide a tool for creating and managing messaging.

- a) Please provide an overview of Guelph Hydro's view of the demarcation point between 'smart grid' and 'CDM' initiatives. In the event that an initiative has both a smart grid and CDM component to it please provide Guelph Hydro's methodology for allocating costs and avoiding double counting of any resulting load reduction.

#### **Guelph Hydro's Response:**

The In-Home Display (IHD) component of our CDM initiative will involve only IHDs which fall within the parameters specified by the OPA program schedule. Per OPA program design, these units are offered to customers at no charge to the customer, in exchange for the customer's participation in the residential demand response program. This "gift" is an update to a \$25 incentive given to customers who participated in the previous 2007-2010 version of the residential demand response program.

Under the new CDM program, the IHDs must have minimum functionality of displaying basic energy consumption and pricing information. Our thoughts are that the unit supply will fall under the category of the CDM initiative. It is unclear at this time whether the OPA will be allocating any CDM load/energy reduction results to the LDC by virtue of the IHD. It is clear that results will be allocated to the LDC through the number and type of devices enrolled for demand response under this program – the elements that will initially be offered include central air

conditioning (and air-source heat pumps), electric hot water heaters, and pool pumps. It is expected that over the term of the 2011-2014 programs, the program parameters will change as technology evolves, and other elements may be offered in the future.

Our intentions are to take advantage of the existing smart meter infrastructure, including LDC to meter communications channel, along with the Zigbee chip included in all of our smart meters, to expand the use of the IHD beyond the basic customer energy consumption and pricing information required for the CDM initiative as described above. We view this element of the program to be related to smart grid development and not strictly a CDM activity, although we acknowledge that the IHD messaging would be used to support CDM programs, whether electric or water.

The "messaging" component of the IHD project is seen as an element to encourage consumers to have an IHD installed in their home, to get used to referring to and taking advantage of them for various different purposes, not all of them CDM-related. As we expect the technology to advance at a fast rate, we believe we need to begin with a basic messaging project in order to test the technology and provide a foundation on which to build more sophisticated two-way communications that will provide more "smart grid" functionality. For example, once messaging is functional, if we wind up with a different tiered rate scheme for electric vehicles, perhaps with a set fee for a specific monthly consumption, it may be possible to send alerts to owners of electric vehicles to advise them if they are getting close to reaching their limits.

As previously mentioned, Guelph Hydro has invested in smart meters containing a ZigBee chip. ZigBee is a two-way communications protocol similar to Bluetooth. A variety of devices will be able to use the ZigBee protocol in the home, potentially including smart appliances, electric vehicle charging systems, lighting controls, heating and cooling systems and sources of renewable energy. Guelph Hydro would like to leverage the ZigBee chip investment to enable customers to use their in-home display for a variety of different purposes including activities that are more "smart grid" related that we expect would not be funded through the OPA CDM programs:

- Enabling smart appliances and electric vehicle charging systems to read Time-of-Use rate buckets and adjust consumption according to consumer-selected criteria (i.e. only charge at off-peak times, only dry clothes at off-peak times, etc;
- Lighting will turn off automatically if no one is in the room, and on when people come in;
- Heating and cooling systems will adjust temperatures in rooms according to occupancy and time-of-use rates;

- Renewable sources of energy may kick in or off according to signals received via the ZigBee chip.

- b) Please provide an explanation as to why a vital component of this initiative will be financed through “a new 2011 OPA Tier 1 CDM program” yet the back office component costing \$ 479,000 of capital in 2011 and \$92,000 per year for 5 years is presented as a smart grid project.

**Guelph Hydro’s Response:**

A separate back-office system is required to build, deliver, track and manage the messaging envisioned in this project, with estimated costing detailed in OEB IR # 87a and 87b.

Background: In August 2011 the OPA released the Schedule for the replacement CDM program anticipated to provide the “vital component funding” as part of this project. This “vital component funding” was anticipated to be funding of the In-Home Display (IHD) purchases.

In order to facilitate the Messaging Project, we are relying on the smart meter and its communications infrastructure to send messages to the IHD. A basic IHD will have minimum functionality that will permit the secure display of the customers real-time (or near real-time) energy consumption in kWh, as well as approximate cost of that energy consumption. For this project we envisage a more sophisticated offering, and to provide some guidance, Guelph Hydro is currently undertaking a customer survey to determine the appropriate functionality required in the IHD, and what end-user applications would be needed to support this project, to ensure that the system will provide value to the customer. This survey is expected to be completed November 2011.

- d) In the event that IHDs are not included in, and/or not funded through, the OPA CDM Program, please explain whether Guelph Hydro will proceed with the IHD Messaging Project. If Guelph Hydro will proceed, how does Guelph Hydro intend to fund the IHD devices?

**Guelph Hydro’s Response:**

Following release of the OPA Demand Response program schedule, we confirm that IHDs will be funded to a maximum per unit cost as determined by the OPA,

through the CDM program. We note that customers that had previously participated in the 2007-2010 OPA demand response program are also eligible to participate (including receipt of an IHD), provided they sign up for continued demand response activities for their central air conditioning through 2014.

Although for this application this project is designed as a pilot to understand how to best utilize the technology to provide value to the customer, we recognize that for this to truly become a community-wide messaging tool, we will ultimately require the majority of Guelph Hydro customers to participate in the IHD program, and we recognize that it may be difficult to achieve this level of penetration of IHDs through the CDM program enrollment alone.

We expect that as the project unfolds and as learnings are revealed, there will be some modifications required to the technology and/or the customer applications. Should we determine that uptake of OPA CDM program is not at a sufficient pace, we will pursue funding through other potential avenues, such as:

- An OEB Tier 3 CDM project application to fund the IHD, provided that IHDs can demonstrate tangible conservation results that can be applied towards Guelph Hydro's CDM targets;
- Ministry of Energy Smart Grid funding for electric vehicle pilot projects (IHD for two-way communications with charging systems);
- Ministry of Infrastructure, Environment or other ministries - development funding
- Ontario Centres of Excellence - Innovation projects with a university research component.

We note, however, that discussions will be required with the OPA and OEB to understand the implications of the wider roll-out of IHDs that are not delivered through the OPA CDM program. Should there be an energy/demand reduction attributed directly to IHD's, we cannot afford to not have this contribution be reflected towards Guelph Hydro's CDM targets.

- e) Please explain whether and how Guelph Hydro's 2011 activities and expenditures for the IHD Messaging Project may be affected by the timing of the roll-out of the OPA CDM Program.

### **Guelph Hydro's Response:**

As Guelph Hydro's GEA Plan we being developed, we did not have information on the design of the replacement residential demand response program. After program schedule was released in August, we started an analysis of its funding mechanism, implementation requirements and various delivery options. As we are already in September, Guelph Hydro's 2011 activities have already been

affected, as the more detailed work to ensure compatibility with the smart metering infrastructure, as well as researching and understanding IHD device functionality is just getting underway. Further delays will result in more delays to beginning the project. In addition, as the proposed project is linked through the IHD to Guelph Hydro's CDM activities, we cannot afford a lengthy delay in offering the IHD through the CDM demand response program to our customer base, as we have aggressive CDM targets to meet.

- f) Does Guelph Hydro intend to count energy and demand savings associated with the IHD Messaging Project towards Guelph Hydro's CDM Targets or Performance Incentive?
- i) If so, please explain how Guelph Hydro intends to apportion any energy or demand savings as between the IHD Messaging Project and the OPA CDM Program?

**Guelph Hydro's Response:**

The IHD project will be focused primarily on using messaging to change consumer behaviour. At this time it is unclear whether energy and demand savings will be associated solely to the IHD itself. Please refer to responses to IR#86a, b, c, d and e for more details. We note that discussions will be required with the OPA and OEB to understand the implications of the wider roll-out of IHDs that are not delivered through the OPA CDM program. Should there be an energy/demand reduction attributed directly to IHD's, we cannot afford to have this contribution not reflected towards Guelph Hydro's CDM targets.

- g) Please confirm whether only those customers that participate in the OPA CDM Program will be able to participate in the IHD Messaging Project.

**Guelph Hydro's Response:**

Please refer to responses to IR#86a, b, c, d and e. We propose to expand the project to beyond those customers participating in the OPA Demand Response program, but we note that discussions will be required with the OPA and OEB to understand the implications of the wider roll-out of IHDs that are not delivered through the OPA CDM program. Should there be an energy/demand reduction attributed directly to IHD's, we cannot afford to not have this contribution be reflected towards Guelph Hydro's CDM targets.



**IR – 87 - Ref: E2/T4/S6 Appendix D, pp.19-21**

- a) Please provide a detailed breakdown of the capital cost of \$479,000 in 2011 into the various components such as hardware, software etc, and further for each component a split between Material/Equipment, Labour, Overheads..etc.

**Guelph Hydro's Response:**

To support this project, the software system will be supplied by and integrated with our smart metering Advanced Metering Infrastructure (AMI). We note that similar to our smart meter implementation, we require the hardware and software to be sited in Canada, in order to avoid customer data privacy and confidentiality issues. The capital costs listed below include the requirement for this system to be situated in Guelph Hydro's IT room to facilitate the interface to our AMI. See the following table for 2011 estimated capital cost breakdown:

<b>Estimated Capital</b>	<b>Equipment</b>	<b>Labour</b>	<b>Total</b>
<b>System Hardware</b>	<b>\$89,000</b>	<b>\$0</b>	<b>\$89,000</b>
<b>System Software (messaging, security, database, and one-time end-point device licensing)</b>	<b>\$265,000</b>	<b>\$0</b>	<b>\$265,000</b>
<b>System Installation, Configuration, Integration, Testing, Commissioning &amp; Project Management</b>	<b>\$75,000</b>	<b>\$0</b>	<b>\$75,000</b>
<b>Application Development</b>	<b>\$50,000</b>	<b>\$0</b>	<b>\$50,000</b>
<b>Total</b>	<b>\$479,000</b>	<b>\$0</b>	<b>\$479,000</b>

- b) Please provide a detailed breakdown of the estimated annual \$92,000 OM&A costs for the project.

**Guelph Hydro's Response:**

See following table for estimated annual OM&A cost breakdown:

<b>Estimated OM&amp;A</b>	<b>Annual</b>
<b>Remote Operational Support</b>	<b>\$53,000</b>
<b>Maintenance Fee (annual software support)</b>	<b>\$42,000</b>
<b>Total</b>	<b>\$95,000</b>

**IR 89 - Ref: E2/T4/S6 Appendix D, pp.19-21 and Filing Requirements: Distribution System Plans – Filing Under Deemed Conditions of Licence, March 25, 2010**

Section 8.0 on page 19 and section 8.3 on page 21 of the first reference describes what amounts to an implementation phase i.e., full roll out, of the two key components of the In-Home Display Messaging Project, that will cover the entire customer base of Guelph Hydro.

In the second reference, the Filing Requirements on page 18 states in part that:

*“At the present time, smart grid development activities and expenditures should be limited to smart grid demonstration projects, smart grid studies or planning exercises and smart grid education and training.”*

- a) Please confirm if this project is a smart grid demonstration project and why it should be considered as such.

**Guelph Hydro's Response:**

Yes, this project is a smart grid demonstration project since the purpose is to investigate and evaluate a variety of customer and community-wide education and messaging opportunities, and how to make the best use of the investment in this system, before wide-spread implementation of these devices in our service territory.

- b) If part a) of this question is confirmed, please list the expected lessons learned from his project that will assist Guelph Hydro in preparing for smart grid implementation.

**Guelph Hydro's Response:**

Guelph Hydro expects to learn:

- How, when and why customers refer to the in-home displays for information about energy consumption and electricity pricing and what they do with this information (behavioural change);
- Whether improved communications to our customers via in-home displays results in a reduction in calls and emails to our Customer Service Department and/or an upswing in activity on the company website (behavioural change);
- Whether promoting energy conservation programs via this channel has a direct result on the uptake of our CDM programs (behavioural change);
- Whether basic information about electric vehicle charging drives people to the company website for in-depth information;

- Whether general community messaging positively impacts the brand of Guelph Hydro in the community;
- How other community agencies (ie City of Guelph Water Department) can use this vehicle as an effective means to promote other activities in support of the Community Energy Initiative (ie – water conservation, lawn watering ban days, etc)

The innovative City of Guelph Community Energy Initiative is contained in a document that can be accessed through Guelph Hydro or the City of Guelph's website, through the following link:

[http://guelph.ca/uploads/ET\\_Group/admin/CEP\\_report\\_web.pdf](http://guelph.ca/uploads/ET_Group/admin/CEP_report_web.pdf)

- c) If this is not considered a demonstration project, please explain why this initiative is being brought forward in advance of the Board's pending Guidance on smart grid implementation (EB-2011-0004) and include a list of any risks/drawbacks associated with getting ahead of the Board's Guidance versus delaying the project until those Guidelines have been issued.

**Guelph Hydro's Response:**

Not applicable.

## **Appendices**

**Guelph\_BrdStaff\_IRR\_33\_a\_i – Rate Application models**

**Submitted electronically**

**Guelph\_BrdStaff\_IRR\_33\_a\_ii – Board Decisions**  
**Provided as a separate file**

**Guelph\_BrdStaff\_IRR\_33\_iii\_Tax Returns**

**Provided as a separate file**

**Guelph\_BrdStaff\_IRR\_33\_a\_iv – SIMPIL Models**

**Submitted electronically**



**Guelph\_BrdStaff\_IRR\_33\_a\_v\_1562 Continuity Schedule**

**Submitted electronically**

**Guelph\_BrdStaff\_IRR\_33\_a\_v\_PILs\_Billed**  
**Submitted electronically**