Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 1 of 24

HISTORICAL INVESTMENTS BY PROJECT

This schedule provides descriptions of actual capital project spending from 2007 to 2011. E2/T4/S3/Att1 presents annual summaries of capital spending by project and account. E2/T4/S4/Att1 is the OEB Appendices 2A that list the projects greater than materiality of \$50k, and listed in detail below:

6

1

Account Description	USA Acct	Total
Land Rights	1806	
Building	1808	
Distribution Stations	1820	
Poles, Towers & Fixtures	1830	\$ 83k
Overhead Conductors & Devices	1835	\$ 120k
Underground Conduit	1840	\$ 25k
Underground Conductors & Devices	1845	\$ 226k
Line Transformers	1850	\$ 275k
Services	1855	\$ 179k
Meters	1860	\$ 32k
Office Furniture	1915	
Computer Hardware	1920	
Computer Software	1925	
Transportation Equipment	1930	
Misc. Tools & Equipment	1940	
Communication Equipment	1955	
Load Mgt Equip – Customer Premise	1970	
System Supervisory Equip	1980	
Contributed Capital	1995	-\$138k
TOTAL		\$ 803k

Capital Additions for 2007

7

8 Project Description: #2007 – 600 General

9 Need: THI uses Project 600 to replace old and deteriorated assets in order to maintain
10 a stable and reliable distribution system. These enhancements are part of THI's
11 obligation to meet the safety standards of Reg 22/04.

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 2 of 24

- 1 **Scope:** Determined on a site specific basis throughout the year.
- 2

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ 5k
#1835 Overhead Conductors & Devices	\$7k
#1840 Underground Conduit	\$ -
#1845 Underground Conductors & Devices	\$7k
#1850 Line Transformers	\$30k
#1855 Services	\$46k
#1860 Meters	\$32k
#1995 Contributions and Grants – Credit	\$ -139
Total	\$-12k

3

4 **Project Description: #2007 – 20 M8 Feeder Egress**

- 5 **Need:** To supply a dedicated feeder to an existing industrial park after new development
- 6 exceeded the prior design.

7

- 8 Scope: Supply and installation of new feeder line extension, and rearrangement of
- 9 transformers and existing circuits
- 10

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$6k
#1835 Overhead Conductors & Devices	\$2k
#1840 Underground Conduit	\$2k
#1845 Underground Conductors & Devices	\$11k
# 1995 Contributed Capital	\$-
Total	\$21k

1 **Project Description: #2007 – 935 Cambdon Court Conversion**

Need: The next step in THI's ongoing conversion of old Hydro One 4.8kV acquired
assets to 16kV assets including the relocation of backyard poles and assets to the
fronting Municipal Right-of-Way.

- 5
- 6 Scope: Build new 16kV assets along Cambdon Court and relocate services to the new
- 7 before removing old 4.8kV assets from rear yards.
- 8

Capital Costs:

Account & Description	Amount
#1835 Overhead Conductors & Devices	\$5k
#1845 Underground Conductors & Devices	\$92k
#1850 Line Transformers	\$46k
#1855 Services	\$114k
#1860 Meters	\$-
Total	\$257k

9

10 **Project Description: #2007 – 936 Baldwin Place Poles**

- 11 **Need:** Relocation of poles and conductors from former Railway corridor as requested by
- 12 a developer
- 13
- 14 **Scope:** Relocate poles into the Municipal Right-of-Way and rearrange conductor
- 15

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$3k
#1835 Overhead Conductors & Devices	\$6k
#1840 Underground Conduit	\$10k
#1845 Underground Conductors & Devices	\$40k
# 1850 Line Transformers	\$-
Total	\$59k

1 Project Description: #2007 – 937 Newell Road

Need: Upgrading the poles and conductors along Newell Road to accommodate new M8
feeder and relocation of assets from former Railway corridor as requested by a
developer.

5

6 Scope: Supply and Place new larger poles and conductors to meet the upcoming7 requirements.

8

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$35k
#1835 Overhead Conductors & Devices	\$65k
#1855 Services	\$-
Total	\$100k

9

10 **Project Description: #2007 – 947 Fox Alley Joseph Block**

11 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

12 assets

13

14 **Scope:** Supply and place new poles and conductors and replace existing transformation

15 with new pad mounted transformers and aerial transformers.

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 5 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$1k
#1835 Overhead Conductors & Devices	\$1k
#1845 Underground Conductors & Devices	\$14k
#1850 Line Transformers	\$36k
#1855 Services	\$4k
Total	\$56k

2

1

3 **Project Description: #2007 – 948 Fox Alley Heath's Block**

4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

- 5 assets
- 6
- 7 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 8 with new pad mounted transformers and aerial transformers.
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$1k
#1835 Overhead Conductors & Devices	\$-
#1845 Underground Conductors & Devices	\$15k
#1850 Line Transformers	\$49k
#1855 Services	\$2k
Total	\$67k

10

11 **Project Description: #2007 – 963 Factory Plaza**

- 12 Need: In order to build the proposed M8 feeder it was identified the existing 4.16Kv
- 13 circuit that serviced this building must be converted and relocated.

- 15 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 16 with new pad mounted transformers.

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 6 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$11k
#1835 Overhead Conductors & Devices	\$7k
#1845 Underground Conductors & Devices	\$6k
#1850 Line Transformers	\$29k
#1855 Services	\$-
Total	\$53k

2

1

3 **Project Description: #2007 – Miscellaneous**

4 Need: THI uses Miscellaneous for all projects which do not meet or exceed our 5 materiality threshold to replace old and deteriorated assets on miscellaneous conversion 6 projects which are generally unscheduled in order to maintain a stable and reliable 7 distribution system. These enhancements are part of THI's obligation to meet the safety 8 standards of Reg 22/04.

9

10 Scope: Replacement of poles, transformers, conductors and service wires necessary to

- 11 complete small scale projects.
- 12

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ 21k
#1835 Overhead Conductors & Devices	\$28k
#1840 Underground Conduit	\$ 14k
#1845 Underground Conductors & Devices	\$41k
#1850 Line Transformers	\$ 85k
#1855 Services	\$13k
#1860 Meters	
#1995 Contributions and Grants – Credit	
Total	\$202k

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 7 of 24

Account Description	USA Acct	Total
Building	1808	
Distribution Stations	1820	
Poles, Towers & Fixtures	1830	\$ 55k
Overhead Conductors & Devices	1835	\$ 74k
Underground Conduit	1840	\$ 49k
Underground Conductors & Devices	1845	\$ 312k
Line Transformers	1850	\$ 300k
Services	1855	\$ 114k
Meters	1860	\$ 14k
Computer Hardware	1920	
Computer Software	1925	
Transportation Equipment	1930	
Misc. Tools & Equipment	1940	
Communication Equipment	1955	
System Supervisory Equip	1980	
Contributed Capital	1995	-\$769k
TOTAL		\$ 149k

Capital Additions for 2008

2

1

3 Project Description: #2008 – 600 General

Need: THI uses Project 600 to replace old and deteriorated assets in order to maintain
a stable and reliable distribution system. These enhancements are part of THI's
obligation to meet the safety standards of Reg 22/04.

7

8 **Scope:** Determined on a site specific basis throughout the year.

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 8 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ 4k
#1835 Overhead Conductors & Devices	\$13k
#1840 Underground Conduit	\$ 2k
#1845 Underground Conductors & Devices	\$3k
#1850 Line Transformers	\$ 8k
#1855 Services	\$27k
#1860 Meters	\$14k
#1995 Contributions and Grants – Credit	-\$769k
Total	-\$698k

2

1

3 Project Description: #2008 – 904 Park Place Residential Subdivision

- 4 Need: Supply new residential development and scattered services that was requested
- 5 by a local developer.
- 6
- 7 Scope: Relocate one pole for placement of new road and then supply and install primary
- 8 and secondary cables and transformers
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$4k
#1840 Underground Conduit	\$8k
#1845 Underground Conductors & Devices	\$32k
#1850 Line Transformers	\$36k
Total	\$80k

10

11 Project Description: #2008 – 913 Oak Park 2007 Residential Subdivision

12 Need: Supply new residential development and scattered services that was requested

13 by a local developer.

14

15 Scope: Supply and install primary and secondary cables and transformers

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 9 of 24

Capital Costs:

Account & Description	Amount
#1840 Underground Conduit	\$4k
#1845 Underground Conductors & Devices	\$42k
#1850 Line Transformers	\$28k
Total	\$74k

2

1

3 **Project Description: #2008 – 914 OAKS Residential Subdivision**

- 4 Need: Supply new residential development and scattered services that was requested
- 5 by a local developer.

6

- 7 **Scope:** Supply and install primary and secondary cables and transformers
- 8

Capital Costs:

Account & Description	Amount
#1840 Underground Conduit	\$16k
#1845 Underground Conductors & Devices	\$98k
#1850 Line Transformers	\$66k
#1855 Services	\$1k
Total	\$181k

9

Project Description: #2008 – 915 Baldwin Place Phase 8 Residential Subdivision

- 12 Need: Supply new residential development and scattered services that was requested
- 13 by a local developer.

14

15 **Scope:** Supply and install primary and secondary cables and transformers

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 10 of 24

Capital Costs:

Account & Description	Amount
#1840 Underground Conduit	\$14k
#1845 Underground Conductors & Devices	\$82k
#1850 Line Transformers	\$46k
Total	\$142k

2

1

3 **Project Description: #2008 – 940 Fairview Pumping Station**

- 4 Need: Supply new servicing to the proposed County of Oxford Water Treatment plant
- 5 and Booster Station.

6

- 7 **Scope:** Connect large service requirements within the existing residential servicing.
- 8

Capital Costs:

Account & Description	Amount
#1835 Overhead Conductors and Devices	\$6k
#1845 Underground Conductors & Devices	\$16k
#1850 Line Transformers	\$29k
Total	\$51k

9

10 **Project Description: #2008 – 946 Fox Alley South Block**

11 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

12 assets

- 14 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 15 with new pad mounted transformers and aerial transformers.

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 11 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$29k
#1835 Overhead Conductors & Devices	\$29k
#1850 Line Transformers	\$17k
#1855 Services	\$20k
Total	\$95k

2

1

3 **Project Description: #2008 – 947 Fox Alley Joseph Block**

4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

5 assets

6

7 **Scope:** Supply and place new poles and conductors and replace existing transformation

8 with new pad mounted transformers and aerial transformers.

9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$-
#1835 Overhead Conductors & Devices	\$1k
#1840 Underground Conduit	\$1k
#1845 Underground Conductors & Devices	\$1k
#1850 Line Transformers	\$9k
#1855 Services	\$43k
Total	\$55k

10

11 Project Description: #2008 – Miscellaneous

Need: THI uses Miscellaneous for all projects which do not meet or exceed our materiality threshold to replace old and deteriorated assets on miscellaneous conversion projects which are generally unscheduled in order to maintain a stable and reliable distribution system. These enhancements are part of THI's obligation to meet the safety standards of Reg 22/04.

Tillsonburg Hydro Inc. Filed: 28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 12 of 24

- 1 **Scope:** Replacement of poles, transformers, conductors and service wires necessary to
- 2 complete small scale projects.

3

4

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ 18k
#1835 Overhead Conductors & Devices	\$25k
#1840 Underground Conduit	\$ 4k
#1845 Underground Conductors & Devices	\$38k
#1850 Line Transformers	\$63k
#1855 Services	\$23k
#1860 Meters	
#1995 Contributions and Grants – Credit	
Total	\$171k

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 13 of 24

Account Description	USA Acct	Total
Building	1808	
Distribution Stations	1820	
Poles, Towers & Fixtures	1830	\$ 153k
Overhead Conductors & Devices	1835	\$ 208k
Underground Conduit	1840	\$ 5k
Underground Conductors & Devices	1845	\$ 30k
Line Transformers	1850	\$ 216k
Services	1855	\$ 101k
Meters	1860	\$ 12k
Computer Hardware	1920	\$11k
Computer Software	1925	\$297k
Transportation Equipment	1930	
Misc. Tools & Equipment	1940	
Communication Equipment	1955	
System Supervisory Equip	1980	
Contributed Capital	1995	-\$92k
TOTAL		\$ 929k

Capital Additions for 2009

2

1

3 **Project Description: #2009 – 600 General**

4 **Need:** THI uses Project 600 to replace old and deteriorated assets in order to maintain

5 a stable and reliable distribution system. These enhancements are part of THI's

6 obligation to meet the safety standards of Reg 22/04.

7

8 **Scope:** Determined on a site specific basis throughout the year.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 14 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ -
#1835 Overhead Conductors & Devices	\$5k
#1840 Underground Conduit	\$ -
#1845 Underground Conductors & Devices	\$1k
#1850 Line Transformers	\$ 10k
#1855 Services	\$21k
#1860 Meters	\$12k
#1920 Computer Hardware	\$12k
#1925 Computer Software	\$296k
#1995 Contributions and Grants – Credit	-\$91k
Total	\$266k

2

1

3 **Project Description: #2009 – 917 Coon Alley Bridge to London**

- 4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 5 assets
- 6
- 7 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 8 with new pad mounted transformers and aerial transformers.
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$63k
#1835 Overhead Conductors & Devices	\$103k
#1840 Underground Conduit	\$
#1845 Underground Conductors & Devices	\$4k
#1850 Line Transformers	\$91k
#1855 Services	\$42k
Total	\$303k

10

11 **Project Description: #2009 – 919 Edgewood Drive**

- 12 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 13 assets

1

- 2 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 3 with new aerial transformers.
- 4

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$17k
#1835 Overhead Conductors & Devices	\$21k
#1840 Underground Conduit	\$
#1845 Underground Conductors & Devices	\$2k
#1850 Line Transformers	\$22k
#1855 Services	\$7k
Total	\$69k

5

6 Project Description: #2009 – 921 Wolfe Street

- 7 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 8 assets
- 9
- 10 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 11 with new aerial transformers.
- 12

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$9k
#1835 Overhead Conductors & Devices	\$15k
#1840 Underground Conduit	\$3k
#1845 Underground Conductors & Devices	\$11k
#1850 Line Transformers	\$43k
#1855 Services	\$19k
Total	\$100k

13

14 **Project Description: #2009 – 024a Computer Hardware**

15 **Need:** Upgrade of technology

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 16 of 24

2 Scope: Dedicated server for new CIS

\mathbf{a}
-
<u> </u>

1

Capital Costs:

Account & Description	Amount
#1920 Computer Hardware	\$11k

4

5 **Project Description: #2009 – 024b Computer Software – CIS System**

6 **Need:** Old system was no longer supported. Upgrade to software mandatory.

7

8 **Scope:** Engineering and CIS product upgrades

9

Capital Costs:

Account & Description	Amount
#1925 Computer Software	\$297k

10

11 **Project Description: #2009 – Miscellaneous**

Need: THI uses Miscellaneous for all projects which do not meet or exceed our materiality threshold to replace old and deteriorated assets on miscellaneous conversion projects which are generally unscheduled in order to maintain a stable and reliable distribution system. These enhancements are part of THI's obligation to meet the safety standards of Reg 22/04.

17

Scope: Replacement of poles, transformers, conductors and service wires necessary to
 complete small scale projects.

- 20
- 21
- 22
- 23
- 24

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 17 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ 61k
#1835 Overhead Conductors & Devices	\$59k
#1840 Underground Conduit	\$ 1k
#1845 Underground Conductors & Devices	\$10k
#1850 Line Transformers	\$49k
#1855 Services	\$11k
#1860 Meters	
#1995 Contributions and Grants – Credit	
Total	\$191k

2

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 18 of 24

Account Description	USA Acct	Total
Building	1808	
Distribution Stations	1820	
Poles, Towers & Fixtures	1830	\$ 145k
Overhead Conductors & Devices	1835	\$ 87k
Underground Conduit	1840	\$ 47k
Underground Conductors & Devices	1845	\$ 72k
Line Transformers	1850	\$ 246k
Services	1855	\$ 84k
Meters	1860	\$ 8k
Computer Hardware	1920	
Computer Software	1925	
Transportation Equipment	1930	
Misc. Tools & Equipment	1940	
Communication Equipment	1955	
System Supervisory Equip	1980	
Contributed Capital	1995	-\$90k
TOTAL		\$ 599k

Capital Additions for 2010

2

1

3 **Project Description: #2010 – 600 General**

4 **Need:** THI uses Project 600 to replace old and deteriorated assets in order to maintain

5 a stable and reliable distribution system. These enhancements are part of THI's

6 obligation to meet the safety standards of Reg 22/04.

7

8 **Scope:** Determined on a site specific basis throughout the year.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 19 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$-
#1835 Overhead Conductors & Devices	\$-
#1840 Underground Conduit	\$-
#1845 Underground Conductors & Devices	\$1k
#1850 Line Transformers	\$ 6k
#1855 Services	\$14k
#1860 Meters	\$8k
#1995 Contributions and Grants – Credit	- \$90k
Total	-\$61k

2

1

3 Project Description: #2010 – 922 Concession Street

- 4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 5 assets
- 6
- 7 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 8 with new pad mounted transformers and aerial transformers.
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$82k
#1835 Overhead Conductors & Devices	\$58k
#1840 Underground Conduit	\$45k
#1845 Underground Conductors & Devices	\$68k
#1850 Line Transformers	\$178k
#1855 Services	\$38k
Total	\$469k

10

11 **Project Description: #2010 – 924 Parkwood Drive**

12 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

13 assets

- 2 with new aerial transformers.
- 3

1

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$32k
#1835 Overhead Conductors & Devices	\$8k
#1850 Line Transformers	\$33k
#1855 Services	\$4k
Total	\$77k

4 **Project Description: #2010 – Miscellaneous**

5 **Need:** THI uses Miscellaneous for all projects which do not meet or exceed our 6 materiality threshold to replace old and deteriorated assets on miscellaneous conversion 7 projects which are generally unscheduled in order to maintain a stable and reliable 8 distribution system. These enhancements are part of THI's obligation to meet the safety 9 standards of Reg 22/04.

10

Scope: Replacement of poles, transformers, conductors and service wires necessary to
 complete small scale projects.

- 13
- 14
- 15

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ 32k
#1835 Overhead Conductors & Devices	\$21k
#1840 Underground Conduit	\$ 2k
#1845 Underground Conductors & Devices	\$3k
#1850 Line Transformers	\$29k
#1855 Services	\$28k
#1860 Meters	
#1995 Contributions and Grants – Credit	
Total	\$115k

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 21 of 24

		I -
Account Description	USA Acct	Total
Building	1808	
Distribution Stations	1820	
Poles, Towers & Fixtures	1830	\$ 155k
Overhead Conductors & Devices	1835	\$ 78k
Underground Conduit	1840	\$ 108k
Underground Conductors & Devices	1845	\$ 88k
Line Transformers	1850	\$ 207k
Services	1855	\$ 153k
Meters	1860	\$ 32k
Computer Hardware	1920	
Computer Software	1925	
Transportation Equipment	1930	
Misc. Tools & Equipment	1940	
Communication Equipment	1955	
System Supervisory Equip	1980	
Contributed Capital	1995	-\$173k
TOTAL		\$ 648k

Capital Additions for 2011

2

1

3 **Project Description: #2011 – 600 General**

4 **Need:** THI uses Project 600 to replace old and deteriorated assets in order to maintain

5 a stable and reliable distribution system. These enhancements are part of THI's

6 obligation to meet the safety standards of Reg 22/04.

7

8 **Scope:** Determined on a site specific basis throughout the year.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 22 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ -
#1835 Overhead Conductors & Devices	\$2k
#1840 Underground Conduit	\$
#1845 Underground Conductors & Devices	\$3k
#1850 Line Transformers	\$ 13k
#1855 Services	\$30k
#1860 Meters	\$31k
#1995 Contributions and Grants – Credit	- \$173k
Total	-\$94k

2

1

3 Project Description: #2011 – 912 Heritage Phase 1 New Residential 4 Development

- 5 Need: Supply new residential developments and scattered services including extending
- 6 aerial servicing to limit of subdivision
- 7
- 8 **Scope:** Install primary and secondary cables and transformers
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$28k
#1835 Overhead Conductors & Devices	\$17k
#1840 Underground Conduit	\$25k
#1845 Underground Conductors & Devices	\$10k
#1850 Line Transformers	\$40k
#1855 Services	\$10k
Total	\$130k

10

11 **Project Description: #2011 – 922 Concession Street**

- 12 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 13 assets

- 15 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 16 with new pad mounted transformers and aerial transformers.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 23 of 24

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$10k
#1835 Overhead Conductors & Devices	\$10k
#1840 Underground Conduit	\$7k
#1845 Underground Conductors & Devices	\$6k
#1850 Line Transformers	\$31k
#1855 Services	\$2k
Total	\$66k

2

1

3 Project Description: #2011 – 930 Brock Street E

4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

- 5 assets
- 6

7 **Scope:** Supply and place new poles and conductors and replace existing transformation

- 8 with new aerial transformers.
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$65k
#1835 Overhead Conductors & Devices	\$32k
#1840 Underground Conduit	\$36k
#1845 Underground Conductors & Devices	\$63k
#1850 Line Transformers	\$104k
#1855 Services	\$45k
Total	\$345k

10

11 **Project Description: #2011 – Miscellaneous**

Need: THI uses Miscellaneous for all projects which do not meet or exceed our materiality threshold to replace old and deteriorated assets on miscellaneous conversion projects which are generally unscheduled in order to maintain a stable and reliable distribution system. These enhancements are part of THI's obligation to meet the safety standards of Reg 22/04.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Page 24 of 24

- 1
- 2 Scope: Replacement of poles, transformers, conductors and service wires necessary to
- 3 complete small scale projects.
- 4
- 5

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$ 52k
#1835 Overhead Conductors & Devices	\$18k
#1840 Underground Conduit	\$ 39k
#1845 Underground Conductors & Devices	\$6k
#1850 Line Transformers	\$20k
#1855 Services	\$66k
#1860 Meters	
#1995 Contributions and Grants – Credit	
Total	\$201k

6

EB-2012-0168 Exhibit 2 Tab 4 Schedule 3 Attachment 1

Historical Capital Project Tables

Historical Capital Projects

Project	2007	2008	2009	2010	2011
600 - General	(\$12,045)	(\$697,560)	(\$30,990)	(\$61,430)	(\$93,729)
24 - CIS System			\$296,643		
904 - Park Place		\$79,565			
912 - Heritage Phase 1					\$130,065
913 - Oak Park 2007		\$73,509			
914 - Oaks Subd		\$180,857			
915 - Baldwin Place #8		\$141,898			
917 - Coon Alley - Bridge to Ldn			\$303,198		
919 - Edgewood Dr			\$69,365		
921 - Wolfe St			\$99,939		
922 - Concession St				\$468,585	\$66,173
924 - Parkwood				\$76,951	
930 - Brock St E					\$344,703
935 Cambdon Crt	\$256,864				
936 - Baldwin Place Poles	\$58,740				
937 - Newell Rd	\$100,180				
940 - Fairvw Pmp Stn		\$50,897			
946 - FoxAlley South		\$94,570			
947 - FoxAlley - Joseph	\$56,410	\$54,786			
948 - FoxAlley - Heaths	\$67,035				
963 - Factory Plaza	\$53,082				
Miscellaneous	\$222,865	\$170,708	\$190,824	\$115,266	\$201,254
Total	\$803,131	\$149,230	\$928,979	\$599,372	\$648,466

Note: projects above the materiality threshold of \$50k are listed in detail above. Projects under the threshold are grouped into Miscellaneous.

FORECAST INVESTMENTS BY PROJECT

- 2 This schedule provides descriptions of capital project spending for 2012 and 2013.
- 3 E2/T4/S4/Att1 presents annual summaries of capital spending by project and account.
- 4

1

Capital Additions for 2012

Account Description	USA Acct	Tota	al
Building	1808		
Distribution Stations	1820		
Poles, Towers & Fixtures	1830	\$	152k
Overhead Conductors & Devices	1835	\$	100k
Underground Conduits	1840	\$	78k
Underground Conductors & Devices	1845	\$	70k
Line Transformers	1850	\$	181k
Services	1855	\$	72k
Meters	1860	\$	28k
Computer Hardware	1920		
Computer Software	1925		
Transportation Equipment	1930		
Supervisory Control and Data Acquisition	1980		
Contributed Capital	1995	-\$	12k
Total		\$	669k

5

6 **Project Description: #2012 – 933 Frances Street**

- 7 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 8 assets
- 9
- 10 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 11 with new aerial transformers.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Page 2 of 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$23k
#1835 Overhead Conductors & Devices	\$17k
#1840 Underground Conduit	\$17k
#1845 Underground Conductors & Devices	\$12k
#1850 Line Transformers	\$35k
#1855 Services	\$12k
Total	\$116k

2

1

3 Project Description: #2012 – 935 Queen St Apartments

4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

- 5 assets
- 6

7 **Scope:** Supply and place new poles and conductors and replace existing transformation

- 8 with new pad mount transformers.
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$17k
#1835 Overhead Conductors & Devices	\$12k
#1840 Underground Conduit	\$28k
#1845 Underground Conductors & Devices	\$23k
#1850 Line Transformers	\$35k
#1855 Services	\$-
Total	\$115k

10

11 **Project Description: #2012 – 939 Queen Street**

- 12 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 13 assets

- 15 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 16 with new pad mount and aerial transformers.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Page 3 of 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$18k
#1835 Overhead Conductors & Devices	\$13k
#1840 Underground Conduit	\$9k
#1845 Underground Conductors & Devices	\$13k
#1850 Line Transformers	\$32k
#1855 Services	\$4k
Total	\$89k

2

1

3 Project Description: #2012 – 940 Durham Street and Ebert Alley

4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

- 5 assets
- 6

7 **Scope:** Supply and place new poles and conductors and replace existing transformation

- 8 with new aerial transformers.
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$32k
#1835 Overhead Conductors & Devices	\$25k
#1840 Underground Conduit	\$6k
#1845 Underground Conductors & Devices	\$6k
#1850 Line Transformers	\$38k
#1855 Services	\$19k
Total	\$126k

10

11 **Project Description: #2012 – 942 Clarke Street**

- 12 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 13 assets

- 15 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 16 with new aerial transformers.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Page 4 of 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$28k
#1835 Overhead Conductors & Devices	\$28k
#1840 Underground Conduit	\$14k
#1845 Underground Conductors & Devices	\$14k
#1850 Line Transformers	\$37k
#1855 Services	\$21k
Total	\$142k

3

2

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Page 5 of 9

Capital Additions for 2013

Account Description	USA Acct	Total
Land	1805	
Building	1808	
Distribution Stations	1820	
Poles, Towers & Fixtures	1830	\$ 174k
Overhead Conductors & Devices	1835	\$ 156k
Underground Conduit	1840	\$ 44k
Underground Conductors & Devices	1845	\$ 55k
Line Transformers	1850	\$ 223k
Services	1855	\$ 77k
Meters	1860	
Furniture	1915	
Computer Hardware	1920	\$ 11k
Computer Software	1611	\$ 54k
Transportation Equipment	1930	
Tools & Equipment	1940	
Communications Equipment	1955	
System Supervisory Equipment	1980	
Contributed Capital	1995	-\$ 133k
Total		\$ 661k

3

4 **Project Description: #2013 – North Street Trailer Park**

5 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

6 assets

7

- 8 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 9 with new pad mount and aerial transformers.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Page 6 of 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$10k
#1835 Overhead Conductors & Devices	\$7k
#1840 Underground Conduit	\$7k
#1845 Underground Conductors & Devices	\$3k
#1850 Line Transformers	\$36k
#1855 Services	\$7k
Total	\$70k

2

1

3 **Project Description: #2013 – Delevan Cres, Queen Street N.**

4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

- 5 assets
- 6

7 **Scope:** Supply and place new poles and conductors and replace existing transformation

- 8 with new aerial transformers.
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$46k
#1835 Overhead Conductors & Devices	\$27k
#1840 Underground Conduit	\$7k
#1845 Underground Conductors & Devices	\$
#1850 Line Transformers	\$40k
#1855 Services	\$13k
Total	\$133k

10

11 **Project Description: #2013 – Lisgar Ave.**

- 12 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 13 assets

- 15 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 16 with new aerial transformers.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Page 7 of 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$30k
#1835 Overhead Conductors & Devices	\$20k
#1840 Underground Conduit	\$5k
#1845 Underground Conductors & Devices	\$
#1850 Line Transformers	\$25k
#1855 Services	\$20k
Total	\$100k

2

1

3 **Project Description: #2013 – Fourth Street**

4 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV

- 5 assets
- 6

7 **Scope:** Supply and place new poles and conductors and replace existing transformation

- 8 with new aerial transformers.
- 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$21k
#1835 Overhead Conductors & Devices	\$17k
#1840 Underground Conduit	\$3k
#1845 Underground Conductors & Devices	\$-
#1850 Line Transformers	\$17k
#1855 Services	\$10k
Total	\$68k

10

11 **Project Description: #2013 – Tillson Ave and Cranberry Road**

- 12 Need: A continuing phase of THI's ongoing conversion of existing 4.16kV to 27.6kV
- 13 assets

- 15 **Scope:** Supply and place new poles and conductors and replace existing transformation
- 16 with new aerial transformers.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Page 8 of 9

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	\$34k
#1835 Overhead Conductors & Devices	\$21k
#1840 Underground Conduit	\$4k
#1845 Underground Conductors & Devices	\$
#1850 Line Transformers	\$17k
#1855 Services	\$ 9k
Total	\$85k

2 **Project Description: #2013 – A New Residential Development (Annandale)**

- 3 **Need:** Service of new residential developments
- 4

1

- 5 **Scope:** Installation of underground conductors and transformers
- 6

Capital Costs:

Account & Description	Amount
#1830 Poles, Towers & Fixtures	
#1835 Overhead Conductors & Devices	
#1840 Underground Conduit	\$8k
#1845 Underground Conductors & Devices	\$40k
#1850 Line Transformers	\$32k
#1855 Services	
#1995 Contributed Capital	-\$80k
Total	\$0

7 **Project Description: #2013 – 3 Commercial Developments**

- 8 **Need:** Service of new commercial developments
- 9
- 10 **Scope:** Installation of poles, conductor and transformers

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Page 9 of 9

Capital Costs:

Account & Description	Amount
#1835 Overhead Conductors & Devices	\$5k
#1840 Underground Conduit	\$3k
#1845 Underground Conductors	\$8k
#1850 Line Transformers	\$32k
#1855 Services	\$5k
#1995 Contributed Capital	-\$53k
Total	\$-

2

1

3

4 Project Description: #2013 – Customer Information System Upgrade

- 5 **Need:** Update technology
- 6
- 7 **Scope:** Upgrade to new version of software to allow use in a Windows 7 environment.

8

Capital Costs:

Account & Description	Amount
#1920 Computer Hardware	\$11k
#1611 Computer Software	\$54k
Total	\$65k

EB-2012-0168 Exhibit 2 Tab 4 Schedule 4 Attachment 1

OEB Appendix 2-A Capital Projects Table
File Number:	EB-2012-0168
Exhibit:	2
Tab:	4
Schedule:	4
Attachment:	1
Date:	28-Sep-12

	2007	2008	2009	2010	2011	2012 Bridge	2013 Test
Projects					-	Year	Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Project 600 - General							
1830 - Poles, Towers and Fixtures	5,051	4,075	814	223	368		
1835 - Overhead Conductors & Devices	6,527	12,752	4,755	883	1,579		
1840 - Underground Conduit	84	2,292		60			
1845 - Underground Conductors & Devices	6,963	2,758	1,087	587	3,035		
1850 - Line Transformers	29,563	7,868	9,676	5,521	12,652		
1855 - Services	45,770	27,268	20,532	13,514	29,626		
1860 - Meters	32,382	13,884	12,461	8,107	31,804		
1920 - Computer Hardware			11,532				
1925 - Computer Software							
1995 - Contributions and Grants - Credit	-138,385	-768,457	-91,847	-90,325	-172,793		
Sub-Total	-12,045	-697,560	-30,990	-61,430	-93,729	0	0
Project 24 CIS System							
1830 - Poles, Towers and Fixtures							
1835 - Overhead Conductors & Devices							
1840 - Underground Conduit							
1845 - Underground Conductors & Devices							
1850 - Line Transformers							
1855 - Services							
1860 - Meters							
1920 - Computer Hardware			296,643				
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	296,643	0	0	0	0
Project 904 Park Place							
1830 - Poles, Towers and Fixtures		3,593					
1835 - Overhead Conductors & Devices							
1840 - Underground Conduit		7,603					
1845 - Underground Conductors & Devices		31,569					
1850 - Line Transformers		36,800					
1855 - Services							
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	79,565	0	0	0	0	0
Project 912 Heritage Phase 1							
1830 - Poles, Towers and Fixtures					27,808		
1835 - Overhead Conductors & Devices					17,111		
1840 - Underground Conduit					25,380		
1845 - Underground Conductors & Devices					9,698		
1850 - Line Transformers					39,827		
1855 - Services					10,241		
1860 - Meters					,		
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
	0	0	0	0	130.065	0	0
Sub-Total	0	0	0	0	130,065	0	

File Number:	EB-2012-0168
Exhibit:	2
Tab:	4
Schedule:	4
Attachment:	1
Date:	28-Sep-12

Projects	2007	2008	2009	2010	2011	2012 Bridge Year	2013 Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Project 913 Oak Park 2007							
1830 - Poles, Towers and Fixtures							
1835 - Overhead Conductors & Devices					-		-
1840 - Underground Conduit		3,778			-		-
1845 - Underground Conductors & Devices		42,205			-		-
1850 - Line Transformers		27,526			-		-
1855 - Services		21,020			-		-
1860 - Meters					-		-
1920 - Computer Hardware					-		-
1925 - Computer Software					-		-
1995 - Contributions and Grants - Credit					-		-
Sub-Total	0	73,509	0	0	0	0	0
Project 914 Oaks Subd	Ű	10,000	Ŭ	•		Ŭ	
1830 - Poles, Towers and Fixtures							
1835 - Overhead Conductors & Devices							
1840 - Underground Conduit		16,024					
1845 - Underground Conductors & Devices		97,357					
1850 - Line Transformers		66,010					
1855 - Services		1,466					
1860 - Meters		1,400					
1920 - Computer Hardware							
1925 - Computer Naturale							
1995 - Contributions and Grants - Credit							
Sub-Total	0	180,857	0	0	0	0	0
Project 915 Baldwin Place #8	0	100,007	0	0	0	0	0
1830 - Poles, Towers and Fixtures							
1835 - Overhead Conductors & Devices							
1840 - Underground Conduit		13,565					
1845 - Underground Conductors & Devices		82,665					
1850 - Line Transformers		45,668					
1855 - Services		43,000					
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Naturale							
1995 - Contributions and Grants - Credit							
Sub-Total	0	141,898	0	0	0	0	0
Project 917 Coon Alley - Bridge to Ldn	0	141,090	0	0	0	0	0
1830 - Poles, Towers and Fixtures			62,785				
1835 - Overhead Conductors & Devices			103.438				
1840 - Underground Conduit			103,436				
V			4.067				
1845 - Underground Conductors & Devices 1850 - Line Transformers			4,067 90,714				
1850 - Line Transformers 1855 - Services			90,714 42,194				
1855 - Services 1860 - Meters			42,194				
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit			200.400	^	^	^	
Sub-Total	0	0	303,198	0	0	0	0

File Number:	EB-2012-0168
Exhibit:	2
Tab:	4
Schedule:	4
Attachment:	1
Date:	28-Sep-12

Proiects	2007	2008	2009	2010	2011	2012 Bridge Year	2013 Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Project 919 Edgewood Dr	COAAI	COAAI	UUAAI	COAAI	COAAI	COAAI	
1830 - Poles, Towers and Fixtures			17,160				
1835 - Overhead Conductors & Devices			20,725				
1840 - Underground Conduit			20,725				
1845 - Underground Conductors & Devices			2.061				
1845 - Onderground Conductors & Devices			/				
			22,196				
1855 - Services			7,223				
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit		-			-		
Sub-Total	0	0	69,365	0	0	0	0
Project 921 Wolfe St							
1830 - Poles, Towers and Fixtures			8,615				
1835 - Overhead Conductors & Devices			15,327				
1840 - Underground Conduit			3,479				
1845 - Underground Conductors & Devices			10,715				
1850 - Line Transformers			42,674				
1855 - Services			19,129				
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	99,939	0	0	0	0
Project 922 Concession St							
1830 - Poles, Towers and Fixtures				81,630	9,728		
1835 - Overhead Conductors & Devices				57,649	9,871		
1840 - Underground Conduit				45,366	7,481		
1845 - Underground Conductors & Devices				67,756	5,886		
1850 - Line Transformers				178,152	30,981		
1855 - Services				38,032	2,226		
1860 - Meters				/	, -		
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	468,585	66.173	0	0
Project 924 Parkwood		0		100,000	00,170	0	0
1830 - Poles, Towers and Fixtures				31,748			
1835 - Overhead Conductors & Devices				7,577			
1840 - Underground Conduit				1,511			
1845 - Underground Conductors & Devices							
1850 - Line Transformers				33,800			
1855 - Services				3,826			
1855 - Services 1860 - Meters				3,020			
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit				70.071		-	
Sub-Total	0	0	0	76,951	0	0	0

File Number:	EB-2012-0168
Exhibit:	2
Tab:	4
Schedule:	4
Attachment:	1
Date:	28-Sep-12

Projects	2007	2008	2009	2010	2011	2012 Bridge Year	2013 Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Project 930 Brock St E							
1830 - Poles, Towers and Fixtures					65,115		
1835 - Overhead Conductors & Devices					32,148		
1840 - Underground Conduit					36.301		
1845 - Underground Conductors & Devices					62,898		
1850 - Line Transformers					103,592		
1855 - Services					44.649		
1860 - Meters					,		
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	344,703	0	0
Project 933 Frances St		-	-		,		
1830 - Poles, Towers and Fixtures						23,112	
1835 - Overhead Conductors & Devices						17,334	
1840 - Underground Conduit						17,334	
1845 - Underground Conductors & Devices						11,556	
1850 - Line Transformers						34,668	
1855 - Services						11,556	
1860 - Meters						. 1,000	
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	115,560	0
Project 935 Cambdon Crt	Ű	Ŭ	Ű	•		110,000	0
1830 - Poles, Towers and Fixtures							
1835 - Overhead Conductors & Devices	4,880						
1840 - Underground Conduit	.,						
1845 - Underground Conductors & Devices	92,061						
1850 - Line Transformers	45,809						
1855 - Services	114,070						
1860 - Meters	44						
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	256,864	0	0	0	0	0	0
Project 935 Queen St Apmts	_30,004	Ŭ	0	0			0
1830 - Poles, Towers and Fixtures						17,262	
1835 - Overhead Conductors & Devices						11,508	
1840 - Underground Conduit						28,770	
1845 - Underground Conductors & Devices						23,016	
1850 - Line Transformers						34,524	
1855 - Services						01,024	
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	115,080	0

File Number:	EB-2012-0168
Exhibit:	2
Tab:	4
Schedule:	4
Attachment:	1
Date:	28-Sep-12

	2007	2008	2009	2010	2011	2012 Bridge	2013 Test
Projects						Year	Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Project 936 Baldwin Place Poles							
1830 - Poles, Towers and Fixtures	2,516						
1835 - Overhead Conductors & Devices	5,529						
1840 - Underground Conduit	9,640						
1845 - Underground Conductors & Devices	40,919						
1850 - Line Transformers	136						
1855 - Services							
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	58,740	0	0	0	0	0	0
Project 937 Newell Rd							
1830 - Poles, Towers and Fixtures	35,456						
1835 - Overhead Conductors & Devices	64,592						
1840 - Underground Conduit							
1845 - Underground Conductors & Devices							
1850 - Line Transformers						-	
1855 - Services	132						
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	100,180	0	0	0	0	0	0
Project 939 Queen St	100,100	Ű	Ű		•		•
1830 - Poles, Towers and Fixtures						17,856	
1835 - Overhead Conductors & Devices						13,392	
1840 - Underground Conduit						8,928	
1845 - Underground Conductors & Devices						13,392	
1850 - Line Transformers						31,248	
1855 - Services						4.464	
1860 - Meters						4,404	
1920 - Computer Hardware	-						
1925 - Computer Nardware							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	89.280	0
	0	0	0	0	0	09,200	0
Project 940 Durham & Ebert Alley 1830 - Poles, Towers and Fixtures						24 500	
· · · · · · · · · · · · · · · · · · ·						31,560	
1835 - Overhead Conductors & Devices						25,248	
1840 - Underground Conduit						6,312	
1845 - Underground Conductors & Devices						6,312	
1850 - Line Transformers						37,872	
1855 - Services						18,936	
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	126,240	0

File Number:	EB-2012-0168
Exhibit:	2
Tab:	4
Schedule:	4
Attachment:	1
Date:	28-Sep-12

Projects	2007	2008	2009	2010	2011	2012 Bridge Year	2013 Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Project 940 Fairvw Pmp Stn							
1830 - Poles, Towers and Fixtures							
1835 - Overhead Conductors & Devices		5.636					
1840 - Underground Conduit		0,000					
1845 - Underground Conductors & Devices		16,269					
1850 - Line Transformers		28,992					
1855 - Services		20,002			-		
1860 - Meters					-		
1920 - Computer Hardware					-		
1925 - Computer Software					-		
1995 - Contributions and Grants - Credit					-		
Sub-Total	0	50,897	0	0	0	0	0
Project 942 Clarke St		00,001		0			•
1830 - Poles, Towers and Fixtures						28,440	
1835 - Overhead Conductors & Devices						28,440	
1840 - Underground Conduit						14.220	
1845 - Underground Conductors & Devices						14,220	
1850 - Line Transformers						35.550	
1855 - Services						21,330	
1860 - Meters						21,000	
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	142,200	0
Project 946 FoxAlley South	0	0	0	0	0	142,200	0
1830 - Poles, Towers and Fixtures		28,732					
1835 - Overhead Conductors & Devices		29,135					
1840 - Underground Conduit		23,135					
1845 - Underground Conductors & Devices							
1850 - Line Transformers		16,569					
1855 - Services		20,134					
1860 - Meters		20,134			-		
1920 - Computer Hardware					-		
1925 - Computer Software					-		
1995 - Contributions and Grants - Credit					-		
Sub-Total	0	94,570	0	0	0	0	0
Project 947 FoxAlley Joseph	0	94,570	0	0	0	0	0
1830 - Poles, Towers and Fixtures	1.280	478					
1835 - Overhead Conductors & Devices	748	1.245					
1840 - Underground Conductors & Devices	740	1,245					
1845 - Underground Conductors & Devices	14,065	1,246					
1845 - Underground Conductors & Devices 1850 - Line Transformers	36,681	9,156					
1855 - Services	3,637	41,431					
1855 - Services 1860 - Meters	3,037	41,431					
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit	E0 440	E 4 700		^	^		^
Sub-Total	56,410	54,786	0	0	0	0	0

File Number:	EB-2012-0168
Exhibit:	2
Tab:	4
Schedule:	4
Attachment:	1
Date:	28-Sep-12

Projects	2007	2008	2009	2010	2011	2012 Bridge Year	2013 Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Project 948 FoxAlley Heaths							
1830 - Poles, Towers and Fixtures	844						
1835 - Overhead Conductors & Devices	346						
1840 - Underground Conduit							
1845 - Underground Conductors & Devices	14,804						
1850 - Line Transformers	48,858						
1855 - Services	2,182						
1860 - Meters	2,102						
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	67,035	0	0	0	0	0	0
Project 963 Factory Plaza	01,000	Ŭ			•		
1830 - Poles, Towers and Fixtures	11,240						
1835 - Overhead Conductors & Devices	7,472					-	
1840 - Underground Conduit	,,,,,,,,					-	
1845 - Underground Conductors & Devices	5,966					-	
1850 - Line Transformers	28,139					-	
1855 - Services	265						
1860 - Meters	200						
1920 - Computer Hardware							
1925 - Computer Nardware							
1995 - Contributions and Grants - Credit							
Sub-Total	53,082	0	0	0	0	0	0
Nort St - Trailer	33,002	0	0	0	0	0	0
1830 - Poles, Towers and Fixtures							10,440
1835 - Overhead Conductors & Devices							6,960
1840 - Underground Conduit							6,960
1845 - Underground Conductors & Devices							3,480
1850 - Line Transformers							34,800
1855 - Services							6,960
1860 - Meters							0,300
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	0	69,600
Deleven Cres, Queen St	0	0	0	0	0	0	03,000
1830 - Poles, Towers and Fixtures							46,550
1835 - Overhead Conductors & Devices							26,600
1840 - Underground Conduit							6,650
1845 - Underground Conductors & Devices							0,030
1850 - Line Transformers							39,900
1855 - Services							13,300
1860 - Meters							13,300
1920 - Computer Hardware							
1925 - Computer Software 1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	0	122.000
Sun-10[8]	U	0	0	0	0	0	133,000

File Number:	EB-2012-0168
Exhibit:	2
Tab:	4
Schedule:	4
Attachment:	1
Date:	28-Sep-12

Projects	2007	2008	2009	2010	2011	2012 Bridge Year	2013 Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Lisgar Ave							
1830 - Poles, Towers and Fixtures							29,940
1835 - Overhead Conductors & Devices							19,960
1840 - Underground Conduit							4.990
1845 - Underground Conductors & Devices							.,
1850 - Line Transformers							24,950
1855 - Services							19,960
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	0	99,800
Fourth St	Ű			Ŭ	Ŭ		00,000
1830 - Poles, Towers and Fixtures							20,340
1835 - Overhead Conductors & Devices							16,950
1840 - Underground Conduit							3,390
1845 - Underground Conductors & Devices							0,000
1850 - Line Transformers							16,950
1855 - Services							10,330
1860 - Meters							10,170
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	0	67,800
Tillson Ave, Cranberry	0	0	0	0	0	0	07,000
1830 - Poles, Towers and Fixtures							34,120
1835 - Overhead Conductors & Devices							21,325
1840 - Underground Conduit							4,265
1845 - Underground Conductors & Devices							4,203
1850 - Line Transformers							17,060
1855 - Services							8,530
1860 - Meters							6,550
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit							
Sub-Total	0	0	0	0	0	0	95 200
	0	0	0	0	0	0	85,300
Annandale Phase 7 Stage 2 1830 - Poles, Towers and Fixtures							
1835 - Overhead Conductors & Devices							0.000
1840 - Underground Conduit							8,000
1845 - Underground Conductors & Devices							40,000
1850 - Line Transformers							32,000
1855 - Services							
1860 - Meters							
1920 - Computer Hardware							
1925 - Computer Software							
1995 - Contributions and Grants - Credit			-	-	-		-80,000
Sub-Total	0	0	0	0	0	0	0

!

Appendix 2-A Capital Projects Table

	2007	2008	2009	2010	2011	2012 Bridge	2013 Test
Projects	2007	2008	2009	2010	2011	Year	Year
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS
Miscellaneous							
1830 - Poles, Towers and Fixtures	27,083	17,962	61,920	31,583	52,202	33,930	32,940
1835 - Overhead Conductors & Devices	29,982	25,493	58,653	21,308	17,679	4,302	64,215
1840 - Underground Conduit	15,767	4,282	1,132	1,954	39,066	1,980	9,580
1845 - Underground Conductors & Devices	51,291	37,908	10,073	3,333	6,146	1,218	11,415
1850 - Line Transformers	86,186	61,682	48,541	28,767	20,118	8,514	56,840
1855 - Services	12,556	23,381	10,505	28,321	66,043	15,456	18,210
1860 - Meters						28,000	
1920 - Computer Hardware							11,000
1925 - Computer Software							54,000
1995 - Contributions and Grants - Credit						-12,360	-52,500
Sub-Total	222,865	170,708	190,824	115,266	201,254	81,040	205,700
Total	803,132	149,230	928,979	599,372	648,466	669,400	661,200

Notes:

1 Please provide a breakdown of the major components of each capital project. Please ensure that all projects below the materiality threshold are included

2 Amounts should be reported on a MIFRS basis for the adoption year and any subsequent years, only.

EB-2012-0168 Exhibit 2 Tab 4 Schedule 5

Asset Management Plan



Executive Summary

Tillsonburg Hydro Inc's (THI) Asset Management (AM) plan provides an overview of the fundamentals of an asset management plan based upon best management practices obtained from other municipalities, utilities and jurisdictions. THI's AM plan has typically been linked to our 4.16 to 27.6 KV conversion projects, identified in the Elecsar Report E2/T1/S1/Att2. Other betterment requirements are reviewed on an annual basis as part of the capital budgeting process. Currently THI shares an Asset Management Technologist with the Town of Tillsonburg. Duties performed by the Asset Management Technologist for THI have included:

- Primary collection of THI assets in our GIS program
- Continual review and correcting of collected assets.
- Formulate data so that accurate life cycling can be projected.

The size of THI and the relatively small service area allows staff to have a good understanding of the status and condition of the hydro distribution network and the plans to maintain the system in the most reliable and safe way. The AM plan as presented here is a systematic process that allows for the maintenance, upgrading/refurbishment and operating of our physical hydro assets in a cost effective manner. Through this AM plan; THI can meet new demands in a fiscally responsible and an environmentally sustainable framework while preserving the quality of life.

Discussion

Asset Management Plan – What is it?

The International Infrastructure Management Manual defines an Asset Management Plan as; "a plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical & financial) over the life cycle of the asset in the most cost effective manner to provide a specific level of service."



THI's and other utilities' asset management plans are similar to the description provided above. The plan refers to the hydro infrastructure that shares a common location within a utility corridor such as roads, curbs, gutters, sewer and water systems. Each asset is assigned different lifecycles which results in the need for the technical and financial experts, based upon the condition and composition of each asset, to determine the need for replacement or rehabilitation. An old or faulty conductor that requires replacing drives the need to review the condition of the poles, transformers, switches and/or any other appurtenances associated with the objects of interest.

An AM Plan also incorporates the existing preventative maintenance and risk management programs to preclude the risk of failure. The preventative maintenance component ensures that the day-to-day wear and tear on the asset is dealt with to ensure that the asset can reach its expected lifecycle. The risk management component ensures that staff manages the risk through due diligence. THI is owned by the Town of Tillsonburg and is governed by our local Hydro Board. This promotes cooperation between the stakeholders, and through an exchange of information, facilitates better planning and coordination of activities within the utility and construction industries. This in turn creates better transparency and communication throughout every level of the utility.

Asset Management Plan – What are the benefits?

THI has determined the specific benefits associated with an AM Plan are:

- Facilitates the establishment and subsequent implementation of policy objectives and measures the related performance;
- Assists in avoiding problems and potential crises;
- Leads to providing a consistent level of service to the public;
- Leads to more effective communications with ratepayers, elected officials, financial rating organizations and regulatory agencies;
- Identifies and reduces lifecycle costs;
- Allows for better decision making regarding resource allocation;
- Reduces risk to the utility;
- Allows for more effective financial planning;
- Leads to more efficient data management;
- Results in positive institution change.



Asset Management Plan – What are the key principles?

The THI AM plan can be characterized by the following key principles:

- A strategic approach to data collection that places a premium on the information, collaboration and interdisciplinary management in a proactive manner;
- A comprehensive long-term view of infrastructure performance and cost;
- A transparent approach that requires effective communication among all stakeholders;

Asset Management Plan – What are the essential components?

In order for an AM Plan to fulfill the principles of Asset Management, the following essential components must be determined and contained in the overall plan:

1. Asset Value:

THI recognizes that all electrical infrastructure assets have a monetary value that is constantly depreciating. Administration has determined the actual capital value for the majority of the assets. Future collaboration between the finance department and operations will result in an inspection study that will determine the actual value of the assets based on a capital cost analysis. It is anticipated that from this report a standard will be created for a process of identification and tracking of capital assets in the future.

2. Lifecycle Management:

All assets have a limited life expectancy. To some degree the rate of deterioration or depreciation can be estimated. A decision made at any point in time in the lifecycle of an asset has an effect on the remaining life, and may have operational implications and related costs.



3. <u>Sustainability</u>:

In terms of Asset Management, sustainability should be defined as a plan that meets the needs of the present generation without compromising the ability of the future generations. The Asset Management Plan needs to identify a financial plan over the long term to ensure that sufficient resources are available. These resources are required to operate, rehabilitate, and ultimately replace the asset at the optimal time with the intention of achieving the lowest lifecycle cost.

It was identified early on in discussions that an asset that receives no preventative maintenance, and has no associated Asset Management plan will require full replacement (at a much higher cost) well before it reaches the end of its life cycle. The plan helps justify, prove and provide evidence for the current rates or any changes to the cost of service.

4. Integration of Technical and Financial Plans:

The technical plan must examine and minimize lifecycle costs for the infrastructure while maintaining an adequate level of service at the lowest possible level of risk. The financial plan must identify the financial investment required per year for each asset over the long term, including any larger than normal expenditures to meet the requirements of the technical plan. There should be thorough communication between each other these departments so the relationship between the level of service and the cost can be quantified and managed. The technical and financial relationship may change from time to time depending on the outcome of the condition surveys.



5. <u>Risk Assessment</u>:

Risk should be managed in any decision making process. The owner of the assets should analyze and document acceptable risk tolerance. In THI's' case, the probability of failure is taken into account while the condition of the asset is being analyzed. The condition survey leads to determining the rate of failure and the consequences of such failure. Risk factors can include financial, environmental, regulatory/legal and public health and safety.

6. <u>Performance Measurement</u>:

To optimize the Asset Management Plan, performance of the assets and rehabilitation strategies should be monitored regularly and adjustments made at the appropriate stage in the asset lifecycle to achieve an acceptable balance between cost and the performance (level of service). THI expects to take on such performance measurements within the next 4 years before our next Cost of Service. These benchmarks will be compiled into a comprehensive database that can be easily accessed as necessary to determine the performance of the asset.

Current Initiatives

THI and the asset management technologist have been reviewing and correcting existing assets through the use of GIS software, aerial imagery and an advanced GPS. Specifically, the main focus has been on correcting and collecting proper locations and nomenclature of hydro poles, transformers, switches and conductors so that proper and accurate life cycling and sustainable development can be determined. Regarding the underground portion of the hydro network, THI and the asset management technologist have created and started a maintenance program to help determine the essential asset management components listed above. The overhead portion of the network will be completed in subsequent years.



Other Initiatives

Another undertaking of THI is the implementation of advanced GIS software used for the collection, archiving, mapping and management of hydro infrastructure assets. This software assists with the overall administration of the asset management plans described within this report. The GIS software allows the asset management technologist access to accurate and precise information regarding all aspects of the hydro distribution system. The software also provides an interface and solution to map

and model the entire hydro network into a dynamic system, complete with topology rules and relationships.

The secure database also ensures the integrity and uniformity of the data that would be used in analysis. The end result is that capital projects can be better planned, and the long term planning associated with the asset management plan can be better managed with the intention of maximizing the life of the asset.

Conclusion

The AM plan as presented in this report is a systematic process that allows for the maintenance, upgrading and the operating of physical hydro assets in a cost effective manner and that by implementing an AM Plan, THI can meet the new demands within a fiscally responsible and environmentally sustainable framework while preserving our quality of life. We have included three main categories of assets below in which asset condition assessments were done, using the principles described in this report. THI is committed to continue deployment of the advanced GIS software, to build and enhance the functionality of the distribution system and provide us with accurate purchase, installation and inspection dates plus financial evaluation and forecasting models.

TREATMENT OF STRANDED ASSETS RELATED TO SMART METER DEPLOYMENT

Guideline G-2011-0001, Smart Meter Funding and Cost Recovery – Final Disposition,
dated December 15, 2011, provides two options to distributors regarding the accounting
treatment for stranded meters related to the installation of smart meters:

- 6 Leave them recorded in Account 1860, Meters; or
- 7 Record them in "Sub-account Stranded Meter Costs" of Account 1555.

8 THI will continue to let stranded meter assets reside in Account 1860 – Meters and 9 depreciate them until the end of 2012. At the end of 2012, the net book value of these 10 assets is \$89k. This value was placed into the Board's Appendix 2-S in the contributed 11 capital column as a 2012 item so that the schedule continued to calculate correctly.

- 12 Appendix 2-S of the Board's Appendices (E9/T4/S1/Att2) presents the value of
- 13 THI's stranded smart meters:

Year	Notes	Gr	oss Asset Value	 ccumulated mortization	Contributed Capital (Net of Amortization)	1	let Asset
			(A)	(B)	(C)	(D)=	(A) - (B) - (C)
2006		\$	708,071	\$ 492,163		\$	215,907
2007		\$	712,374	\$ 515,966		\$	196,408
2008		\$	712,452	\$ 538,925		\$	173,527
2009		\$	712,821	\$ 561,264		\$	151,557
2010		\$	712,821	\$ 582,526		\$	130,295
2011		\$	712,821	\$ 603,137		\$	109,684
2012		\$	712,821	\$ 623,476		\$	89,345

14

1

2

- Appendix 2-S requests that utilities complete the following information relating to thetreatment of the utility's stranded meters:
- A description of the accounting treatment followed by the applicant on stranded
 meter costs for financial accounting and reporting purposes.

- 1Thus far, stranded meters were included in account 1860 and therefore2were treated in accordance with CGAAP with the same accounting rules3as standard meters.
- As the installation of smart meters was completed in December 2011, THI
 intends to transfer net balances to 1555 in 2013, without any further
 amortization. The amount of stranded meter assets to be transferred is
 \$89k.
- 8 2. The amount of the pooled residual net book value of the removed from
 9 service stranded meters, less any contributed capital (net of accumulated
 10 amortization), and less any net proceeds from sales, as of December 31,
 11 2010.

12 13

14

- THI has assumed that the requested date should have been December 31, 2012. The amount of pooled residual net book value as of December 31, 2012 is \$89k
- A statement as to whether or not the recording of depreciation expenses
 continued in order to reduce the net book value through accumulated
 depreciation. If so, provision of the total (cumulative) depreciation expense for
 the period from the time that the meters became stranded to December 31,
 2010.
- 20

21

26

Smart meters were fully installed by the end of 2011. The 2012 depreciation expense was \$20k.

4. If no depreciation expenses were recorded to reduce the net book value of
stranded meters through accumulated depreciation, the total (cumulative)
depreciation expense amount that would have been applicable for the period
from the time that the meters became stranded to December 31, 2010.

N/A Please see question #3 above.

5. The estimated amount of the pooled residual net book value of the removed from
service meters, less any net proceeds from sales and contributed capital, at the
time when smart meters will have been fully deployed. If the smart meters have
been fully deployed, please provide the actual amount.

- 6. A description as to how the applicant intends to recover in rates the costs for
 stranded meters, including the proposed accounting treatment, the proposed
 disposition period and the associated bill impacts.
- 6 THI intends to recover the cost of the Stranded Meters through a Rate 7 Rider. The proposed recovery period is 4 years. Calculations of the 8 proposed rate rider are:
- 9

1

2

Table 2 Stranded Meter Rate Rider (E2/T4/S6/Att1)

Variance Account Balance Balance Date: Total for Recovery Recovery Period (years) Annual Recovery

41,274
89,345
22,336

			Billing			
Refresh			Determinant:	Volumetric		
·		%				
Customer Class	kWh's	share	Annual \$	Volume	Rate	per
Residential	49,718,289	67.6%	15,092	49,718,289	\$0.0003	kWh
General Service < 50 kW	22,374,916	30.4%	6,792	22,374,916	\$0.0003	kWh
General Service > 50 to 499 kW				115,448		kW
General Service > 500 to 1499 kW				87,241		kW
General Service > 1,500 kW				70,544		kW
TOTAL	73,585,655	100.0%	22,336			

10

11

THI has selected a 4 year disposition period to minimize bill impact.

Distributors should also provide the Net Book Value per class of meter as of
December 31, 2010 as well as the number of meters that were removed /
stranded. In preparing this information, distributors should review the Board's
letter of January 16, 2007 Stranded Meter Costs Related to the Installation of
Smart Meters which stated that records were to be kept of the type and number
of each meter to support the stranded meter costs. Table 3 shows THI's net book
value by customer class.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 6 Page 4 of 4

Table 3: Net Book Value by class

<u>Class</u>	<u>Meters</u>	NBV
Residential	6011	\$79k
GS<50 kW	658	\$10k

1

EB-2012-0168 Exhibit 2 Tab 4 Schedule 6 Attachment 1

Calculation of Stranded Meter Rate Rider

Tillsonburg Hydro Inc. (ED-2003-0026) 2013 EDR Application (EB-2012-0168) version: 1 August 31, 2012

Stranded Meter Rate Rider

Variance Account Balance	\$ 89,345	
Balance Date:	31-Dec-12	41,274
Total for Recovery		89,345
Recovery Period (years)	4	
Annual Recovery		22,336

		Billing	Determinant:	Volumetric		
Customer Class	kWh's	% share	Annual \$	Volume	Rate	per
Residential	49,718,289	67.6%	15,092	49,718,289	\$0.0003	kWh
General Service < 50 kW	22,374,916	30.4%	6,792	22,374,916	\$0.0003	kWh
General Service > 50 to 499 kW				115,448		kW
General Service > 500 to 1499 kW		·		87,241		kW
General Service > 1,500 kW		·		70,544		kW
TOTAL	73,585,655	100.0%	22,336			

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 7 Page 1 of 1

1 GREEN ENERGY PLAN CAPITAL EXPENDITURES

Tillsonburg Hydro Inc is not proposing any capital expenditures with respect to the Green Energy Plan. Tillsonburg Hydro Inc. does not anticipate significant uptake in our territory for large scale FIT projects. Based on the anticipated uptake of the program and our assessment of our systems capabilities, Tillsonburg Hydro Inc. is forecasting sufficient capacity to accommodate the anticipated connections. Tillsonburg Hydro Inc. will however undertake an annual review of the anticipated renewable generation connection project schedule as well as related costs.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 4 Schedule 8 Page 1 of 1

1

HARMONIZED SALES TAX

2 THI has ensured that all capital and OM&A costs contained in the application test year 3 excludes all impacts of PST previously embedded in costs for historical years ended in 4 2010. When the 2010 and 2011 budgets were formulated, certain expense lines were 5 reduced by the estimated impact of PST. For the 2012 and 2013 budgets, THI already 6 had a full prior year of actual historical information that excluded PST. From July 1, 7 2010 to April 30, 2013, a variance account will be credited with the estimated HST 8 savings and an expense recorded. For the 2013TY, no expense was reflected since the 9 new rates are based on costs that already exclude PST.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 5

Exhibit 2: Rate Base

Tab 5 (of 7): Allowance for Working Capital

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 5 Schedule 1 Page 1 of 2

1 DERIVATION OF WORKING CAPITAL ALLOWANCE

The Working Capital Allowance has been derived by applying the Board's deemed Working Capital factor to projected eligible expenses, which consist of power supply expenses and controllable expenses for Operations, Maintenance and Administration ("OM&A").

6

E2/T1/S1/Att1 shows the calculation of the Working Capital Allowance by account, for
the 2012BY & 2013TY MIFRS and preceding years since the previous Board-Approved
amount from the 2009 EDR under CGAAP. E2/T1/S1/Att2 shows the calculation of the
Working Capital Allowance by account for the 2012BY & 2013TY and preceding years
since the previous Board-Approved amount from the 2009 EDR under CGAAP.

12

13 2013TY vs. 2012BY MIFRS

The projected Working Capital Allowance of \$2,591k is \$275k lower than 2012BY MIFRS. The lower Working Capital Allowance results from the Working Capital Factor decreasing to 13% from 15% applied against higher distribution expenses and increased power supply cost. The higher distribution expenses are due to higher employee costs and higher rate application costs. The increase power supply costs reflect higher commodity prices and lower volumes.

20

21 2012BY MIFRS vs. 2012BY CGAAP

The projected Working Capital Allowance of \$2,866k is \$21k higher than 2012BY CGAAP. Distribution expenses are higher due to costs that were previously capitalized under CGAAP.

25

26 2012BY CGAAP vs. 2011 actual

The projected Working Capital Allowance of \$2,845k is \$Nil lower than 2011. The Working Capital Allowance results from higher distribution expenses and lower power supply costs. The higher distribution expenses are due to labour that was capitalized in 2011 and increased indirect labour and rent costs determined by the transfer pricing

- 2
- 3

4 2011 actual vs. 2010 actual

5 The Working Capital Allowance of \$2,845k is \$205k higher than 2010. The higher 6 Working Capital Allowance results from higher distribution expenses and higher power 7 supply costs. The higher distribution expenses are due to labour that was capitalized in 8 2010 and increased total labour costs offset by one-time costs incurred in 2010 not 9 repeated in the current year. The increase in power supply costs mainly reflects higher 10 commodity prices.

11

12 2010 actual vs. 2009 actual

13 The Working Capital Allowance of \$2,640k is \$83k higher than 2009. The higher 14 Working Capital Allowance results from higher distribution expenses and higher power 15 supply costs. The higher distribution expenses are due to higher labour costs and 16 decreased management fee capitalization. The increase in power supply costs reflects 17 higher volumes and lower commodity price.

18

19

20 2009 actual vs. 2009 Board-Approved

21 The Working Capital Allowance of \$2,557k is \$113k higher than 2009 Board-Approved. 22 The higher Working Capital Allowance results from higher distribution expenses and 23 higher power supply costs. The higher distribution expenses are due to higher labour 24 costs offset by higher capitalization of labour. The increase in power supply costs 25 reflects higher commodity price and lower volumes.

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 6

Exhibit 2: Rate Base

Tab 6 (of 7): Service Quality and Reliability Performance

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 6 Schedule 1 Page 1 of 1

SERVICE QUALITY

2 THI reports its service quality indicators (SQI) annually to the Ontario Energy Board. The

3 SQIs are defined in Chapter 7 of the Distribution System Code. THI has met the

4 minimum standards for all SQIs each year, as indicated in E2/T6/S1/Att1

1

EB-2012-0168 Exhibit 2 Tab 6 Schedule 1 Attachment 1

Service Quality Indicators

SERVICE QUALITY INDICATORS

Service Quality Indicator	Minimum Standard	2009	2010	2011
Connection of New	90%	100	100	100
Services – Low Voltage				
Connection of New	90%	N/A	N/A	N/A
Services – High Voltage				
Appointment Scheduling	90%	100	100	100
Appointments Met	90%	100	100	100
Rescheduling of missed	100%	N/A	N/A	N/A
appointment				
Telephone Accessibility	65%	97.90	97.90	84.50
Telephone Call Abandon	10%	1	1	5
Rate				
Written Responses to	80%	N/A	N/A	N/A
Enquiries				
Emergency Response	80%	100	100	100
Urban				
Emergency Response	80%	N/A	N/A	N/A
Rural				
Reconnection	85%	***	***	100
Performance Standard				

*** New reporting standard as of 2011

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 6 Schedule 2 Page 1 of 1

RELIABILITY PERFORMANCE

2 Service reliability indices measure system outage statistics.

3

1

System Average Interruption Duration Index (SAIDI): SAIDI is an indicator of system reliability that expresses the length of outage customers experience in the year on average. All Planned and unplanned interruptions of one minute or more should be used to calculate this index. It is defined as the total hours of power interruptions normalized per customer served.

9

10 <u>System Average Interruption Frequency Index (SAIFI)</u>: SAIFI is an indicator of the 11 average number of interruptions each customer experiences. All planned and unplanned 12 interruptions of one minute of more should be used to calculate this index. It is defined 13 as, the number of interruptions normalized per customer served.

14

15 <u>Customer Average Interruption Duration Index (CAIDI)</u>: CAIDI is an indication of the 16 speed at which power is restored. All planned and unplanned interruptions of one minute 17 of more should be used to calculate this index. It is defined as, the average duration of 18 interruption in the year.

19

Tillsonburg Hydro Inc. reports its reliability performance annually to the Ontario Energy Board. THI has met the minimum standards for all SQIs each year, as indicated in E2/T6/S2/Att1 EB-2012-0168 Exhibit 2 Tab 6 Schedule 2 Attachment 1

Reliability Performance Measures

RELIABILITY PERFORMANCE MEASURES

Reliability Metrics caused by Loss of Supply	Minimum Standard	2008	2009	2010	2011	2012 Estimate
SAIDI – System Average Interruption Duration Index	Within the range of 3 years historical performance	4.46	.33	4.10	2.62	2.88
SAIFI – System Average Interruption Frequency Index	Within the range of 3 years historical performance	2.93	1.01	6.93	3.62	3.62
CAIDI – Customer Average Interruption Duration Index	Within the range of 3 years historical performance	1.52	.33	.59	.72	.79
Reliability Metrics excludes Loss						
of Supply	Minimum Standard	2008	2009	2010	2011	2012 Estimate
of Supply SAIDI – System Average Interruption Duration Index	Minimum Standard Within the range of 3 years historical performance	2008 3.97	.2009	2010	2011	
SAIDI – System Average	Within the range of 3 years					Estimate

Tillsonburg Hydro Inc. Filed:28 September, 2012 EB-2012-0168 Exhibit 2 Tab 7

Exhibit 2: Rate Base

Tab 7 (of 7): Green Energy Plan



Basic GEA Plan

EB-2012-0168

Rates Effective: May 1, 2013

Date Filed: September 28, 2012 Corrected: October 5, 2012

> Tillsonburg Hydro Inc. 10 Lisgar Ave. Tillsonburg, ON N4G 5A5


Date Filed: September 28, 2012

Exhibit 2

Tab 7.1 of 5

Summary



File Number:	EB-2012-0168
Exhibit:	2
Tab:	7.1
Schedule:	1
Page:	1 of 2
Date Filed:	September 28, 2012
Corrected:	October 5, 2012

Table of Contents

Title	Exhibit	Tab	Schedule	Attachment	Number	Revised
Cover Sheet	2	7				Yes
Summary	2	7.1				Yes
Table of Contents	2	7.1	1			Yes
Foreword	2	7.1	2			Yes
Liability Disclaimer	2	7.1	3			Yes
Executive Summary	2	7.1	4			Yes
Background	2	7.2				Yes
Impact of CDM on System	2	7.2	2			Yes
Capacity Consultation	2	7.2	3			Yes
LDC Distribution System	2	7.3				Yes
FIT and microFIT	2	7.3	1			Yes
Expansions and Renewable Enabling Improvements (REI's)	2	7.3	2			Yes
Other Limitations of the Distribution System	2	7.3	3			Yes
Development of Smart Grid	2	7.4				Yes
Summary Discussion	2	7.4	1			Yes
Appendices	2	7.5				Yes
Appendix One - HONI TCIA Report	2	7.5	1	1		Yes
HONI Threshold Connection Impact Assessment ID 15,450	2	7.5	1	1	1	Yes
CIA Extension Letter	2	7.5	1	1	2	Yes

Basic GEA Plan Tillsonburg Hydro Inc. Application Revision 1

				File Number:	E	B-2012-0168
Tilsor	bu	g		Exhibit: Tab: Schedule: Page:		2 7.1 1 2 of 2
🛛 📂 Hydro In	Date Filed: Corrected:		nber 28, 2012 tober 5, 2012			
Title	Exhibit	Tab	Schedule	Attachment	Number	Revised
Appendix Two - OPA Letter of Comment	2	7.5	1	2		Yes



Foreword File Number: EB-2012-0168

Exhibit:	2
Tab:	7.1
Schedule:	2
Page:	1 of 1

Date Filed:September 28, 2012 October 5, 2012 Corrected:

Foreword 1

\sim
· /
_
_

Tillsonburg Hydro has prepared a Basic GEA Plan. 3

4

5 A Detailed GEA Plan is required if the total capital costs of all of the distributor's planned 6 projects related to the connection of renewable generation and/or the development of the smart 7 grid in any one year are more than \$100,000 and exceed 3% of the distributor's distribution rate 8 base; or exceed \$5M; or the total capital costs of all a distributor's planned projects related to 9 the connection of renewable generation and/or development of the smart grid are more than 10 \$100,000 and exceed 6% of the distributor's distribution rate base, or exceed \$10M.

11

12 Tillsonburg Hydro Inc. ("Tillsonburg") has reviewed the requirements as described above for 13 preparing a detailed GEA Plan above and confirms that Tillsonburg's current one year plans and 14 proposed five year plans do not exceed the above noted thresholds. Tillsonburg therefore files 15 this Basic GEA Plan.



Liability Disclaimer File Number: EB-2012-0168

Exhibit:	2
Tab:	7.1
Schedule:	3
Page:	1 of 1

Date Filed:September 28, 2012 Corrected: October 5, 2012

Liability Disclaimer

2

3 The information and statements made in this Basic GEA Plan are prepared on the assumptions,

- 4 projections, and forecasts made by Tillsonburg Hydro Inc. and represents Tillsonburg's
- 5 intentions and opinions at the date of preparation.
- 6
- 7 Circumstances will change, assumptions and forecasts may prove to be wrong, events may
- 8 occur that were not predicted, and Tillsonburg may, at a later date, decide to take different
- 9 actions from those it currently intends to take as expressed in this Basic GEA Plan.
- 10
- 11 Tillsonburg cannot be held liable for any loss, injury, or damage arising directly or indirectly as a
- 12 result of use or reliance on any information contained within this Basic GEA Plan.



Executive Summary File Number: EB-2012-0168

Exhibit:	2
Tab:	7.1
Schedule:	4
Page:	1 of 2

Date Filed:September 28, 2012 Corrected: October 5, 2012

1 Executive Summary

-	
\mathbf{r}	
/	
_	

Tillsonburg is a local energy distributor that services approximately 6733 customers throughout the Town of Tillsonburg and is licensed by the Ontario Energy Board ("OEB"). As part of the submission to fulfill the OEB Filing Requirements for the Conditions of License, Tillsonburg has prepared a Basic Green Energy Act (GEA) Plan. The GEA Plan contains a description of the current undertakings to enable renewable generation, as well as future initiatives and planned expenditures to continue to allow for connection of new projects.

9

10 Tillsonburg has connected a number of renewable generation installations under the Feed-In-11 Tariff ("FIT") program. As of the end of the July 2012, Tillsonburg has connected and settles a 12 total of:

- 13
- 12 MicroFIT installations totaling 117.50 kW of generation capability
- 14
- 1 FIT installation totaling 75 kW of generation capability
- 15

16 Following the government's "Two-Year Review" of the FIT Program, the government has 17 signaled continued commitment to the program. As a result, Tillsonburg anticipates demand for 18 the program to be steady and therefore will require future capital expenditures in order to 19 continue to connect renewable generation projects, as is required by the OEB Distribution 20 System Code. Tillsonburg has a series of projects planned involving system expansion and 21 refurbishment, and will consider the impact in enabling renewable generation within the 22 prioritization mix. There are also potential required investments for system expansion to connect 23 renewable generation that will come via the Offer-To-Connect process.

24

Known constraints exist on the Tillsonburg system by the upstream transmitter, Hydro One,which will limit renewable generation connection. Tillsonburg intends to continue its strong

Basic GEA Plan Tillsonburg Hydro Inc. Application Revision 1



Executive Summary File Number: EB-2012-0168

Exhibit:	2
Tab:	7.1
Schedule:	4
Page:	2 of 2

Date Filed:September 28, 2012 Corrected: October 5, 2012

- 1 working relationship with its transmitter and will work with it to help resolve, if possible, any
- 2 issues as they arise.



Date Filed: September 28, 2012

Exhibit 2

Tab 7.2 of 5

Background



Background File Number: EB-2012-0168

Exhibit:	2
Tab:	7.2
Schedule:	1
Page:	1 of 2

Date Filed:September 28, 2012 Corrected: October 5, 2012

1 Background

2	
3	
4	In May of 2009, the Green Energy and Green Economy Act, 2009 was formally passed into
5	Ontario law. The FIT Program is the cornerstone of the Act, and is North America's first
6	comprehensive guaranteed pricing structure for renewable electricity production. The Ontario
7	Power Authority (OPA) is responsible for implementing the program and offers stable prices
8	under long-term contracts for energy generated from renewable sources, including:
9	Solar photovoltaic
10	On-shore and off-shore wind
11	Biomass
12	• Biogas
13	Landfill gas
14	Waterpower
15	
16	This Basic GEA plan focuses on two main areas, namely:
17	
18	1. Current assessment of the distributor's system; and
19	2. Planned development of the system to accommodate renewable generation connection.
20	
21	The GEA Plan, may also include preliminary work for the development of a smart grid, if the
22	distributor is seeking to recover smart grid related costs. Tillsonburg is not seeking smart
23	grid funding. Tillsonburg will continue to monitor advancing technologies and new market
24	developments.
25	



Background	
File Number:	EB-2012-0168

Exhibit: Tab: Schedule: Page:	2
Tab:	7.2
Schedule:	1
Page:	2 of 2

Date Filed:September 28, 2012 Corrected: October 5, 2012

1 Tillsonburg's GEA Plan is based on current information and presents both a short-term and 2 a near-term perspective of Tillsonburg plans for its distribution system with respect to 3 accommodating new connections of renewable generation facilities.

4

5 It is anticipated that the connection of small-scale inverter-based renewable generation will 6 not impose limitations, but that over time a larger concentration of renewable generators on 7 the same distribution feeder may have a noticeable impact on the distribution system and 8 upstream elements. Tillsonburg does not anticipate a sufficient number of small-scale 9 projects to reach our level of constraint in the near term of this GEA Plan.

10

Large scale projects can have an immediate impact and will require a detailed study and analysis to understand the impact of the proposed connection. As the rules for FIT 2.0 were just finalized on July 12, 2012 it is not possible to predict with certainty the potential for large scale projects to be located in our territory. In any event, those constraints would not likely relate to Tillsonburg-owned equipment. Furthermore, the typical planning process for large projects generally provides Tillsonburg an adequate timeframe to plan any required expansions to accommodate any new mid-sized load or large generation additions.



Impact of CDM on System Capacity File Number: EB-2012-0168

2
7.2
2
1 of 1

Date Filed:September 28, 2012 Corrected: October 5, 2012

Impact of CDM on System Capacity

')	

The Board requires that conservation and demand management ("CDM") programs and related
costs not be included in Tillsonburg's GEA Plan, although the effects of CDM programs on
system capacity should be considered in preparing the GEA Plan.

6

7 Table 1 below shows Tillsonburg's licence prescribed CDM target for December 31, 2014.
8 Tillsonburg confirms it will endeavor to include consideration of the impact of CDM on system
9 capacity should any expansions or renewable enabling improvement projects be considered or
10 mandated.

11

Tillsonburg Hydro Inc.	MW	MWh
CDM Target Prescribed by Licence	2.29	10.25
80% of Target Achievement	1.83	8.20
100% of Target Achievement	2.29	10.25
150% of Target Achievement	3.44	15.38
Table 1 CDM Target Achievement		

14

12 13

Achieving the CDM targets at 80%, 100% and 150% of the provincial targets will not have any
significant impact on Tillsonburg Hydro's current system capacity.



Consultation File Number: EB-2012-0168

Exhibit:	2
Tab:	7.2
Schedule:	3
Page:	1 of 2

Date Filed:September 28, 2012 Corrected: October 5, 2012

Consultation

3 Consultation with Transmitter

4 Tillsonburg has a strong working relationship with its upstream transmitter, Hydro One, and has 5 consulted with Hydro One on a series of issues raised by the FIT Program.

6

7 Tillsonburg intends to continue to maintain the strong working relationship it has with Hydro One

8 by working collaboratively through these issues as well as new issues as they arise.

9

10 Tillsonburg requested a LDC Threshold Connection Impact Assessment ("TCIA") from Hydro 11 One to connect up to 1.4 MW of Inverter Based Solar PV, connected to the 27.6 kV Bus at 12 Tillsonburg TS. The TCIA expires after six months. Hydro One granted the extension of the 13 initial connection for an additional six months to September 29, 2012. Please see Appendix One 14 for a copy of the executive summary to the TCIA and correspondence from Hydro One to 15 Tillsonburg.

16

17 Tillsonburg sent a letter with a copy of the draft GEA Plan to Hydro One for comment on 18 Tillsonburg's renewable generation connection and planned system investments to 19 accommodate the forecast connections. This letter was delivered on July 25, 2012 and to date 20 has received no formal reply comments. However informal communication has indicated the 21 following:

- 22 "The is a problem in responding to the Tillsonburg GEA plan. HON DX is investigation23 the supply matter.
- The limitation is transmission circuit W8T and Tillsonburg will still be Restricted. Since Hydro One has already given 1.4 MW of capacity in the Threshold CIA, we have yet to determine if Tillsonburg Hydro can use any unused capacity in the threshold.

Basic GEA Plan Tillsonburg Hydro Inc. Application Revision 1



Consultation	
File Number:	EB-2012-0168

Exhibit:	2
Tab:	7.2
Schedule:	3
Page:	2 of 2

Date Filed:September 28, 2012 Corrected: October 5, 2012

1	If no changes are made to the Threshold, then Tillsonburg Hydro WILL NOT be able to
2	connect any MicroFITs, BUT still be able to connect CAEs. This is not a good situation
3	because bigger generators might be able to connect while smaller ones would be
4	denied.
5	We may wish to explore the idea of making an agreement with Tillsonburg Hydro to
6	enable them to use the Threshold capacity for MicroFITs."
7	
8	Consultation with Embedded or Host Distributors
9	
10	Tillsonburg confirms that there are no embedded or host distributors in our distribution system
11	service territory, hence no other consultation is necessary.
12	
13	Consultation with OPA
14	
15	A letter was sent to the OPA with our GEA Plan. This letter was sent out on July 25, 2012 and
16	received on August 17, 2012 as appended in Appendix Two. The OPA found that Tillsonburg
17	Hydro Inc.'s GEA Plan is reasonably consistent with the OPA's information regarding renewable
18	energy generation applications to date.



Date Filed: September 28, 2012

Exhibit 2

Tab 7.3 of 5

LDC Distribution System



Exhibit:	2
Tab:	7.3
Schedule:	1
Page:	1 of 4

Date Filed:September 28, 2012 Corrected: October 5, 2012

FIT and microFIT

2

Tillsonburg has traditionally distributed power from Hydro One transformer stations to its
customers either directly from the sub transmission system or through its distribution system.
With the implementation of the FIT Program, Tillsonburg has now evolved into a multifaceted
distributor of power from both Hydro One transformer stations and embedded generators within
the Tillsonburg system.

8

9 The Tillsonburg service territory is mainly an urban setting with a mix of residential and, 10 industrial/commercial. Presently, the main type of renewable generation found within Tillsonburg 11 service territory is photovoltaic from roof mounted solar panel installations. The majority of 12 MicroFIT projects have been installed on the rooftops of residential customers; however there 13 are a few commercial MicroFIT installations as well. One industrial facility located in Tillsonburg 14 service territory operates a mid-size photovoltaic FIT system.

15

The table below provides a summary of the renewable energy projects connected as of the end of June 30, 2012. A complete listing of all connected projects in the Tillsonburg system is contained in the following tables. It should be noted that CDM programs are not included in this GEA Plan as is stipulated in the OEB Filing Requirements EB-2009-0397.



Exhibit:	2
Tab:	7.3
Schedule:	1
Page:	2 of 4

Date Filed:September 28, 2012 Corrected: October 5, 2012

microFIT Projects		
Total Applications Submitted	41	
Total Contracts Issued	12	
Applications Terminated	7	
Pending Connection*	4	
Submitted	11	
Pending LDC Offer to Connect	4	
Info Received	1	
Connection Completed- Information Requested	2	

1 2

 Table 1 microFIT Projects connected as of June 30, 2012

3

FIT Projects	
Applications which require performance of DAT testing	0
Applications which have completed DAT testing	0
Applications which are undergoing TAT	3
Applications which require an ECT	0
Applications for which a Connection Assessment has been requested	0
Applications that have been issued contracts	1
Applications which are Capacity Allocation Exempt	5

4 5

 Table 2 FIT Projects as of June 30, 2012

6

Distribution systems, including monitoring and protection elements were planned, designed and
constructed to serve loads. The traditional distribution system was never intended to
accommodate the connection of a large number of embedded generators. As such, the amount
of generation capacity to be connected to Tillsonburg's distribution system could be constrained
by a variety of engineering factors, such as:

- 12 a. Feeder ampacity;
- 13 b. Feeder loading;
- 14 c. Short circuit capacity;

Basic GEA Plan Tillsonburg Hydro Inc. Application Revision 1



Exhibit:	2
Tab:	7.3
Schedule:	1
Page:	3 of 4

Date Filed:September 28, 2012 Corrected: October 5, 2012

 d. Power quality (i.e. harmonics); and
 e. Limits on reverse power flow and short circuit capability (at transformers and substations).

4

7

5 These factors are considered in totality in determining any possible limitations on the distribution 6 system prior to connecting any new generation.

8 In order to forecast the anticipated demand for renewable generation connections, Tillsonburg 9 has looked to previous uptake for the FIT program. To date, there have been 41 microFIT 10 applications and 5 FIT applications submitted. Of those applications, we have connected 14 11 Micro-FIT projects and 1 FIT project to-date. Given that the FIT program has been in existence 12 for three years and that the annual connection rate is approximately 5 Micro-FIT and 1 FIT 13 application per year, and therefore the forecast is expected to remain the same until 2017.

14

Application Type	2012	2013	2014	2015	2016	2017
Forecast microFIT Connections	5	5	5	5	5	5
Forecast FIT Connections	2	1	1	1	1	1

¹⁵ 16

17

Project applications that are less than 10 kW and small capacity allocation exempt ("CAE") under the FIT/microFIT program typically have capacities less than the building load. Peak generation for solar projects of this size will tend to coincide with peak building energy use. Tillsonburg expects these connections to be accommodated with standard metering and connection techniques.

23

With respect to large scale projects (1MW to 10 MW in size), we anticipate that the distribution system and/or the customer connections will require upgrading. Tillsonburg does not anticipate significant uptake in our territory for large scale projects. In the event these projects do

Basic GEA Plan Tillsonburg Hydro Inc. Application Revision 1

Table 3 microFIT and FIT Projects Forecast as of June 30, 2012



Exhibit:	2
Tab:	7.3
Schedule:	1
Page:	4 of 4

Date Filed:September 28, 2012 Corrected: October 5, 2012

materialize, they generally have sufficient lead time to allow an appropriate response by
 Tillsonburg and Hydro One.

3

4 Projects will be prioritized to align with the intent of the OPA FIT and microFIT programs.

5 Prioritization of FIT projects is based on project application dates and the ongoing status of the

6 new development. Tillsonburg intends to prioritize and expedite renewable generation projects

7 that are ready to connect to the distribution system. To date, project timeline information has not

8 been made available and as such Tillsonburg has not prioritized any of the proposed projects.

9

In conclusion, based on the anticipated uptake of the program and our assessment of our
systems capabilities, Tillsonburg is forecasting sufficient capacity to accommodate the
anticipated connections with the need to prioritize the projects.



Expansions and Renewable Enabling

File Number:	EB-2012-0168
Exhibit:	2
Tab:	7.3
Schedule:	2
Page:	1 of 1
Date Filed:	September 28, 2012
Corrected:	October 5, 2012

¹ Expansions and Renewable Enabling ² Improvements (REI's)

3

There is no proposed budget with respect to connection of renewable generation under the FIT
program. Tillsonburg will undertake an annual review of the anticipated renewable generation
connection project schedule as well as related costs.

7 connec

8 Tillsonburg is therefore not proposing that any of its costs incurred to make eligible investments

- 9 for the purpose of enabling the connection of renewable electricity generation be recovered from
- 10 provincial ratepayers rather than solely from Tillsonburg's ratepayers. It is therefore not
- 11 necessary to calculate the direct benefits accruing to Tillsonburg customers.



Other Limitations of the Distribution

File Number: EB-2012-0168

Exhibit:	2
Tab:	7.3
Schedule:	3
Page:	1 of 1

Date Filed:September 28, 2012 Corrected: October 5, 2012

Other Limitations of the Distribution ² System

3

4 Only one project thus far has been connected to the Tillsonburg system without limitation. Three new proposals have recently been submitted for assessment by Hydro One. Thus Tillsonburg 5 has not experienced any limitations with respect to renewable generation facility connections. 6 7 Tillsonburg is aware that the upstream transmitter, Hydro One, has restrictions on their 8 transformer station feeders based on the thermal ratings and the short circuit capacity of the 9 relevant equipment in accordance with limits set forth in the Transmission System Code ("TSC"). To determine if capacity is available on a given Hydro One transformer station feeder, 10 11 the Hydro One "Station & Feeder Capacity Calculator" is used. Hydro One has requested that 12 all LDCs comply with this standard and Tillsonburg has committed to doing so.



Date Filed: September 28, 2012

Exhibit 2

Tab 7.4 of 5

Development of Smart Grid



Summary Discussion File Number: EB-2012-0168

Exhibit:	2
Tab:	7.4
Schedule:	1
Page:	1 of 1

Date Filed:September 28, 2012 Corrected: October 5, 2012

Summary Discussion

2

3 While Tillsonburg currently has no plans for doing smart grid activities, should Tillsonburg

4 engage in any activities in the future, Tillsonburg will prepare and file with the Board, pursuant

5 with Board filing requirements, an evaluation of activities to ensure the benefits of the activities

6 are shared.



Date Filed: September 28, 2012

Exhibit 2

Tab 7.5 of 5

Appendices



Exhibit:	2
Tab:	7.5
Schedule:	1

Date Filed: September 28, 2012 Corrected: October 5, 2012

Appendix 1 of 2

Appendix One - HONI TCIA Report

hydro

483 Bay St., Toronto, Ontario M5G 2P5

THRESHOLD CONNECTION IMPACT ASSESSMENT

Tillsonburg Hydro Inc Tillsonburg TS, BY Bus (Feeder M5, M6, M7, M8) 1.4 MW Inverter Based Generation ID 15,450

March 1, 2011

Generation Connections Department Distribution Business Development Division

COPYRIGHT @ HYDRO ONE NETWORKS INC. ALL RIGHTS RESERVED

This report may not be reproduced or copied, in whole or in part, in any printed, mechanical, electronic film, or other distribution and storage without written permission from Hydro One Networks Inc.

2.0 Executive Summary

This Threshold CIA considered only the impact of 1.4MW cumulative generation connection of Inverter based CAE projects on the Hydro One's Tillsonburg TS BY Bus where the Distributed Generator is LDC connected, and LDC is transmission connected.

The following issues were discovered during the Threshold CIA and shall be addressed to facilitate interconnection of the Generator(s) to the Hydro One Transmission System.

- For all DG Facilities ≥ 250kW, Full Monitoring is required. Additional monitoring is required for islanding protection/transfer trip. Additionally, for all DG Facilities < 250kW, Provision of monitoring is required.
- Transfer Trip and Distributed Generator End Open (DGEO) shall be determined in Tillsonburg Hydro Inc's CIA as the DG facilities are within the service territory of Tillsonburg Hydro Inc and are connected to a feeder that is wholly owned by Tillsonburg Hydro Inc.
- Feeder Relay Directioning shall be determined in Tillsonburg Hydro Inc's CIA as the DG facilities are within the service territory of Tillsonburg Hydro Inc and are connected to a feeder that is wholly owned by Tillsonburg Hydro Inc.
- Feeder metering bi-directioning shall be determined in Tillsonburg Hydro Inc's CIA as the DG facilities are within the service territory of Tillsonburg Hydro Inc and are connected to a feeder that is wholly owned by Tillsonburg Hydro Inc.
- By no later than five (5) business days following the CIA Expiry Date and at any time upon the request of Hydro One, the customer agrees to provide Hydro One with the list of CAE Facilities that have been or will be connected to the Feeder(s) using the Threshold Allocated Capacity.

Hydro One Networks Inc. Business Customer Centre 185 Clegg Road Markham, Ontario L6G 1B7



March 29, 2012

Sebastian Fardella Tillsonburg Hydro Inc 10 Lisgar Ave Tillsonburg, ON, N4G 5A5 <u>sfardella@tillsonburg.ca</u>

Re: Tillsonburg Hydro Inc – Tillsonburg TS BY-Bus, ID # 15,450

Dear Mr. Fardella,

Hydro One has received your request for a six month extension to the capacity allocation under TCIA 15,450. The capacity allocation is covered by the original Threshold Connection Impact Assessment ("TCIA") that was sent on March 29, 2011 and studied for a total inverter-based generating capacity of 1.4 MW, connected to the 27.6 kV BY Bus at Tillsonburg TS.

After review, Hydro One has approved the request for an extension. Your TCIA ID number will remain in the listing for Tillsonburg TS in the Hydro One Application List until September 29, 2012. This list is updated monthly and can be found at:

http://www.hydroone.com/Generators/Documents/HONI_LA.pdf Please note that all projects are listed based on the complete application received date.

For additional information on distribution-connected generation, please visit our website at <u>http://www.hydroone.com/Generators/Pages/Distribution-connected.aspx</u>.

For any further questions or inquiries, please call the Business Customer Centre at 1-877-447-4412 or email us at dxgenerationconnections@HydroOne.com.

Yours truly,

John Fuerth HYDRO ONE NETWORKS INC



Date: 20/03/2012 (dd / mm / yyyy)

LDC Threshold Connection Impact Assessment Application Form

This application form is used for a Distributor ("LDC") application to Hydro One for a **Threshold** Connection Impact Assessment ("Threshold CIA"). A Threshold CIA is used to study an allocation of 1 MW or more of embedded generation for a single transformer station ("TS") bus, provided that:

- The generator(s) fall under the DSC definition of "capacity allocation exempt small embedded generation facility", and
- The generator(s) are interfaced to the LDC's distribution system through an inverter, and
- The LDC is transmission-connected to the Hydro One Transformer Station or supplied by a Hydro One "Express" feeder (i.e. a feeder serving no other load other than your LDC), and
- The LDC has at least one CAE application for the TS and can provide proof of such by submitting a copy of the signed and stamped LDC's Form B for that proponent.

IMPORTANT:

- 1. A request may be made for a Threshold CIA allocation greater than 1 MW with appropriate rationale.
- 2. A Threshold CIA expires after six months from the date the CIA was sent to the LDC. An extension to the six month period may be applied for using this same application form. The extension request must include submission of the generator connection status in the attached Schedule B.
- 3. Applicants and Generators are cautioned NOT to incur major expenses until Hydro One approves to connect the proposed generation.

If you have any questions please e-mail Hydro One's Business Customer Centre at <u>dxgenerationconnections@hydroone.com</u> or call 1-877-447-4412 (Option # 2 8:30 am to 5:00 pm Mon to Fri).

<u>Please return the completed form including a copy of the LDC Form B for the first CAE project,</u> and other required documents by mail to:

Hydro One Networks Inc. Attn: Business Customer Centre Generation Connection Application 185 Clegg Road Markham, Ontario L6G 1B7



All fields below are mandatory, except where noted. Incomplete applications may be returned by Hydro One Networks Inc. ("Hydro One"). Please ensure you fill in the date on the first page of this form.

Application Type:

New Application \boxtimes Revision/Extension (Original Threshold CIA #<u>15,450</u>)

- 1. Initial OPA CAE Project #: FIT-FK45E0S LDC Form B attached
- 2. Requested allocation (check one):

This application is for 1MW only. (The actual allocated amount may differ if the TS has restricted available capacity.)

This application is for a total of 1.4 MW. (If greater than 1 MW, please provide justifications for the total size of requested allocation.) More than 1 MW is required because initial TCIA approved 1.4MW.

3. Contact Information:

Legal Name of LDC	Tillsonburg Hydro Inc
Contact Person	Sebastian Fardella
Street, Post Office	10 Lisgar Ave
Box	
City, Province,	Tillsonburg, ON, N4G5A5
Postal Code	
Telephone	519-842-9200 x2226
Cell	
Fax	519-688-0759
E-mail	sfardella@tillsonburg.ca

Preferred method of communication with Hydro One: 🛛 E-mail 🖾 Telephone 🗌 Mail 🗌 Fax

4. Connection to Hydro One Transformer Station:

- a. Feeder voltage: 27.6 kV
- b. Transformer Station: <u>Tillsonburg TS</u>
- c. LV Bus Designation: <u>B/Y</u>
- d. Feeder Designation(s): <u>M5,M6,M7,M8</u>

5. Existing Generator information

If any part of the LDC's distribution system that is downstream from the above TS includes existing or proposed queue generators, the LDC must provide details of that generation in the attached Appendix A.

CHECKLIST

┉●•ज़^ᢤ᠃★.●■■≫★.••३।ःः ≝৺•৾ঀৼঢ়৾৳



Please ensure the following items are completed prior to submission. Your application will NOT be processed if any part is omitted or incomplete:

- □ Original FIT CAE application number
- □ Copy of the original FIT CAE Form B signed and stamped by the proponent
- □ Listing of existing generation (Appendix A)
- Listing of CAE project status (Appendix B) if this is a renewal application



Appendix A: Existing and Queued Generation Listing (Generation > 10 kW supplied from the TS)

TS (associated with this Threshold CIA): (Tillsonburg TS)

Generator Name	TS Feeder	Generation Type	Nameplate Capacity (kW)	Comments
1596101 Ontario Inc	M6	Inverter Based Solar	75KW	Connected Aug 25,
		PV		2011



Appendix B: Listing of CAE Inverter based projects associated with this Threshold CIA

Generator Name	FIT Application #	TS Feeder	Generation Type	Nameplate Capacity (kW)	Status
OZZ Solar	FIT-FU9YZI7	M7	Rooftop Solar PV	250	Undergoing CIA
OZZ Solar	FIT-F75YS8A	M7	Rooftop Solar PV	150	Undergoing CIA
OZZ Solar	FIT-F8826RX	M7	Rooftop Solar PV	150	Undergoing CIA
OZZ Solar	FIT-FBIIH5U	M8	Rooftop Solar PV	500	Undergoing CIA
Real-Flex Business Parks		M8	Rooftop Solar PV	250	Investigation stage

TS Name: Tillsonburg TS



Exhibit:	1
Tab:	5
Schedule:	1

Date Filed: September 28, 2012 Corrected: October 5, 2012

Appendix 2 of 2

Appendix Two - OPA Letter of Comment

OPA Letter of Comment:

Tillsonburg Hydro Inc.

Basic Green Energy Act Plan







Introduction

On March 25, 2010, The Ontario Energy Board ("the OEB") issued its Filing Requirements for Distribution System Plans. As a condition of Licence, Ontario Distributors are required to file a Green Energy Act Plan as part of their cost of service application.

The Filing Requirements distinguish between Basic and Detailed Green Energy Act Plans ("Plan" or "GEA Plan") and outline the specific information and level of detail which must be provided for each type of Plan. Recognizing the importance of coordinated planning in achieving the goals of the *Green Energy and Green Economy Act, 2009* (the "GEA"), distributors must consult with embedded and host distributors, upstream transmitters and the OPA in preparing their Plans. For both Basic and Detailed Plans, distributors are required to submit as part of the Plan, a letter of comment from the OPA.

The OPA will review distributors' Basic Plans to ensure consistency with regard to FIT and microFIT applications received, as well as with integrated Plans for the region or the system as a whole.

Tillsonburg Hydro Inc. - Basic Green Energy Act Plan

The OPA has reviewed the Basic GEA Plan from Tillsonburg Hydro Inc. ("Tillsonburg") dated July 25, 2012, and has provided its comments below.

OPA FIT/microFIT Applications Received

Tillsonburg's GEA Plan indicates that to date 12 microFIT projects totaling approximately 0.118 MW of capacity, and 1 FIT project totaling 0.075 MW have been connected in Tillsonburg Hydro Inc.'s service territory. This information is shown in the Executive Summary of the plan.

To date, the OPA has processed 29 microFIT applications totalling approximately 0.279 MW of capacity in Tillsonburg Hydro Inc.'s service territory. Of these, approximately 0.132 MW have been offered a contract as of July 2012. Additionally, the OPA has received and offered contracts to 5 capacity allocation exempt FIT applications, totalling approximately 1.125 MW that have identified themselves as connecting within Tillsonburg Hydro Inc.'s service territory. All of the applications remained active as of July 2012.

Upstream Transmission Constraints

Tillsonburg Hydro Inc.'s GEA Plan indicates that Tillsonburg has committed to complying with Hydro One's "Station & Feeder Capacity Calculator" to determine if capacity is available on a given Hydro One transformer station feeder.

The updated Transmission Availability Table for Small FIT 2012 available on the OPA's FIT website as follows: <u>http://fit.powerauthority.on.ca/sites/default/files/TAT%20Table%20Final%20-%20April%205%20for%20posting.pdf</u>. This table shows that Tillsonburg TS is limited by known upstream transmission constrains.

Economic Connection Test

The OPA received a directive dated April 5, 2012 from the Minister of Energy with respect to the Feed-in Tariff Program Review. The directive states that "[g]iven the transmission projects planned through the Long Term Energy Plan and changes to the FIT Program, the OPA shall not run the Economic Connection Test ". A link to the full directive is provided on the OPA's website: http://www.powerauthority.on.ca/sites/default/files/page/FIT-ReviewApril-2012.pdf

Opportunities for Integrated Solutions

There are no known corresponding expansions among neighbouring LDCs that could be addressed through integrated transmission solutions at this time.

Conclusion

The OPA finds that Tillsonburg Hydro Inc.'s GEA Plan is reasonably consistent with the OPA's information regarding renewable energy generation applications to date.

The OPA appreciates the opportunity to comment on Tillsonburg Hydro Inc.'s Basic GEA Plan.