#### EB-2010-0142

#### **ONTARIO ENERGY BOARD**

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an application by Toronto Hydro-Electric System Limited for an order approving just and reasonable rates and other charges for electricity distribution to be effective May 1, 2011

#### CROSS-EXAMINATION MATERIALS ON BEHALF OF THE SSMWG

DENNIS M. O'LEARY Counsel for SSMWG AIRD & BERLIS LLP

Brookfield Place 181 Bay Street Suite 1800, Box 754 Toronto, ON M5J 2T9 Telephone: (416) 863-1500 Facsimile: (416) 863-1515

doleary@airdberlis.com

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# **TAB 1**

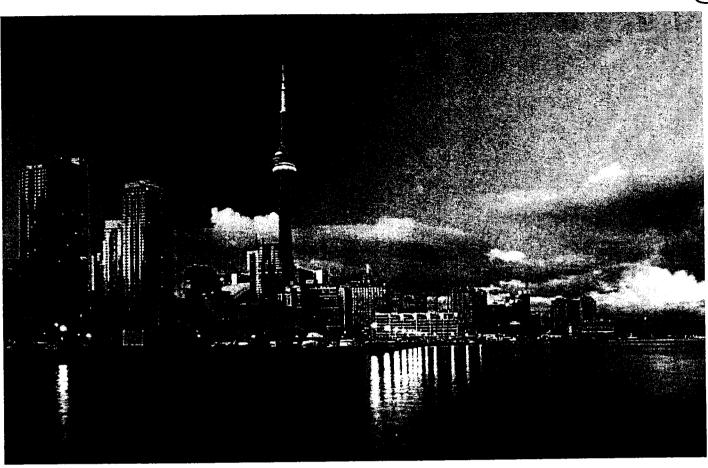
# INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1	INTERROGATORY 7:
2	Reference(s): none
3	
4	Please produce a copy of all brochures, postcards, posters, and/or other information
5	available in hard copy or on-line (including copies of all Web page screen prints)
6	provided or available to developers, building owners, or condominium corporations that
7	promote, explain or deal with the suite metering program.
8	
9	RESPONSE:
10	The following documents are provided as Appendix A to this Schedule:
11	Suite Call Centre Info Form Nov 08
12	Suite Meter Case Study 1
13	Suite Meter Case Study 2
14	Suite Meter Case Study 3.pdr
15	• Suite Meter Conservation Tips V2.1
16	Suite Meter EMS Pocket Folder BIP Nov 2008
17	Suite Meter Info Sheet 10
18	Suite Meter Letter
19	Suite Meter Postcard Nov 08
20	<ul> <li>Suite Metering for Condos Nov. 2010</li> </ul>
21	Suite Meter Welcome Kit_tl4_11x17 Nov 08
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24	Suite Meters Toronto Hydro Electric System - Web Page 3

• Suite Meters \_ Toronto Hydro Electric System - Web Page 4

25





# Your Toronto Hydro advantage

#### Toronto Hydro-Electric System will:

- Provide and arrange for installation of one meter point per condominium suite, at no cost to the suite owner, condominium corporation or developer.
- Establish each condominium unit owner as a Toronto Hydro-Electric System customer.
- Perform all account management activities, including meter reading, billing, meter maintenance, collection, and reconnect/ disconnect activities.

#### Condominium boards and builders will:

- Agree on behalf of each suite/unit owner that Toronto Hydro-Electric System will be the meter service provider.
- Permit meter installation at service connection points recommended by Toronto Hydro-Electric System or its subcontractors.
- Be responsible for any on-site upgrades required to accommodate the new metering equipment.
- Arrange access for Toronto Hydro-Electric System personnel to carry out any required maintenance or service activities.

For more information visit us at www.torontohydro.com/suitemeters

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Toronto Hydro-Electric System Limited EB-2010-0142 Exhibit R1 Tab 10 Schedule 7 Appendix A-8 Filed: 2010 Dec 6 (1 page)



March 09, 2009

Dear Sir or Madam.

Today, many condominiums across the city are choosing to individually meter their suites. Property Managers and condominium boards can choose between sub-metering or individual metering. What's the difference?

A licensed sub-metering company typically installs sub-meters behind the bulk meter. Then they bill and collect from unit owners on behalf of the condominium corporation which they return to the corporation. But there are three issues to keep in mind:

- 1. The condominium corporation is still responsible for paying the bill based on the bulk meter. If any individual owners are delinquent in their payments, it is up to the condominium to make good.
- 2. Secondly, the administrative fees charged by the sub-metering services are un-regulated.
- 3. Lastly, in most cases, the condominium corporation will own the metering system and will be responsible for re-certifying it every six years.

#### Toronto Hydro's approach is different

We supply and install our Smart Meter system at no cost\* to the condominium or suite owners. Suite owners become customers of Toronto Hydro and are billed directly by Toronto Hydro. We own and maintain the system forever. All of our charges are regulated by the Ontario Energy Board.

Our experience shows that many condominium corporations prefer this arrangement because it is simpler and places a lesser obligation on the condominium corporation.

#### Suite meters are smart meters

All new suite meters will work with Time-of-Use pricing. When introduced, this pricing structure offers further incentive to owners to control their electricity use.

#### No cost to suite owner or condominium corporation

When a building converts to suite metering, Toronto Hydro-Electric System will:

- Provide and arrange for installation of one meter point per condominium unit, at no cost to the suite owner or condominium corporation
- Establish each customer as a Toronto Hydro-Electric System customer, responsible for their own bill
- · Perform all account management activities including meter reading, billing and meter maintenance

Learn more about the benefits of suite metering at **www.torontohydro.com/suitemeters**. To book an appointment, or for more information, please contact me directly.

Sincerely,

Leo Guidolin, CET, CEM, CDSM

Suite Metering Co-ordinator

Tel: 416-542-3100 ext. 50327

Email: lguidolin@torontohydro.com

Didolin

\*Pending a site review.





# Your Toronto Hydro advantage

#### Toronto Hydro-Electric System will:

- Provide and arrange for installation of one meter point per condominium suite, at no cost to the suite owner, condominium corporation or developer.
- Establish each condominium unit owner as a Toronto Hydro-Electric System customer.
- Perform all account management activities, including meter reading, billing, meter maintenance, collection, and reconnect/ disconnect activities.

#### Condominium boards and builders will:

- Agree on behalf of each suite/unit owner that Toronto Hydro-Electric System will be the meter service provider.
- Permit meter installation at service connection points recommended by Toronto Hydro-Electric System or its subcontractors.
- Be responsible for any on-site upgrades required to accommodate the new metering equipment.
- Arrange access for Toronto Hydro-Electric System personnel to carry out any required maintenance or service activities.

For more information visited a www.torontohydro.com/sill

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Mixed Sources
Product group from well-managed
forests, controlled sources and
recycled wood or fiber
www.isc.org Cert no. 594-000-002717
0 1996 Forest Stewardship Council



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**CUSTOMER CARE 416** 542-8000

8:00am - 4:30pm / Monday - Friday

FOR HOME FOR BUSINESS ELECTRICITY CONSERVATION CONSTRUCTION PROJECTS POWER OUTAGES

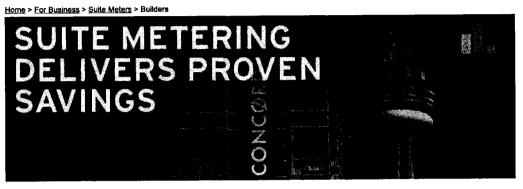
SEARCH #

COMMUNITY

CORPORATE RESPONSIBILITY

**EBILL LOGIN** 

**Business Customer Care** Your Bill Overview Opening & Closing Accounts Your Meter RPP & MUSH Sector FAQs RPP & MUSH Sector Net System Load Shape Saving Tips For Businesses Smart Meters **Electricity Retailers** Suite Meters Conditions of Service



Today, condominium owners want to be in control of their costs, which is why they prefer units with suite meters. It means they are individually reponsible for the electricity they use in their unit. Suite meters also mean that condo corporations may reduce costs that have previously been associated with common areas. After the sale, your relationship with Toronto Hydro-Electric System Limited (Toronto Hydro) continues to pay off. Customers know our company and are confident that we're the best choice for the delivery of reliable electricity.

#### TORONTO HYDRO WILL TAKE CARE OF EVERYTHING SUITE METERS

For builders, it's reassuring to work with the leader. We offer complete service to implement suite meters in your building. We do the assessment, the system design and project management. We supply and install one meter point per condominium suite, at no cost to you, the suite owner or the condominium corporation. We will also take care of postinstallation and establish each suite owner as a Toronto Hydro customer.

Thereafter, we will perform all account managment activities including meter reading, billing, meter maintenance, collection, and reconnect/disconnect activities.

To help with your communications to potential buyers, we've developed postcards and posters that outline the benefits of suite meters, making it easier to close sales. These materials can be customized with your logo and printed by Toronto Hdyro for use in your sales suites, free of charge.

- View postcard
- View posters
- Order materials

Suite Owners

Condo Boards



Click above to view sample electricity bill (pdf 192k)

#### SUITE METERED UNITS WORK WITH TIME-OF-USE **PRICING**



All suite-metered units have "smart meters" that work with TOU pricing. This pricing structure will offer further incentives to unit owners to control their electricity use, and to time-shift use whenever possible.

LEARN MORE ABOUT SUITE METERS

Doing laundry and using the dishwasher in the evenings or on weekends are two obvious examples for taking advantage of TOU pricing.

Click here to contact us

To help unit owners monitor their usage and encourage timeshifting, Toronto Hydro provides each customer with a secure online dashboard, where they can log in and see their electricity usage by the day, week, billing period or any period they choose.

#### **WORKING WITH US IS REASSURING FOR OWNERS**

Suite owners know Toronto Hydro, recognize our trucks on the street and are confident that we're the best choice for the delivery of reliable electricity.

They can decide to stay with Toronto Hydro as their electricity supplier of choice, or select another electricity retailer. As direct customers of Toronto Hydro, they'll be able to take advantage of popular energy conservation programs.

It's also important to know that all charges on their electricity bill are regulated by the Ontario Energy Board.

#### **OUR BILL IS CLEAR AND UNDERSTANDABLE**

The Toronto Hydro bill is a good example of the quality of communications we deliver to our customers. It has a clear layout and has been researched for customer acceptance.

It outlines the various components that go into the charges for electricity and breaks out taxes and any other service charges. It also shows historical use, which allows customers to make comparisons over similar time periods. This encourages efficient use of electricity.

#### RESPONSIBILITIES OF THE BUILDER

We try to make it as easy as possible to work with us. Here is what we ask of you to ensure that the process is efficient.

- Agree on behalf of each suite/unit owner that Toronto Hydro will be the meter service provider.
- Permit meter installation at service connection points recommended by Toronto Hydro or its subcontractors.
- Be responsible for any onsite upgrades required to accommodate the new metering equipment.
- Arrange access for Toronto Hydro personnel to carry out any required maintenance or service activities.

#### **Ouestions or Comments**

If you'd like to know more about suite metering for your suite, please call 416-542-3443 or email <a href="mailto:suitemeters@torontohydro.com">suitemeters@torontohydro.com</a>



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EBILL LOGIN

**CUSTOMER CARE 416** SEARCH a 542-8000 8:00am - 4:30pm

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CORPORATE RESPONSIBILITY

FOR HOME FOR BUSINESS **Business Customer Care** Your Bill Overview **Opening & Closing Accounts** Your Meter RPP & MUSH Sector FAQs RPP & MUSH Sector Net System Load Shape Saving Tips For Businesses **Smart Meters Electricity Retailers** Suite Meters

Conditions of Service

/ Monday - Friday



COMMUNITY

If you're renovating or refurbishing your building, it may make sense to make the switch to suite metering. With TOU rates now in effect, it's more important than ever that owners are paying for what they use. Experience shows us that they tend to be happier when they're in control. They will also generally use less electricity, and that's good for all of us.

#### IT'S EASY TO WORK WITH US

Toronto Hydro will take care of everything. We offer a complete service for the supply and installation of individual suite meters at no cost to the condominium board. We will meet with your board and then provide the assessment, system design, full installation and all necessary project management. Post-installation we can host owner seminars outlining our full customer service support.

#### It's reassuring to work with the leader:

- . We are the established experts in the field.
- We are regulated by the Ontario Energy Board.
- Condo owners will receive the same level of service as our other 687,000 customers.
- We have been in business for nearly 100 years. The City of Toronto is our marjority shareholder.

#### YOUR SUITE OWNERS GET REGULATED **ELECTRICAL RATES**

It's important to know that all charges on a Toronto Hydro bill are regulated by the Ontario Energy Board. Suite owners still have the option of working with the retailer of their choice.

As direct customers of Toronto Hydro, they'll be able to take advantage of popular energy conservation programs, many of which include incentives.

#### **SUITE METERS**

Suite Owners

**Builders** 



- · Case Study -Wilson **Blanchard** <u>Management</u> Inc.
- Case Study -Cape Property <u>Management</u> <u>Ltd.</u>
- Case Study -Canlight Hall Management Inc.

**LEARN MORE ABOUT** 



#### SUITE METERED UNITS WORK WITH TIME-OF- SUITE METERS **USE PRICING**

Click here to contact us.

All suite-metered units have smart meters that work with TOU pricing. This pricing structure will offer further incentive to owners to control their electricity use, and to time-shift use whenever possible. Doing laundry and using the dishwasher in the evenings or on weekends are two obvious examples for taking advantage of Time-of-Use pricing. Learn more about Time-of-Use rates here.

#### YOUR TORONTO HYDRO ADVANTAGE

#### **Toronto Hydro will:**

- Provide and arrange for installation of one meter point per condominium suite, at no cost\* to the suite owner, condominium corporation.
- Establish each condominium unit owner as a Toronto Hvdro customer.
- · Perform all account management activities, including meter reading, billing, meter maintenance, collection, and reconnect/disconnect activities.
- \* Pending site review

#### **OUR BILL IS CLEAR AND UNDERSTANDABLE**

The Toronto Hydro bill is a good example of the quality of communications we deliver to our customers. It has a clear layout and has been researched for customer acceptance.

It outlines the various components that go into the charges for electricity and breaks out taxes and any other service charges. It also shows historical use, which allows customers to make comparisons over similar time periods. This encourages efficient use of electricity.

#### RESPONSIBILITIES OF THE CONDO BOARD

- · Agree on behalf of each suite/unit owner that Toronto Hydro will be the meter service provider.
- Permit meter installation at service connection points recommended by Toronto Hydro or its subcontractors.
- Be responsible for any onsite upgrades required to accommodate the new metering equipment.
- Arrange access for Toronto Hydro personnel to carry out any required maintenance or service activities.

#### **Questions or Comments**

If you'd like to know more about suite metering for your buildings, please call 416-542-3443 or email suitemeters@torontohydro.com



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## TAB 2A

EB-2010-0142 Exhibit R1 Tab 10 Schedule 8

Filed: 2010 Dec 6 Page 1 of 1

# INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

#### 1 **INTERROGATORY 8:**

2 Reference(s):

none

3

- 4 Please provide a copy of all offers, contracts, agreements, undertakings, or other
- 5 documents which THESL requests that condominium developers and/or condominium
- 6 corporations execute, or any terms and conditions which THESL deems to be in effect
- where a developer or condominium corporation agrees that THESL may undertake suite
- 8 metering in a building.

9

#### 10 RESPONSE:

- Please see documents provided as Appendix A to this Schedule:
- 1) Suite Meter Customer Agreement Retrofit (v07,Aug9.10) Template
- 2) Suite Meter Customer Agreement (v11, Aug9.10) Template

Toronto Hydro-Electric System Limited EB-2010-0142 Exhibit R1 Tab 10 Schedule 8 Appendix A-1 Filed: 2010 Dec 6 (14 pages)

## SUITE METER INSTALLATION AND SERVICE AGREEMENT FOR NEW CONDOMINIUM DEVELOPMENTS

DEVEL			FION AND SERVICE AGREEMEN ent") is made effective this			
BETWE	EN:					
			Toronto Hydro-Electric Sys	tem Limited		
		á	a corporation incorporated under the	he laws of Ontario		
			(hereinafter called "Toront	o Hydro")		
			and			
			a corporation incorporated under the	he laws of Ontario		
		•	thereinafter called the <b>"De</b> "			
			(Hereinater called the De	velopel )		
RECITA	ALS.					
1.	Toronto Hydro is in the business of supplying, installing and maintaining suite meter systems to multi- residential buildings;				tems to multi-	
2.	Developer is the builder and owner of the multi-residential building(s) located at (collectively,					
	as applicable, hereinafter referred to as the "Building");					
3.	Developer wishes to retain Toronto Hydro to supply, install and maintain a suite meter system and provide suite meter services for the Building upon the terms and conditions set forth herein;					
NOW T	THEREFORE, in eration, the receipt	consider and sur	ration of the mutual covenants of	ontained herein and for othe owledged, the parties agree a	r good and valuable s follows:	
1.	INTERPRETAT	ON				
1.1	All capitalized terms in this Agreement shall have the meaning as defined in Schedule 5;				j;	
1.2	All dollar amounts in this Agreement are expressed in Canadian dollars, unless otherwise stated; and				se stated; and	
1.3	The recitals hereto shall form an integral part of this Agreement as if specifically restated herein.				d herein.	
2.	SCHEDULES	The fo	ollowing schedules and appendice	s are attached to and form pa	rt of this Agreement:	
		(i)	SCHEDULE 1 -Supply and Ins	stallation of Suite Meter System	m	
		(ii)	SCHEDULE 2 – Suite Meter S	ervices		

- (iii) SCHEDULE 3 Additional Cost Items
- (iv) SCHEDULE 4 Assignment and Assumption Agreement
- (v) SCHEDULE 5 Defined Terms

In the event of a conflict between the terms of any schedule and the terms of this Agreement, the terms of this Agreement shall govern.

#### 3. SUPPLY AND INSTALLATION OF THE SUITE METER SYSTEM

- 3.1 The Developer appoints Toronto Hydro to supply and install the suite meter system described in Schedule 1 (the "Suite Meter System") at the Building and provide the corresponding suite meter services as described in Schedule 2 (the "Suite Meter Services") throughout the Term all in accordance with the terms and conditions of this Agreement.
- 3.2 Toronto Hydro shall provide the Suite Meter System and the Suite Meter Services at no cost to the Developer, save and except for any on-site upgrades required to accommodate the installation of the Suite Meter System as specified in Schedule 3 to this Agreement ("Additional Cost Items"). Toronto Hydro shall invoice Developer for the Additional Cost Items, if any, and Developer shall make payment to Toronto Hydro not later than thirty (30) days following receipt of the invoice. All amounts not received from the Developer when due shall bear interest at the lesser of (i) 2% per month; or (ii) the maximum allowed by Applicable Laws, from the due date to and including the date of payment in full.

#### 4. OWNERSHIP AND ACCESS

- 4.1 Notwithstanding the installation or attachment of the Suite Meter System in and to the Building, all components of the Suite Meter System shall remain the property of Toronto Hydro and no part of the Suite Meter System shall become the property of the Developer.
- During the Term and for a period of six (6) months after the expiry or termination of the Term, the Developer will provide Toronto Hydro with access to the Suite Meter System located in the Building as reasonably required by Toronto Hydro to allow Toronto Hydro to fulfill its obligations under this Agreement including, without limitation, to allow for: (i) the installation, inspection and maintenance of the Suite Meter System; (ii) the removal of the Suite Meter System pursuant to Section 8.1; (iii) to provide the Suite Meter Services; and (iv) the performance of any necessary services related to an emergency pertaining to the Suite Meter System.

#### 5. ELECTRICITY ACCOUNT

- 5.1 The parties agree and acknowledge that following the installation of the Suite Meter System:
- (a) and upon registration of the condominium corporation for the Building under the Condominium Act, 1998, Toronto Hydro shall establish each residential and retail condominium unit owner in the Building as a separate and individual Toronto Hydro electricity distribution customer and residential or commercial rate account holder, as applicable; and
- (b) the Developer shall not be responsible for the payment of the electricity account of the individually metered residential or commercial account holder referred to in (a) above but shall remain the account holder for the current general service account at the Building and for any unsold condominium units following registration of the condominium for the Building under the Condominium Act, 1998, and shall continue to make

payment for electricity consumption for the Building common areas and any of the unsold condominium units noted above.

#### 6. TERM

6.1 Subject to any termination rights herein, the term of this Agreement shall be for a term of twenty (20) years, starting on the Effective Date (the "Term").

#### 7. TERMINATION

- 7.1 <u>Termination for Convenience</u>. Either party may elect to terminate this Agreement at any time following the completion of the first five (5) years of the Term by providing the other party with at least one (1) year prior written notice.
- 7.2 <u>Termination for Material Default.</u> If one of the parties (the "Defaulting Party") fails to fulfil any material obligation under this Agreement or breaches any representation or warranty contained herein, then the other party (the "Non-Defaulting Party") may, without prejudice to any other right or remedy the Non-Defaulting Party may have, notify the Defaulting Party in writing that the Defaulting Party is in default of its contractual obligations and instruct the Defaulting Party to correct the default within thirty (30) Business Days immediately following the receipt of such notice. If the Defaulting Party fails to correct the default in the time specified, then, without prejudice to any other right or remedy, the Non-Defaulting Party may terminate this Agreement by providing written notice thereof.
- 7.3 <u>Termination for Bankruptcy</u>. If bankruptcy or insolvency proceedings are instituted by or against either party, or either party is adjudicated a bankrupt, becomes insolvent, makes an assignment for the benefit of creditors or proposes or makes arrangements for the liquidation of its debts, or a receiver or receiver and manager is appointed with respect to all or part of the assets of either party, the other party may, without prejudice to any other rights or remedies it may have, immediately terminate this Agreement.

#### 8. EFFECT OF TERMINATION

- 8.1 Upon the expiry of the Term or any earlier termination of this Agreement, the Developer shall forthwith pay to Toronto Hydro any unpaid amounts payable to Toronto Hydro under this Agreement accruing to the date of expiry or termination and Toronto Hydro shall remove the Suite Meter System installed at the Building and return the Building to a bulk meter system.
- 8.2 Notwithstanding any other terms herein, in the event of termination by the Developer pursuant to Section 7.1 (Termination for Convenience) or a termination by Toronto Hydro pursuant to Section 7.2 (Termination for Material Default) or Section 7.3 (Termination for Bankruptcy), the Developer shall forthwith pay to Toronto Hydro any direct reasonable costs incurred by Toronto Hydro associated with disconnecting and removing the Suite Meter System installed at the Building and returning to the Building to a bulk meter system.
- 8.3 The termination of this Agreement shall not affect any rights or obligations which may have accrued prior to such termination or any other right which the terminating party may have arising out of either the termination or the event giving rise to the termination.

#### 9. REPRESENTATIONS AND WARRANTIES

- 9.1 The Developer represents and warrants to Toronto Hydro that:
- (a) it is entitled to enter into this Agreement in respect of the Building and it has the corporate power and authority to enter into this Agreement and to perform its obligations hereunder, and that this Agreement

constitutes a legal, valid, and binding obligation of the Developer, enforceable against the Developer in accordance with its terms;

- (b) the entering into of this Agreement and the performance of the terms of this Agreement by the Developer do not breach or contravene any provision of any agreement to which the Developer is bound or which otherwise affects the Building;
- (c) it shall obtain and maintain, for the Building during the Term, insurance covering such risks and in such amount as a prudent owner of a building the same as or similar to the Building would maintain and as may be required pursuant to the *Condominium Act*, 1998 (Ontario); and
- (d) it shall not cause or voluntarily permit any tampering with or modification or alteration to the Suite Meter System (or any part thereof); and
- (e) it shall permit Toronto Hydro to install suite metering promotional materials (including cladding and boarding) at the Building's construction site, subject to the Developer retaining a right of approval on the location of such promotional materials.
  - 9.2 Toronto Hydro represents and warrants to the Developer that:
- (a) it has the corporate power and authority to enter into this Agreement and to perform its obligations hereunder, and that this Agreement constitutes a legal, valid, and binding obligation of Toronto Hydro, enforceable against Toronto Hydro in accordance with its terms;
- (b) the installation, operation and maintenance of the Suite Meter System shall be in compliance with all Applicable Laws;
- (c) it shall obtain and maintain in full force and effect during the Term of this Agreement commercial general liability and property insurance as it relates to the supply and installation of the Suite Meter System and Suite Meter Services.
- 10. SUBCONTRACTORS Toronto Hydro may subcontract any or all of its obligations under this Agreement.
- 11. FORCE MAJEURE If, by reason of Force Majeure, either party hereto (the "Frustrated Party") is delayed or unable, in whole or in part, to perform or comply with any obligation or condition of this Agreement, then it will be relieved of liability and will suffer no prejudice for failing to perform or comply or for delaying such performance or compliance during the continuance and to the extent of the inability so caused from and after the happening of the event of Force Majeure. The party affected by the event of Force Majeure shall as soon as reasonably practicable, give prompt notice thereof stating the date and extent of Force Majeure, and take all reasonable steps to resume compliance with its obligations provided, however, that settlement of strikes, lockouts and other industrial disputes shall be within the discretion of the Frustrated Party. The Frustrated Party will give prompt notice of the cessation of the event of Force Majeure to the other party.
- 12. LIMITATION OF LIABILITY Toronto Hydro and its Representatives shall not be liable in contract, tort (including negligence), or otherwise, for incidental, consequential, indirect, special, or punitive damages of any kind, or for the loss of revenue or profits, loss of business, loss of information or data, or other financial loss, arising out of or in connection with the installation, use, inability to use, performance, failure or interruption of the Suite Meter System or the Suite Meter Services, even if Toronto Hydro has been advised of the possibility of such damages and regardless of whether such damages were foreseeable.

13. CONFIDENTIAL INFORMATION The parties agree and acknowledge that: (a) subject to Applicable Laws or court order, each party shall maintain in strict confidence the terms of this Agreement and any and all proprietary and confidential information about the business or operations of the other party or any of their Affiliates, which it acquires in any form from the other party (the "Disclosing Party") by virtue of this Agreement ("Confidential Information") and will not disclose to any third party or make use of such Confidential Information for itself or any third party without the prior written consent of the Disclosing Party; and (b) notwithstanding the foregoing, (i) Toronto Hydro is subject to MFIPPA and may be required to disclose Confidential Information concerning this Agreement in accordance with the provisions of MFIPPA; and (ii) the parties shall be permitted to disclose the Confidential Information to its respective Representatives who have a need to know such Confidential Information, provided such Representatives have agreed to comply with and be bound by the provisions of this Section 13.

#### 14. ASSIGNMENT

- 14.1 Save and except for Toronto Hydro's right to assign this Agreement to any of its Affiliates and the Developer's obligation to assign this Agreement pursuant to Sections 14.2, neither party may assign this Agreement or any of its rights or obligations hereunder, in whole or in part, without the prior written consent of the other party, which consent may not be unreasonably withheld, conditioned or delayed.
- 14.2 Upon registration of the condominium corporation for the Building under the Condominium Act, 1998, (Ontario), the Developer will: (a) provide written notice of the registration to Toronto Hydro and; (b) execute and cause the condominium corporation to execute, and deliver to Toronto Hydro an assignment and assumption agreement in the form attached hereto as Schedule 4 (the "Assignment and Assumption Agreement") pursuant to which the condominium corporation shall assume all of the obligations of the Developer under this Agreement and Toronto Hydro shall release the Developer of all of its obligations under this Agreement as of the effective date of the Assignment and Assumption Agreement. The Developer hereby agrees and acknowledges that it shall remain responsible for all obligations under this Agreement and for the consumption of electricity at the Building until such time as Toronto Hydro receives an executed Assignment and Assumption Agreement evidencing the condominium corporation's assumption of the Developer's obligations.
- 15. RELATIONSHIP OF THE PARTIES Nothing contained in this Agreement shall be construed to constitute either party as the partner, employee or agent of, or joint venturer with the other party, nor shall either party have any authority to bind the other in any respect, it being intended that each party shall remain an independent contractor of the other.
- 16. SEVERABILITY If any provision of this Agreement is determined by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, such determination shall not affect the enforceability or validity of the remaining provisions of this Agreement and such unenforceable or invalid portion shall be severable from the remainder of this Agreement.
- 17. NO WAIVER A waiver of any provision of this Agreement shall not constitute either a waiver of any other provisions or a continuing waiver, unless otherwise expressly indicated in writing.
- 18. ENUREMENT This Agreement and everything contained herein shall enure to the benefit of, and be binding upon, the parties hereto and their respective successors and permitted assigns.
- 19. NOTICE All notices, requests, claims, demands and other communications hereunder shall be in writing and shall be deemed to have been validly and effectively given on the same day if personally served, the next Business Day if sent by facsimile or similar means of recorded communication or on the fifth (5th) Business Day if sent by registered mail. Notices shall be addressed as follows or at such other address of which the addressee may from time to time have notified the other party:

to the Developer:	to Toronto Hyd	Toronto Hydro:		
Name:	Name:	Leo Guidolin Suite Metering Coordinator		
Title:	Address:	5800 Yonge St. Toronto, On. M2M 3T3 (416) 542-3100 x 50327		
Address:	Telephone: Facsimile:	(416) 542-3100 x 50327 (416) 542-3501 Iguidolin@torontohydro.com		
Telephone:	Email:			
Facsimile:	With a copy to			
Email:	Name: Title:	Lawrence Wilde General Counsel		
	Address: Telephone:	14 Carlton St. Toronto, On. M5B 1K5 (416) 542-2896		
	Facsimile: Email:	(416) 542-2540 <u>lwilde@torontohydro.com</u>		

20. GOVERNING LAW This Agreement shall be governed by and construed in accordance with the laws of the province of Ontario and the laws of Canada applicable therein. The parties irrevocably attorn to the jurisdiction of the courts of Ontario with respect to any matter arising under or related to this Agreement.

#### 21. ENTIRE AGREEMENT

- 21.1 This Agreement, including all schedules referred to herein and subsequent amendments, constitutes the entire agreement between the Developer and Toronto Hydro relating to the subject matter hereof. This Agreement supersedes the terms of any purchase order, all prior correspondence, representations, warranties, covenants, collateral undertakings, discussions, negotiations, understandings or agreements, oral or otherwise, express or implied, unless otherwise provided in this Agreement.
- 21.2 No modification or amendment to this Agreement shall be binding on the parties unless agreed to in writing and executed by an authorized Representative of each party.
- 22. FURTHER ASSURANCES. The Developer agrees to execute such further assurances and documents, including any bills of sale, and to do all such things and actions which shall be necessary or proper for the carrying out of the purposes and intent of this Agreement.
- 23. **EXECUTION AND DELIVERY**. This Agreement may be executed in counterparts and delivered by electronic means, each of which shall be deemed to be an original and all of which taken together shall be deemed to constitute one and the same instrument.
- 24. SURVIVAL. In addition to the terms of this Agreement that by their nature survive the expiry or termination of this Agreement, the terms of Sections 9 (Representations and Warranties), 12 (Limitation of Liability), and 13 (Confidential Information) shall survive the expiry or termination of this agreement for a period of five (5) years.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the day and year first written above:

# Per: Per: Name: Susan Davidson Title: Title: Senior Vice-President, Customer Care I have authority to bind the Developer. I bave authority to bind Toronto Hydro.

## SCHEDULE 1 SUPPLY AND INSTALLATION OF SUITE METER SYSTEM

#### (i) Supply of Suite Meter System

Toronto Hydro will provide at no cost to the Developer:

- one (1) suite meter per residential or retail suite in the Building;
- one (1) meter point for the common area or "house" electrical load; and
- one meter (1) point to measure the total load of the Building.

If more than one (1) suite meter is required for any residential or retail suite in the Building, such suite meters will be supplied and installed at the expense of the Developer in accordance with the amount documented in Schedule 3 to this Agreement.

#### (ii) Components of the Suite Meter System

The main components of the Suite Meter System to be installed by Toronto Hydro at the Building will consist of the following:

- Quadlogic Mini Closet, MC5 for all voltages configurations;
- Quadlogic Scan Transponder, ST5 (data collector and communications device);
- Quadlogic Socket Meter, S 20 socket base meters for all voltage and current configurations;
- Instrument Transformers, 2DARL-201 or equivalent;
- Instrument Transformer interface box(es); and.
- a Local Area Network for meter reading data communications that utilizes the existing electrical distribution system in the building for data transmission.

The Suite Meter System shall be based on Toronto Hydro's single line layout. Any variations from this layout may result in Additional Cost Items, which Additional Cost Items shall be listed in Schedule 3.

#### (iii) Installation of the Suite Meter System

The installation activities to be performed by Toronto Hydro at no cost to the Developer consist of the following:

- supply and installation of the Suite Meter System;
- testing, sealing and registration of suite meters with Measurement Canada;
- recertification of the Suite Meter System, as required;
- project management of the installation of the Suite Meter System, including required safety inspections;
- inspection and approval of Suite Meter System by the Electrical Safety Authority; and
- commissioning of the Suite Meter System.

#### SCHEDULE 2 SUITE METER SERVICES

During the Term, Toronto Hydro shall provide the following Suite Meter Services in respect of the Suite Meter System installed at the Building at no additional cost to the Developer:

- data acquisition (ie. meter reading to determine electricity consumption);
- data storage (ie. electronic record of data acquisition);
- data management (ie. the use of acquired data to validate billing information);
- suite meter communication to Toronto Hydro for billing purposes; and
- operations, maintenance, troubleshooting, and repair work to maintain the Suite Meter System to required Measurement Canada and Toronto Hydro standards.

## SCHEDULE 3 ADDITIONAL COST ITEMS

Developer shall be responsible for the following Additional Cost Items required to accommodate the installation of the Suite Meter System, as applicable:

- security staff to escort Toronto Hydro staff or its subcontractor to the Suite Meter System installation location;
- cost of electrician for standby purposes during planned outages;
- cost of fuel for use with backup generators during planned outages;
- cost of replacing parts belonging to the Customer which are found to be defective at the time of the installation of the Suite Meter System.

#### **SCHEDULE 4**

#### ASSUMPTION AND ASSIGNMENT AGREEMENT

	ON AND ASSIGNMENT AGREEMENT (the "Agreement") made the day of, 20
BETWEEN:	
	, a corporation incorporated under the laws of ("Developer")
	-and-
	-and-
	Toronto Hydro-Electric System Limited, a corporation incorporated under the laws of Ontario ("Toronto Hydro")
between Toronto	WHEREAS pursuant to the terms and provisions of a Suite Meter Installation and Service lew Condominium Developments dated, 20 (the "Suite Meter Agreement"), made Hydro and the Developer with respect to the supply and installation of suite meters and related uilding by Toronto Hydro.
Developer under	<b>AND WHEREAS</b> the Condo Corporation has agreed to assume the rights and obligations of the the Suite Meter Agreement effective as of the date first written above (the "Effective Date").
covenants contain	NOW THEREFORE THIS AGREEMENT WITNESSES that in consideration of the mutual ined herein and other good and valuable consideration (the receipt and sufficiency of which are dged by each of the parties hereto), the parties hereto covenant and agree as follows:
1.	INTERPRETATION
1.1 therewith, capital Agreement.	<b>Definitions</b> . In this Agreement, unless something in the subject matter or context is inconsistent ized words not otherwise defined herein shall have the meaning ascribed thereto in the Suite Meter
the enforceability	<b>Severability</b> . In the event that any of the covenants herein shall be held unenforceable or declared ason whatsoever, to the extent permitted by law, such unenforceability or invalidity shall not affect or validity of the remaining provisions of this Agreement and such unenforceable or invalid portion e from the remainder of this Agreement.
1.3 of Ontario and th	Governing Law. This Agreement shall be governed by and construed in accordance with the laws e laws of Canada applicable therein.

**1.4 Enurement**. This Agreement and everything herein contained shall enure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns.

#### 2. ASSIGNMENT BY DEVELOPER AND ASSUMPTION BY THE CONDO CORPORATION

- **2.1 Assignment.** As at the date of this Agreement, the Developer hereby assigns to the Condo Corporation all interest in and to the Suite Meter Agreement including all rights, obligations and liabilities thereunder.
- 2.2 Assumption. As of the date of this Agreement, the Condo Corporation hereby:
  - (a) assumes all rights, obligations and liabilities of the Developer under the Suite Meter Agreement;
  - (b) agrees to pay all amounts owing by the Developer, if any, under the Suite Meter Agreement, in the manner set forth in the Suite Meter Agreement; and
  - agrees to do, observe, perform, keep and be bound by every term, covenant, proviso, condition and agreement contained in the Suite Meter Agreement to be done, observed, performed and kept by the Developer as if the Condo Corporation were an original party to the Suite Meter Agreement and as such had executed the Suite Meter Agreement.

#### 3. REPRESENTATIONS AND WARRANTIES

- **3.1 Representations and Warranties of the Condo Corporation**. The Condo Corporation represents and warrants the following to Toronto Hydro:
  - (a) the Condo Corporation is a condominium corporation created and validly existing under the laws of Ontario.
  - (b) the Condo Corporation has all necessary power and authority to enter into this Agreement and to assume the rights, obligations and liabilities of the Developer under the Suite Meter Agreement and to do all acts and things as are required hereunder or thereunder to be done, observed or performed by it in accordance with their terms.
  - (c) the Condo Corporation has taken all necessary action to authorize the execution, delivery, observance and performance of this Agreement and the observance and performance of the Suite Meter Agreement in accordance with its terms.

#### 4. CONSENT BY TORONTO HYDRO AND RELEASE OF DEVELOPER

- **4.1 Consent**. Toronto Hydro hereby acknowledges and agrees to the assignment by the Developer and the assumption by the Condo Corporation of the rights, obligations and liabilities of the Developer under the Suite Meter Agreement as of the date of this Agreement.
- **4.2** Release. Toronto Hydro hereby releases and discharges the Developer from and after the Effective Date, from all obligations and liabilities under the Suite Meter Agreement.

5.	GENERAL
<b>5.1</b> of the parties he	Amendments. This Agreement may not be modified or amended except with the written consent reto.
<b>5.2</b> such instruments Agreement.	<b>Further Assurances</b> . The parties hereto agree that they will from time to duly execute and deliver and take such further action as may be required to accomplish or give effect to the purposes of this
	<b>Execution and Delivery</b> . This Agreement may be executed in counterparts and delivered by s, each of which shall be deemed to be an original and all of which taken together shall be deemed to and the same instrument.
IN WITNESS WI	HEREOF the parties hereto have executed this Agreement the day and year first above written.
	[CONDO CORPORATION]
By: Name: Title:	
	[DEVELOPER]

TORONTO HYDRO-ELECTRIC SYSTEM LIMITED

Name: Susan Davidson

By: Name: Title:

Title: Senior Vice-President, Customer Care

### SCHEDULE 5 DEFINITIONS

In this Agreement, the following definitions shall apply:

"Affiliates"

shall have the meaning as prescribed in the Business Corporations Act

(Ontario);

"Applicable Laws"

means all federal, provincial and municipal statutes, regulations, codes, bylaws, orders in council, directives, rules, guidelines and ordinances applicable to this Agreement, including without limitation all applicable OEB codes, rules or quidelines;

"Business Day"

means a day on which banks are open for business in the City of Toronto, Ontario, but does not include a Saturday, Sunday, or a statutory holiday in the Province of Ontario:

"Force Majeure"

means events beyond the reasonable control of a party applying reasonable diligence and foresight given the nature of the Work and Services being provided under the Agreement, including, as applicable, any acts of God and the public enemy, the elements; fire; accidents; vandalism; sabotage; power failure; strikes, lockouts or any other industrial, civil or public disturbances; any laws, orders, rules, regulations, acts or restraints of any government or governmental body or authority, civil or military, including the orders and indoments of courts and any other similar causes or acts;

"MFIPPA"

"OEB"

means the Municipal Freedom of Information and Protection of Privacy Act (Ontario) and the regulations thereunder, each, as amended;

means Ontario Energy Board;

"Representatives"

in respect of a party, means such party's directors, officers, employees, agents and contractors, the party's Affiliates, and all such Affiliates' respective directors, officers, employees, agents and contractors.

## **TAB 2B**

Toronto Hydro-Electric System Limited BB-2010-0142 Exhibit R1 Tab 10 Schedule 8 Appendix A-2 Filed: 2010 Dec 6 (10 pages)

## SUITE METER INSTALLATION AND SERVICE AGREEMENT FOR CONDOMINIUM RETROFITS

THIS SU "Agreer	JITE METER INS nent") is made thi	TALLATI	ON AND SERVICE	E AGREEME of	NTFOR CON	IDOMINIUM RET 20 (the "Effecti	ROFITS (the ve Date")
BETWE	EN:						
			Toronto Hydro	-Electric Sys	stem Limited	i	
		a	corporation incorpo	orated under t	the laws of O	ntario	
			(hereinafter o	alled <b>"Toron</b>	to Hydro")		
				and			
			• Condom	inium Corpo	oration •		
	a condominium	corporati	on registered with	the provision	s of the Cond	dominium Act, 199	98(Ontario)
			(hereinafter ca	alled the <b>"Co</b>	ndo Corp")		•
RECITA	ALS.						
1.	Toronto Hydro is in the business of supplying, installing and maintaining suite meter systems to multi-residential buildings;						
2.	Condo Corp is	the cond	dominium corpora	tion in respe		nulti-residential b	uilding(s) located at (collectively,
	as applicable, he	ereinafter	referred to as the '	"Building");			,
3.	Condo Corp wishes to retain Toronto Hydro to supply, install and maintain a suite meter system and provide suite meter services for the Building upon the terms and conditions set forth herein;						
NOW T consider	THEREFORE, in or a ration, the receipt	and suffi	tion of the mutual ciency of which are	covenants of hereby ackr	contained he nowledged, th	rein and for other ne parties agree a	r good and valuable s follows:
1.1	All capitalized terms in this Agreement shall have the meaning as defined in Schedule 4;						
1.2	All dollar amoun	ts in this /	Agreement are exp	ressed in Ca	nadian dollai	s, unless otherwis	e stated; and
1.3	The recitals hereto shall form an integral part of this Agreement as if specifically restated herein.						
2.	SCHEDULES	The foll	owing schedules a	nd appendice	es are attach	ed to and form par	rt of this Agreement:
		(i)	SCHEDULE 1 -	Supply and In	stallation of	Suite Meter Syster	n
		(ii)	SCHEDULE 2 -	Suite Meter S	Services		
		(iii)	SCHEDULE 3 -	Additional Co	ost Items		

#### (iv) SCHEDULE 4 – Defined Terms

In the event of a conflict between the terms of any schedule and the terms of this Agreement, the terms of this Agreement shall govern.

#### 3. SUPPLY AND INSTALLATION OF THE SUITE METER SYSTEM

- 3.1 The Condo Corp appoints Toronto Hydro to supply and install the suite meter system described in Schedule 1 (the "Suite Meter System") at the Building and provide the corresponding suite meter services as described in Schedule 2 (the "Suite Meter Services") throughout the Term all in accordance with the terms and conditions of this Agreement.
- 3.2 Toronto Hydro shall provide the Suite Meter System and the Suite Meter Services at no cost to the Condo Corp, save and except for any on-site upgrades required to accommodate the installation of the Suite Meter System as specified in Schedule 3 to this Agreement ("Additional Cost Items"). Toronto Hydro shall invoice Condo Corp for the Additional Cost Items, if any, and Condo Corp shall make payment to Toronto Hydro not later than thirty (30) days following receipt of the invoice. All amounts not received from the Condo Corp when due shall bear interest at the lesser of (i) 2% per month; or (ii) the maximum allowed by Applicable laws, from the due date to and including the date of payment in full.

#### 4. OWNERSHIP AND ACCESS

- 4.1 Notwithstanding the installation or attachment of the Suite Meter System in and to the Building, all components of the Suite Meter System shall remain the property of Toronto Hydro and no part of the Suite Meter System shall become the property of the Condo Corp.
- 4.2 During the Term and for a period of six (6) months after the expiry of the Term, the Condo Corp will provide Toronto Hydro with access to the Suite Meter System located in the Building as reasonably required by Toronto Hydro to allow Toronto Hydro to fulfill its obligations under this Agreement including, without limitation, to allow for: (i) the installation, inspection and maintenance of the Suite Meter System; (ii) the removal of the Suite Meter System pursuant to Section 8.1; (iii) to provide the Suite Meter Services; and (iv) the performance of any necessary services related to an emergency pertaining to the Suite Meter System.

#### 5. ELECTRICITY ACCOUNT

- 5.1 The parties agree and acknowledge that following the installation of the Suite Meter System:
- (a) and upon registration of the condominium corporation for the Building under the Condominium Act, 1998, Toronto Hydro shall establish each residential and retail condominium unit owner in the Building as a separate and individual Toronto Hydro electricity distribution customer and residential or commercial rate account holder, as applicable; and
- (b) the Condo Corp shall not be responsible for the payment of the electricity account of the individually metered residential or commercial account holder referred to in (a) above but shall remain the account holder for the current general service account at the Building and for any unsold condominium units following registration of the condominium for the Building under the *Condominium Act, 1998*, and shall continue to make payment for electricity consumption for the Building common areas and any of the unsold condominium units noted above.

#### 6. TERM.

6.1 Subject to any termination rights herein, the term of this Agreement shall be for a term of twenty (20) years, starting on the Effective Date (the "Term").

#### 7. TERMINATION.

- 7.1 <u>Termination for Convenience</u>. Either party may elect to terminate this Agreement at any time following the completion of the first five (5) years of the Term by providing the other party with at least one (1) year prior written notice.
- 7.2 <u>Termination for Material Default.</u> If one of the parties (the "Defaulting Party") fails to fulfil any material obligation under this Agreement or breaches any representation or warranty contained herein, then the other party (the "Non-Defaulting Party") may, without prejudice to any other right or remedy the Non-Defaulting Party may have, notify the Defaulting Party in writing that the Defaulting Party is in default of its contractual obligations and instruct the Defaulting Party to correct the default within thirty (30) Business Days immediately following the receipt of such notice. If the Defaulting Party fails to correct the default in the time specified, then, without prejudice to any other right or remedy, the Non-Defaulting Party may terminate this Agreement by providing written notice thereof.
- 7.3 <u>Termination for Bankruptcy</u>. If bankruptcy or insolvency proceedings are instituted by or against either party, or either party is adjudicated a bankrupt, becomes insolvent, makes an assignment for the benefit of creditors or proposes or makes arrangements for the liquidation of its debts, or a receiver or receiver and manager is appointed with respect to all or part of the assets of either party, the other party may, without prejudice to any other rights or remedies it may have, immediately terminate this Agreement.

#### 8. EFFECT OF TERMINATION

- 8.1 Upon the expiry of the Term or any earlier termination of this Agreement, the Condo Corp shall forthwith pay to Toronto Hydro any unpaid amounts payable to Toronto Hydro under this Agreement accruing to the date of expiry or termination and Toronto Hydro shall remove the Suite Meter System installed at the Building and return the Building to a bulk meter system.
- 8.2 Notwithstanding any other terms herein, in the event of termination by the Condo Corp pursuant to Section 7.1 (Termination for Convenience) or a termination by Toronto Hydro pursuant to Section 7.2 (Termination for Material Default) or Section 7.3 (Termination for Bankruptcy), the Condo Corp shall forthwith pay to Toronto Hydro any direct reasonable costs incurred by Toronto Hydro associated with disconnecting and removing the Suite Meter System installed at the Building and returning the Building to a bulk meter system.
- 8.3 The termination of this Agreement shall not affect any rights or obligations which may have accrued prior to such termination or any other right which the terminating party may have arising out of either the termination or the event giving rise to the termination.

#### 9. REPRESENTATIONS AND WARRANTIES

- 9.1 The Condo Corp represents and warrants to Toronto Hydro that:
- (a) it is entitled to enter into this Agreement in respect of the Building and it has the corporate power and authority to enter into this Agreement and to perform its obligations hereunder, and that this Agreement constitutes a legal, valid, and binding obligation of the Condo Corp, enforceable against the Condo Corp in accordance with its terms;

- (b) the entering into of this Agreement and the performance of the terms of this Agreement by the Condo Corp do not breach or contravene any provision of any agreement to which the Condo Corp is bound or which otherwise affects the Building;
- (c) it shall obtain and maintain, for the Building during the Term, insurance covering such risks and in such amount as a prudent owner of a building the same as or similar to the Building would maintain and as may be required pursuant to the *Condominium Act*, 1998 (Ontario); and to provide evidence thereof to Toronto Hydro upon request; and
- (d) it shall not cause or voluntarily permit any tampering with or modification or alteration to the Suite Meter System (or any part thereof); and
- (e) It shall permit Toronto Hydro to install suite metering promotional materials (including cladding and boarding) a the Building's construction site, subject to the Condo Corp retaining a right of approval on the location of such promotional materials.
  - 9.2 Toronto Hydro represents and warrants to the Condo Corp that:
- (a) it has the corporate power and authority to enter into this Agreement and to perform its obligations hereunder, and that this Agreement constitutes a legal, valid, and binding obligation of Toronto Hydro, enforceable against Toronto Hydro in accordance with its terms;
- (b) the installation, operation and maintenance of the Suite Meter System shall be in compliance with all Applicable Laws; and
- (c) it shall obtain and maintain in full force and effect during the Term of the Agreement commercial general liability and property insurance as it relates to the supply and installation of the Suite Meter System and Suite Meter Services.
- 10. SUBCONTRACTORS Toronto Hydro may subcontract provision any or all of its obligations under this Agreement.
- 11. FORCE MAJEURE If, by reason of Force Majeure, either party hereto (the "Frustrated Party") is delayed or unable, in whole or in part, to perform or comply with any obligation or condition of this Agreement, then it will be relieved of liability and will suffer no prejudice for failing to perform or comply or for delaying such performance or compliance during the continuance and to the extent of the inability so caused from and after the happening of the event of Force Majeure. The party affected by the event of Force Majeure shall as soon as reasonably practicable, give prompt notice thereof stating the date and extent of Force Majeure, and take all reasonable steps to resume compliance with its obligations, provided, however, that settlement of strikes, lockouts and other industrial disputes shall be within the discretion of the Frustrated Party. The Frustrated Party will give prompt notice of the cessation of the event of Force Majeure to the other party.
- 12. LIMITATION OF LIABILITY Toronto Hydro and its Representatives shall not be liable in contract, tort (including negligence), or otherwise, for incidental, consequential, indirect, special, or punitive damages of any kind, or for the loss of revenue or profits, loss of business, loss of information or data, or other financial loss, arising out of or in connection with the installation, use, inability to use, performance, failure or interruption of the Suite Meter System or the Suite Meter Services, even if Toronto Hydro has been advised of the possibility of such damages and regardless of whether such damages were foreseeable.
- 13. CONFIDENTIAL INFORMATION The parties agree and acknowledge that: (a) subject to Applicable Laws or court order, each party shall maintain in strict confidence the terms of this Agreement and any and all

proprietary and confidential information about the business or operations of the other party or any of their Affiliates, which it acquires in any form from the other party (the "Disclosing Party") by virtue of this Agreement ("Confidential Information") and will not disclose to any third party or make use of such Confidential Information for itself or any third party without the prior written consent of the Disclosing Party; and (b) notwithstanding the foregoing, (i) Toronto Hydro is subject to MFIPPA and may be required to disclose Confidential Information concerning this Agreement in accordance with the provisions of MFIPPA; and (ii) the parties shall be permitted to disclose the Confidential Information to its respective Representatives who have a need to know such Confidential Information, provided such Representatives have agreed to comply with and be bound by the provisions of this Section 13.

- 14. ASSIGNMENT Toronto Hydro has the right to assign this Agreement to any of its Affiliates. Subject to the forgoing sentence, neither party may assign this Agreement or any of its rights or obligations hereunder, in whole or in part, without the prior written consent of the other party, which consent may not be unreasonably withheld, conditioned or delayed.
- 15. RELATIONSHIP OF THE PARTIES Nothing contained in this Agreement shall be construed to constitute either party as the partner, employee or agent of, or joint venturer with the other party, nor shall either party have any authority to bind the other in any respect, it being intended that each party shall remain an independent contractor of the other.
- 16. SEVERABILITY If any provision of this Agreement is determined by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, such determination shall not affect the enforceability or validity of the remaining provisions of this Agreement and such unenforceable or invalid portion shall be severable from the remainder of this Agreement.
- 17. NO WAIVER A waiver of any provision of this Agreement shall not constitute either a waiver of any other provisions or a continuing waiver, unless otherwise expressly indicated in writing.
- 18. ENUREMENT This Agreement and everything contained herein shall enure to the benefit of, and be binding upon, the parties hereto and their respective successors and permitted assigns.
- 19. NOTICE All notices, requests, claims, demands and other communications hereunder shall be in writing and shall be deemed to have been validly and effectively given on the same day if personally served, the next Business Day if sent by facsimile or similar means of recorded communication or on the fifth (5th) Business Day if sent by registered mail. Notices shall be addressed as follows or at such other address of which the addressee may from time to time have notified the other party:

to the Condo Corp:	to Toronto Hydro:			
Name:	Name:	Leo Guidolin		
Title:	Title:	Suite Metering Coordinator		
Address:	Address:	5800 Yonge St. Toronto, On. M2M 3T3		
Telephone:	Telephone:	(416) 542-3100 x 50327		
Facsimile:	Facsimile:	(416) 542-3501		
	Email:	lguidolin@torontohydro.com		
	With a copy to:			
	Name:	Lawrence Wilde		
	Title:	General Counsel		
	Address:	14 Carlton St. Toronto, On. M5B 1K5		
	Telephone:	(416) 542-2896		
	Facsimile:	(416) 542-2540		

Email:

lwilde@torontohydro.com

**20. GOVERNING LAW** This Agreement shall be governed by and construed in accordance with the laws of the province of Ontario and the laws of Canada applicable therein. The parties irrevocably attorn to the jurisdiction of the courts of Ontario with respect to any matter arising under or related to this Agreement.

#### 21. ENTIRE AGREEMENT

- 21.1 This Agreement, including all schedules referred to herein and subsequent amendments, constitutes the entire agreement between the Condo Corp and Toronto Hydro relating to the subject matter hereof. This Agreement supersedes the terms of any purchase order, all prior correspondence, representations, warranties, covenants, collateral undertakings, discussions, negotiations, understandings or agreements, oral or otherwise, express or implied, unless otherwise provided in this Agreement.
- 21.2 No modification or amendment to this Agreement shall be binding on the parties unless agreed to in writing and executed by an authorized Representative o each party.
- 22. FURTHER ASSURANCES The Condo Corp agrees to execute such further assurances and documents, including any bills of sale, and to do all such things and actions which shall be necessary or proper for the carrying out of the purposes and intent of this Agreement.
- 23. **EXECUTION AND DELIVERY** This Agreement may be executed in counterparts and delivered by electronic means, each of which shall be deemed to be an original and all of which taken together shall be deemed to constitute one and the same instrument.
- 24. SURVIVAL In addition to the terms of this Agreement that by their nature survive the expiry or termination of this Agreement, the terms of Sections 9 (Representations and Warranties), 12 (Limitation of Liability), and 13 (Confidential Information)shall survive the expiry or termination of this agreement for a period of five (5) years.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the day and year first written above:

	Toronto	Toronto Hydro-Electric System Limited	
Per:	Per:		
Name:	Name:	Susan Davidson	
Title:	Title:	Senior Vice-President, Customer Care	
I have authority to bind the Condo Corp.	l have a	uthority to bind Toronto Hydro.	

## SCHEDULE 1 SUPPLY AND INSTALLATION OF SUITE METER SYSTEM

#### (i) Supply of Suite Meter System

Toronto Hydro will provide at no cost to the Condo Corp:

- one (1) suite meter per residential or retail suite in the Building;
- one (1) meter point for the common area or "house" electrical load; and
- one meter (1) point to measure the total load of the Building.

If more than one (1) suite meter is required for any residential or retail suite in the Building, such suite meters will be supplied and installed at the expense of the Condo Corp in accordance with the amount documented in Schedule 3 to this Agreement.

#### (ii) Components of the Suite Meter System

The main components of the Suite Meter System to be installed by Toronto Hydro at the Building will consist of the following:

- Quadlogic Mini Closet, MC5 for all voltages configurations;
- Quadlogic Scan Transponder, ST5 (data collector and communications device);
- Quadlogic Socket Meter, S 20 socket base meters for all voltage and current configurations;
- Instrument Transformers, 2DARL-201 or equivalent;
- Instrument Transformer interface box(es); and
- a Local Area Network for meter reading data communications that utilizes the existing electrical distribution system in the building for data transmission.

The Suite Meter System shall be based on Toronto Hydro's single line layout. Any variations from this layout may result in Additional Cost Items, which Additional Cost Items shall be listed in Schedule 3.

#### (iii) Installation of the Suite Meter System

The installation activities to be performed by Toronto Hydro at no cost to the Condo Corp consist of the following:

- supply and installation of the Suite Meter System;
- testing, sealing and registration of suite meters with Measurement Canada;
- recertification of the Suite Meter System, as required;
- project management of the installation of the Suite Meter System, including required safety inspections;
- inspection and approval of Suite Meter System by the Electrical Safety Authority; and
- commissioning of the Suite Meter System.

## SCHEDULE 2 SUITE METER SERVICES

During the Term, Toronto Hydro shall provide the following Services in respect of the Suite Meter System installed at the Building at no additional cost to the Condo Corp:

- data acquisition (ie. meter reading to determine electricity consumption);
- data storage (ie. electronic record of data acquisition);
- data management (ie the use of acquired data to validate billing information);
- suite meter communication to Toronto Hydro for billing purposes; and
- operations, maintenance, troubleshooting, and repair work to maintain the Suite Meter System to required Measurement Canada and Toronto Hydro standards.

## SCHEDULE 3 ADDITIONAL COST ITEMS

The Condo Corp shall be responsible for the following Additional Cost Items required to accommodate the installation of the Suite Meter System, as applicable:

- security staff to escort Toronto Hydro staff or its subcontractor to the Suite Meter System installation location;
- cost of electrician for standby purposes during planned outages;
- cost of fuel for use with backup generators during planned outages;
- cost of replacing parts belonging to Customer which are found to be defective at the time of the installation of the Suite Meter System.

#### **SCHEDULE 4 DEFINITIONS**

In this Agreement, the following definitions shall apply:

"Affiliates"

shall have the meaning as prescribed in the Business Corporations Act

(Ontario);

"Applicable Laws"

means all federal, provincial and municipal statutes, regulations, codes, bylaws, orders in council, directives, rules, guidelines and ordinances applicable to this Agreement, including without limitation all applicable OEB codes, rules

or guidelines:

"Business Day"

means a day on which banks are open for business in the City of Toronto, Ontario, but does not include a Saturday, Sunday, or a statutory holiday in the Province of Ontario:

"Force Majeure"

means events beyond the reasonable control of a party applying reasonable diligence and foresight given the nature of the Work and Services being provided under the Agreement, including, as applicable, any acts of God and the public enemy, the elements; fire; accidents; vandalism; sabotage; power failure: strikes, lockouts or any other industrial, civil or public disturbances; any laws, orders, rules, regulations, acts or restraints of any government or governmental body or authority, civil or military, including the orders and

judgments of courts and any other similar causes or acts;

"MFIPPA"

means the Municipal Freedom of Information and Protection of Privacy Act

(Ontario) and the regulations thereunder, each, as amended;

"OEB"

means Ontario Energy Board;

"Representatives"

in respect of a party, means such party's directors, officers, employees, agents and contractors, the party's Affiliates, and all such Affiliates' respective

directors, officers, employees, agents and contractors.

# **TAB 3**

Toronto Hydro-Electric System Limited
EB-2010-0142
Exhibit R1
Tab 10
Schedule 5
Filed: 2010 Dec 6
Page 1 of 1

# INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

#### 1 INTERROGATORY 5:

2 Reference(s): F1/T6/S1, p.4

3

- 4 Please provide more detail, including cost estimates, about how the continued growth of
- suite metering installations has impacted and will impact THESL's customer service
- 6 costs.

7

#### 8 RESPONSE:

- 9 Suite meter installations are regarded as typical customer growth, and as such are not
- specifically identified as a Customer Services O&M cost. Suite meters are part of
- common pool of Customers Services activities. There is no basis for assigning different
- costs for suite meters from other accounts in the same customer class.

# **TAB 4**

Toronto Hydro-Electric System Limited EB-2010-0142 Exhibit L1 Tab 4 Schedule 1 Filed: 2011 Feb 18 (22 pages)

COST OF SERVICE STUDY
FOR INDIVIDUALLY
METERED SUITES IN
MULTI-UNIT RESIDENTIAL
BUILDINGS
Alternative Scenario Ordered
by the Ontario Energy Board

Submitted to
Toronto Hydro-Electric
System Limited
February 18, 2011

BDR

BDR 34 King Street East Suite 1000 Toronto, ON M5C 2X8 416-214-4848 phone 416-214-1643 fax

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#### 1 REPORT SUMMARY

This study was undertaken by BDR NorthAmerica Inc., at the request of the Toronto Hydro-Electric System Limited ("THESL") and in response to the OEB's Decision and Order on Motion dated January 21, 2011. This study expands on BDR's report dated November 29, 2010, by dividing THESL's residential suite-metered customers into two classes for cost allocation purposes: one class consisting of approximately 9,000 customers metered with Quadlogic meters, and the other class consisting of approximately 110,000 other suite metered customers.

BDR performed the study, based on 2009 cost and operating data, and 2009 consumption data, consistent with its November study. For each Quadlogic customer, hourly interval data was provided and was used as the basis for both the load shape and the total consumption of the class in the base case. Modeling assumed the costs of a Quadlogic meter and THESL's current third party arrangement for meter reading for all customers in the Quadlogic class in creating the base case.

Since the November study had shown secondary infrastructure to be a key respect in which the costs of serving suites in multi-unit residential buildings may differ from the costs of serving other residential customers (for example detached single family homes), THESL staff reviewed drawings to determine the extent of secondary infrastructure for the specific buildings served by the Quadlogic meters. This resulted in a reduced allocation of secondary infrastructure to the Quadlogic class as compared with customers who are not suites in multi-unit buildings, and even in comparison with the class of 110,000 other suite metered customers.

In reviewing the available interval load data for the Quadlogic metered customers in detail, BDR was concerned about the confidence that can be placed in this data as the basis for the total load and load shape in view of the number of gaps and unusually low readings in some of the data. As a result, two scenarios were developed to test the impact of an erroneous assumption as to either load or load shape. It was found that a reasonable alternative assumption resulted in only a small change to the Quadlogic customers' revenue-to-cost ratio, and therefore would not affect the general conclusions that can be drawn as to whether cross-subsidization is occurring.

A scenario was also tested to reflect the expected reduction in THESL's costs to read the Quadlogic meters. At present, the meters are read by an arms' length party. THESL is working toward bringing this function in-house, and expects to be able to implement the change shortly. This scenario resulted in a change of ten percent (from 95:100 to 104:100 revenue-to-cost ratio). In BDR's view, the ability of THESL to realize cost savings in its service to the Quadlogic customers in the future should be taken into account in considering whether an issue of cross-subsidy related to this customer group

should be of concern to the OEB, even though the cost reduction was not realized in 2009.

The base case scenario, which reflects costs as incurred in 2009, and estimates of load and load shape based on interval metered data, indicates a revenue-to-cost ratio of 95:100 for the Quadlogic class. This is well within the boundaries set for acceptable ratios by the OEB, and is higher than the revenue-to-cost ratio of the residential class in aggregate (90:100 per the BDR November 29, 2010 report, and 86:100 as filed by THESL with the OEB for its 2009 test year). This result leads to the conclusion that at residential rates, the Quadlogic customers are not receiving a cross-subsidy from other customers in the residential class.

#### 2 Purpose of this Analysis and Report

On December 1, 2011, Toronto Hydro-Electric System Limited ("THESL") filed a report titled "Cost of Service Study for Individually Metered Suites in Multi-Unit Residential Buildings", prepared on THESL's behalf by BDR NorthAmerica Inc., and dated November 29, 2010 ("the November cost of service study"). That study had been prepared in response to direction from the Ontario Energy Board ("OEB" or "Board") to prepare a cost allocation study that would assist the OEB in making a judgment as to whether the rate that THESL is charging for condominium smart metering is recovering the costs of these services. THESL currently charges these customers at its approved residential rate.

For purposes of the November cost of service study, the class of individually metered suites in multi-unit residential buildings was defined as consisting of all separately metered residential units in buildings with more than six residential units. In 2009, there were 119,947 customers meeting this definition. The November cost of service study separated these customers from the balance of the residential class as to revenue and allocated cost, and computed revenue-to-cost ratios separately for the individually metered suites (the "suite-metered sub-class" or "SMSC") and for the balance of the residential class (the "non-suite-metered sub-class" or "NSMSC").

The cost allocation model was loaded with the data and run as a base case (with a single residential class) and as a case with a separate suite-metered class. The overall residential class showed a revenue-to-cost ratio of 90:100. When the class was separated, the result was a revenue-to-cost ratio of 120:100 for the suite-metered customers and a ratio of 85:100 for the non-suite-metered customers.

As a result of the November study, BDR concluded that suite-metered customers are paying their full cost of service, and more, and are not subsidized by other customers.

In its Decision and Order on Motion dated January 21, 2011, the OEB ordered that:

- "2. Toronto Hydro produce an alternative scenario to the one provided in the study, which would be to divide the residential customer class into three sub categories. These would be: (i) the 9,243 suite metering customers as of the end of 2009, (ii) the approximately 110,000 remaining customers in the study's suite metered subclass ("SMSC") and (iii) all of the other residential customers, using the Board's approved methodologies. As discussed in the filed study, no secondary services costs should be allocated to the three residential customer sub categories specified herein by the Board, unless these costs would otherwise exist for Toronto Hydro's account; i.e., be a cost to Toronto Hydro. In undertaking this alternative scenario, Toronto Hydro, through its expert BDR would be free to attach to it, any caveats or concerns which it had about the revised scenario.
- 3. Toronto Hydro request that BDR provide any further scenarios, in addition to the alternative scenario described by the Board, or any further information or analysis that BDR determined would be helpful in assessing whether and to what extent any cross-subsidy may exist between the different types of Toronto Hydro customers relative to the suite metering customers.
- 4. Toronto Hydro file with the Board and copy to all parties to the proceeding on or before January 31, 2011, an assessment of the time that will be required to produce the alternative scenario which the Board has ordered (part 1 of this Order) and if necessary, any further scenarios, information or analysis that Toronto Hydro (part 2 of this Order), through its expert, BDR, determines would be helpful to the Board."

As a result of Toronto Hydro's assessment in response to item 4 above, it was determined that the alternative scenario(s) as set out in items 2 and 3 above should be performed by BDR NorthAmerica Inc. ("BDR") and completed for filing with the Board on February 18, 2011. This report documents the methodology and results of that work.

#### 3 CLASSIFICATIONS AND TERMINOLOGY

In the November cost of service study, 119,947 customers were identified as individually metered suites in multi-unit residential buildings, and these were defined to constitute the suite-metered subclass or "SMSC".

As described in Section 4.2 below, THESL staff identified 48 multi-unit residential buildings that it considers as respondents to its recent initiatives to provide separate metering for suites, and 9,149<sup>1</sup> customers in those buildings were considered to constitute

In prior information filed with the Board, and in the Board's Decision and Order on Motion, reference is made to the figure of 9,243 as the number of program customers. The source of this figure may be a transposition of the figure 9,423, which represents the total of suite meters installed by THESL in 2008 (3,889) and 2009 (5,534) per EB-2010-0142 Exhibit D1, Tab 8, Schedule 7, page 5 of 5. The correct figure would include any meters installed prior to 2008, but would also exclude any meters installed for which the customer's account was not yet active. This reflects the



the customer class as defined by the Board in item 2(i) of its January 21, 2011 Decision and Order on Motion. All of these customers are served with Quadlogic meters. For purposes of this scenario therefore, and to distinguish them from other individually metered suites, these customers are referred to as the "Quadlogic customers". In the November cost of service study, the Quadlogic customers were included in the SMSC. Separation of the Quadlogic customers into a new class for modeling purposes results in an SMSC with only 110,798 customers (119,947 minus 9,149). For purposes of this report, the 110,798 customers are referred to as "other suite-metered" customers.

As in the first cost of service study, residential customers who are not suite-metered customers in multi-unit residential buildings (489,492 customers)<sup>2</sup> will be referred to as the Non-Suite-Metered Sub-Class, or the NSM Sub-Class ("NSMSC"), as they were in the November study.

The terminology "residential customers" or "Residential Class" will refer to the program customers, the other suite-metered customers and the NSM Sub-Class, i.e. the residential class as it exists today, as was the case in the November study.

#### 4 METHODOLOGY

#### 4.1 Cost Data

The cost data for this study are the same costs used in the first cost allocation study, i.e. actual costs for THESL in the year 2009.

## 4.2 Electricity Consumption and Load Data Analysis

#### 4.2.1 Load Data for the Quadlogic Customers

The work of the November cost of service study resulted in identification of 119,947 suite-metered customers, averaging 389 kWh per customer per month of consumption on an actual (not weather-normalized) basis. From these customers, a random sample was selected and the hourly loads of the sample customers were aggregated in each hour to yield a sample load shape. The sample load shape was applied to the SMSC total annual

same approach to determining the "number of customers" for cost allocation purposes that applies to all customer classes.

<sup>&</sup>lt;sup>2</sup> In the November study report, certain tables were presented showing the NSMSC as having 458,411 customers, rather than 489,492 customers. The figure of 458,411 was erroneously taken by BDR from a different data source. However the correct figure of 489,492 customers was used in all modeling to allocate costs and compute revenue-to-cost ratios, and the error therefore has no impact on the analysis or the conclusions.



load to produce an estimated population load shape. This load shape was weather-normalized by THESL staff, and the weather-normalized load shape was subtracted from the weather-normalized load shape of the residential class to produce a weather-normalized load shape for the NSMSC.

The load data analysis for the current study was focused on separating the SMSC load and load shape created in the November study into two components: the Quadlogic customers' load shape and the other suite-metered customers' load shape.

THESL staff provided BDR with files containing the hourly consumption data by suite for 48 buildings with 9,222 suites. For example, data for a building with 36 suites would be organized as 36 rows of hourly consumption figures, with each row containing 8760 figures (365 days x 24 hours). The data in these files were the source of both the annualized total kWh consumption of the program customers, and their class load shape for the base scenario. On review of the data, it was shown that some of the suites in the data files did not have consumption associated with them at any time during 2009. 73 records without consumption were therefore eliminated from the data set, leaving 9,149 customer records for analysis.

It was separately verified by THESL that the number of residential customers with Quadlogic meters and with active accounts at the end of 2009 was 9,149. This was therefore accepted as the number of program customers for purposes of this study.

## 4.2.2 Computing Representative Load Shape for the Quadlogic Class

In analyzing the data, all values greater than zero were assumed to be valid. Where the data included a value of zero for an hourly interval, the possibilities included valid zeros (no consumption or a power outage) and invalid zeros (data errors). The data included both short gaps (a small number of intervals with zeros, surrounded by intervals with positive readings) and long gaps (for example, weeks or months of zeros), either surrounded by positive readings or preceding or following all positive readings for 2009. Short gaps were assumed to be errors (unless applicable to the whole building) and filled on an estimated basis. Long gaps were assumed to be a valid absence of consumption in the actual 2009 period, but it was also assumed that this pattern of consumption (or lack of consumption) would not be representative of future periods, when the suites would be fully occupied.

The data were reviewed to determine whether there were a sufficient number of suites or buildings that represented a relatively complete year of valid consumption history, that could serve as a sample from which a load shape could be constructed for the class. In view of the fact that a data set was available for every customer, it seemed preferable to use all available data rather than attempt a random sampling approach which would

exclude some of the available data. It was determined that relatively complete data existed for 20 buildings consisting of more than 4,000 suites. For this purpose, the data was considered "relatively complete" for a building if:

> there were 5 or fewer intervals in which there were no positive values for any of the suites in the building;

> January consumption in total for all suites exceeded December consumption.
This comparison would indicate the expected relative levels of consumption from the beginning of the year; and

➤ a computation to fill the gaps with the average per-suite value for the building, for that interval, resulted in a change of less than eight percent (8%) to the total consumption for the building<sup>3</sup>.

The gaps were then filled for these 20 buildings, and the resulting total loads for each interval were summed on an interval by interval basis. The summed load shape was used in the base case as the representative load shape for the class.

#### 4.2.3 Total Annual kWh Consumption

In the case of this study, which is focused on a very small and new customer population, in premises for which there is for the most part little or no consumption history, the loads described above have been annualized so that each customer is assumed to be connected and consuming electricity over the full year. Such an assumption is especially important in producing a result that would be indicative of the revenue-to-cost ratio that would exist in the long term, and as such, be helpful to the Board in responding to an issue with long term potential effects on the customers, and on any other customers that might in the future be served by Toronto Hydro in the same way. Of the 9,149 suites determined to be active accounts as of the end of December, 2009, only 8,471 showed consumption exceeding 10 kWh in December, and only 5,462 showed consumption exceeding 10 kWh in January, 2009. On average through the year, only 70% of the customers were actually consuming and producing revenue for THESL at points in time during 2009. It was therefore considered necessary to adjust the total annual metered consumption in computing the demand-based cost allocation factors and as the determinant of the class revenue.

The approach taken was to estimate the consumption that would have occurred had all the suites been occupied continuously from January 1, 2009. After correction of the data for the 20 buildings used for development of the load shape, the average monthly consumption for the 4,117 suites in those buildings was computed to be 355.4 kWh. The total kWh of consumption for the year for the class of 9,149 customers could then be computed as 9,149 customers x 355.4 kWh per month x 12 months, or 39,018,655 kWh.

<sup>&</sup>lt;sup>3</sup> In fact, with only two exceptions the resulting change to total consumption for the buildings was less than 3%, and most changes in value were less than 1%.



# 4.2.4 Weather Normalization of the Quadlogic Customers' Load Shape and Consumption

Once BDR had prepared a load shape and estimated total consumption for the class, THESL weather normalized the data in the same manner as was done for the SMSC in the first cost allocation study. This resulted in a normalized total consumption of 39,600,733 kWh, or 361 kWh per customer per month.

This average consumption can be compared to the average monthly consumption established in the first cost allocation study for the SMSC as per Table 4.1:

Table 4.1: Computation of Statistics for "Other" Suite-Metered Customers					
	SMSC Per First Cost of Service Study	"Quadlogic" Customers	"Other" Suite Metered		
Number of Customers	119,947	9,149	110,798		
Annual MWh Weather Normalized	568,047	39,601	528,446		
Average kWh per Customer per Month	395	361	397		

## 4.3 Load Data Analysis for Other Customer Classes

In the November cost of service study, hourly weather-normalized load shapes were provided to BDR by THESL for the following customer classifications:

- Residential
- > General Service between 50 and 1000 kW, interval metered
- > General Service between 50 and 1000 kW, non-interval metered
- > General Service less than 50 kW
- ➤ General Service between 1000 and 5000 kW
- ➤ General Service greater than 5000 kW (Large Users)
- > Street Lighting, and
- > Unmetered Scattered Loads (USL).

Þ

At that time, BDR prepared a load shape for the SMSC class as defined in the November cost of service study, based on a sample, and subtracted it on an hour-by-hour basis from the residential load shape to compute the residual or "NSMSC" load shape.



Once the Quadlogic class load shape had been prepared as described in Section 4.2 and weather-normalized by THESL, BDR followed the same methodology of subtracting it on an hour-by-hour basis from the weather normalized SMSC load shape. This resulted in a load shape for the "Other Suite-Metered Customers".

## 4.4 Computation of Load Statistics

The report of the November cost of service study explains the customer class statistics that are required as allocators of demand-related costs, i.e.: 1CP, 4CP, 12CP, 1NCP, 4NCP and 12NCP.

Table 4.2 summarizes these statistics as computed for the Quadlogic customers and the Other Suite-Metered customers in this study for the base scenario.

:	Other Suite-Metered	Quadlogic
Number of Customers	110,798	9149
Annual MWh		
Weather Normalized	528,446	39,601
Average kWh per	397	361
Customer per Month		
NCP	129.1	7.9
1 NCP	457.3	31.1
12 NCP	1,201.6	85.1
CP	61.4	4.7
CP	301.5	21.9
12 CP	888.1	69.1

## 4.5 Comparison with Results of November Study

As in the November cost allocation study, BDR used THESL's cost allocation model as filed in its previous cost of service application as the basis for all cost allocations, except as specified in this report. The results of this study are easily comparable with the scenarios presented in the November cost allocation study.

In the course of modeling for this study, two errors were discovered in the November study that affect the revenue-to-cost ratios for suite-metered customers. One is a formulaic error in the November analysis that resulted in an under-allocation of meter capital to the general service class. As a result, there was a corresponding over-allocation of these costs to residential customers, including both suite-metered ("SMSC") and non-suite-metered ("NSMSC"). The second error pertains to the level of marketing costs associated with THESL's suite-metering program. When collecting the data specific to costs of the suite-metering program and the suite-metering customers, BDR was advised that THESL's marketing initiatives had a cost of approximately \$400,000. BDR erroneously interpreted this to mean that the annual level of marketing expense was \$400,000, when in fact that figure represents a total spending plan covering several years. In the course of data collection for this study, THESL clarified to BDR that the suite-metering marketing expense for 2009 was just under \$90,000.



Cost of Service Study for Individually Metered Suites in Multi-Unit Residential Buildings

\*Alternative Scenario Ordered by the Ontario Energy Board\*

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To provide a base against which the current analysis can be compared, the model was therefore re-run based on two residential sub-classes, as per the November study. Table 4.3 sets out the results. By reviewing Table 4.3 in comparison with Table 5.1 of the November study, it can be seen that overall the corrections have negligible impact on the revenue-to-cost ratios.

It is important to note that the overall residential class revenue-to-cost ratio is 90:100. This figure provides the context for assessment as to whether there are cross-subsidies within the residential customer class.

Table 4.	3 Cost Allocation from BDR November Report			
Rate Base Assets		1 Residential Non Suite Metered	2 Residential Suite Metered	Sum of Residential (Col 1+Col 2)
crev	Distribution Revenue (sale)	\$162,264,558	\$32,267,056	\$194,531,614
mi	Miscellaneous Revenue (mi)	\$10,541,913	\$2,049,455	\$12,591,368
••••				
		STEEL CO. SEASON ST. SECTION AND ADMINISTRATION OF THE PARTY.		\$0
	Expenses			\$0
dì	Distribution Costs (di)	\$32,342,587	\$3,318,848	\$35,661,435
cu	Customer Related Costs (cu)	\$19,843,658	\$5,265,451	\$25,109,109
ad	General and Administration (ad)	\$23,783,197	\$3,646,903	\$27,430,100
dep	Depreciation and Amortization (dep)	\$65,749,116	\$8,268,058	\$74,017,175
INPUT	PILs (INPUT)	\$10,375,983	\$1,269,318	\$11,645,301
INT	Interest	\$27,801,751	\$3,401,052	\$31,202,803
	Direct Allocation	\$0	\$400,000	\$0 \$400,000 \$0
NI	Atlocated Net Income (NI)	\$20,844,145	\$2,549,912	\$23,394,057 \$0
	Revenue Requirement (Includes NI)	\$200,740,437	\$28,119,542	\$228,859,980
	Kevenue Requirement (includes Ni) \$1	\$200,140,401		
	•	MINER A. S.	<u> </u>	\$0
			l	\$0
	Rate Base Calculation	ł	Ì	\$0
	Nate Dase Calculation			\$0
	Net Assets			\$0
dp	Distribution Plant - Gross	\$1,497,989,910	\$177,701,798	\$1,675,691,708
gp	General Plant - Gross	\$216,566,709	\$25,638,794	\$242,205,503
	Accumulated Depreciation	(\$878,184,708)	(\$104,324,603	(\$982,509,311)
co	Capital Contribution	(\$103,520,233)	(\$9,629,552	(\$113,149,785)
				\$0
	Directly Allocated Net Fixed Assets	\$0	\$0	\$0
COP	Cost of Power (COP)	\$364,056,515	\$44,602,229	\$408,658,744
	OM&A Expenses	\$75,969,442	\$12,231,202	\$88,200,644
	Directly Allocated Expenses	\$0	\$400,000	\$400,000
				E-F-STREET
				400 007 022
0.124819	Working Capital	\$54,923,788	\$7,143,844	\$62,067,633
	(\$0)	2224422	220 242 442	\$353,722,299
	Equity Component of Rate Base	\$315,110,186	\$38,612,113	\$353,722,299 \$0
	Net Income on Allocated Assets	(\$7,089,821)	\$8,746,880	
	Net Income on Direct Allocation Assets	\$0	\$0	I II
	RATIOS ANALYSIS			
	REVENUE TO EXPENSES %	86.08%	122.049	90.50%
	EXISTING REVENUE MINUS ALLOCATED COSTS	(\$27,933,966		(\$27,933,968)
	RETURN ON EQUITY COMPONENT OF RATE BASE			6 0.47%
	A company and the company which is a meaning of the company of the			ing approved
	TOTAL CONTRACTOR OF THE PROPERTY OF THE PROPER	y popular neon a report to the balls	AND THE RESERVE AND ADDRESS OF THE PARTY OF	ra menganca



### 4.6 Cost Analysis

#### 4.6.1 Identification of Cost Issues

In performing the November study BDR listed and carefully reviewed the cost functions with THESL staff to determine which costs might be differently incurred in serving suites in a multi-unit residential building, as compared with other types of residential premises. It was determined that the key areas of difference are in meter-related costs (capital and reading), and costs stemming from secondary infrastructure.

It was considered that similarly, only these two cost types represented a significant quantifiable source of difference in cost incurrence between the Quadlogic customers and other customers in suites. They were therefore given particular attention in this study.

#### 4.6.2 Meter Capital

By the definition of the Quadlogic class, all of the customers have Quadlogic meters. The cost applicable to a Quadlogic meter, \$440, was therefore applied as the meter capital allocator to the full number of customers in the class (9,149). Correspondingly, 9,149 meters at \$440 each were deducted from the Other Suite-metered class.

#### 4.6.3 Secondary Lines and Related Facilities

For purposes of the November study, an estimated weighting factor of 30% was applied to the SMSC to reduce the allocation of the cost of secondaries, reflecting the understanding that large multi-unit buildings will not be served by such equipment.

For this study, given that the Quadlogic customers represent a small number of specifically identified residential complexes (48), THESL staff examined drawings of the connection configuration of all of the buildings. On this detailed and specific basis, it was determined that eight percent (8%) of the suites are served by secondary facilities. The allocation of secondary costs to the Quadlogic class was therefore weighted in this study by a factor of 8%.

Table 4.4 of this study shows the summary of allocations for the relevant accounts.

### Table 4.4 Summary of Allocations by Class and Account, from Sheet O4 of Base Scenario

#### **ALLOCATION BY RATE CLASSIFICATION**

			1	Talk and Talking	10
USoA Account #	Accounts	O1 Grouping	Residential Non Suite Metered	Residential Suite Metered	Quadlogic customers
1565	Consensation and Demand Management	dp	· · · · · · · · · · · · · · · · · · ·		
	Expenditures and Recoveries		<b>\$6</b> ,115,046	\$879,335	\$105,297
1805-1	Land Station >50 kV	ďр	\$102,751	\$9,224	\$718
1805-2	Land Station <50 kV	dp	\$381,260	\$34,226	\$2,665
1806-2	Land Rights Station <50 kV	dp	\$193,681	\$17,387	\$1,354
1808-1	Buildings and Fixtures > 50 kV	dp	\$299,270	\$26,885	\$2,092
1808-2	Buildings and Fixtures < 50 KV	dp	\$9,895,343	\$888,306	<b>\$</b> 69,160
	Transformer Station Equipment - Normally Primary	dp			
1815	above 50 kV		\$4,571,616	\$410,395	<b>\$</b> 31,952
	Distribution Station Equipment - Normally Primary	dp			4100 000
1820-2	below 50 kV (Primary)		\$33,592,887	\$2,778,104	\$163,208
	Distribution Station Equipment - Normally Primary	dp			" AD 4 EDE
1820-3	below 50 kV (Wholesale Meters)		\$4,032,134	\$459,490	\$34,505
1830-4	Poles, Towers and Fixtures - Primary	dp	\$61,850,716	\$10,532,783	\$822,173
1830-5	Poles, Towers and Fixtures - Secondary	dp	\$90,397,890	\$2,820,740	\$77,217
1835-4	Overhead Conductors and Devices - Primary	dp	\$46,298,301	<b>\$7,884,306</b>	\$615,437
1835-5	Overhead Conductors and Devices - Secondary	dp	\$67,667,264	\$2,111,462	\$57,800
1840-4	Underground Conduit - Primary	dp	\$270,800,646	\$46,115,626	\$3,599,714
1840-5	Underground Conduit - Secondary	dp dp	\$158,812,315	\$4,955,516	\$135,655
1845-4	Underground Conductors and Devices - Primary	dp dp	\$122,734,331	\$20,900,875	\$1,631,490
1845-5	Underground Conductors and Devices - Secondary	dp	\$71,978,127	<b>\$</b> 2,245,977	\$61,483
1850	Line Transformers	dp	\$268,951,809	\$18,929,620	\$244,124
1855	Services	dp dp	\$203,874,232	\$13,844,265	\$304,846
1860	Meters	dp dp	\$78,252,874	\$22,207,579	\$6,730,759 (\$497,445)
1995	Contributions and Grants - Credit	co	(\$103,686,323)	(\$8,858,816)	(3491,440)
2105	Accum. Amortization of Electric Utility Plant - Property, Plant, & Equipment	accum dep	(\$876,628,397)	(\$92,283,591)	(\$8,679,115)

### Table 4.4 Summary of Allocations by Class and Account, from Sheet O4 of Base Scenario

#### **ALLOCATION BY RATE CLASSIFICATION**

			1	2	10
USoA Account#	Accounts	O1 Grouping	Residential Non Suite Metered	Residential Sulta Metered	Quadlogic customers
5005	Operation Supervision and Engineering	di	\$7,731,865	\$706,533	\$40,759
5010	Load Dispatching	di	\$2,920,277	\$266,853	\$15,395
5012	Station Buildings and Fixtures Expense	di	\$1,660	\$149	\$12
5016	Distribution Station Equipment - Operation Labour	dí	\$538,116	\$44,502	\$2,614
5017	Distribution Station Equipment - Operation Supplies	di	,		
	and Expenses	1	\$94,880	\$7,847	. \$461
5020	Overhead Distribution Lines and Feeders -	di	#F70.0E0	\$50,805	\$3,422
	Operation Labour Overhead Distribution Lines & Feeders - Operation	di	\$579,250	450,005	<b>#3,422</b>
5025	Supplies and Expenses	<b>l</b> ‴	\$316,206	\$27,734	\$1,868
5035	Overhead Distribution Transformers- Operation	di	\$15,938	\$1,122	\$14
5040	Underground Distribution Lines and Feeders -	di	,		
	Operation Labour		\$521,313	\$61,972	\$4,533
5045	Underground Distribution Lines & Feeders -	di	#4 CCO 745	\$198,494	\$14,518
	Operation Supplies & Expenses	di	\$1,669,745 <b>\$</b> 0	50.	\$14,516
5050	Underground Subtransmission Feeders - Operation	di	• -	\$38,077	\$491
5055	Underground Distribution Transformers - Operation	cu	\$540,999	154 - 4 K W W L W L S	\$140,315
5065	Meter Expense	cu	\$1,631,327	\$462,958	-
5070	Customer Premises - Operation Labour	cu	\$1,962,761	\$444,277	\$36,686
5075	Customer Premises - Materials and Expenses		\$950,740	\$215,203	\$17,770
5085	Miscellaneous Distribution Expense	di	\$1,291,977	\$118,060	\$6,811
5105	Maintenance Supervision and Engineering	di 	\$1,691,242	\$154,545	\$8,916
5110	Maintenance of Buildings and Fixtures - Distribution Stations	di	\$3,784,001	\$339,690	\$26,447
5112	Maintenance of Transformer Station Equipment	di	\$0	\$0.	\$0
5114	Maintenance of Distribution Station Equipment	di	\$458,792	\$37,942	\$2,229
5120	Maintenance of Poles, Towers and Fixtures	di	\$2,683	\$235	\$16
5125	Maintenance of Overhead Conductors and Devices	di	\$3,538,067	\$310,319	\$20,901
5130	Maintenance of Overhead Services	di	\$322,917	\$21,928	\$483
5135	Overhead Distribution Lines and Feeders - Right of	di	\$1,815,799	\$159,281	\$10,727
5150	Way Maintenance of Underground Conductors and	di	\$1,010,139		¥10,121
	Devices		\$4,531,349	\$538,674	\$39,399
5160	Maintenance of Line Transformers	di	\$70	\$5	\$0
		· cu	\$1,887	\$535	\$162
ı,xX		cu	\$186,195	\$42,146	\$3,480
		СU	\$484,748	\$97,369	\$239,838
		cu	\$4,924,304	\$1,114,631	\$92,039
K.		cu	\$6,148,443	\$1,391,719	\$114,919
rida ana		cu	\$3,592,558	\$659.906	\$54,491

#### 5 RESULTS AND CONCLUSIONS

#### 5.1 Base Scenario

Table 5.1 sets out the allocated costs and revenues, and computes the revenue-to-cost ratios for total residential and each of the three sub-classes.

It is noted that this exercise has subdivided the SMSC from the November study into two sub-groups: the Quadlogic customers, with a relatively low revenue-to-cost ratio and the Other suite-metered customers with a high revenue-to-cost ratio. The key difference in the cost profile of these two customer groups is the high cost of Quadlogic meters, although the effects are partially mitigated by the lower proportionate level of secondary costs.

At a revenue-to-cost ratio of 95:100, the Quadlogic customer revenue-to-cost ratio is therefore very different than for customers in multi-unit buildings who are not served with Quadlogic meters (130:100), but is not significantly different from the overall revenue-to-cost ratio for the residential class, of 90:100, or of the largest residential subgroup, which is the non-suite-metered customers, with a revenue-to-cost ratio of 86:100.

				·
Table 5.1	Revenue to Cost Summary, Sheet O1 of Mo	odel Base Sce	nario	
	ı	1	2	10
		Residential Non	Residential Suite	Quadlogic
Rate Base Assets		Suite Metered	Metered	customers
crev	Distribution Revenue (sale)	\$162,264,558	\$29,832,688	\$2,434,368
mi	Miscellaneous Revenue (mi)	\$10,548,305	\$1,878,090	\$160,049
				\$2,694,117
	_			
as:	Expenses  Distribution Costs (di)	\$32,367,142	\$3,084,747	\$200,014
di	Distribution Costs (di) Customer Related Costs (cu)	\$19,882,961	\$4,428,744	\$699,701
cu ad	General and Administration (ad)	\$23,940,184	\$3,220,561	\$388,779
dep	Depreciation and Amortization (dep)	\$65,889,721	\$7,250,595	\$761,437
INPUT	PILS (INPUT)	\$10,395,082	\$1,127,551	\$107,952
INT	Interest	\$27,852,925	\$3,021,198	\$289,250
				\$2,427,133
		ACCUSED OF THE REAL PROPERTY.		
	Direct Allocation	\$0	\$0	\$90,000
NI	Allocated Net Income (NI)	\$20,882,512	\$2,265,119	\$216,863
	Revenue Requirement (includes NI) Rate Base Calculation	\$201,210,527	\$24,398,515	\$2,733,996
_	Net Assets	£4 E00 902 404	\$158,052,081	\$14,691,647
dр	Distribution Plant - Gross	\$1,500,802,491 \$216,958,451	\$22,861,073	\$2,089,984
gp	General Plant - Gross	(\$879,876,140)		(\$8,710,198)
•	Accumulated Depreciation Capital Contribution	(\$103,686,323)		(\$497,445)
со	TOTAL TOTAL CONTROLLED			A CONTRACTA
		Security of the Control of the Contr		Prince Park
	Directly Allocated Net Fixed Assets	\$0	so so	\$0
СОР	Cost of Power (COP)	\$364,056,515	\$41,486,816	\$3,115,413
COP	OM&A Expenses	\$76,190,287	\$10,734,052	\$1,268,494
	Directly Allocated Expenses	\$0	\$0	\$90,000
0.1248194	Working Capital	<b>\$54,951,354</b>	<b>\$6</b> ,518,179	\$558,430
	Remodera e e e e e e e e e e e e e e e e e e			
ingle-monators.	(\$0) Equity Component of Rate Base	\$315,659,933	<b>\$34,379,162</b>	\$3,252,967
	Net Income on Allocated Assets	(\$7,515,152)	\$9,577,382	\$77,284
	Net Income on Direct Allocation Assets	<b>\$0</b>	\$0	\$0
	RATIOS ANALYSIS			
	REVENUE TO EXPENSES %	85.89%	129.97%	94.89%
	EXISTING REVENUE MINUS ALLOCATED COSTS	(\$28,397,664)		(\$139,579)
	RETURN ON EQUITY COMPONENT OF RATE BASE	-2.38%		2.38%



#### 5.2 Alternative Scenarios

#### **5.2.1** Selection of Alternative Assumptions

In its Decision and Order on Motion, the Board requested that BDR "provide any further scenarios, in addition to the alternative scenario described by the Board, or any further information or analysis that BDR determined would be helpful in assessing whether and to what extent any cross-subsidy may exist between the different types of Toronto Hydro customers relative to the suite metering customers."

This section of the report is intended to respond to that request.

BDR noted in the course of its analysis that although THESL has provided individual metering to some suites in multi-unit residential buildings for several decades, the installation of Quadlogic meters did not commence until 2006, and substantial volumes of these meters did not commence until 2007. Therefore in the view of BDR, if the Board is considering any action on rate classification or rate levels, it is important from the standpoint of rate stability, to consider how the results of this type of study might be affected by the sorts of changes to cost levels or improvements to the quality of data that might reasonably be expected in the next several years.

BDR discussed with subject matter experts in THESL the expected trends in costs of meters and meter reading, relevant to this class.

With respect to the meters themselves, THESL advised BDR that with more experience in the suite metering program and some scale in its suite metering activities, it could structure the tender for procurement of meters and installation to be more competitive, especially if alternative equipment is offered into the market. The possibility therefore exists of a relative reduction of unit capital costs for meters to serve its suite metering program. However, the magnitude of such a reduction cannot be identified. As a result, BDR has not developed a scenario addressing meter capital costs, but would point out that a reduction in such costs would improve the revenue-to-cost ratio of the Quadlogic class.

With respect to meter reading, THESL advised BDR that that reading of the Quadlogic meters is currently being done for THESL by an arms' length party, and that the costs exceed the cost of reading of an "urban outdoor" meter by a factor of about seven (7) times.

THESL has already purchased software that will enable it to take over this activity for itself, and expects to implement the change in a very few months. The costs for meter reading associated with the Quadlogic class would therefore consist only of the capital-

related costs (depreciation, interest, return on equity and PILs), and a telephone line to each building (not each customer). BDR made a high level review of the cost information provided for the software and telephone lines, and concluded that even with a generous provision for start-up costs and at the 2009 number of customers, meter reading costs for Quadlogic meters would be expected to move closer to the cost for reading other "smart" meters. If the number of customers in the Quadlogic class increases, the relative cost of meter reading in-house by THESL will reduce the per-customer cost levels still further, since the costs for in-house service are largely fixed.

To address this, BDR has prepared an alternative scenario in which meter reading costs for the Quadlogic customers are reduced; the weighting factor has been changed from 7 in the base scenario to 2 in this alternative scenario. We believe that in view of the potential for reduction in these costs, a weighting factor of 2 represents a reasonable and perhaps conservative scenario.

In Section 4.2 of this report, BDR commented on the many gaps and low or zero values in the hourly load data, and on the fact that some of the 9,149 customers in the class actually had no consumption data at all. BDR attributes this to many of the buildings in the program being new in 2009, and therefore the suites in those buildings being unoccupied or only inconsistently occupied during the year. In BDR's view it is reasonable to forecast that in a later period, the data would be more complete, and the total consumption registered by the meters for these same suites would be higher than the amounts in the data available for this study. Incorporating an underestimate of the customers' load (and therefore of the revenue) as a result of a temporary situation, while allocating full year costs, would clearly push the revenue-to-cost ratios down, and would not demonstrate to the Board what could be expected in the way of cost recovery from the class on a stable, long term basis.

Use of the data from the most complete 20 buildings resulted in an average consumption statistic of 355 kWh per customer per month, once some efforts had been made to fill gaps with average values. While there is certainly a possibility that 355 kWh is in fact a good estimate of the average levels of consumption for the suites when fully occupied (monthly consumptions of 250 kWh per month or less are not uncommon for occupants of small suites), our confidence in this statistic is not high. We therefore wish to ensure that the Board has a good sense of the impact on cost allocation study results if the consumption and revenue figures are too low.

For this purpose, BDR turned to its best alternative source for an estimate of the average kWh monthly consumption for a cross-section of suites in Toronto multi-unit residential buildings, and this is the data for the 119,947 member aggregate Suite-Metered Sub-Class

<sup>&</sup>lt;sup>4</sup> An alternative interpretation is that the gaps and low values are technical errors. If so, the same considerations apply, since the errors would be predominantly in the direction of reducing load.



("SMSC"). With meters for this large number of suites providing consumption figures, an average consumption of 389 kWh per customer per month (or 395 kWh weather – normalized), BDR has concluded that this value represents a reasonable alternative estimate for the average monthly consumption of the present Quadlogic-metered suites. A scenario has therefore been developed in which consumption has been estimated using these figures; the load shape from the 20 relatively complete buildings in the Quadlogic class has been applied in this scenario, consistent with the base scenario.

For the reasons stated, BDR also has concerns about the validity of the Quadlogic customer load shape obtained in the study. An available alternative estimated load shape is the load shape for the suite-metered (SMSC) load shape. This load shape has therefore been applied to the total consumption as discussed above (395 kWh per suite per month) to produce a fourth scenario.

Table 5.2 summarizes the changes made to produce each scenario. Table 5.3 compares the results of the scenarios.

Table 5.2 Scer	nario Definitions Meter Reading	Quadlogic kWh	Quadlogic Load
	Cost	per Month	Shape
Base Scenario	Multiplier 7	355	From 20 buildings in Quadlogic class
Meter Reading Scenario	Multiplier 2	355	From 20 buildings in Quadlogic class
Consumption Scenario	Multiplier 2	389	From 20 buildings in Quadlogic class
Load Shape Scenario	Multiplier 2	389	Suite Meter Sample Load Shape

Table 5.3 Comparison of Scenario Revenue-to-Cost Ratios					
Scenario	Non-Suite-Metered		Quadlogic		
Base Scenario	85.89%	129.97%	94.89%		
Meter Reading	85.87%	129.93%	103.53%		
Consumption	85.87%	129.90%	104.29%		
Load Shape	85.86%	130.30%	103.24%		

### 5.3 Conclusions as to Cross-Subsidization within the Residential Class

Using the base case, the Quadlogic customers revenue-to-cost ratio is 95:100, which is well within the boundaries set for acceptable ratios by the OEB, and would also be acceptable by more stringent definitions.<sup>5</sup> Furthermore, while a class at any ratio below unity is by definition receiving a subsidy from other customers, in determining whether the subsidy comes from other residential customers, the comparison must be to the overall residential class ratio, which is at 90:100, based on 2009 actual costs.

Furthermore, a scenario reflecting confidently expected changes in meter reading costs raises the revenue-to-cost ratio for the Quadlogic customers to a level above unity (i.e. full cost recovery through the rates). While other technology and pricing changes may create additional improvements, they cannot be predicted as confidently as the meter reading cost change, and therefore have not been reflected.

<sup>&</sup>lt;sup>5</sup> For example, New Brunswick uses a range of 95-105 to define target revenue-to-cost ratios for NB Power.