EB-2010-0142
Phase II

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* 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

DOCUMENT BRIEF OF THE

SMART SUB-METERING WORKING GROUP

HEARING: DECEMBER 7, 2011

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EB-2010-0142
Phase II

I N D E X

TAB 1

SUITE METERING SUPPLEMENTARY EVIDENCE

The Board's July 7, 2011 Partial Decision in EB-2010-0142 (the "Partial Decision") found that supplementary evidence on the Suite Metering Issues would be required. The Board found that "the creation and maintenance of a separate rate class for multi-residential customers that at the present time are served utilizing Quadlogic technology is the most effective and transparent manner" to address the costs of providing suite metering as part of THESL's monopoly service. The Board further found that THESL was required to file supplementary evidence with the objective of "establish[ing] both the cost allocation protocols for the new customer class and the initial tariff that Toronto Hydro will charge for this service" (page 36 of the Partial Decision).

The following evidence addresses the Board's requirements. Using the guidance of the Partial Decision, THESL has made use of the Board's updated Cost Allocation Model to determine the costs to be allocated to the new Suite Meter rate class, and the resulting proposed tariff. THESL has provided the information based on the 2012 forecast costs filed in its EB-2011-0144 rate filing.

METHODOLOGY

THESL has employed the Board's latest updated Cost Allocation Model, and the same general assumptions used in BDR's second report filed in this application as Exhibit L1, Tab 4, Schedule 1, (which identified the Quadlogic customers as a separate class). Specific components of the Cost Allocation model and the treatment of costs specific to the new Suite Meter class are described below.

CUSTOMERS AND LOADS

The BDR study at Exhibit L1, Tab 4, Schedule 1 (the "Updated BDR Study") identified 9,149 suite meter customers served by Quadlogic technology at the end of 2009. For the current analysis, 24,898 suite meter customers are forecast to be served by Quadlogic

meters in 2012. This number represents the mid-year forecast, which is the standard method of applying customer numbers in the Cost Allocation Model. All other classes use a mid-year forecast number of customers, as this represents the average of beginning and ending year customers using the distribution system.

In the Updated BDR Study, based on the 2009 sample of Quadlogic customers, the average monthly load was estimated to be 361 kWh on a normalized basis (or 355 kWh non-normalized). THESL has updated its information on loads for this class using the most recent available hourly load information. As in the Updated BDR Study, some of the raw load data contain periods with zero use (due to unoccupied units). THESL has used the same methodology employed in the Updated BDR Study to obtain an updated estimate of average monthly load. This updated average is 334 kWh per month. Due to the time constraints associated with filing this evidence, THESL has not done a detailed investigation as to why the most recent sample produces a lower average monthly load than the Updated BDR Study. However, statistical analysis of the current data shows a standard deviation across the sample of 192 kWh per month. This puts the current estimate well within one standard deviation of the previous estimate. For the purpose of the Cost Allocation model, THESL has used the point estimate of 334 kWh per month, but has also produced a sensitivity analysis which includes an estimate of loads that vary by one standard deviation around this point estimate.

A summary of customers and loads is provided in the table below.

Table 1- Customers and Loads

	2012 Base		BDR Study – 2009 Base		
	Suite-Meter Class	Residential Class	Quadlogic-Meter Class	Other Suite Meter Class	Residential Class
Customers	24,898	608,223	9,149	110,798	489,492
Annual class MWh (weather normalized)	99,492	4,937,803	39,601	528,446	4,559,587
kWh/month (normalized)	334	677	361	397	776
4NCP (MW)	78.0	4,527.5	31.1	457.3	4,169.6
4CP (MW)	54.9	3,985.0	21.9	301.5	3,719.6

COSTS

In the BDR study filed as Exhibit L1, Tab 3, Schedule 1 in this application (the "Original BDR Study"), the consultants reviewed the various functional cost areas to determine if there were costs which were clearly identifiable and materially different in the servicing of multi-residential versus traditional residential customers. BDR concluded, and THESL agrees, that the only significant differences relate to meter costs and to distribution secondary costs. For metering costs (both capital costs of the meter and meter reading costs) the differences in costs are reflected through the appropriate weightings by class (Tabs I7.1 and I7.2 of the Cost Allocation model). For secondary distribution costs, the adjustment is reflected through adjustments to the demand allocators (primarily loads, customers, and NCP/CP values, which are in Tabs I6.2 and I8 in the model). The remaining costs are allocated to the suite meter class according to the logic of the Cost Allocation Model. No special treatment of those costs is required.

METER COSTS

The Board has indicated that the new Suite Meter class is to be defined (presently) by the meter type servicing the customers in this class – specifically Quadlogic meters. The use of this technology for serving Suite Meter customers was based on a number of factors,

including physical characteristics, cost and Measurement Canada approval. Currently, this is the brand of meter being installed by THESL. The contract with the vendor for these meters will expire at the end of 2011, and there is no guarantee that this same technology will be used by THESL going forward. For purposes of the analysis presented, THESL's best forecast of meter costs has been used.

For 2012, THESL estimates an installed per meter cost of $550. This value is higher than the $440 value used in the Updated BDR Study. THESL has estimated this number based on the number and types of meters in service in 2012. Factors driving the increased per meter cost estimate compared to the previous value include costs related to inspections, network meters, and larger 3-phase meters which are more costly.

As meter costs are identified as being one of the key cost differences for this class, and these costs can be significantly affected by technology choice and external costs (e.g. Measurement Canada inspection requirements) sensitivity analyses to various estimates for meters costs are included below. A sensitivity analysis was also conducted by directly allocating the estimated Quadlogic meter costs to the Suite Meter class, rather than using the model's meter cost weighting factors.

With respect to meter reading costs, as was indicated in the Updated BDR study, these costs are expected to be reduced as the reading of the meters is moved in-house. In that study, meter reading for the Quadlogic customers was assigned a weighting factor of 7 compared to 1 for a smart meter residential customer. Based on 2012 data, the weighting factor compared to other residential meters used in this evidence is estimated to be 3.6. This lower value reflects the reduced costs. Offsetting this reduction in meter reading factor is a change in the assumption related to meter reads. In the BDR study, meter reads were assumed to happen every two months. For the current study, reads have been assumed to occur monthly, as the suite meters are being read and billed at the same time

as the bulk meter (which is used to bill the building common area load). This serves to increase the costs allocated to the Suite Meter class.

SECONDARY DISTRIBUTION COSTS

In the Original BDR study, based on engineering estimates of the proportion of THESL's secondary system which was used to service individually metered multi-residential customers (which included Quadlogic metered customers) a weighting factor of 30% was applied to THESL's secondary costs to adjust the amount of these costs being allocated to the entire individually metered multi-residential customer class. In the Updated study, this weighting factor was reduced to 8% for the customers served using Quadlogic meters to reflect the fact that very few of the buildings with Quadlogic installations are served by secondary assets. Accordingly, in the current analysis, the weighting factor has been maintained at 8%.

Because the impact of the amount of secondary costs allocated to the Suite Meter class can be significant, an alternative assumption of plus or minus 8% (thus allocating 0% or 16% of secondary costs) to demonstrate the sensitivity of the R/C ratios to this component was computed. THESL believes that a number lower than 8% is more likely than a number greater than 8%, as most of the additional Quadlogic customers since 2009 have been added to the primary system.

MARKETING EXPENSES

In the Updated BDR Study, a direct allocation of marketing costs associated with the suite meter program was included. The amount allocated to the Quadlogic class was $90,000. In 2012, there are no marketing dollars included in the budget for suite meter activity and hence no expenses have been directly allocated to the Suite Meter class. THESL's overall marketing expenses have, however, been allocated to this class based

on the Cost Allocation model logic, which allocated marketing costs to all customer classes based on the OM&A allocator.

COST ALLOCATION RESULTS

Based on the methodology and assumptions detailed above, the Revenue-Cost ratios as determined based on 2012 Test Year costs for the Suite Meter and remaining Residential class are detailed in the table below. Also included is a comparison with the Revenue-Cost ratios from the BDR Study for 2009 costs.

Table 2: Revenue/Cost Ratios

	2012 Base	BDR Study – 2009 Base
Suite Meter Class	100.5%	94.9%
Residential Class	89.1%	90.7%
Combined Suite Meter and Residential Class	89.4%	90.7%

Based on the 2012 customer, load and cost data applied to the Board's Cost Allocation model the result indicates a Revenue-to-Cost ratio of more than unity – 100.5% – for the Suite Meter class. This is higher than estimated in the Updated BDR Study, which found based on 2009 data the R/C ratio to be 94.9%.

COST ALLOCATION RESULTS – SENSITIVITY TO ALTERNATIVE ASSUMPTIONS

As noted above, a number of the input variables into the Cost Allocation Model could vary from the amounts estimated. In order to assess the sensitivity of the R/C ratios for the Suite Meter class the model was run with the alternate values.

The results, which are summarized in the table below, show the R/C ratios for the Suite Meter class can vary within a range of about 5-6% depending on the value of the input

variables.

Table 3: Sensitivity of R/C Ratios to Alternative Assumptions

Alternative Assumption	Impact on R/C Ratio for Suite Meter class	Resulting Suite Meter R/C range	
Average Monthly load - +/- 1 Std Deviation based on sample	+/- 4-5%	104.4-95.1%	/c
Estimated per Meter Cost +/- $100	+/- 6%	106.5-94.5%	/c
Directly Allocated Meter Costs	- 5.6%	95.0%	/c
Percentage of Secondary allocated +/- 8%	+/- 3.4%	103.9-97.1%	/c

SUITE METER RATES

The Board's Partial Decision requires THESL to propose a tariff for the new customer class.

The two key steps in developing a tariff for the class are: 1) determining the proportion of the overall revenue requirement to be collected from the class, or in other words, the Revenue-to-Cost ratio; and 2) the design of the rates to recover the revenue so determined.

With respect to the first step, the Revenue-to-Cost ratio, the Board stated in its Partial Decision:

> *"The Board finds that due to the existence of a competitive market for the provision of unit sub-metering it is appropriate to ensure that procurement choices, as between licensed distributors (suite metering) and licensed unit sub-meter providers (unit sub-metering) are made on a comparable economic basis both within the competitive unit sub-metering marketplace and between this competitive market place and the monopoly service."*

THESL has interpreted this to imply that the Revenue-to-Cost ratio for the new class is to be set at unity – where the revenues collected from the class are set equal to the costs incurred to serve the class, to ensure that suite meter customers are neither receiving nor paying any subsidies from/to consumers in other rate classes. As indicated above, the Cost Allocation model indicates that for 2012, the R/C ratio, before any reallocations, would be 100.5% for the Suite Meter class. For the purposes of designing an initial tariff, /c
THESL has reduced the revenue responsibility – in the amount of $44,600 – to the class /c
to make the Revenue-to-Cost ratio equal to 1. An offsetting increase in the Revenue-to-Cost ratio for the Remaining Residential Class is a result. Only the Remaining Residential class has been adjusted since the Suite Meter class was previously part of the (existing) Residential class, and therefore it is appropriate that any impacts due to the split of this class would be effected only on this class and not on other rate classes.

With respect to rate design, THESL proposes the same design of rates for this new class that is applied for the existing Residential class. The proposed tariff therefore includes two components – a fixed charge (per customer per 30 days, consistent with fixed charges in all other THESL rate classes), and a variable charge based on kWh. In developing the level of these charges, THESL has maintained the same proportion of revenue recovered from the fixed and variable charges for the new classes (the Suite Meter class as well as the new Remaining Residential class) as applies to the existing Residential class.

The initial rates resulting from the allocation and rate design described above (and an estimated monthly bill based on average consumption) are shown below (in comparison with the Remaining Residential rates at average residential consumption level).

Table 4: Suite Meter Rates

	Suite Meter Class (334 kWh/month)	Remaining Residential Class (677 kWh/month)	
Fixed ($/customer/30 days)	16.29	20.16	/c
Variable ($/kWh)	0.02701	0.01646	/c
Estimated Monthly Bill[1]	$53.06	$88.68	/c

Note 1: Estimated monthly bill based on Distribution, Transmission and Commodity costs only. Taxes and rate riders not included. Transmission rates based on EB-2011-0114 filed rates. Commodity costs based on tiered RPP rates of $0.068/kWh for first 600kWh, and $0.079/kWh for usage above 600kWh.

TRANSITIONAL METER-ONLY RATE FOR CONVERTING BUILDINGS

Under section 5.1.9 of the Distribution System Code, THESL has the obligation to be the supplier of last resort in a market which is otherwise deemed by the Board to be contestable. Section 5.1.9 provides: "When requested to do so by a master consumer, a distributor shall install unit smart meters that meet the specifications prescribed by Ontario Regulation 389/10". This means that THESL must provide service in situations where other sub-meterers decline to do so.

In these and in any other circumstances in which THESL provides suite metering to a residential building which was initially bulk metered, THESL also has the obligation to install the suite metering system in an efficient, cost-effective manner. This requires THESL to install the entire suite metering system in the building at one time, rather than on a piecemeal basis as each individual unit converts to individual direct service.

In the case of existing condominiums which are converting to unit metering, consent to establish individual accounts is conveyed by the condominium corporation rather than individual unit occupants. No significant period of time would exist during which existing condominium units in a converting building would have meters installed which would not be used for billing purposes.

However, in the case of rental buildings, landlords are required by law to obtain the informed consent of tenants prior to conversion to individual billing. In the cases of new rental buildings or condominiums, there is also a period during which the units are habitable and electricity consumption occurs, but have not yet been occupied for the first time.

In practice, this creates a situation in which suite meters are installed in rental and other buildings but may not be used for purposes of billing an individual unit for an indefinite period until consent has been obtained from the occupant of that unit (or until unit occupancy changes), or until the unit is occupied for the first time.

Under the current tariff, THESL must bill the property owner under existing residential rates (or the prospective suite meter rate, if approved) for each unit in which a suite meter is installed. THESL cannot install the meters and then wait for an indefinite period to begin recovering the associated costs. However, relative to the situation in which consumption for unconverted units is billed under the applicable bulk rate, costs to the property owner are substantially higher.

In the case of converting rental buildings, these increased costs to the landlord may then be reflected in reduced maintenance or capital expenditures, or in rent increases to the remaining unconverted tenants. In either case, the interests of the tenants of the building are prejudiced. In the case of other building types, it is also reasonable to assume that such costs will be passed on to the ultimate owners or occupants.

THESL submits that this result is an unintended and untoward outcome of the existing statutory and regulatory framework.

THESL proposes a solution to this problem which minimizes the cost increase to property owners without creating any cross subsidy from existing THESL ratepayers to property owners or suite metered customers. Specifically, THESL proposes that for suite metered buildings, and only for the transitional period during which units are being gradually converted to individual direct accounts, THESL bill the property owner for electricity consumption based on the bulk meter reading, adjusted to eliminate the consumption and demand of the converted units, and apply a 'meter only' rate to recover the capital-related costs of the Quadlogic (or the successor) meters in units which have not yet converted. The applicable monthly customer charge for the bulk meter account, under the GS<50kW, GS 50-1000kW, or GS 1000-5000kW rate class as the case may be, would continue to apply, and the meter only rate would be a conditional rate component, similar in that respect to the transformer credit which only applies in some cases depending on the circumstances of the customer. The meter-only rate would be applicable only during the transition period and would not be applicable to vacant units after their conversion to individual billing.

The meter-only rate would be designed to recover only the capital related costs of the installed, but unutilized, meter. The capital related costs of the suite meter would be the depreciation, return, and taxes associated with the meter investment, and would be recovered through a fixed monthly charge reflecting the amortization period for the meters together with applicable values for the rate of return and PILs rates.

Using those proposed values together with the projected Quadlogic meter costs and an amortization period of 15 years for those meters, Table 5 below sets out the derivation of the monthly meter-only rate.

Table 5 - Derivation of Monthly Meter-Only Rate

Item	Cost/Rate
Average Installed Meter Cost	$550
Depreciation Rate (15 year amortization)	6.67%
Annual Depreciation & Amortization	$36.67
Annual Return (at WACC of 6.79% on average NBV over meter life of $275)	$18.67
Annual PILs (at 35.6% grossed-up tax rate)	$3.86
Total Annual Capital-Related Costs	$59.20
Meter-Only Rate (per 30 day period)	**$4.87**

The resulting figure of $4.87 per month represents a meaningful reduction from, but not the elimination of, the otherwise applicable charge of $15.47.

Regular billing and customer care costs related to the unconverted units would not be incurred by THESL during the transition since the meters would not be used for billing purposes in that period. However, there would be incremental administrative costs associated with maintaining information on unconverted units in a building, and calculating and adding the meter-only costs to the GS bill. THESL estimates that for 2012 the annual cost of this function would be approximately $53,000, based on an estimate of the time required to administer and bill. Spread over a forecast number of buildings that would contain unconverted meters (110 buildings), this results in a per building monthly cost of approximately $40. THESL proposes this administration fee also be applied monthly to the bulk meter account for those buildings that have unconverted meters, as an adjunct to the meter only rate.

SUMMARY

As noted above, THESL cannot decline to provide suite metering when requested to do so by a master consumer. Neither can THESL absorb the costs of unutilized meters, or incur the additional costs of installing a suite metering system on a piecemeal basis. However, application of the standard suite meter rate to unconverted units can reasonably be expected to accentuate a cost increase related to electrical service that is likely to be to the detriment of tenants or unit owners. THESL believes that the proposal set out above represents a responsible approach to the mitigation of this cost increase given the overall circumstances in which THESL has been placed. It keeps THESL and existing customers whole while avoiding the imposition of charges for services (i.e. billing and customer care) not actually provided in the subject circumstances.

TAB 1 A

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November 4, 2011

via RESS e-filing – signed original to follow by courier

Ms. Kirsten Walli, Board Secretary
Ontario Energy Board
PO Box 2319
2300 Yonge St, 27th floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

Re: Toronto Hydro-Electric System Limited's ("THESL")
2011 Electricity Distribution Rate Application – Responses to Interrogatories on Suite Metering Evidence, Corrections and Confidential Filing
OEB File No. EB-2010-0142

THESL received interrogatories from Board Staff, Consumers Council of Canada ("CCC"), Smart Sub-Metering Working Group ("SSMWG") and Vulnerable Energy Consumers Coalition. Pursuant to the Board's Decision on Motion dated October 14th, enclosed are THESL responses to these interrogatories.

In preparing its responses to the interrogatories on the Suite Metering evidence, THESL has identified two corrections to input values in the Cost Allocation model (related to values used for Bad Debt/Late Payment penalties, and meter capital costs). They have been reflected in the corrected written direct pages attached, and in the corrected Cost Allocation model being filed. The corrections result in a decrease in the calculated Revenue to Cost ratio for the Quadlogic class, from 104.7 to 100.5. The responses to the interrogatories reflect this correction when necessary.

In the second round of interrogatories in an earlier phase of this proceeding, SSMWG asked in interrogatory 8 to identify the unit pricing capital cost and installation cost per suite. In a letter to the Board dated January 20, 2011, THESL requested that the Board

limit disclosure of that commercially-sensitive information, to counsel who execute the Board's Declaration and Undertaking. The Board granted THESL's request. In this present round of interrogatories, Board Staff interrogatory 5 and CCC interrogatory 2 make the same request. Therefore, THESL requests that responses to these two interrogatories be treated in the same manner as SSMWG interrogatory 8 in the earlier phase of this proceeding.

THESL is providing the Board with its responses to Board Staff interrogatory 5 and CCC interrogatory 2 enclosed in an envelope marked "confidential", in accordance with the OEB's *Rules of Practice and Procedure* in its Practice Direction on Confidential Filings. THESL also notes that should any party wish to cross-examine/or address these documents in any other way during this proceeding, THESL requests that those proceedings be conducted *in camera*, and any submissions or other written material pertaining to these documents be filed in confidence, all in accordance with the Practice Direction.

Please direct any questions or comments to my attention.

Yours truly,

Glen A. Winn
Manager, Regulatory Applications & Compliance

.encl

:GAW/acc

cc: J. Mark Rodger, Counsel for THESL
Intervenors of Record for EB-2010-0142

TAB 1 B

2012 COST ALLOCATION
Toronto Hydro-Electric System Limited
2011-0144
August 26 2011

Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - Edit description in Sheet I2, cell C17

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1 Residential	2 Quadlogic	3 GS < 50	4 GS - 50 to 999	5 GS - 1,000 to 4,999	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	$4.52	$12.71	$13.01	$46.28	$140.61	$158.65	$0.40	$2.32
Customer Unit Cost per month - Directly Related	$6.62	$17.60	$19.56	$69.89	$216.17	$296.59	$0.66	$3.59
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$20.35	$23.76	$40.80	$100.77	$274.70	$476.18	$16.28	$15.79
Existing Approved Fixed Charge	$18.50	$18.50	$24.64	$36.05	$695.99	$3,050.90	$1.32	$4.91

Information to be Used to Allocate PILs, ROD, ROE and A&G

	Total	1 Residential	2 Quadlogic	3 GS < 50	4 GS - 50 to 999	5 GS - 1,000 to 4,999	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
General Plant - Gross Assets	$700,543,035	$325,374,803	$6,538,641	$90,746,165	$174,503,813	$49,254,622	$23,464,987	$26,658,139	$4,001,864
General Plant - Accumulated Depreciation	($439,219,084)	($204,000,063)	($4,099,528)	($56,895,074)	($109,408,560)	($30,881,143)	($14,711,830)	($16,713,839)	($2,509,046)
General Plant - Net Fixed Assets	$261,323,951	$121,374,740	$2,439,113	$33,851,092	$65,095,253	$18,373,479	$8,753,157	$9,944,300	$1,492,817
General Plant - Depreciation	$53,315,253	$24,762,847	$497,627	$6,906,292	$13,280,719	$3,748,553	$1,785,817	$2,028,834	$304,564
Total Net Fixed Assets Excluding General Plant	$2,036,349,079	$945,134,202	$19,805,159	$262,970,984	$504,928,635	$145,105,870	$69,383,766	$77,412,310	$11,608,152
Total Administration and General Expense	$89,422,210	$39,911,561	$1,510,940	$13,512,459	$22,587,444	$6,273,312	$2,990,155	$2,166,602	$469,736
Total O&M	$172,388,623	$76,375,139	$3,145,020	$26,736,055	$43,672,695	$12,073,624	$5,753,396	$3,741,430	$891,262

Scenario 1

Accounts included in Avoided Costs Plus General Administration Allocation

USoA Account #	Accounts	Total	1 Residential	2 Quadlogic	3 GS < 50	4 GS - 50 to 999	5 GS - 1,000 to 4,999	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
	Distribution Plant									
1860	Meters	$213,321,565	$130,652,399	$16,456,738	$26,814,817	$31,420,936	$6,733,587	$1,243,087	$0	$0
	Accumulated Amortization									
	Accum. Amortization of Electric Utility Plant - Meters only	($93,200,970)	($57,082,510)	($7,190,009)	($11,715,492)	($13,727,921)	($2,941,929)	($543,109)	$0	$0
	Meter Net Fixed Assets	**$120,120,595**	**$73,569,889**	**$9,266,729**	**$15,099,326**	**$17,693,014**	**$3,791,658**	**$699,978**	**$0**	**$0**
	Misc Revenue									

4082	Retail Services Revenues	($870,160)	($386,493)	($15,475)	($133,771)	($220,224)	($60,978)	($29,060)	($19,636)	($4,523)
4084	Service Transaction Requests (STR) Revenues	($36,000)	($15,990)	($640)	($5,534)	($9,111)	($2,523)	($1,202)	($812)	($187)
4090	Electric Services Incidental to Energy Sales	($1,800,000)	($799,494)	($32,011)	($276,716)	($455,551)	($126,139)	($60,114)	($40,619)	($9,357)
4220	Other Electric Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4225	Late Payment Charges	($5,000,000)	($2,602,802)	($106,547)	($1,035,253)	($983,705)	($226,396)	($45,297)	$0	$0
	Sub-total	*($7,706,160)*	*($3,804,778)*	*($154,673)*	*($1,451,274)*	*($1,668,591)*	*($416,036)*	*($135,673)*	*($61,087)*	*($14,068)*
	Operation									
5065	Meter Expense	$5,250,611	$3,215,825	$405,060	$660,009	$773,382	$165,738	$30,597	$0	$0
5070	Customer Premises - Operation Labour	$2,936,441	$2,187,865	$89,562	$237,077	$49,554	$1,817	$180	$326,059	$44,328
5075	Customer Premises - Materials and Expenses	$1,483,311	$1,105,176	$45,241	$119,757	$25,032	$918	$91	$164,705	$22,392
	Sub-total	*$9,670,363*	*$6,508,867*	*$539,862*	*$1,016,843*	*$847,968*	*$168,472*	*$30,868*	*$490,764*	*$66,719*
	Maintenance									
5175	Maintenance of Meters	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Billing and Collection									
5310	Meter Reading Expense	$4,226,655	$1,771,278	$521,764	$1,231,836	$394,005	$266,683	$41,089	$0	$0
5315	Customer Billing	$15,182,413	$8,141,787	$666,579	$3,528,974	$2,581,714	$94,640	$20,079	$455	$148,185
5320	Collecting	$14,570,162	$7,813,459	$639,698	$3,386,663	$2,477,603	$90,824	$19,270	$437	$142,209
5325	Collecting- Cash Over and Short	$0	$0	$0	$0	$0	$0	$0	$0	$0
5330	Collection Charges	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total	$33,979,230	$17,726,523	$1,828,040	$8,147,474	$5,453,321	$452,147	$80,438	$892	$290,394
	Total Operation, Maintenance and Billing	$43,649,593	$24,235,390	$2,367,902	$9,164,316	$6,301,290	$620,619	$111,305	$491,656	$357,114
	Amortization Expense - Meters	$11,127,518	$6,815,237	$858,435	$1,398,744	$1,639,014	$351,245	$64,843	$0	$0
	Allocated PILs	$79,695	$48,795	$6,175	$10,012	$11,730	$2,519	$465	$0	$0
	Allocated Debt Return	$4,045,858	$2,477,150	$313,480	$508,268	$595,473	$127,872	$23,616	$0	$0
	Allocated Equity Return	$5,247,674	$3,212,983	$406,599	$659,248	$772,357	$165,856	$30,631	$0	$0
	Total	**$56,444,177**	**$32,984,776**	**$3,797,918**	**$10,289,313**	**$7,651,272**	**$852,075**	**$96,188**	**$430,589**	**$343,046**

Scenario 2

Accounts included in Directly Related Customer Costs Plus General Administration Allocation

			1	2	3	4	5	6	7	9
USoA Account #	**Accounts**	**Total**	**Residential**	**Quadlogic**	**GS < 50**	**GS - 50 to 999**	**GS - 1,000 to 4,999**	**Large Use >5MW**	**Street Light**	**Unmetered Scattered Load**
	Distribution Plant									
1860	Meters	$213,321,565	$130,652,399	$16,456,738	$26,814,817	$31,420,936	$6,733,587	$1,243,087	$0	$0
	Accumulated Amortization									
	Accum. Amortization of Electric Utility Plant - Meters only	($93,200,970)	($57,082,510)	($7,190,009)	($11,715,492)	($13,727,921)	($2,941,929)	($543,109)	$0	$0
	Meter Net Fixed Assets	$120,120,595	$73,569,889	$9,266,729	$15,099,326	$17,693,014	$3,791,658	$699,978	$0	$0
	Allocated General Plant Net Fixed Assets	$15,382,199	$9,447,892	$1,141,248	$1,943,669	$2,280,978	$480,104	$88,306	$0	$0
	Meter Net Fixed Assets Including General Plant	$135,502,793	$83,017,781	$10,407,977	$17,042,995	$19,973,993	$4,271,763	$788,284	$0	$0
	Misc Revenue									
4082	Retail Services Revenues	($870,160)	($386,493)	($15,475)	($133,771)	($220,224)	($60,978)	($29,060)	($19,636)	($4,523)
4084	Service Transaction Requests (STR) Revenues	($36,000)	($15,990)	($640)	($5,534)	($9,111)	($2,523)	($1,202)	($812)	($187)
4090	Electric Services Incidental to Energy Sales	($1,800,000)	($799,494)	($32,011)	($276,716)	($455,551)	($126,139)	($60,114)	($40,619)	($9,357)
4220	Other Electric Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4225	Late Payment Charges	($5,000,000)	($2,602,802)	($106,547)	($1,035,253)	($983,705)	($226,396)	($45,297)	$0	$0
	Sub-total	*($7,706,160)*	*($3,804,778)*	*($154,673)*	*($1,451,274)*	*($1,668,591)*	*($416,036)*	*($135,673)*	*($61,087)*	*($14,068)*

	Operation									
5065	Meter Expense	$5,250,611	$3,215,825	$405,060	$660,009	$773,382	$165,738	$30,597	$0	$0
5070	Customer Premises - Operation Labour	$2,936,441	$2,187,865	$89,562	$237,077	$49,554	$1,817	$180	$326,059	$44,328
5075	Customer Premises - Materials and Expenses	$1,483,311	$1,105,176	$45,241	$119,757	$25,032	$918	$91	$164,705	$22,392
	Sub-total	*$9,670,363*	*$6,508,867*	*$539,862*	*$1,016,843*	*$847,968*	*$168,472*	*$30,868*	*$490,764*	*$66,719*
	Maintenance									
5175	Maintenance of Meters	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Billing and Collection									
5310	Meter Reading Expense	$4,226,655	$1,771,278	$521,764	$1,231,836	$394,005	$266,683	$41,089	$0	$0
5315	Customer Billing	$15,182,413	$8,141,787	$666,579	$3,528,974	$2,581,714	$94,640	$20,079	$455	$148,185
5320	Collecting	$14,570,162	$7,813,459	$639,698	$3,386,663	$2,477,603	$90,824	$19,270	$437	$142,209
5325	Collecting- Cash Over and Short	$0	$0	$0	$0	$0	$0	$0	$0	$0
5330	Collection Charges	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total	*$33,979,230*	*$17,726,523*	*$1,828,040*	*$8,147,474*	*$5,453,321*	*$452,147*	*$80,438*	*$892*	*$290,394*
	Total Operation, Maintenance and Billing	$43,649,593	$24,235,390	$2,367,902	$9,164,316	$6,301,290	$620,619	$111,305	$491,656	$357,114
	Amortization Expense - Meters	$11,127,518	$6,815,237	$858,435	$1,398,744	$1,639,014	$351,245	$64,843	$0	$0
	Amortization Expense - General Plant assigned to Meters	*$3,138,273*	*$1,927,557*	*$232,837*	*$396,547*	*$465,365*	*$97,951*	*$18,016*	*$0*	*$0*
	Admin and General	$22,546,268	$12,664,753	$1,137,595	$4,631,665	$3,259,016	$322,466	$57,848	$284,710	$188,215
	Allocated PILs	$89,900	$55,061	$6,935	$11,301	$13,242	$2,838	$524	$0	$0
	Allocated Debt Return	$4,563,947	$2,795,267	$352,087	$573,695	$672,241	$144,063	$26,595	$0	$0
	Allocated Equity Return	$5,919,661	$3,625,597	$456,674	$744,110	$871,929	$186,857	$34,496	$0	$0
	Total	**$83,329,001**	**$48,314,083**	**$5,257,792**	**$15,469,103**	**$11,553,506**	**$1,310,003**	**$177,954**	**$715,299**	**$531,261**

Scenario 3

Minimum System Customer Costs Adjusted for PLCC - High Limit Fixed Customer Charge

			1	2	3	4	5	6	7	9
USoA Account #	**Accounts**	**Total**	**Residential**	**Quadlogic**	**GS < 50**	**GS - 50 to 999**	**GS - 1,000 to 4,999**	**Large Use >5MW**	**Street Light**	**Unmetered Scattered Load**
	Distribution Plant									
1565	Conservation and Demand Management Expenditures and Recoveries	$15,702,253	$6,956,734	$286,468	$2,435,290	$3,977,987	$1,099,743	$524,056	$340,793	$81,182
1830	Poles, Towers and Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery	$0	$0	$0	$0	$0	$0	$0	$0	$0
1830-4	Poles, Towers and Fixtures - Primary	$60,910,324	$45,382,684	$1,857,769	$4,917,664	$1,027,899	$37,681	$3,731	$6,763,412	$919,483
1830-5	Poles, Towers and Fixtures - Secondary	$54,976,898	$42,737,244	$139,958	$4,631,005	$233,272	$355	$19	$6,369,161	$865,885
1835	Overhead Conductors and Devices	$0	$0	$0	$0	$0	$0	$0	$0	$0
1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery	$0	$0	$0	$0	$0	$0	$0	$0	$0
1835-4	Overhead Conductors and Devices - Primary	$50,100,538	$37,328,596	$1,528,070	$4,044,924	$845,477	$30,993	$3,069	$5,563,106	$756,302
1835-5	Overhead Conductors and Devices - Secondary	$45,220,120	$35,152,644	$115,120	$3,809,138	$191,873	$292	$16	$5,238,822	$712,216
1840	Underground Conduit	$0	$0	$0	$0	$0	$0	$0	$0	$0
1840-3	Underground Conduit - Bulk Delivery	$0	$0	$0	$0	$0	$0	$0	$0	$0
1840-4	Underground Conduit - Primary	$283,265,577	$211,053,748	$8,639,621	$22,869,769	$4,780,280	$175,235	$17,350	$31,453,484	$4,276,088
1840-5	Underground Conduit - Secondary	$113,520,495	$88,247,123	$288,996	$9,562,452	$481,677	$733	$40	$13,151,529	$1,787,945
1845	Underground Conductors and Devices	$0	$0	$0	$0	$0	$0	$0	$0	$0
1845-3	Underground Conductors and Devices - Bulk Delivery	$0	$0	$0	$0	$0	$0	$0	$0	$0
1845-4	Underground Conductors and Devices - Primary	$117,587,360	$87,611,257	$3,586,423	$9,493,549	$1,984,359	$72,743	$7,202	$13,056,765	$1,775,062
1845-5	Underground Conductors and Devices - Secondary	$47,123,888	$36,632,571	$119,966	$3,969,503	$199,951	$304	$17	$5,459,377	$742,200
1850	Line Transformers	$260,459,752	$200,460,545	$656,479	$21,721,890	$3,647,228	$36,524	$852	$29,874,772	$4,061,463

1855	Services	$476,272,867	$329,836,766	$1,080,166	$71,482,176	$18,003,389	$27,386	$4,475	$49,155,798	$6,682,711
1860	Meters	$213,321,565	$130,652,399	$16,456,738	$26,814,817	$31,420,936	$6,733,587	$1,243,087	$0	$0
1880	IFRS Placeholder Asset Account	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total	*$1,738,461,636*	*$1,252,052,310*	*$34,755,776*	*$185,752,177*	*$66,794,327*	*$8,215,575*	*$1,803,913*	*$166,427,021*	*$22,660,537*
	Accumulated Amortization									
	Accum. Amortization of Electric Utility Plant -Line Transformers, Services and Meters	($908,107,062)	($657,685,763)	($16,865,077)	($95,486,971)	($32,208,540)	($3,748,478)	($849,905)	($89,126,499)	($12,135,831)
	Customer Related Net Fixed Assets	$830,354,574	$594,366,547	$17,890,699	$90,265,206	$34,585,787	$4,467,098	$954,008	$77,300,522	$10,524,706
	Allocated General Plant Net Fixed Assets	$106,579,909	$76,328,933	$2,203,337	$11,619,441	$4,458,790	$565,629	$120,354	$9,929,940	$1,353,485
	Customer Related NFA Including General Plant	$936,934,482	$670,695,481	$20,094,036	$101,884,647	$39,044,577	$5,032,727	$1,074,362	$87,230,462	$11,878,192
	Misc Revenue									
4082	Retail Services Revenues	($870,160)	($386,493)	($15,475)	($133,771)	($220,224)	($60,978)	($29,060)	($19,636)	($4,523)
4084	Service Transaction Requests (STR) Revenues	($36,000)	($15,990)	($640)	($5,534)	($9,111)	($2,523)	($1,202)	($812)	($187)
4090	Electric Services Incidental to Energy Sales	($1,800,000)	($799,494)	($32,011)	($276,716)	($455,551)	($126,139)	($60,114)	($40,619)	($9,357)
4220	Other Electric Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4225	Late Payment Charges	($5,000,000)	($2,602,802)	($106,547)	($1,035,253)	($983,705)	($226,396)	($45,297)	$0	$0
4235	Miscellaneous Service Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total	*($7,706,160)*	*($3,804,778)*	*($154,673)*	*($1,451,274)*	*($1,668,591)*	*($416,036)*	*($136,673)*	*($61,067)*	*($14,068)*
	Operating and Maintenance									
5005	Operation Supervision and Engineering	$12,449,978	$9,153,186	$147,999	$1,289,407	$287,398	$16,798	$7,596	$1,362,284	$185,310
5010	Load Dispatching	$1,671,880	$1,229,161	$19,874	$173,152	$38,594	$2,256	$1,020	$182,938	$24,885
5020	Overhead Distribution Lines and Feeders - Operation Labour	$469,898	$357,308	$8,100	$38,718	$5,114	$154	$15	$53,250	$7,239
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	$274,286	$208,565	$4,728	$22,600	$2,985	$90	$9	$31,083	$4,226
5035	Overhead Distribution Transformers- Operation	$0	$0	$0	$0	$0	$0	$0	$0	$0
5040	Underground Distribution Lines and Feeders - Operation Labour	$372,236	$280,782	$8,376	$30,426	$4,936	$165	$16	$41,845	$5,689
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	$1,202,383	$906,973	$27,056	$98,280	$15,945	$533	$53	$135,167	$18,376
5055	Underground Distribution Transformers - Operation	$668,290	$514,343	$1,684	$55,734	$9,358	$94	$2	$76,653	$10,421
5065	Meter Expense	$5,250,611	$3,215,825	$405,060	$660,009	$773,382	$165,738	$30,597	$0	$0
5070	Customer Premises - Operation Labour	$2,936,441	$2,187,865	$89,562	$237,077	$49,554	$1,817	$180	$326,059	$44,328
5075	Customer Premises - Materials and Expenses	$1,483,311	$1,105,176	$45,241	$119,757	$25,032	$918	$91	$164,705	$22,392
5085	Miscellaneous Distribution Expense	$1,768,996	$1,300,561	$21,029	$183,210	$40,836	$2,387	$1,079	$193,565	$26,330
5090	Underground Distribution Lines and Feeders - Rental Paid	$0	$0	$0	$0	$0	$0	$0	$0	$0
5095	Overhead Distribution Lines and Feeders - Rental Paid	$0	$0	$0	$0	$0	$0	$0	$0	$0
5096	Other Rent	$0	$0	$0	$0	$0	$0	$0	$0	$0
5105	Maintenance Supervision and Engineering	$3,275,576	$2,408,194	$38,938	$339,242	$75,614	$4,420	$1,999	$358,415	$48,755
5120	Maintenance of Poles, Towers and Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0
5125	Maintenance of Overhead Conductors and Devices	$2,539,009	$1,930,647	$43,769	$209,205	$27,631	$833	$82	$287,726	$39,116
5130	Maintenance of Overhead Services	$395,324	$273,777	$897	$59,333	$14,943	$23	$4	$40,801	$5,547
5135	Overhead Distribution Lines and Feeders - Right of Way	$1,158,917	$881,234	$19,978	$95,490	$12,612	$380	$38	$131,331	$17,854
5145	Maintenance of Underground Conduit	$0	$0	$0	$0	$0	$0	$0	$0	$0
5150	Maintenance of Underground Conductors and Devices	$2,892,439	$2,181,804	$65,087	$236,420	$38,358	$1,283	$127	$325,156	$44,205
5155	Maintenance of Underground Services	$0	$0	$0	$0	$0	$0	$0	$0	$0
5160	Maintenance of Line Transformers	$0	$0	$0	$0	$0	$0	$0	$0	$0

5175	Maintenance of Meters	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total	*$38,808,574*	*$28,135,400*	*$947,379*	*$3,848,058*	*$1,422,294*	*$197,888*	*$42,907*	*$3,710,977*	*$504,672*
	Billing and Collection									
5305	Supervision	$494,966	$265,433	$21,731	$115,049	$84,167	$3,085	$655	$15	$4,831
5310	Meter Reading Expense	$4,226,655	$1,771,278	$521,764	$1,231,836	$394,005	$266,683	$41,089	$0	$0
5315	Customer Billing	$15,182,413	$8,141,787	$666,579	$3,528,974	$2,581,714	$94,640	$20,079	$455	$148,185
5320	Collecting	$14,570,162	$7,813,459	$639,698	$3,386,663	$2,477,603	$90,824	$19,270	$437	$142,209
5325	Collecting- Cash Over and Short	$0	$0	$0	$0	$0	$0	$0	$0	$0
5330	Collection Charges	$0	$0	$0	$0	$0	$0	$0	$0	$0
5335	Bad Debt Expense	$7,628,705	$4,320,405	$176,859	$1,942,800	$1,111,986	$76,655	$0	$0	$0
5340	Miscellaneous Customer Accounts Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total	*$42,102,901*	*$22,312,362*	*$2,026,630*	*$10,205,323*	*$6,649,474*	*$531,888*	*$81,092*	*$907*	*$295,225*
	Sub Total Operating, Maintenance and Billing	*$80,912,475*	*$50,447,761*	*$2,974,009*	*$14,053,381*	*$8,071,768*	*$729,776*	*$123,999*	*$3,711,884*	*$799,897*
	Amortization Expense - Customer Related	$40,042,837	$27,806,641	$1,211,469	$4,373,092	$2,547,975	$476,842	$125,036	$3,080,525	$421,257
	Amortization Expense - General Plant assigned to Meters	$21,744,409	$15,572,612	$449,524	$2,370,596	$909,681	$115,400	$24,555	$2,025,904	$276,138
	Admin and General	$42,083,420	$26,362,621	$1,428,782	$7,102,609	$4,174,705	$379,183	$64,445	$2,149,492	$421,583
	Allocated PILs	$621,452	$444,835	$13,390	$67,556	$25,885	$3,343	$714	$57,853	$7,877
	Allocated Debt Return	$31,549,083	$22,582,786	$679,752	$3,429,601	$1,314,077	$169,726	$36,247	$2,937,011	$399,883
	Allocated Equity Return	$40,920,690	$29,290,968	$881,671	$4,448,358	$1,704,422	$220,143	$47,014	$3,809,446	$518,668
	PLCC Adjustment for Line Transformer	$3,963,235	$3,445,559	$11,217	$373,281	$62,708	$627	$15	$0	$69,829
	PLCC Adjustment for Primary Costs	$9,048,547	$7,592,537	$303,682	$821,270	$170,347	$6,192	$612	$0	$153,907
	PLCC Adjustment for Secondary Costs	$10,605,168	$9,138,816	$70,721	$927,660	$188,928	$6,860	$0	$0	$272,183
	Total	**$226,551,255**	**$148,526,534**	**$7,098,304**	**$32,271,707**	**$16,657,938**	**$1,664,698**	**$285,711**	**$17,711,047**	**$2,335,316**

TAB 1 C

2012 COST ALLOCATION
Toronto Hydro-Electric System Limited
2011-0144
August 26 2011
Sheet I9 Direct Allocation Worksheet - Edit description in Sheet I2, cell C17

Instructions:
More Instructions provided on the first tab in this workbook.

USoA Account #	Accounts	Direct Allocation	Total Allocated to Rate Classifications?	1 Residential	2 Quadlogic	3 GS < 50	4 GS - 50 to 999	5 GS - 1,000 to 4,999	6 Large Use >5MW	7 Street Light	9 etered Scattered Load
Instructions: To Allocate Capital Contributions by Rate Classification, Input Allocation on Next Line											
1995	Contributions and Grants - Credit	$0	Yes								
Instructions: The Following is Used to Allocate Directly Allocated Costs from I3 to Rate Classifications											
1805	Land	$0	Yes								
1806	Land Rights	$0	Yes								
1808	Buildings and Fixtures	$0	Yes								
1810	Leasehold Improvements	$0	Yes								
1815	Transformer Station Equipment - Normally Primary above 50 kV	$0	Yes								
1820	Distribution Station Equipment - Normally Primary below 50 kV	$0	Yes								
1825	Storage Battery Equipment	$0	Yes								
1830	Poles, Towers and Fixtures	$0	Yes								
1835	Overhead Conductors and Devices	$0	Yes								
1840	Underground Conduit	$39,751,901	Yes				$3,070,322	$6,406,796	$30,274,783		
1845	Underground Conductors and Devices	$15,823,875	Yes				$1,222,191	$2,550,327	$12,051,357		
1850	Line Transformers	$0	Yes								
1855	Services	$0	Yes								
1860	Meters	$0	Yes								
1880	IFRS Placeholder Asset Account	$0	Yes								
1905	Land	$0	Yes								
1906	Land Rights	$0	Yes								
1908	Buildings and Fixtures	$0	Yes								
1910	Leasehold Improvements	$0	Yes								
1915	Office Furniture and Equipment	$0	Yes								
1920	Computer Equipment - Hardware	$0	Yes								
1925	Computer Software	$0	Yes								
1930	Transportation Equipment	$0	Yes								
1935	Stores Equipment	$0	Yes								
1940	Tools, Shop and Garage Equipment	$0	Yes								
1945	Measurement and Testing Equipment	$0	Yes								

1950	Power Operated Equipment	$0	Yes								
1955	Communication Equipment	$0	Yes								
1960	Miscellaneous Equipment	$0	Yes								
1970	Load Management Controls - Customer Premises	$0	Yes								
1975	Load Management Controls - Utility Premises	$0	Yes								
1980	System Supervisory Equipment	$0	Yes								
1990	Other Tangible Property	$0	Yes								
2005	Property Under Capital Leases	$0	Yes								
2010	Electric Plant Purchased or Sold	$0	Yes								
2050	Completed Construction Not Classified-Electric	$0	Yes								
2105	Accum. Amortization of Electric Utility Plant - Property, Plant, & Equipment	($26,931,696)	Yes				-2,080,127	-4,340,569	-20,511,000		
2120	Accumulated Amortization of Electric Utility Plant - Intangibles	$0	Yes								
	Directly Allocated Net Fixed Assets			**$0**	**$0**	**$0**	**$2,212,386**	**$4,616,554**	**$21,815,140**	**$0**	**$0**
5005	Operation Supervision and Engineering	$0	Yes								
5010	Load Dispatching	$0	Yes								
5012	Station Buildings and Fixtures Expense	$0	Yes								
5014	Transformer Station Equipment - Operation Labour	$0	Yes								
5015	Transformer Station Equipment - Operation Supplies and Expenses	$0	Yes								
5016	Distribution Station Equipment - Operation Labour	$0	Yes								
5017	Distribution Station Equipment - Operation Supplies and Expenses	$0	Yes								
5020	Overhead Distribution Lines and Feeders - Operation Labour	$0	Yes								
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	$0	Yes								
5030	Overhead Subtransmission Feeders - Operation	$0	Yes								
5035	Overhead Distribution Transformers-Operation	$0	Yes								
5040	Underground Distribution Lines and Feeders - Operation Labour	$40,753	Yes				$3,148	$6,568	$31,037		
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	$131,640	Yes				$10,168	$21,216	$100,256		
5050	Underground Subtransmission Feeders - Operation	$0	Yes								
5055	Underground Distribution Transformers - Operation	$0	Yes								
5065	Meter Expense	$0	Yes								
5070	Customer Premises - Operation Labour	$0	Yes								
5075	Customer Premises - Materials and Expenses	$0	Yes								
5085	Miscellaneous Distribution Expense	$0	Yes								
5090	Underground Distribution Lines and Feeders - Rental Paid	$0	Yes								

5095	Overhead Distribution Lines and Feeders - Rental Paid	$0	Yes								
5096	Other Rent	$0	Yes								
5105	Maintenance Supervision and Engineering	$0	Yes								
5110	Maintenance of Buildings and Fixtures - Distribution Stations	$0	Yes								
5112	Maintenance of Transformer Station Equipment	$0	Yes								
5114	Maintenance of Distribution Station Equipment	$0	Yes								
5120	Maintenance of Poles, Towers and Fixtures	$0	Yes								
5125	Maintenance of Overhead Conductors and Devices	$0	Yes								
5130	Maintenance of Overhead Services	$0	Yes								
5135	Overhead Distribution Lines and Feeders - Right of Way	$0	Yes								
5145	Maintenance of Underground Conduit	$0	Yes								
5150	Maintenance of Underground Conductors and Devices	$316,672	Yes				$24,459	$51,038	$241,175		
5155	Maintenance of Underground Services	$0	Yes								
5160	Maintenance of Line Transformers	$0	Yes								
5175	Maintenance of Meters	$0	Yes								
5305	Supervision	$0	Yes								
5310	Meter Reading Expense	$0	Yes								
5315	Customer Billing	$0	Yes								
5320	Collecting	$0	Yes								
5325	Collecting- Cash Over and Short	$0	Yes								
5330	Collection Charges	$0	Yes								
5335	Bad Debt Expense	$0	Yes								
5340	Miscellaneous Customer Accounts Expenses	$0	Yes								
5405	Supervision	$0	Yes								
5410	Community Relations - Sundry	$0	Yes								
5415	Energy Conservation	$0	Yes								
5420	Community Safety Program	$0	Yes								
5425	Miscellaneous Customer Service and Informational Expenses	$0	Yes								
5505	Supervision	$0	Yes								
5510	Demonstrating and Selling Expense	$0	Yes								
5515	Advertising Expense	$0	Yes								
5520	Miscellaneous Sales Expense	$0	Yes								
5605	Executive Salaries and Expenses	$0	Yes								
5610	Management Salaries and Expenses	$0	Yes								
5615	General Administrative Salaries and Expenses	$0	Yes								
5620	Office Supplies and Expenses	$0	Yes								
5625	Administrative Expense Transferred Credit	$0	Yes								
5630	Outside Services Employed	$0	Yes								
5635	Property Insurance	$0	Yes								
5640	Injuries and Damages	$0	Yes								
5645	Employee Pensions and Benefits	$0	Yes								
5650	Franchise Requirements	$0	Yes								
5655	Regulatory Expenses	$0	Yes								
5660	General Advertising Expenses	$0	Yes								
5665	Miscellaneous General Expenses	$0	Yes								
5670	Rent	$0	Yes								

5675	Maintenance of General Plant	$0	Yes								
5680	Electrical Safety Authority Fees	$0	Yes								
5682	IFRS Placeholder Expense Account	$0	Yes								
5705	Amortization Expense - Property, Plant, and Equipment	$1,200,074	Yes				$92,690	$193,415	$913,969		
5710	Amortization of Limited Term Electric Plant	$0	Yes								
5715	Amortization of Intangibles and Other Electric Plant	$0	Yes								
5720	Amortization of Electric Plant Acquisition Adjustments	$0	Yes								
6105	Taxes Other Than Income Taxes	$0	Yes								
6205	Donations	$0	Yes								
6210	Life Insurance	$0	Yes								
6215	Penalties	$0	Yes								
6225	Other Deductions	$0	Yes								
	Total Expenses			$0	$0	$0	$130,465	$272,237	$1,286,437	$0	$0
	Depreciation Expense			$0	$0	$0	$92,690	$193,415	$913,969	$0	$0

Total Net Fixed Assets Excluding Gen Plant	**$4,322,816,988**	**Allocated**	**Residential**	**Quadlogic**	**GS < 50**	**GS - 50 to 999**	**GS - 1,000 to 4,999**	**Large Use >5MW**	**Street Light**	**etered Scattered Load**
Approved Total PILs	**$1,534,206**	**$10,166**	$0	$0	$0	$785	$1,638	$7,742	$0	$0
Approved Total Return on Debt	**$77,886,594**	**$516,096**	$0	$0	$0	$39,862	$83,179	$393,055	$0	$0
Approved Total Return on Equity	**$101,022,688**	**$669,402**	$0	$0	$0	$51,703	$107,887	$509,812	$0	$0
		Total	**$0**	**$0**	**$0**	**$222,815**	**$464,942**	**$2,197,047**	**$0**	**$0**

TAB 2

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

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Table of Contents

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[1] customers in those buildings were considered to constitute

[1] 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)[2] 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.

[2] 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[3].

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.

[3] 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).
-

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.

Table 4.2: Statistics for Base Scenario		
	Other Suite-Metered	**Quadlogic**
Number of Customers	110,798	9149
Annual MWh Weather Normalized	528,446	39,601
Average kWh per Customer per Month	397	361
1 NCP	129.1	7.9
4 NCP	457.3	31.1
12 NCP	1,201.6	85.1
1 CP	61.4	4.7
4 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.

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, Revised to Correct Error

Rate Base Assets		1 Residential Non Suite Metered	2 Residential Suite Metered	3 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
	Total Revenue	**$172,806,472**	**$34,316,511**	**$207,122,982**
				$0
	Expenses			$0
di	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
	Total Expenses	**$179,896,292**	**$25,169,630**	**$205,065,923**
				$0
	Direct Allocation	**$0**	**$400,000**	**$400,000**
				$0
NI	Allocated 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
	$1			**0**
				$0
				$0
	Rate Base Calculation			$0
				$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
ccum dep	Accumulated Depreciation	($878,184,708)	($104,324,603)	($982,509,311)
co	Capital Contribution	($103,520,233)	($9,629,552)	($113,149,785)
	Total Net Plant	**$732,851,677**	**$89,386,437**	**$822,238,115**
				$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
	Subtotal	***$440,025,957***	***$57,233,432***	***$497,259,389***
0.124819	**Working Capital**	**$54,923,788**	**$7,143,844**	**$62,067,633**
	Total Rate Base	**$787,775,466**	**$96,530,282**	**$884,305,747**
	($0)			**0**
	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**	**$1,657,060**
				$0
	Net Income on Direct Allocation Assets	**$0**	**$0**	**$0**
	Net Income	**($7,089,821)**	**$8,746,880**	**$1,657,060**
	RATIOS ANALYSIS			
	REVENUE TO EXPENSES %	86.08%	122.04%	90.50%
	EXISTING REVENUE MINUS ALLOCATED COSTS	($27,933,966)	$6,196,969	($27,933,966)
	RETURN ON EQUITY COMPONENT OF RATE BASE	-2.25%	22.65%	0.47%
	Revenue to Expenses % from BDR November Study	85.49%	119.59%	89.73%

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	2	10
USoA Account #	Accounts	O1 Grouping	Residential Non Suite Metered	Residential Suite Metered	Quadlogic customers
1565	Conservation and Demand Management Expenditures and Recoveries	dp	$6,115,046	$879,335	$105,297
1805-1	Land Station >50 kV	dp	$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	$26,865	$2,092
1808-2	Buildings and Fixtures < 50 KV	dp	$9,895,343	$888,306	$69,160
1815	Transformer Station Equipment - Normally Primary above 50 kV	dp	$4,571,616	$410,395	$31,952
1820-2	Distribution Station Equipment - Normally Primary below 50 kV (Primary)	dp	$33,592,887	$2,778,104	$163,208
1820-3	Distribution Station Equipment - Normally Primary below 50 kV (Wholesale Meters)	dp	$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	$7,884,306	$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	$158,812,315	$4,955,516	$135,655
1845-4	Underground Conductors and Devices - Primary	dp	$122,734,331	$20,900,875	$1,631,490
1845-5	Underground Conductors and Devices - Secondary	dp	$71,978,127	$2,245,977	$61,483
1850	Line Transformers	dp	$268,951,809	$18,929,620	$244,124
1855	Services	dp	$203,874,232	$13,844,265	$304,846
1860	Meters	dp	$78,252,874	$22,207,579	$6,730,759
1995	Contributions and Grants - Credit	co	($103,686,323)	($8,858,816)	($497,445)
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 Suite 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	di	$538,116	$44,502	$2,614
5017	Distribution Station Equipment - Operation Supplies and Expenses	di	$94,880	$7,847	$461
5020	Overhead Distribution Lines and Feeders - Operation Labour	di	$579,250	$50,805	$3,422
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	di	$316,206	$27,734	$1,868
5035	Overhead Distribution Transformers- Operation	di	$15,938	$1,122	$14
5040	Underground Distribution Lines and Feeders - Operation Labour	di	$521,313	$61,972	$4,533
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	di	$1,669,745	$198,494	$14,518
5050	Underground Subtransmission Feeders - Operation	di	$0	$0	$0
5055	Underground Distribution Transformers - Operation	di	$540,999	$38,077	$491
5065	Meter Expense	cu	$1,631,327	$462,958	$140,315
5070	Customer Premises - Operation Labour	cu	$1,962,761	$444,277	$36,686
5075	Customer Premises - Materials and Expenses	cu	$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 Way	di	$1,815,799	$159,261	$10,727
5150	Maintenance of Underground Conductors and Devices	di	$4,531,349	$538,674	$39,399
5160	Maintenance of Line Transformers	di	$70	$5	$0
5175	Maintenance of Meters	cu	$1,887	$535	$162
5305	Supervision	cu	$186,195	$42,146	$3,480
5310	Meter Reading Expense	cu	$484,748	$97,369	$239,838
5315	Customer Billing	cu	$4,924,304	$1,114,631	$92,039
5320	Collecting	cu	$6,148,443	$1,391,719	$114,919
5335	Bad Debt Expense	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 sub-group, 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 Model -- Base Scenario

Rate Base Assets		1 Residential Non Suite Metered	2 Residential Suite Metered	10 Quadlogic 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
	Total Revenue	**$172,812,863**	**$31,710,778**	**$2,594,417**
	Expenses			
dl	Distribution Costs (di)	$32,367,142	$3,084,747	$200,014
cu	Customer Related Costs (cu)	$19,882,961	$4,428,744	$699,701
ad	General and Administration (ad)	$23,940,184	$3,220,561	$368,779
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
	Total Expenses	**$180,328,015**	**$22,133,395**	**$2,427,133**
	Direct Allocation	**$0**	**$0**	**$90,000**
NI	Allocated Net Income (NI)	$20,882,512	$2,265,119	$216,863
	Revenue Requirement (includes NI)	$201,210,527	$24,398,515	$2,733,996
	Rate Base Calculation			
	Net Assets			
dp	Distribution Plant - Gross	$1,500,802,491	$158,052,081	$14,691,647
gp	General Plant - Gross	$216,958,451	$22,861,073	$2,089,984
accum dep	Accumulated Depreciation	($879,876,140)	($92,624,611)	($8,710,198)
co	Capital Contribution	($103,686,323)	($8,858,816)	($497,445)
	Total Net Plant	**$734,198,478**	**$79,429,726**	**$7,573,987**
	Directly Allocated Net Fixed Assets	**$0**	**$0**	**$0**
COP	Cost of Power (COP)	$364,056,515	$41,486,816	$3,115,413
	OM&A Expenses	$76,190,287	$10,734,052	$1,268,494
	Directly Allocated Expenses	$0	$0	$90,000
	Subtotal	***$440,246,802***	***$52,220,868***	***$4,473,907***
0.1248194	**Working Capital**	**$54,951,354**	**$6,518,179**	**$558,430**
	Total Rate Base	**$789,149,832**	**$85,947,905**	**$8,132,418**
	($0)	Rate Base Input equals Output		
	Equity Component of Rate Base	**$315,659,933**	**$34,379,162**	**$3,252,967**
	Net Income on Allocated Assets	**($7,515,152)**	**$9,577,382**	**$77,284**
	Net Income on Direct Allocation Assets	**$0**	**$0**	**$0**
	Net Income	**($7,515,152)**	**$9,577,382**	**$77,284**
	RATIOS ANALYSIS			
	REVENUE TO EXPENSES %	85.89%	129.97%	94.89%
	EXISTING REVENUE MINUS ALLOCATED COSTS	($28,397,664)	$7,312,263	($139,579)
	RETURN ON EQUITY COMPONENT OF RATE BASE	-2.38%	27.86%	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.[4] 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

[4] 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 Scenario Definitions

	Meter Reading Cost	Quadlogic kWh per Month	Quadlogic Load 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	Other 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.[5] 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.

[5] For example, New Brunswick uses a range of 95-105 to define target revenue-to-cost ratios for NB Power.

TAB 3

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

INTERROGATORY 55 – SECOND ROUND:

Reference(s): BDR Report, page 21

a) Please describe the types of administrative and marketing activities that are directly incurred for suite metering.

RESPONSE:

THESL's administrative and marketing activities include:

- Using external service providers to develop and produce Sell Sheets, Case Studies, Web Site Updates, Editorial Content, New Customer Information Forms, and brochures/folders to contain handout materials given to new THESL customers
- Memberships in trade organizations
- Booths at trade shows
- On-line access to industry websites
- Banners, small give-aways at trade functions

TAB 4

INTERROGATORIES OF ONTARIO SMART SUB-METERING WORKING GROUP

INTERROGATORY 6:

Reference(s): **Exhibit L1, Tab 4, Schedule 1:** ***Cost of Service Study for Individually Metered Suites in Multi-Unit Residential Buildings – Alternate Scenario Ordered by the Ontario Energy Board,*** **BDR, February 18, 2011 (the "Study")**

Please identify each of the specific accounts set out in Table 4.4 where BDR has done the following:

a) decreased the allocation to the Quadlogic customers relative to either or both of the residential suite metered sub-group and the residential non-suite metered customers;
b) increased the allocation to the Quadlogic customers relative to either or both of the residential suite metered sub-group and the residential non-suite metered customers;
c) Please confirm that all remaining accounts not identified in (a) and (b) above have been allocated solely on the basis of the allocator normally used in the OEB's cost allocation model (e.g., demand, customer count, etc.);
d) For each of the accounts identified in (a) and (b) above, please set out specifically the value of the change (in dollars and percentages) and the justifications for the change.

RESPONSE:

All the accounts shown in Table 4.4 have been allocated solely on the basis of the allocator normally used in OEB's cost allocation model e.g., demand, customer count, weighted meter capital and weighted meter reading, etc. The determination of the values of these allocators as they apply to the Quadlogic customers is described in BDR's February 18, 2011 report.

INTERROGATORIES OF ONTARIO SMART SUB-METERING WORKING GROUP

In addition to these allocations, there was a $90,000 direct assignment to the Quadlogic customers, representing the full amount of suite metering marketing expenses incurred in 2009. This amount was taken from account 5615 General Administrative Salaries and Expenses and is not listed in Table 4.4, which was an extraction of the significant accounts from the Trial Balance. This amount represents an increased allocation as compared with both the residential suite metered sub-group and the residential non-suite metered customers. $90,000 represents 3.3 percent of the total fully allocated cost of service of the Quadlogic customers. The appropriateness of this treatment was considered in light of the fact that THESL's web site includes information potentially of interest to any individually metered suite, and to the boards of condominium buildings that are not currently individually metered (i.e., now in the General Service class). However, BDR concluded that direct assignment of the full amount of 2009 costs represented a conservative scenario in view of the objective of the study, which was to enable the Board to consider whether the Quadlogic customers receive an undue subsidy from other residential customers.

TAB 5

RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON SUITE METERING EVIDENCE

INTERROGATORY 1:

Reference(s): L1/T5/S1/p. 1

At the above reference it is stated:

"The Updated BDR Study identified 9,149 suite metered customers served by Quadlogic technology at the end of 2009. For the current analysis, 24,898 suite meter customers are forecast to be served by Quadlogic meters in 2012".

a) The evidence states that the 9,149 suite meter customers are housed in 48 multi-unit residential buildings. Please provide the number of buildings in each of the 5 electricity load requirement categories: less than 50 KVA, 50 KVA to 100 KVA, 100KVA to 250 KVA, 250KVA to 500 KVA and more than 500 KVA. Please also provide the different supply voltages (kV) that are used to serve the buildings in each of the 5 load categories.

b) THESL forecasts 24,898 suite meter customers in 2012. How many multi-unit residential buildings does that customer forecast represent? Please provide the number of buildings in each of the 5 load categories: less than 50 KVA, 50 KVA to 100 KVA, 100KVA to 250 KVA, 250KVA to 500 KVA and more than 500 KVA. Please also provide the different supply voltages (kV) that are projected to serve the buildings in each of the 5 load categories.

c) How is the load for the common areas metered in multi-unit residential buildings that are suite metered and is it allocated in some manner to the suites in the building?

RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON SUITE METERING EVIDENCE

b) The breakdown for the 24,898 suite meters is:

Load Categories	Number of Buildings	Supply Voltages	Primary/Secondary Fed
0-50 kVA	1	120/208V	0/1
50-100 kVA	7	5@120/208V 2 @600V	2/5
100-250 kVA	19	3@120/208V 16@600V	16/3
250-500 kVA	38	2@120/208V 36@600V	36/2
>500 kVA	48	600V	48/0

c) For MURB facilities the common areas is, in most cases, separately metered. In a few cases, the common area use is netted out of the bulk meter by using the sum of the suite meter usage. In condominiums, the common element expenses are billed to the condominium corporation and are included in the monthly maintenance fees. For apartment buildings, the common usage is part of the building owners' operational expenses.

RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON SUITE METERING EVIDENCE

RESPONSE:

a) The breakdown of the 48 MURB buildings is:

Load Categories	Number of Buildings	Supply Voltages	Primary/Secondary Fed
0-50 kVA	0	Not applicable	0/0
50-100 kVA	4	1@120/208V 3@600V	3/1
100-250 kVA	8	600V	8/0
250-500 kVA	21	3 @120/208V 18 @600V	18/3
>500 kVA	15	600V	15/0

TAB 6

RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON SUITE METERING EVIDENCE

INTERROGATORY 4:

Reference(s): L1/T5/S1/p. 3

Re: Forecast Number of Quadlogic and other Customers

a) Please confirm that THESL's forecast of suites metered by Quadlogic equipment is 24,989, compared to 9,149 suites used in the previous cost allocation study filed on February 18, 2011.

b) Is THESL's forecast of suites metered by equipment other than Quadlogic also increased by a similar factor? What is THESL's forecast of the number of such suites?

RESPONSE:

a) THESL has forecast that there will be 24,989 Quadlogic customers as of mid-2012, and is the basis of the customer numbers used in the Cost Allocation Study.

b) THESL has not produced a forecast of suites metered by equipment other than Quadlogic. For the purposes of the current analysis, the forecast of total number of residential customers (which includes Quadlogic customers, non-quadlogic multi-residential customers, and all other residential customers) was reduced by the number of forecast Quadlogic customers. THESL's residential customer forecasting methodology does not include forecasting by different meter types. The forecast of non-Quadlogic residential customers is based on extrapolating historical number of all remaining residential customers after subtracting the Quadlogic metered customers.

TAB 7

RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON SUITE METERING EVIDENCE

INTERROGATORY 10:

Reference(s): L1/T5/S1/p. 4 and 7

It is stated when discussing meter costs that:

> "A sensitivity analysis was also conducted by directly allocating the estimated Quadlogic meter costs to the Suite Meter class, rather than using the model's meter cost weighting factors."

Table 3 – "Sensitivity of R/C Ratios to Alternative Assumptions" shows that the direct allocation of meter costs would reduce the Revenue-to-Cost ratio for the Suite Meter class from 104.7% to 99.2%. Please state why THESL used the model's meter cost weighting factors rather than direct allocation for these costs and which approach THESL would view as the most accurate.

RESPONSE:

The Cost Allocation Model designed and built by the OEB incorporates detailed information on costs by meter type for each rate class, and allocates these weighted meter costs using sound allocation logic to all rate classes. THESL believes this to be a reasonable methodology for all rate class.

Under the direct allocation methodology, while the Quadlogic meter costs are allocated directly to the Quadlogic class, the remaining meter costs are allocated to all classes – including the Quadlogic class – using the weighted meter logic. While this shortcoming could be partially overcome by assigning zero costs to the Quadlogic class in Tab I7.1, some meter costs – specifically wholesale meter costs – which are in the meter cost

RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON SUITE METERING EVIDENCE

USoA account will not get allocated to the Quadlogic class, while they should be. In the current model, there is no practical way to separate out and directly allocate these meter costs.

The direct allocation of the estimated Quadlogic meter costs to the Quadlogic class in the sensitivity analysis was performed to transparently demonstrate the results using a second method of allocation (and did not adjust for the shortcoming noted above). It is THESL's view that both methods likely provide a reasonable estimate for the allocation of meter costs, and the relatively narrow range of the result (especially considering the relatively small size of the Quadlogic class) demonstrates this.

TAB 8

RESPONSES TO SMART SUB-METERING WORKING GROUP INTERROGATORIES ON SUITE METERING EVIDENCE

INTERROGATORY 20:

Reference(s): **Suite Metering Supplementary Evidence, Exhibit L1, Tab 5, Schedule 1 ("Supplementary Evidence")**
Cost Allocation Model ("CA Model"), Exhibit L1, Tab 5, Schedule 2

THESL takes the position that fewer secondary costs should be allocated to Quadlogic Suite Meter customers because it believes that a larger percentage of the buildings served do not rely upon any secondary systems. It therefore follows that these buildings rely entirely on primary systems. It is noted at Sheet I9 "Direct Allocation Worksheet" of the CA Model that several USoA accounts have been directly allocated to the General Service Customers 50 – 999 and 1000 – 4999. These rate classes include as customers the common elements of buildings that contain Quadlogic Suite Meter Customers.

a) Does it not logically follow that for the same reasons that a general service "customer" is directly allocated costs and expenses, such as underground conduit (USofA 1840) and underground distribution lines (USofA 5045), that some of these costs should be directly allocated to the Quadlogic Suite Metered Class? If you disagree with this premise, please state your reasons in detail.

b) How are the amounts that are directly allocated to the General Service Customers 50 to 999 and 1000 to 4999 at USofA accounts 1840, 1845, 2105, 5040, 5045, 5150 and 5705 determined? Please provide any rationale used for determining the allocating factor or any other basis for the direct allocation of these accounts to these rate classes.

RESPONSES TO SMART SUB-METERING WORKING GROUP INTERROGATORIES ON SUITE METERING EVIDENCE

RESPONSE:

a) In accordance with "OEB Cost Allocation Review – Board Directions on Cost Allocation Methodology for Electricity Distributors", September 29, 2006 (RP-2005-0317): *"A distributor should identify any significant distribution facilities that are dedicated exclusively to only one customer rate class. The cost of such a facility, and the associated OM&A expenses, should then be directly allocated to the customer classification that it is exclusively dedicated to." "The consultations for this project indicated that direct allocation should be explored in the following circumstances: ..... * A feeder that is 100% dedicated to customer(s) in the same classification....." "Direct allocation must be applied if, and only if, 100% of the use of a clearly identifiable and significant distribution facility can be tracked directly to a single rate classification."*

In the cost allocation studies filed by THESL in previous rate filings, THESL has filed in accordance with these directions. With the addition of the Quadlogic class, and in accordance with the directions, THESL believes that some of these directly allocated costs may no longer meet the criteria. In other words, some of the costs previously identified as dedicated may now be serving both the Quadlogic class and the GS 50-999kW class. THESL has not, for the purposes of this study, done the detailed assessment as to how much of the directly allocated costs may no longer be directly allocable to the GS 50-999kW class. THESL notes however that of the total $2.9 million of revenue requirement allocated through direct allocation, only $222 thousand is currently allocated to the GS 50-999kW class (of which Quadlogic metered buildings are a small proportion of the total customer base).

RESPONSES TO SMART SUB-METERING WORKING GROUP INTERROGATORIES ON SUITE METERING EVIDENCE

b) In accordance with the above Board Directions, amounts have been directly allocated to the GS 50-999, the GS 1000-4999 and the Large Use >5MW customer rate classes for their respective identified dedicated feeders. An allocation for the capital cost of the dedicated feeders has been made to accounts 1840 Underground conduit and 1845 Underground conductors and devices, which are the OEB USofA accounts which carry the feeder capital costs. The associated allocation of OM&A for these allocated capital costs has been made to accounts 5040 – Underground Distribution Lines and Feeders – Operation Labour, 5045 – Underground Distribution Lines & Feeders - Operation Supplies & Expenses and 5150 – Maintenance of Underground Conductors and Devices, which are the OEB USofA accounts which carry the associated OM&A for these dedicated feeders. The associated allocation of amortization expense for these capital costs has been made to account 5705 – Amortization Expense – Property, Plant, and Equipment, which is the USofA account which carries the associated amortization expense for these dedicated feeders.

Dedicated feeders by customer rate class were identified. The dollar amount for allocation from rate base accounts 1840 and 1845 was determined, based upon the value of dedicated feeders by customer rate class relative to the rate base value of all feeders in accounts 1840 and 1845. This same basis was used to determine the portion of amortization expense for direct allocation relative to the total feeder amortization expense in account 5705. This same basis was used to determine the portion of OM&A for direct allocation relative to the total OM&A costs in accounts 5040, 5045 and 5150.

RESPONSES TO SMART SUB-METERING WORKING GROUP INTERROGATORIES ON SUITE METERING EVIDENCE

INTERROGATORY 21:

Reference(s): **Supplementary Evidence**
Updated BDR Study (Exhibit L1, Tab 4, Schedule 1)

Is the decrease in estimated consumption for the Quadlogic Suite Meter Class in part driven by THESL's estimates as to the number, percentage and/or consumption pattern of vacant units (either before first occupancy, or during a turnover)? If vacancy rates or consumption during unoccupied periods has been used by THESL to in any way influence the consumption rate (THESL has estimated 334 kWh/month in the CA Model) please provide all assumptions and data and a justification for the use of the assumptions and data.

RESPONSE:

Please see responses to Board Staff interrogatory 2 and 20 at Exhibit R4, Tab 1, Schedules 2 and 20, respectively.

TAB 9

RESPONSES TO TECHNICAL CONFERENCE UNDERTAKINGS ON SUITE METERING EVIDENCE

UNDERTAKING NO. JTC2.3:

Reference(s): none provided

To rerun model with a weighting of 7 for the first 3 months, 3.6 for the next nine months, then 7 for the first 6 months and 3.6 for the last 6 months.

RESPONSE:

The weighting factors were adjusted to reflect a) three months of current Quadlogic cost of $2.75 per month and nine months of forecast Quadlogic cost of $1.58 per month; and b) six months of current Quadlogic cost of $2.75 per month and six months of forecast Quadlogic cost of $1.58 per month. The resulting weighting factors are 4.3 and 5.0, respectively. The resulting Revenue to Cost ratios for the Quadlogic class are 99.1% and 97.7%, respectively.

	2009 Cost/meter	2012 Cost/Meter	Quadlogic at 3 Months 2009 Cost 9 Months 2012 Cost	Quadlogic at 6 Months 2009 Cost 6 Months 2012 Cost
Quadlogic	2.75	1.58	1.87	2.17
Residential	0.39	0.43	0.43	0.43
Ratio	7.0	3.6	4.3	5.0

TAB 10

RESPONSES TO TECHNICAL CONFERENCE UNDERTAKINGS ON SUITE METERING EVIDENCE

UNDERTAKING NO. JTC2.4:

Reference(s): Board Staff IR No. 6

To identify accounts where particular costs reside in the accounts including $60,000 in Account 5310.

RESPONSE:

Upon review of the project details, the additional cost indicated by Mr. Marchant at the technical conference was for hardware only. There are also additional software costs that increase the total project cost by $100,000. The table provided in response to SSMWG Interrogatory 6 is updated below to reflect the most recent cost estimates, and the USofA accounts in which each of the costs would be reflected.

CAPEX	As filed in IR response	Updated Budget	USofA Account
Hardware	$0	$65,000	1920
Software	$100,000	$135,000	1925
Labour	$160,000	$160,000	1925
External	$0	$0	n/a
Total	**$260,000**	**$360,000**	

RESPONSES TO TECHNICAL CONFERENCE UNDERTAKINGS ON SUITE METERING EVIDENCE

OPEX	As filed in IR response	Updated Budget	USofA Account
IT Support	$100,000	$100,000	5615
Labour	$202,500	$202,500	5310
External	$0	$0	n/a
Total	**$301,000**	**$301,000**	

Software	$30,400	$30,400	1925

TAB 11

RESPONSES TO TECHNICAL CONFERENCE UNDERTAKINGS ON SUITE METERING EVIDENCE

UNDERTAKING NO. JTC2.7:

Reference(s): none provided

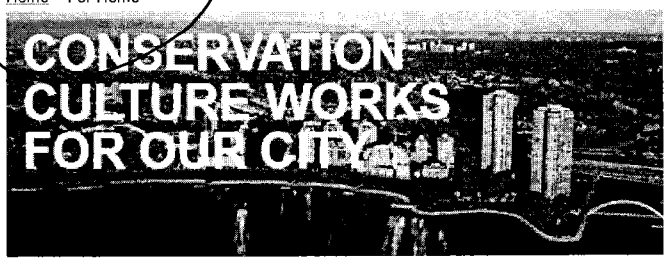
To rerun model with a consumption estimate of 334, the weighting factor used in JCT2.3, and allocate Quadlogic meter costs.

RESPONSE:

Using the meter reading weighting factors as provided in JTC2.3, an average Quadlogic consumption level of 334 kWh per month, and directly assigning the Quadlogic meter capital costs to the Quadlogic class (without making any other adjustments to the allocation of the remaining meter costs in the model), the resulting Revenue to Cost ratios for the Quadlogic class are calculated as 93.9% and 92.6%.

TAB 12

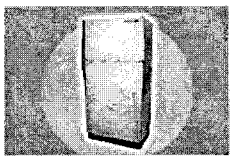
Customer Care: (416) 542-8000 | 8:00am - 4:30pm | Monday - Friday



RATE CHANGE EFFECTIVE NOVEMBER 1

Rate change effective Nov. 1, 2011
Changes to rates and Time-of-Use periods will affect your bill.

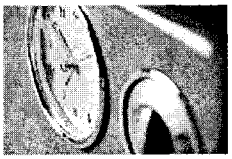
+ read more



Fridge & Freezer Pick Up

Have an old fridge or freezer? We'll haul it away for FREE. Book an appointment.

+ read more



Learn to Shift to Save

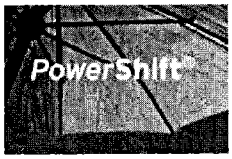
Log onto your TOU Account
Find out how to better manage your bill.

+ read more

saveONenergy Coupons

Save instantly on a wide range of energy-efficient products for your home!

+ read more



*Power*Shift®

If you're a *peaksaver* customer, sign up for *Power*Shift. It's an easy way to reduce your electricity use.

+ read more

Greater Toronto's Top Employers 2011 — Canada's Greenest Employers 2011

Customer Care: (416) 542-8000 | 8:00am - 4:30pm | Monday - Friday

RATE CHANGE

Rate change effective Nov. 1, 2011

Changes to rates and Time-of-Use periods will affect your bill.

+ read more

Suite metering means you can control your electricity costs by managing your usage. So if you use electricity wisely and practice conservation it will be reflected in your bill. That's much better than having to pay a share of the building's total electricity use where you could be paying more than you consume.

YOUR METER WORKS WITH TIME-OF-USE RATES

With Time-of-Use rates, the charge for electricity varies during the day. Typically the lowest rates apply early in the morning, again in the evening and on weekends and holidays.

You can take advantage of this by shifting some of your electricity use to the lowest-cost times. For example, you could do your laundry or run your dishwasher during these off-peak hours.

That helps reduce your bill, and also helps our environment. Every little bit counts and this is an easy way to do your part. Learn more about Time-of-Use rates here.

WHAT ABOUT ELECTRICITY IN THE BUILDING'S COMMON AREAS?

Your monthly condominium fees will include your share of the electricity used for lighting in the hallways, operating elevators, lighting and running fans in underground garages and outdoor lighting.

ARE YOU A NEW CUSTOMER?

Download our **New Customer Information form.**

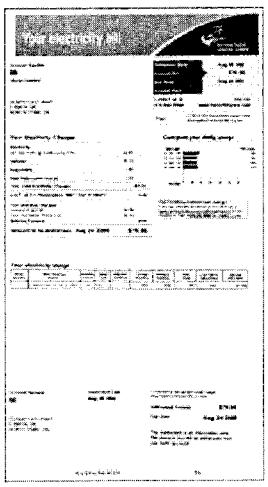
SIGN UP FOR ELECTRONIC BILLING

Electronic billing is the most convenient way to take care of paying your electricity bill. It takes just minutes to sign up at Toronto

SUITE METERS

Builders

Condo Boards



Click above to view sample electricity bill

Hydro eBills. You can also choose our pre-authorized payment plan which deducts the same amount from your account every month to help you budget.

CONSERVATION IDEAS FROM TORONTO HYDRO-ELECTRIC SYSTEM

- Typically you use nearly 50% of your electricity for heating and cooling. So in the summer try to keep your thermostat at 25 degrees Celsius. In the winter, aim for 22 degrees Celsius.*
- Energy-efficient appliances help you save, too. Consider how you use them to save electricity.
- Use compact fluorescent bulbs wherever possible. They're much more efficient than the old incandescent bulbs.
- Turn off lights and equipment such as computers, TVs and stereos when they're not being used. If you go away for more than a day, consider unplugging your TV, computer and any other equipment. They all use electricity to remain in stand-by mode, even when they're not on.

***Source: "Heating and Cooling your Home: A Conservation Guide," Government of Ontario, 2004.**

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.

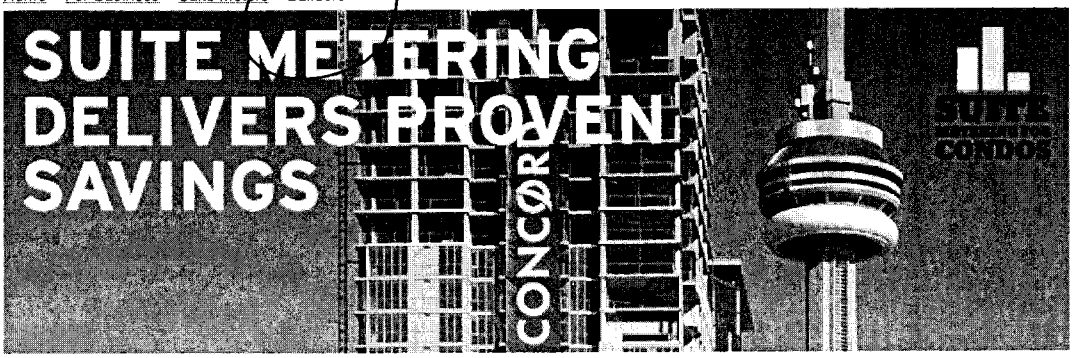
Questions or Comments

If you'd like to know more about suite metering for your suite, please contact:

Maria D'orazio
Tel: 416-542-3100 ext. 50037

Customer Care: (416) 542-8000 | 8:00am - 4:30pm | Monday - Friday

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
Vault Owner Resources



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

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 post-installation 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

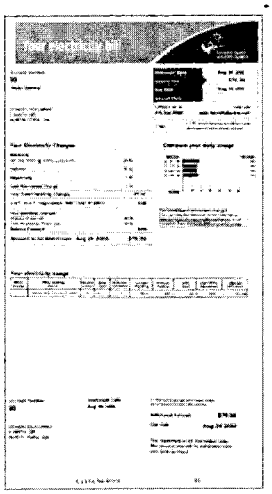
SUITE METERED UNITS WORK WITH TIME-OF-USE PRICING

All suite-metered units have "smart meters" that work with

SUITE METERS

Suite Owners

Condo Boards



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

LEARN MORE ABOUT

TOU pricing. This pricing structure will offer further incentives to unit 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 TOU pricing.

To help unit owners monitor their usage and encourage time-shifting, 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.

SUITE METERS

Click here to contact us

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.

Questions or Comments

If you'd like to know more about suite metering for your suite, please call 416-542-3443 or email suitemeters@torontohydro.com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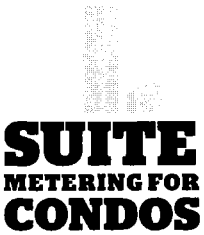
FAMILY FRIENDLY
2011
Canada's Greenest
Employers



The right choice for individual control

This condominium features individual suite metering for electricity. That means you can control your electricity costs by managing your usage. That's much better than having to pay a share of the building's total electricity use where you could be paying more than you consume.

Your meter is a smart meter

Here's more good news – all suite meters are based on smart metering technology and are programmed to accommodate Time-of-Use billing, when introduced. Time-of-Use rates can help you control how much you pay for electricity.

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


Your Suite Meter Puts You In Control
SUITE METERING FOR CONDOS
This condo features suite metering. And that's a good thing
toronto hydro electric system

Your Suite Meter Puts You In Control

SUITE
METERING FOR
CONDOS

"This condo
features suit
metering. An
hat's a good
hing."

YOUR
LOGO
HERE

toronto hydro
electric system

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 Management Inc.**
- **Case Study - Cape Property Management Ltd.**
- **Case Study - Canlight Hall Management Inc.**

LEARN MORE ABOUT SUITE METERS

SUITE METERED UNITS WORK WITH TIME-OF-

Click here to contact us.

USE PRICING

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 Hydro 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


Greater Toronto's
Top Employers
2011
FAMILY FRIENDLY
2011
Canada's Greenest
Employers

"Toronto Hydro's clear communications convinced the condo boards."

David Blois,
Wilson Blanchard Management Inc.

Electricity budget reduced by 50 per cent

Luxury towers look for even greater savings

As they were going to tender for suite metering in 2009, the boards of Broadway One and Broadway Two condominiums on Beecroft Road were also preparing their 2010 budgets. In anticipation of savings from suite metering, they reduced the line item for electricity by 50 per cent, which was then reflected in the fees for common areas.

David Blois of Wilson Blanchard Management Inc. feels this is appropriate for budgeting, but believes the results will show even greater savings.

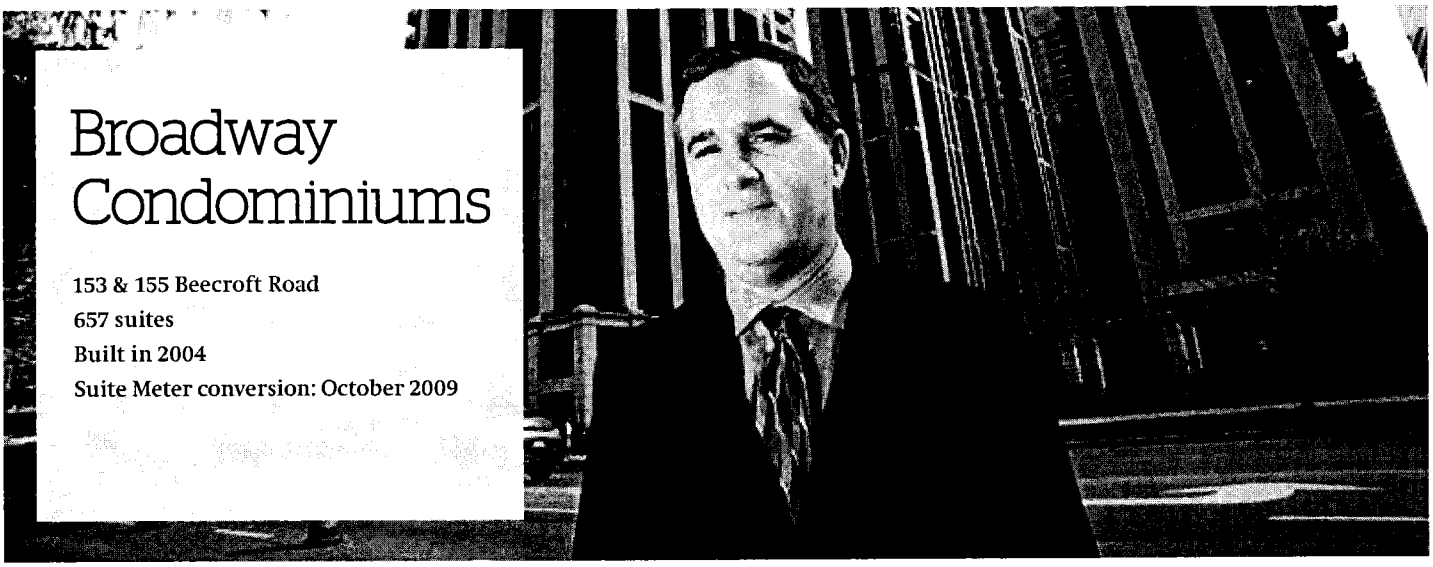
Electricity use reduced by 15% in suites

Working with Toronto Hydro-Electric System (Toronto Hydro), Blois calculates that electricity usage in the suites has already decreased by approximately 15 per cent.

Like many other condos, a large percentage of these suites are rented. In the past, when electricity was included in the fees for the common areas, many tenants had little incentive to manage their electricity use. Early indications are that tenants and owners alike are now more conscious of how they're using electricity.

For more information visit
torontohydro.com/suitemeters

toronto hydro
electric system



Broadway Condominiums

153 & 155 Beecroft Road
657 suites
Built in 2004
Suite Meter conversion: October 2009

Billing transparency and high service levels appeal to boards

In choosing Toronto Hydro, the boards took into account the transparency and clarity in the billing process, the significant customer care department and the security of working directly with the regulated public utility. Blois mentions that the boards felt that the utility was more strictly governed and this was reassuring.

Blois adds, "We were also satisfied that should Toronto Hydro have any issue over billing with a customer, they would resolve it directly and it would not come back to the condominium corporation in any way."

Reduction in carbon footprint

"The board members and other suite owners have long expressed an interest in doing what they can within their buildings to be environmentally responsible. Wilson Blanchard had reduced the carbon footprint in the common areas by switching garage lighting to high efficiency fluorescents and implementing variable speed drives for the common hallway ventilation systems at each building. Suite metering was a natural continuation of their conservation efforts."

Informative meetings and consulting in advance

Toronto Hydro hosted presentations to the boards which allowed everyone to ask questions and get answers. For those unable to attend, Toronto Hydro left literature.

Smooth transition

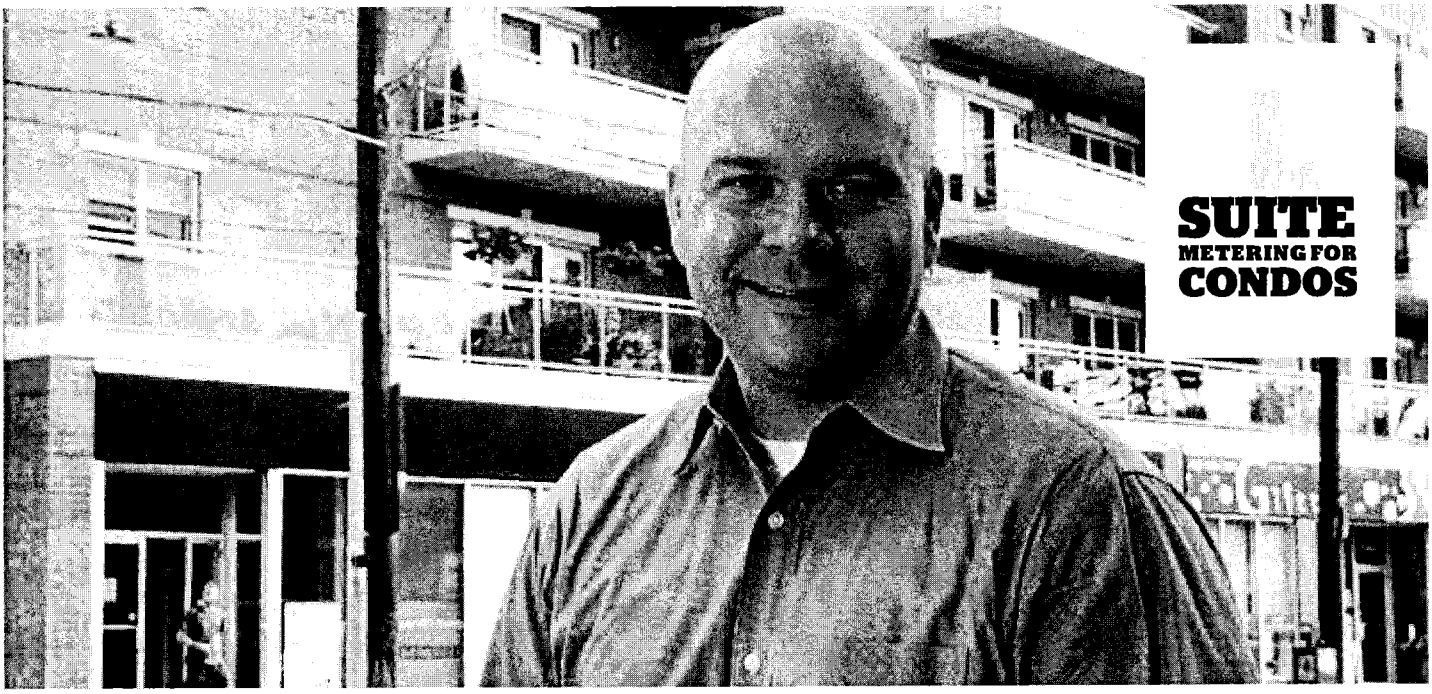
Blois was very impressed with Toronto Hydro's implementation. "They had a site supervisor here at all times. The job was completed at each building in about three weeks with minimal disruption. Communication throughout was excellent."

SUITE METERING FOR CONDOS

For more information visit
torontohydro.com/suitemeters

Or contact us today at:
Tel: 416.542.3443
Email: suitemeters@torontohydro.com

toronto hydro electric system



"This condo board sees both the cost and environmental benefits."

Michael Kudrac,
Cape Property Management Ltd.

Suite metering is fair for all condo owners

Flawless conversion to suite metering

When Cape Property Management took over One Lawlor Avenue, the conversion to suite metering was high on the list of energy efficiency improvements for the building. Michael Kudrac had worked on a similar conversion and understood the process, its benefits and the ease of working with Toronto Hydro.

"The project was flawless," said Kudrac. "Toronto Hydro delivered above and beyond our expectations."

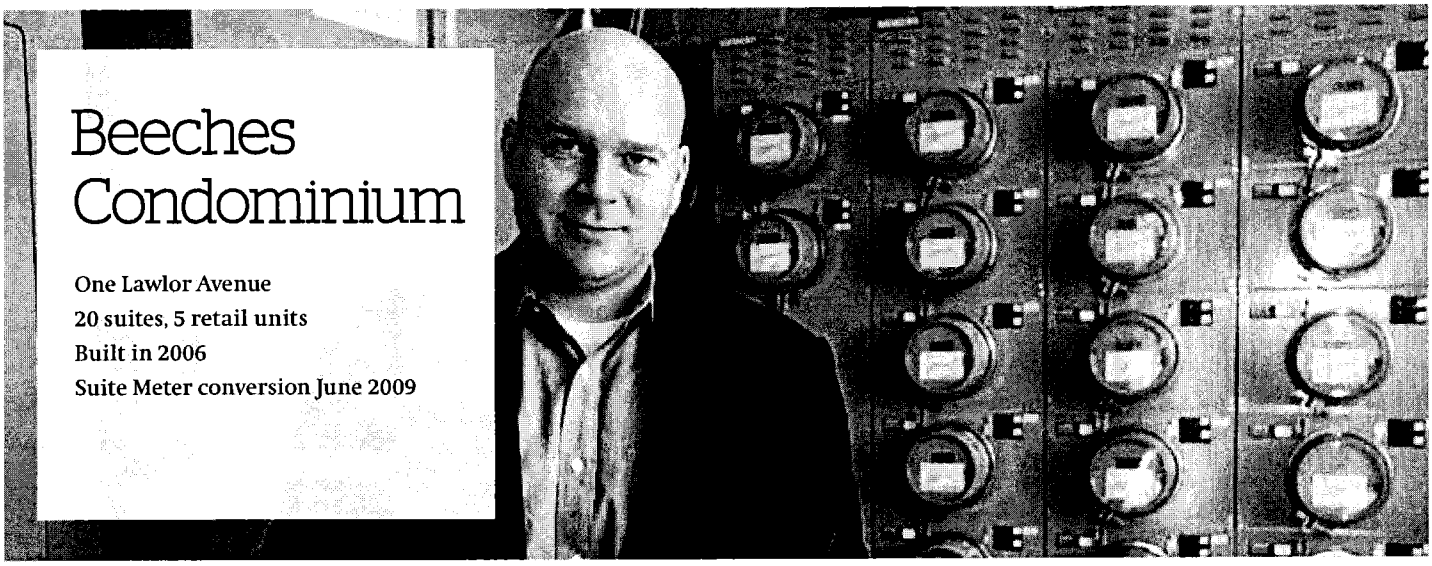
Toronto Hydro hosted an information session for owners

Anytime there are changes to people's homes, there are bound to be questions. Toronto Hydro representatives worked with the condominium board to organize an information session for all owners to attend.

"That really helped," said Kudrac. "The Toronto Hydro rep was able to answer everyone's questions. He also left materials for owners to read."

For more information visit
www.torontohydro.com/suitemeters

toronto hydro electric system



Beeches Condominium

One Lawlor Avenue
20 suites, 5 retail units
Built in 2006
Suite Meter conversion June 2009

The conversion was completed in one day

Once the condominium board approved the conversion, a date was set, and the work was completed within one day. Now every owner is a Toronto Hydro customer and pays for the electricity they use in their suites. The common fees have been appropriately reduced. Owners still pay their share for electricity used in hallways, garages, elevators and other common requirements.

Suite metering is fair to all owners

Kudrac points out two characteristics of this group of owners. "They were already environmentally aware and conscious of how they used electricity. But of course, they had no real way of measuring, so they like the fact that they can see what they use. Also, a percentage of our owners are snowbirds – they spend a few months down south each year, so when they're away, they're not consuming electricity. Suite metering is especially important to them."

Easy for owners and property management companies

Toronto Hydro's expertise and responsiveness made an impression on Kudrac. "Toronto Hydro's customer service is great. They answer my calls, they show up when they say they will, they do a great job and they clean up after themselves. I'll continue to work with them on other buildings. Makes life easy for me."

SUITE METERING FOR CONDOS

For more information visit
www.torontohydro.com/suitemeters

Or contact Leo Guidolin today at:
Tel: 416.542.3100 ext. 50327
Email: lguidolin@torontohydro.com

toronto hydro electric system

"The owners already knew they wanted to convert It was an easy process."

Don Sawyer,
Canlight Hall Management Inc.

The board sees the environmental benefits of suite metering

Overall electricity consumption has been reduced

Canlight Hall Management is implementing a number of energy reduction programs in their buildings. When they introduced the idea of suite metering to the board at 21 Markbrook Lane, they found it was already under consideration. Some owners admitted that previously they had no incentive to use less electricity. After the conversion, there is keen interest in reducing use and finding ways to save.

Owners have changed habits

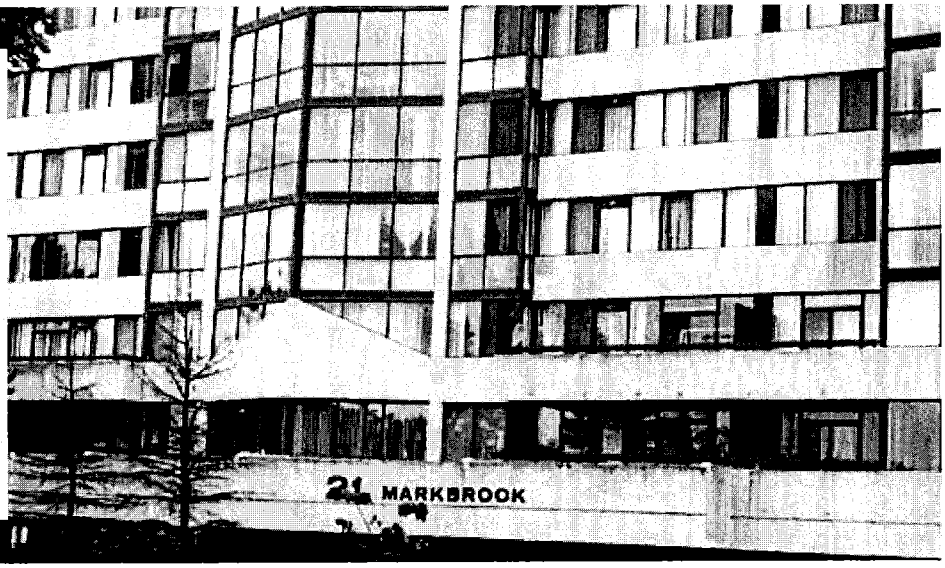
Don Sawyer of Canlight Hall Management mentioned that suite metering was brought up at the recent Annual General Meeting of the board. "Some owners had specific tips they shared. They've changed how they're using electricity, even unplugging appliances, computers and televisions when they go out for the day. It's been a big change in perception here."

For more information visit
www.torontohydro.com/suitemeters

toronto hydro electric system

21 Markbrook Lane

175 suites
Built in 1990
Suite Meter conversion May 2009



Working with Toronto Hydro was easy

The actual conversion process went seamlessly. Once the agreement was in place, Toronto Hydro took over and installed the meters and ensured that the owners had all the information they needed about their Toronto Hydro bill and where they could access further information on the website. When asked about that aspect of the project, Sawyer simply says, "Things went fine. It has been a very positive experience."

Canlight Hall is managing costs in common areas

In conjunction with the conversion to suite metering, Canlight Hall Management is reducing electricity usage in the common areas of the buildings. This will allow them to manage the common condominium fees. Programs underway include complete energy audits of their buildings, lighting retrofits for all common areas, new controllers on garage fans that could cut energy use by 50% and upgrades to the chiller.

It's simply good management

Sawyer and his team are working with all appropriate programs to make their buildings as energy efficient as possible. "We start with the audits and we look at everything – electricity, gas and water. Working with Toronto Hydro and the suite meter program is a key part of that. Today, that's just responsible and part of being a leading property management company."

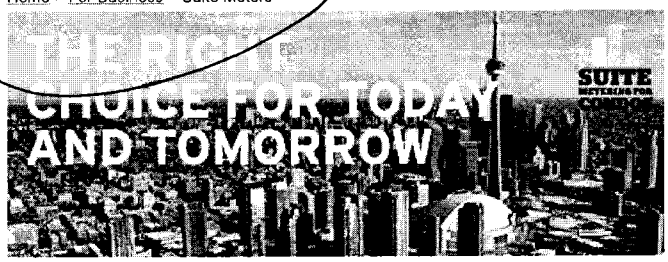
SUITE METERING FOR CONDOS

For more information visit
www.torontohydro.com/suitemeters

Or contact Leo Guidolin today at:
Tel: 416.542.3100 ext. 50327
Email: lguidolin@torontohydro.com

toronto hydro electric system

Customer Care: (416) 542-8000 | 8:00am - 4:30pm | Monday - Friday



RATE CHANGE

Rate change effective Nov. 1, 2011

Changes to rates and Time-of-Use periods will affect your bill.

+ read more

Individual suite meters are a good idea for everyone. Suite owners can control how much electricity they use and pay for. And now, with Time-of-Use (TOU) rates, they can time-shift activities like dishwashing and laundry to better manage their costs. Builders, landlords and property managers know that suite meters are equitable and therefore, desirable.

PEOPLE WHO PAY FOR ELECTRICITY USE LESS

Research has proven that people who pay for their own electricity consumption usually use less. Today, that's important. Suite metering is a fair way to allocate costs.

Those who consume more, pay more. Also, since the electricity used in suites is paid directly, the overall monthly maintenance fees can be adjusted accordingly.

Smart builders include suite metering right from the start.

Condo boards and property managers know it pays to switch to suite metering.

SUITE METERS

Suite Owners

Builders

Condo Boards

Greater Toronto's Top Employers 2011 | 2011 Canada's Greenest Employers

TAB 13

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

EB-2010-0142

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.

BEFORE: Ken Quesnelle
Presiding Member

Marika Hare
Member

Karen Taylor
Member

PARTIAL DECISION & ORDER

The Application and the Proceeding

Toronto Hydro-Electric System Limited ("THESL" or the "Applicant") filed an application dated August 23, 2010 with the Ontario Energy Board (the "Board") under section 78 of the *Ontario Energy Board Act, 1998*, S.O. c.15, Schedule B) (the "Act"), for an order or orders approving just and reasonable rates and charges for the rate year commencing May 1, 2011.

The application included increases in operating expenses, increases in capital expenses, changes to the cost of debt and equity, as well as a smart grid plan. The

With respect to the IFRS deferral account (1508), the Board is concerned about the significant costs incurred by THESL in becoming IFRS compliant. As pointed out by several parties, these costs seem out of line with spending by other utilities. The testimony provided was that about half of the costs were due to inadequate records with respect to the fixed-asset ledger. The Board agrees with the arguments of certain parties that the costs to reconstruct records that should have been properly maintained from the outset should not be recoverable from ratepayers. The Board therefore disallows half of the amount, i.e. $3.05 M, as THESL has stated that this was the approximate amount related to these costs.

Of the remaining $3.05 M, the Board does not believe it will be of probative value to wait until a greater sampling of IFRS implementation costs is obtained from other utilities to determine the reasonableness of the remaining $3.05 M. There will undoubtedly be many reasons why IFRS implementation costs may differ from one distributor to another. The Board orders the disposition of $3.05 M from account 1508.

The Board has determined that the Line Loss Variance Account (1588) will be continued. In doing so, the Board is mindful of the fact that managing line losses is an inherent part of a distributor's role and function, as argued by several parties. However, this is a generic issue to be dealt with in the future, and one which requires adequate data in order to address properly. In the interim, the Board does not believe THESL should be treated any differently from any other distributor in the sector.

The disposition of all other deferral and variance accounts is approved as filed.

Suite Metering Issues

Background

The Board's decision of April 9, 2010 on THESL's EB-2009-0139 application of August 28, 2009 made the following finding regarding suite metering issues:

> ...the Board finds that THESL should undertake a cost allocation study related to its provision of suite metering services. The study shall include an analysis of the implications of creating and maintaining a separate rate class for those customers served in this manner. The Board is of the opinion that the potential for cross-subsidization is ongoing and that there may be merit in the

establishment of a separate rate class for multi unit-residential customers that are served directly by THESL through its suite metering provision. This should be filed as part of the next cost of service application, which THESL intends to file later this year, but in any event no later than six months from the date of this Decision.

On July 29, 2010, THESL sent a letter to the Board which noted the above direction from the Board. THESL stated that it had recently completed an RFP for the provision of services to develop a cost allocation study related to suite metering in its service territory and that the study was expected to be completed by the end of December 2010. Accordingly, THESL requested an extension to the filing deadline and proposed to file the study in early 2011.

On August 5, 2010, the Board granted THESL an extension of this deadline to December 1, 2010.

On December 1, 2010, THESL filed the relevant study entitled *Cost of Service for Individually Metered Suites in Multi-Unit Residential Buildings*. (the "initial study") dated November 29, 2010. The study was prepared by BDR North America Inc. ("BDR").

The key conclusion of the initial study was that suite-metered customers are paying their full cost of service, and more, and are not subsidized by other customers. Non-suite-metered residential customers and suite-metered customers were within the range of acceptable revenue to cost ratios identified by the Board. Therefore, the initial study concluded that separation of the class might not result in immediate adjustments to the level of rates, but if an adjustment were to be made in the direction of unity, it would result in a rate decrease for the suite-metered sub-class ("SMSC") customers and a rate increase for other residential customers. Finally, the initial study concluded that it did not appear that separation of the residential class would have a significant impact on the allocation of costs to other customer classes.

On January 14, 2011, the Smart Sub-metering Working Group ("SSMWG"), an intervenor in the proceeding, filed a Notice of Motion (the "Motion") requesting, among other things, that the Board direct THESL to provide full and complete answers to the interrogatories of the SSMWG on suite metering issues.

On January 21, 2011, the Board issued its Decision and Order on Motion (the "Motion Decision"). The Board denied the Motion with the exception of compelling THESL to provide an additional response to one part of one of the disputed interrogatories. However, the Board also found that it would be assisted by the provision of additional information by THESL in this area and required THESL to request BDR to produce an alternative scenario arising from the study (the "further study").

The further study required by the Board was to produce an alternative scenario to that provided in the initial 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 SMSC and (iii) all of the other residential customers, using the Board's approved methodologies. The Board specified that as discussed in the initial study, no secondary services costs should be allocated to the three residential customer sub categories specified by the Board, unless these costs would otherwise exist for THESL's account; i.e., be a cost to THESL. The Board stated that THESL, in undertaking this alternative scenario, through its expert BDR would be free to attach to it, any caveats or concerns which it had about the revised scenario.

The Board also directed THESL to 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 THESL customers relative to the suite metering customers.

On February 18, 2011, THESL filed the further study that had been ordered by the Board. In the further study, it was stated that the exercise had subdivided the SMSC from the November study into two sub-groups: the approximately 9,000 customers metered with Quadlogic meters, with a relatively low revenue-to-cost ratio and the other suite-metered customers with a high revenue-to-cost ratio. The further study stated that the key difference in the cost profile of these two customer groups is the high cost of Quadlogic meters, although the effects were stated as partially mitigated by the lower proportionate level of secondary costs.

The further study stated that 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 sub-group, which is the non-suite-metered customers, with a revenue-to-cost ratio of 86:100.

The further study concluded that in its base case, the Quadlogic customers' revenue-to-cost ratio of 95:100 is well within the boundaries set by the Board for acceptable ratios, as well as by more stringent definitions.

Where the alternate scenarios were concerned, the further study concluded that a scenario reflecting what it characterized as confidently expected changes in meter reading costs, would raise the revenue-to-cost ratio for the Quadlogic customers to a level above unity, or full cost recovery through the rates. The further study noted that while other technology and pricing changes may create additional improvements, they could not be predicted as confidently as the meter reading cost change and therefore had not been reflected.

In its Argument-in-Chief, THESL adopted and reiterated its submissions made during the SSMWG Motion hearing that the initial study responded appropriately to the requirements of the Board, as outlined in its EB-2009-0139 decision. THESL submitted in addition that the further study had properly and fully met the Board's requirements as provided by its direction contained in the Motion decision.

THESL submitted that these studies show that a claim cannot be made that the residential suite metering sub-class is being subsidized by the residential class as a whole since the results show that irrespective of the precise definition of the 'suite metering sub-class,' that sub-class has a higher Revenue/Cost ratio than the residential class as a whole, and in the case where the sub-class comprises all members of the suite metered multi-unit residential building' group, the Revenue/Cost ratio significantly exceeds unity.

THESL argued that insufficient grounds exist to justify creating a separate sub-class of suite metered customers, especially when that sub-class is narrowly defined on the basis of what it saw as a transient technology. THESL stated that the evidence indicates that the Quadlogic sub-class Revenue/Cost ratio is well within Board guidelines and is in fact closer to unity than the residential class overall.

THESL submitted that while distributors were required by the Board to be suppliers of last resort to master consumers who wish to, or must, install unit meters through the provisions of the *Distribution System Code,* the SSMWG companies had willingly entered an existing marketplace and were sufficiently enticed to remain in that market, while being under no compulsion to do so.

THESL concluded that at the present time there is no clear basis to justify discrimination of the Revenue/Cost ratios as between two or more sub-classes of the residential class and as such no change should be made at this time.

SSMWG stated that its concern has always been the impact of THESL's Quadlogic suite metering activities and related conduct on the competitive market which exists for the installation, maintenance and customer care functions of multi-unit residential customers served by Quadlogic or similar-type metering systems.

SSMWG submitted that requiring THESL to establish a separate rate class for its suite metering customers may not be the best way for the Board to proceed.

SSMWG submitted that the Board has acknowledged and confirmed on several occasions that unit sub-metering is a competitive market activity and that THESL confirmed under cross-examination that it is competing against the members of the SSMWG for its Quadlogic suite metering customers. SSMWG submitted that while there can be no question that THESL is directly competing in the competitive suite-metering marketplace, it is not subject to the rigours of the competitive marketplace, unlike each of the SSMWG members. SSMWG expressed the belief and stated that the experience of its members shows that THESL's conduct in this competitive marketplace, without appropriate safeguards, is distorting and negatively impacting the competitive marketplace.

SSMWG argued that a key question of this proceeding had been whether or not other THESL ratepayers are cross-subsidizing THESL's Quadlogic customers and that the answer to this question was "yes", with the February BDR study estimating the amount of this cross-subsidy to be in the range of five percent. SSMWG's submission cited other factors that in its view increased the subsidy beyond the five percent figure. SSMWG also suggested that the magnitude of the subsidy was likely to increase in the future.

SSMWG submitted that the question before the Board at this time is what the significance of this subsidy is. SSMWG suggested that THESL and BDR played down the five percent subsidy because other residential ratepayers are being cross-subsidized to a slightly greater extent. SSMWG argued that what this argument failed to recognize was the fundamental distinction between the acceptable degree of cross-subsidy for the purpose of ratemaking in a non-competitive environment and the situation of a cross-subsidy existing in respect of competitive market activities undertaken by a rate-regulated utility. SSMWG submitted that in the latter instance, there can be no question that any cross-subsidy risks damaging the competitive market by making it difficult for all parties to compete and by giving improper price signals to consumers with the ultimate result of continued and increasing cross-subsidy potentially ruining the competitive market.

SSMWG noted that, generally speaking, distribution utilities are required to conduct competitive activities within an affiliate and that one reason the *Affiliate Relationships Code for Electricity Distributors and Transmitters* was created was to prevent any competitive advantage being provided to any affiliate of a regulated utility so as not to distort the competitive marketplace. SSMWG submitted that the fact that THESL has undertaken Quadlogic metering activities within the utility should not allow it to escape or avoid the rigours of safeguards to protect the competitive marketplace and to ensure that potential customers receive appropriate price signals.

SSMWG stated that in contemplating potential remedies for this situation, it was mindful of the regulatory burdens that would accompany a requirement that THESL annually develop rates for a subclass of customers in multi-residential buildings served by Quadlogic meters, which in the SSMWG's view would undoubtedly require THESL to undertake additional and expanded cost allocation studies each year and the SSMWG and intervenors to inquire about and to consider in greater detail such studies and the impacts on various stakeholders. SSMWG submitted that all of this would add costs to the process and in addition there would be ongoing administrative costs to THESL arising from the addition of a new rate subclass.

SSMWG also argued that there is also an issue of fairness in that it is the developer and building owner that benefit from the space savings that the use of the Quadlogic metering system provides. SSMWG submitted that where the developer or building owner is able to sell or lease this space, it stands to reason that all residential ratepayers should not be contributing to or paying for these benefits.

SSMWG therefore submitted that the question which arises is how in an efficient and practical fashion can safeguards be implemented which will eliminate or significantly reduce the likelihood of THESL negatively impacting the competitive market and/or sending out inappropriate price signals. SSMWG argued that given the complexity and additional costs of developing a new residential rate subclass or developing a rate adder based upon the additional costs of installing, maintaining and reading Quadlogic meters, it did not recommend that the Board order THESL to undertake either of these options.

SSMWG proposed instead what it stated was a straightforward and more cost effective and efficient way to deal with its concerns and create a level playing field in respect to the Quadlogic metering system business. This was to view it as a separate business unit.

SSMWG argued that it is only in respect of an upgrade to a Quadlogic metering system where THESL is competing with members of the SSMWG. The SSMWG argued that in order to make the playing field truly level, THESL should be required in the case of all new multi-unit residential developments to undertake only one economic evaluation and to require a building developer to pay the same or no capital contribution whether the building is installed with Quadlogic meters by a member of the SSMWG or THESL.

SSMWG submitted that the Board would, in effect, be requiring THESL to create a notional business for its Quadlogic suite metering activities and to prepare its offers to connect and undertake economic evaluations on the assumption that each new building will be served by a bulk meter (including the assumption that revenues would be received on that basis). SSMWG stated that under its proposal all of the activities from the bulk meter upstream would remain THESL activities, while all metering activities downstream in the notional Quadlogic meter business unit would be viewed as a separate and distinct activity to THESL's Quadlogic suite metering business activities.

SSMWG concluded that it did not wish to unnecessarily complicate the regulatory process and add additional costs to any stakeholder. SSMWG submitted that it was for this reason that it had attempted to propose a remedy which would be simple and cost effective to implement and which would clearly level the playing field between THESL and the privately-owned unit submetering companies which comprise the SSMWG.

Staff made no submissions on the suite metering issues. BOMA noted that the BDR Report had stated on page 3 that it did not appear that separation of the residential class would have a significant impact on the allocation of costs to other customer classes. BOMA submitted that based on this evidence, it did not take any position on the appropriateness of the cost allocation associated with suite metering, nor on the need to establish a separate rate class for multi-unit residential customers that are served directly by THESL through its suite metering provision.

CCC submitted that the evidence in this case was not, in its view, sufficient for the Board to move off of its long-standing rate-making principles, specifically that while every residential consumer imposes different costs on the system, rates are based on average costs. CCC argued that the evidence of BDR shows that the very problem the SSMWG assumed exists does not exist.

CCC submitted that where the issue of the competitiveness of the suite metering market was concerned, there was no evidence presented that THESL is somehow thwarting competition, or acting in a way that is bringing harm to other service providers. CCC noted that it may well be difficult for the members of the SSMWG to compete with THESL given THESL's position as a regulated utility and a longstanding service provider. However, CCC stated that the Government of Ontario has promoted competition in this market by allowing alternate service providers while at the same time requiring THESL to continue to provide the service. CCC submitted that if THESL is undermining the ability of the other service providers to compete, evidence to demonstrate this should be brought to the Board in the appropriate context.

SEC submitted that it had been its consistent position that participation by regulated utilities in competitive markets is generally to be avoided, and if it cannot be avoided, it should be supervised very tightly by the regulator. SEC stated that subject to its restatement of that general principle, it had no submissions on the suite metering issues that have been presented in this proceeding.

VECC submitted that it generally agreed with the conclusions of THESL that it would be inappropriate to create a separate rate class for suite metered customers based on the information available to inform the cost allocation study that was performed by BDR.

THESL argued that SSMWG's submissions did not challenge or even address the appropriateness of THESL's suite metering cost allocation study and that therefore the

Board should find that both of the studies submitted by THESL were appropriate and met the Board's requirements.

THESL argued that with regards to the question of establishing a separate rate class for multi-unit residential customers, the evidence on the record in this proceeding did not justify a departure from the Board's established and well accepted rate-making principles to allow for a new suite metering rate class. THESL noted that both VECC and CCC agreed. THESL also stated that the SSMWG submission conceded that there is insufficient evidence of a cross-subsidy to justify the additional complexity and costs associated with creating a new Quadlogic rate class.

THESL argued that SSMWG's proposal that THESL should be required to establish a new separately operated and regulated business to provide metering 'upgrades' should be rejected.

THESL also rejected the argument of SSMWG that there is an undue cross subsidy arising from the further study which showed that, when considering the Quadlogic metered customers only, the revenue/cost ratio is 0.95. THESL argued that the evidence clearly demonstrated, first, that the revenue/cost ratio for Quadlogic customers is closer to unity than for residential customers overall; second that this revenue/cost ratio is well within guidelines; and finally that there is no reason to believe that it will deteriorate but instead good reason to believe it will improve.

THESL submitted that there was no evidence of any predatory activity on the part of THESL or of any damage to the competitive market as a result of THESL's existing offerings. THESL submitted that SSMWG's implication that the mere existence of THESL in the market is itself directly injurious is unsupported and that the facts were that THESL's competitive position was highly constrained as THESL's offerings are strictly pursuant to its Board-approved tariff and no distinction or discrimination exists in THESL's treatment of standard residential customers compared to multi –unit residential buildings ("MURB") customers.

THESL argued that if the Board was to accept the submissions of the SSMWG, it would be faced with a major policy decision which would be to either bring all residential customers abruptly to a revenue/cost ratio of unity; or to discriminate the setting of the appropriate revenue/cost ratio as between residential customers in houses and residential customers in MURBs.

THESL submitted that the Board should deal with this matter by allowing THESL to bring the revenue/cost ratio for the residential class as a whole, closer to unity in a gradual and orderly fashion.

Board Findings

For clarity with respect to terminology, the Board notes that for the purposes of this Partial Decision and Order, a reference to "suite metering" means the installation of a separate meter for each unit of a multi-unit residential building where there is no bulk meter that is used for the purposes of settlement. Suite metering is a monopoly activity that can only be conducted by a licensed distributor and the rates for suite metering are, therefore, regulated.

Unit sub-metering (sometimes called suite sub-metering or smart sub-metering) is the installation by a licensed unit sub-meter provider of a separate meter for each unit of a multi-unit residential building "behind" the bulk meter, which is owned and operated by a licensed distributor. Unit sub-metering is a competitive and, therefore, non rate-regulated activity.

The Board has heard issues pertaining to suite metering, and specifically suite metering requiring Quadlogic meters, on numerous occasions in recent years. The matters arise due to the unique situation that exists whereby THESL, in the fulfilment of its regulated responsibilities, provides services that are in essence the same services that are provided in a competitive environment by members of the SSMWG.

In the Board's view the issue between THESL and the SSMWG can be distilled down to the following positions.

THESL's position is that no changes to the way it is conducting itself should be made because it is applying sound and longstanding Board sanctioned practices and policies in the treatment of its suite metering service provision.

The SSMWG position is that the manner in which THESL operates with respect to its suite metering service distorts the competitive environment in which the SSMWG members operate and therefore THESL should be compelled to alter its practices to nullify the distortion.

The Board accepts THESL's contention that it is operating in a fashion that comports to established rate making and cost recovery principles as it conducts its cost allocation and economic evaluation exercises. The Board accepts the central tenet of rate making whereby the averaging of costs within a class of customers is considered to be a practical and fair manner in which to avoid the inefficiencies associated with excessively granular cost driver analysis. The pooling of common service costs amongst customers of a common class irrespective of their individual and actual contribution to those costs also recognizes that most often the customer has little or no control over its actual contribution level to these types of costs. For example, actual distribution feeder costs vary depending on the distance a customer is from the starting point of the feeder. A customer has little opportunity to select where it will connect along a feeder and even if it did, feeder configurations are subject to change and different costs would be introduced. The pooling principle responds to matters of both efficiency and fairness in the rate making process.

However, the rather unique regulatory framework involving both monopoly and competitive services occupying the same space introduces another consideration that must be recognised by the Board. It would be insufficient for the Board to limit its review of the situation to a consideration of whether or not THESL is operating in a manner that has been accepted in the past and whether or not it has applied well established principles of ratemaking. The legislative framework that has been introduced brings with it matters of public policy that must be considered in the review of THESL's operating protocols associated with its provision of suite metering services. It is not a matter of whether or not THESL is operating in a predatory fashion. The simple co-existence of the monopoly and competitive services necessitates a thorough and purposeful review.

The metering of individual multi-residential dwellings is a significant Government initiative in support of its energy conservation policies. The legislative intent that a competitive market for the provision of unit sub-metering should exist is clear. It is also clear that the provision of suite metering by regulated monopolies such as THESL is permitted. The fact that multi-unit residential building developers have the option to obtain separate smart meters for individual units within a building from either the competitive unit sub-metering market or a regulated monopoly (suite metering) introduces a complication that must be managed, not ignored or avoided. It is not business as usual when it comes to setting rates in this environment.

The Board finds that due to the existence of a competitive market for the provision of unit sub-metering it is appropriate to ensure that procurement choices, as between licensed distributors (suite metering) and licensed unit sub-meter providers (unit sub-metering) are made on a comparable economic basis both within the competitive unit sub-metering marketplace and between this competitive market place and the monopoly service. Within the competitive market place the conduct of the service providers will be driven by normal competitive forces and the best price will emerge. The determination of the true cost of the provision of suite metering as part of the monopoly service for comparison purposes is more complicated but the Board considers it to be warranted.

The Board has determined that the creation and maintenance of a separate rate class for multi-residential customers that at the present time are served utilizing Quadlogic technology is the most effective and transparent manner in which to address the aforementioned issues.

The transparency of the specific costs of the suite metering service is required on an ongoing basis. The Board has concluded that it would be more effective to utilize the existing cost allocation tools and input protocols to set a specific rate for these customers than to have THESL periodically perform the types of studies that have been produced for this application.

A virtue of establishing an ongoing cost-allocation process is that the accounting protocols are established in advance and real activity costs are tracked with the intent to identify the class revenue requirement. The Board considers the merit of this approach of exposing the specific costs to be superior to the options that require the deconstruction of pooled costs of the much larger residential rate class on a retroactive basis.

The Board does not therefore consider it necessary to approach the exercise in the manner proposed by SSMWG whereby a concept of THESL operating a "notional" business is adopted.

The Board agrees with THESL's assertion that it is not appropriate to base a rate class on a specific technology that is likely to evolve over time. The rate class that the Board has determined to be required shall be initially identified on the basis of the current technology but the ongoing existence of the class is not predicated on the ongoing existence of this particular technology. Technology advancements are surely to occur.

These advancements will be available to both THESL in its supply of the rate regulated suite metering service and to the suppliers of the unit sub-metering. The need to expose the specific costs of the suite metering service will remain so long as there is a choice to be made between the rate regulated service and the competitive marketplace.

The Board will therefore require supplementary evidence to be filed on this suite metering issue. The objective of the subsequent phase of the proceeding is to establish both the cost allocation protocols for the new customer class and to establish the initial tariff that THESL will charge for this service. The Board will issue a procedural order under the current docket number containing filing instructions to THESL and subsequent procedural steps to facilitate further discovery and examination to facilitate this objective.

To be clear, all findings in this current Partial Decision and Order are final and will result in a final rate order for 2011 rates. Any rate implications that arise from the findings in the supplementary proceeding will be reflected in THESL's 2012 rates (whether determined as part of a rebasing or IRM application) and will not have retroactive effect in any way.

Cost Allocation

Background

There were two unsettled issues in the area of cost allocation, other than the suite metering issues. These were 7.1 "Is THESL's cost allocation appropriate?" and 7.4 "Are the proposed revenue to cost ratios for each class appropriate?"

THESL noted that in respect of Issue 7.1, parties were able to settle the appropriateness of its cost allocation with one exception, which was that intervenors did not agree with the methodology used by THESL to account for the transformer ownership allowance ("TOA"). Where Issue 7.4 was concerned, parties were unable to reach an agreement on THESL's proposed revenue to cost ratios for each class.

Where Issue 7.1 was concerned, THESL argued that its treatment of the TOA was appropriate. THESL submitted that it had used the Board's cost allocation model, adjusted for a shortcoming in the way TOA costs were allocated in the model to allocate the revenue requirement and to form the basis for determining rates for each of the