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December 19, 2007

Board Secretary Ontario Energy Board P.O. Box 2319 27<sup>th</sup> Floor 2300 Yonge Street Toronto, Ontario M4P 1E4

Dear Ms. Walli:

Re: Oshawa PUC Networks Inc. (ED 2002-0560)

Board File Number EB-2007-0710

Please find attached Oshawa PUC Networks Inc.'s response to the Interrogatories posed by VECC in the above noted proceeding. We have now retrieved and answered all of the questions asked. Oshawa PUC Networks has forwarded a copy of this response to VECC and the other intervenors.

Yours truly,

*Original* signed by

Michael Chase Corporate Controller

# VECC Interrogatories Oshawa PUC Networks Inc. (OPUCN) 2008 Electricity Rate Application Board File No. EB-2007-0710 Oshawa PUC Networks Inc. Responses

Note: OPUCN has assumed that any references to Barrie were errors and have assumed in those cases that the reference should have been to Oshawa.

## **Question #1**

Reference: i) Exhibit 1/Tab 1/Schedule 12, page 1

a) Will the settlements between the Generator and OPUCN form part of OPUCN's cost of power for purposes of establishing the balances in the RSVA for Power?

The settlements between the Generator and OPUCN will not form part of OPUCN's cost of power for purposes of establishing the balances in the RSVA for Power. The settlement process will segment any power purchased from the generator for accounting purposes and the amount paid will not be included in the RSVA account.

b) If yes, what is the pricing arrangement for power purchased from the Generator? In particular, is the pricing competitive with purchases from the IESO administered market?

The generator will not run continuously and it is difficult at this point to predict how much power will be generated. Any power produced will be bought by OPUCN at the HOEP price which is current at the time of the sale. The price paid to the generator will not include transmission or connection costs.

#### Question #2

Reference: i) Exhibit 1/Tab 3/Schedule 1, page 19

a) Has OPUCN concluded a new long-term lease arrangement with the City of Oshawa? If so, please indicate what the new leasing arrangements are and provide any available evidence that demonstrates the rent paid reflects market rates.

The main new leasing arrangements, as reflected in the Lease Agreement dated 1 June 2007 between The Corporation of the City of Oshawa and Oshawa PUC Networks Inc. include the following.

- Demise: The City grants to OPUCN a leasehold interest in the premises for a term of five years, expiring on March 31, 2012, subject to termination provided in the lease.
- 2. Base Rent \$264,000 per year.
- OPUCN shall obtain, provide and maintain a Commercial General Liability Insurance Policy for the duration of the lease. The Policy shall be written on an occurrence basis and have a liability limit of not less than five million dollars.
- 4. OPUCN agrees to place at all times maintain all risk property insurance with respect to its own property and its chattels an amount that a prudent owner of such a business would carry acting reasonably.
- 5. Rent means any and all sums due and payable by OPUCN pursuant to this Lease. Without limitation, Rent includes the following amounts:
  - i. The Base Rent
  - ii. All Property Taxes
  - iii. All Rental Taxes, to the intent that the full amount and burden of these shall be borne by OPUC.
  - iv. All other costs, expenses and charges (including interest on overdue payments) incurred in and about the premises required to be paid by OPUC pursuant to any provision in the lease.

Although market rate has not been explicitly established by this lease arrangement, the rent has not changed since 2001. Yearly rent has been maintained at \$264,000 since January 1, 2001 (for seven years).

b) If OPUCN has not concluded a long term lease with the City of Oshawa, please indicate what the short term leasing arrangements are and demonstrate that the associated rents reflects market rates.

N/A

Reference: i) Exhibit 2/Tab 1/Schedule 1, page 2

**Preamble:** The last time Oshawa's rates were based on a "cost of service" type approach was for 2006. In that process, rate base was determined by making various adjustments to 2004 year end actual values. Barrie is currently seeking approval for its 2008 rate base.

- a) Please provide a continuity schedule for Barrie's Net Plant, Property and Equipment similar to reference (i) but that:
  - Starts as of December 31, 2004.
  - Also shows separately:
    - o Annual depreciation charges
    - o The capital expenditures during the year
    - o The in-service asset additions during the year
    - Year end assets under construction (CWIP)

# RATE BASE SUMMARY (Averages Gross Assets & Accumulated Depreciation)

average assets	Actual December 31, 2004	Actual December 31, 2005	Variance from 2006 Board Approved	Actual Decmber 31, 2005	2006 Actual	Variance from 2006 Board Approved	2006 Board Approved	2006 Actual	Variance from 2006 Board Approved
Gross Assets	97,516,500	103,279,500	(5,763,000)	103,279,500	106,720,748	(3,441,248)	98,090,923	106,720,748	8,629,824
Accumulated Depreciation	(58,755,500)	(61,893,500)	3,138,000	(61,893,500)	(64,932,276)	3,038,776	(58,755,351)	(64,932,276)	(6,176,925)
Net Fixed Asset	38,761,000	41,386,000	(2,625,000)	41,386,000	41,788,471	(402,471)	<u>39,335,572</u>	41,788,471	2,452,899
Allowance for Working Capital	13,563,900	17,077,800	(3,513,900)	17,077,800	12,474,797	4,603,003	13,634,408	12,474,797	(1,159,611)
<u>Utility Rate</u> <u>Base</u>	<u>52,324,900</u>	<u>58,463,800</u>	<u>(6,138,900)</u>	<u>58,463,800</u>	<u>54,263,268</u>	4,200,532	<u>52,969,980</u> -	<u>54,263,268</u>	<u>1,293,288</u>
Annual Expend	itures (As per A	udited Financial	Statements for	or 2004, 2005, a	<u>nd 2006)</u>		-		-
	-		-	-		-	-		-
Annual Depreciation Expense	(3,339,000)	(3,545,000)	206,000	(3,545,000)	(3,959,000)	414,000	(3,383,711)	(3,959,000)	575,289

Capital Expenditures	6,913,000	5,536,000	1,377,000	5,536,000	3,876,000	1,660,000	7,152,878	3,876,000	3,276,878
In Service Asset Additions	7,155,000	4,371,000	2,784,000	4,371,000	2,566,000	1,805,000	7,152,878	2,566,000	4,586,878
CWIP	1,489,000	2,654,000	(1,165,000)	2,654,000	3,964,000	(1,310,000)	3,964,000	3,964,000	-

average assets	2006-Actual	2007 Bridge	Variance from 2006 Actual	2007- Bridge	2008 Test	Variance from 2007 Bridge
Gross Assets	106,720,748	112,318,749	5,598,001	112,318,749	122,102,639	9,783,890
Accumulated Depreciation	(64,932,276)	(68,448,224)	(3,515,948)	(68,448,224)	(72,591,949)	(4,143,725)
Net Fixed Asset	<u>41,788,471</u>	43,870,524	<u>2,082,053</u>	<u>43,870,524</u>	<u>49,510,690</u>	<u>5,640,166</u>
Allowance for Working Capital	12,474,797	14,854,422	2,379,625	14,854,422	15,247,548	393,126
Utility Rate Base	<u>54,263,268</u> -	58,724,947	<u>4,461,678</u> -	<u>58,724,947</u> -	64,758,238	6,033,291 -

Annual Expenditures (As per Audited Financial Statements for 2004, 2005, and 2006)								
	-		_	-		-		
Annual Depreciation Expense	(3,659,000)	(2,891,960)	(767,040)	(2,891,960)	(4,395,489)	1,503,529		
Capital Expenditures	3,876,000	8,928,914	(5,052,914)	8,928,914	11,494,900	(2,565,986)		
In Service Asset Additions	2,566,000	8,574,435	(6,008,435)	8,574,435	10,993,345	(2,418,910)		
CWIP	3,964,000	4,318,471	(354,471)	4,318,471	4,820,026	(501,555)		

Reference: i) Exhibit 2/Tab 2/Schedules 1 & 2

- a) Please provide a Schedule that shows the capital spending and capital additions for each of the years 2005 through 2008 for each of the following asset categories
  - Land and Buildings (Accounts 1805, 1808, and 1810)
  - TS Primary Above 50 kW (Account 1815)
  - DS (Account 1820)
  - Poles and Wires Overhead (Accounts 1830 and 1835)
  - Underground (Accounts 1840 and 1845)
  - Line Transformers (Account 1850)
  - Services and Meters (Accounts 1855 and 1860)
  - General Plant (Accounts 1908 and 1910)
  - IT Assets
  - Equipment
  - Other Distribution Assets

The following schedule contains information as to Capital Additions and Capital Expenditures. Any differences with the audited Financial Statements are the result of rounding.

Please note that the years 2004 through 2006 isolate the Contributed Capital Account. The Bridge and Test years show net Contributed Capital Figures.

	2004 Actual	2005 Actual	2006 Actual	2007 Bridge	<u>2008 Test</u>
	Gross Asset Value (in 000's)	Gross Asset Value (in 000's)	Gross Asset Value (in 000's)	Gross Asset Value (in 000's)	Gross Asset Value (in 000's)
Land and Buildings					
1805-Land -capital expenditures				-	250
1805-Land -Capital additions				-	250
1806-Land Rights -capital expenditures	110	(42)	127	-	-
1806-Land Rights -Capital additions	110	(42)	127	-	-
1905-Land -capital expenditures				-	-
1905-Land -Capital additions				-	-
1906-Land Rights-capital expenditures				-	-
1906-Land Rights-Capital additions				-	-
1810-Leasehold Improvements-capital expenditures				200	262
1810-Leasehold Improvements-Capital additions				70	392
TS Primary Above 50					
1815-Transformer Station Equipment - Normally Primary above 50 kV-capital expenditures	-	(6)		-	-
1815-Transformer Station Equipment - Normally Primary above 50 kV-Capital additions	-	(6)		-	-
DS					
1820-Distribution Station Equipment - Normally Primary below 50 kV-capital expenditures	581	860	581	1,560	3,098

	1			1	
1820-Distribution Station Equipment - Normally Primary below 50 kV-Capital additions	560	768	234	1,044	3,098
Poles and Wires					
1830-Poles, Towers and Fixtures-capital expenditures				-	-
1830-Poles, Towers and Fixtures-Capital additions				-	-
1835-Overhead Conductors and Devices-capital expenditures	3,010	2,044	5,064	2,354	3,885
1835-Overhead Conductors and Devices-Capital additions	3,010	1,816	4,915	2,731	3,253
1840-Underground Conduit-capital expenditures				-	-
1840-Underground Conduit-Capital additions				-	-
1845-Underground Conductors and Devices-capital expenditures	1,928	7,368	3,750	3,141	1,928
1845-Underground Conductors and Devices-Capital additions	1,928	6,523	3,582	2,925	1,928
Line Transformers					
1850-Line Transformers-capital expenditures	46	18	(11)	323	35
1850-Line Transformers-Capital additions	46	18	(11)	323	35
Services and Meters					
1855-Services-capital expenditures				-	33
1855-Services-Capital additions				-	33
1860-Meters-capital expenditures	783	562	274	435	560
1860-Meters-Capital additions	783	562	274	399	560
CDM-capital expenditures				-	-
		1	1	I.	

	-	38	277		
CDM-Capital additions	-	38	-		-
General Plant					
1808-Buildings and Fixtures-capital expenditures	-	(6)			
1808-Buildings and Fixtures-Capital additions	-	(6)		-	-
1908-Buildings and Fixtures-capital expenditures					
1908-Buildings and Fixtures-Capital additions				-	-
1910-Leasehold Improvements-capital expenditures	43	14	51	1	-
1910-Leasehold Improvements-Capital additions	43	14	51	1	-
IT Assets					
1920-Computer Equipment - Hardware-capital expenditures	90	52	34	24	42
1920-Computer Equipment - Hardware-Capital additions	90	52	34	24	42
1925-Computer Software-capital expenditures	33	58		150	24
1925-Computer Software-Capital additions	16	58		150	24
Equipment					
1915-Office Furniture and Equipment-capital expenditures	38	14	34	185	212
1915-Office Furniture and Equipment-Capital additions	38	14	34	145	212
1930-Transportation Equipment-capital expenditures	663	(284)	(307)	315	350
1930-Transportation Equipment-Capital additions	663	(284)	(394)	315	350

1935-Stores Equipment-capital expenditures			1	-	125
1935-Stores Equipment-Capital additions			1	-	125
1940-Tools, Shop and Garage Equipment-capital expenditures	35	123	35	73	67
1940-Tools, Shop and Garage Equipment-Capital additions	35	123	35	73	67
1945-Measurement and Testing Equipment-capital expenditures	3			-	30
1945-Measurement and Testing Equipment-Capital additions	3			-	30
1950-Power Operated Equipment-capital expenditures				-	-
1950-Power Operated Equipment-Capital additions					
1955-Communication Equipment-capital expenditures			230	122	78
1955-Communication Equipment-Capital additions				330	78
1960-Miscellaneous Equipment-capital expenditures	1		66	-	18
1960-Miscellaneous Equipment-Capital additions	1		13	-	18
Other Distribution Assets					
1825-Storage Battery Equipment-capital expenditures				-	-
1825-Storage Battery Equipment-Capital additions					
1970-Load Management Controls - Customer Premises- capital expenditures					
1970-Load Management Controls - Customer Premises- Capital additions				-	-

1975-Load Management Controls - Utility Premises-capital expenditures	-	4		45	498
1975-Load Management Controls - Utility Premises-Capital additions	-	4		45	498
1980-System Supervisory Equipment-capital expenditures	-	19	32		
1980-System Supervisory Equipment-Capital additions	-	19	32	-	-
1985-Sentinel Lighting Rental Units-capital expenditures				_	-
1985-Sentinel Lighting Rental Units-Capital additions				-	-
1990-Other Tangible Property-capital expenditures				-	-
1990-Other Tangible Property-Capital additions					
1995-Contributions and Grants - Credit-capital expenditures	(171)	(5,300)	(6,362)	-	-
1995-Contributions and Grants - Credit-Capital additions	(171)	(5,300)	(6,362)	-	-
Capital expenditures	0.040	5.500	3,876	8,929	11,495
Capital additions	6,913 7,155	5,536	2,565	8,575	10,993
	1,100	4,371	2,300		
GM Sports Centre and 401 Interchange Contributed Capital			3,588		
Adjusted Capital expenditures			7,464		
Adjusted Capital additions			10,029		

Reference: i) Exhibit 2Tab 3/Schedule 3, page 7

a) Please provide details on OPUCN's program to upgrade qualified customers with new interval meters (e.g., what customers qualify and why and what is the business case for the program?)

OPUCN is upgrading all industrial customers with demand over 200 kW for a period of at least one year to interval meters. This is being done to conform to the Smart Meter Implementation Plan issued by the OEB on January 26, 2005. This plan defines Category 3 customers as those General Service customers with a peak demand over 200 kW. It further states that "In all areas of the province, distributors would have to install interval meters for all Category 3 customers" (Smart Meter Implement Plan, p. 6)

#### **Question #6**

Reference: i) Exhibit 2/Tab 3/Schedule 1, pages 1 and 2

ii) Exhibit 4/Tab 2/Schedule 7, page 1

iii) Exhibit 11/Appendix D

- a) Reference (i) states that "the typical engineering life of distribution system components is 40 to 50 years". However, reference (ii) indicates that the depreciation rate for poles, wires and transformers is 4% which represents a service life of 25 years. Similarly, reference (iii) notes (page v) that the life of distribution assets is considerably longer than the depreciation period used. Why has OPUCN not proposed a change in the depreciation rates for its distribution system assets?
- b) Reference (i) states that the average system age for OPUCN is 20.63 years. Please provide a schedule setting out how this value was determined.

Kinetrics has determined the average age of major distribution components. The table below, copied from their report, shows the average age of individual system components. The averages of major individual components vary from 10 to 28 years. It is inferred from this table that the average age of the system is about 20 years.

Table 1 Asset Populations and Age Distribution

Asset Type	Net Value (k\$)	Quantity	Average Age 2	Age Range
Transformer Stations	2,527	8	28	1 to 38
Breakers	220	86	26	14 to 38
OH 3phase switches	19	19		
UG 3 phase Switches	191	94		
OH In-line switch	148	438		
OH fused cutout	408	5177		
OH conductor	1,373	501 km	12	1 to 50
UG conductor	7,892	92 km	15	1 to 40
Line Transformers UG	6,395	3385	17	1 to 40
Line Transformers OH	1,872	2629	19	1 to 50
Arresters	1,729	4825	10	1 to 40
Secondary	1,467	868 km	21	1 to 50
All poles	12,939	11824	19	1 to 70
Conduit and trench	11,139	225 km	21	1 to 70
Padmounts	1,709	2802		
Meters	1,122	55400	20	1 to 40

<sup>&</sup>lt;sup>\*1</sup> This is the average age of the conductor for which the age is known, but 72% of the conductor is of unknown age.

<sup>2</sup> Blank cells indicate no age data was available

c) Reference (i) states that "OPUCN's distribution system is nearing end of life". However, elsewhere the Application states that the typical life of distribution system components is 40-50 years and the average age of OPUCN's assets is only 20.63 years. Please reconcile.

There are indeed discrepancies in the engineering life and depreciation rates of various distribution assets. The challenge is how to approach a determination as to what rates should be studied. OPUCN has seen many examples in which "the typical engineering life of a distribution system's components" do and do not deteriorate after 40 to 50 years. Recent pole studies reflect the fact that many of our poles are not meeting expected engineering life due to problems of weather, insects, and other environmental challenges. Many transformers require major overhauls every 15 to 20 years in order to allow for extended service. Large investments in relays that date back to the early and mid 1970's are now requiring replacement. These standard industrial relays have been found to be a fire risk and danger to safety, property, and service. Their replacement does not

meet expectations for engineering life. It should be pointed out that even if fire risk was not an issue for these relays, parts and repair and maintenance expertise are hard to locate for such equipment. Further this old technology involves intensive labour requirements which do not provide our Customers cost effectiveness or savings.

OPUCN is aware that certain distribution asset categories perhaps should be adjusted to realize typical engineering life. However, it is beyond the present resources of OPUCN, as well as the issue of time for a study before meeting deadline schedules for the 2008 rate application process. This matter needs to involve the Industry as a whole. Appropriate studies of LDC's asset life should be considered. Consultations with Regulatory Authorities need to be made. If the Industry can agree to the changes, OPUCN would propose adoption.

#### **Question #7**

Reference: i) Exhibit 2/Tab 3/Schedule 1, page 13

a) Are the 2003 to 2006 values actual historical loads or weather corrected values?

The load forecast sheet is determined by using the actual peak load for the system until 2007 and after that the load forecast is done based on the expected growth in the system. That is, it is based on pending and expected commercial connections, subdivisions, and load requirements for large customers.

b) Please explain why the 2007 value is the same as that for 2006.

These values are the same because the peak loads on our system were the same for 2006 and 2007.

#### Question #8

Reference: i) Exhibit 2/Tab 3/Schedule 2, pages 2-4

ii) Exhibit 2/Tab 3/Schedule 3

a) Reference (ii) states that 2006 was an abnormal year in terms of capital spending projects. In order to provide more context for the 2007 and 2008 values please provide a breakdown of 2005 capital spending in format similar to that used in reference (i).

In 2006 OPUCN introduced an internal management reporting system which produces a listing of all capital expenditures in the format presented in the Rate Application. The management reporting system in use prior to 2006 was not sophisticated enough to allow for such a presentation. OPUCN would like to supply the information requested but is unable to do so.

b) What was the 2006 capital spending associated with the two large capital projects undertaken in that year (i.e., prior to capital contributions) – Reference (ii), page 1.

General Motors Sports Centre (City)	734,743
401 Interchange (MTO)	3,253,066
	3,987,809

c) Total capital spending (net of contributions) increases by over \$ 4 M in 2007 versus 2006. The variance explanations provided in reference (ii) account for less than \$1.3 M of this. Please indicate in which category of spending each of the two projects fall — using the categories set out in reference (i).

The two Projects would normally be included in Enhancement category of reference (i). However, as contributed capital was realized against these two projects in 2006, the impact is not to be reflected in the 2006 reference (i). Comparison on the reference (i) cannot be made unless contributed capital is not factored on the reference sheet.

- d) Please identify the other major projects (i.e., spending in excess of \$100,000) that:
  - Account for the increase of almost \$2.7 M in spending on System Planning-Enhancement in 2007 over 2006.
- Make up the \$1.1 M in spending on System Planning-Expansion in 2007. In each case, please identify the external drivers that give rise to the need for the spending.

System Planning -Enhancement	

C07-201 O/H kV Ritson/Eulalie	425,728	To provide tie between two different Transmission Stations and to improve and upgrade 401 crossing
C07- 202 Wilson Rd - Greenhill to Conlin	102,600	New development
C07-206 Taunton - Simcoe to Ritson Region	108,656	
C07-210 11F3 U/G Feeder Install/Connect	216,000	New development
C07-290 MS#9 Design	275,000	New development
Reliability - Safety - Enhancemement		
C06-225 U/G System Improve - Mary & King	113,307	
C06-271 MS#11 Relays	103,680	Replacement of Electromechanical relay with digital relay
C06-280 MS #2 - 2T1 Transformer Major Overhaul	199,400	Repairing and regasketing of leaking transformer
C07-212 U/G Cable Replace, Kinmount	113,400	Replacement of cables more than 30 years old
C07-213 U/G Cable Replace, Fleetwood	379,080	
C07-243 U/G Sec Cable Unplanned Replacement	194,400	
C07- Substation Breaker Replacement	198,720	Replacement of old air magnetic breaker with vacuum breaker
System Planning - Expansion		
C04-105 U/G Falcon Ridge Ph#5 Sub	11,523	
C04-112 Beechnut Subd.Ph#3 C04-213 PPG - Install Break	8,705	
Switches C05-101 Kingsway Meadows Ph#3	16,135 3,452	
C05-102 Kedron Park 2 Ph#1 C05-103 Ritson Ridge Subd.	7,299 1,571	
C05-108 Grandview Heights Subd. C05-109 Forrest Hills Ph#2 Subd.	3,539 6,179	
C05-110 Forrest Hills Ph#3 Subd C05-113 Parkridge Ph.1-5 Subd.	2,036 2,109	
C05-114 Parkridge Ph2-1 Subdivision	700	
C05-115 Copperfield Sub-Marshall Homes	701	
C05-116 Parkridge Phase 4B- Silwell	10,199	

C05-117 Dusty Dawn Ph#1 Subdivision	27,032	
C05-118 1101 Ormond Dr. Condominiums	(4,914)	
C05-120 Southfields Subdivision Airport Subdivision.	1,497	
C06-100 Harmony Horizon Ph#3	11,584	
C06-101 Dusty Dawn Ph#2 Subdivision U/G	90,037	
C06-103 Springridge Phase 1 Subdivision	212,694	load increase due to new development
C06-104 Glaspell North Ph#1 Subdivision	26,508	
C06-105 Parkridge 2 Ph#2 Subdivision	14,740	
C06-107 Area 1 Subdivision Underground Cap	1,608	
C06-108 Windfield Farms - Ph2 A&B	9,690	
C06-110 Kingsway Meadows Ph 3 D Ug Cap	11,780	
C06-112 Kingsfield Loop Subdivision	5,952	
2007 Subdivision Expansion	650,000	
	1,132,357	

- e) Into which category of spending (per reference (i)) does each of the three major projects for 2008 fall?
  - i) Building a New Municipal Substation (MS9) \$ 2,000,000
     System Planning (Enhancement Category)
  - ii) SCADA upgrade \$ 498,000 Special Projects (Enhancement Category)
  - iii) 2008 Overhead Pole Replacement Program \$ 550,000 Reliability and Safety (Enhancement Category)
- f) The Application states that "2.5% of the poles have been identified for replacement" (reference (ii), page 6) which represents roughly 300 of the OPUCN's 12,000 poles. However, on the same page, the Application indicates that 190 poles need replacement. Please reconcile.

The pole replacement program has identified the need to replace 2.5% poles which approximates to about 300 poles. Based on this report, OPUCN has identified the 190 most critical poles which need replacement in 2007 and 2008 to maintain safety and reliability. The other replacements are less urgent and will occur at a later time.

Reference: i) Exhibit 2/Tab 3/Schedule 4, page 1

 a) Please provide OPUCN's policy with respect to the capitalization of overheads.

OPUCN conforms to Article 340 of the APH in respect to the capitalization of overheads. The following summary is provided by overhead expense type.

#### Payroll Burden

-Allocate payroll associated cost including benefits, EI costs, CPP, medical, WSIB, pension, insurance. Also allocated are vacation, holidays, sick, training, small tools, safety program, clothing, and a portion of all support employees salary and benefits who contribute to capital work.

-allocate payroll burden based on percentage and add to work order labour, regular time only

# Allocated Rolling Stock Expense

- -Allocate costs associated with maintaining automobiles, trucks and equipment, trailers, etc.
- -labour costs and the payroll burden of staff directly involved in rolling stock maintenance, mechanics, fuel, repairs, license fees, insurance, etc.
- -operation and maintenance of garages and garage equipment, office clerical and computers
- -rolling stock operation overhead may be based on a per kilometer rate or per hour of use

## Allocated Stores Operations Expense

- -Allocate costs in the operation of the Stores Department by applying material costs and costs associated with acquiring, handling, and storing materials, labour costs and payroll burden of staff working in stores
- -common stores operation costs include property taxes, light, heat, janitor, yard maintenance, snow removal, building maintenance, inventory insurance, shipping, storage charges, depreciation on stores equipment, freight-in, write-off, obsolete material, purchasing office clerical, and computers
- -stores overhead are based as a standard percentage of the dollar value of materials issued

#### **Allocated Engineering Expense**

- -Allocate costs of the Engineering Department to jobs
- -Engineering costs include labour costs and payroll burden of staff directly involved in detailed planning and design of utility plant as well office clerical, computers and equipment
- -engineering overhead is charged as a percentage of gross job costs

b) Please provide a schedule that sets out the calculation of capitalized overheads for 2006.

## Payroll Burden

-determine total benefits and portion of support salary cost divided by total regular labour costs to arrive at the percentage of "Payroll Burden Overhead Job Recovery".

# Allocated Rolling Stock Expense

- -each vehicle category has an established hourly rate
- -hours used on each vehicle are tracked
- -use vehicle costs from P&L, add portion of garage costs for facilities, office equipment and MIS, plus vehicle depreciation expense to arrive at total cost -take the total cost of vehicles for each category divided by the vehicle hours for that category divided by the number of vehicles in that category to arrive at an average cost per hour for each vehicle in each category

# Allocated Stores Operations Expense

- -Total Stores is the stores department costs plus the allocation portion on facilities, MIS, office equipment and depreciation
- -Rate is determined taking the total costs of the stores department divided by the issued inventory value

## Allocated Engineering Expense

-calculate the percentage of engineering costs to jobs by taking all Tech. Services department costs plus a portion of facilities, MIS & office equipment cost divided by Gross jobs less internal jobs and vehicle jobs as they do not relate to the Engineering department

The results of applying these calculations are shown below.

# **Overhead Allocations Analysis (Summary)** Comparative Fiscal Years 2006 and 2005

Item for Allocation			2006

Item for Allocation					2000			
	Rate Used in 2006	Rate Per 2006 Cost Alloc Study	2005	2004	Amount Should be Allocated	Amount Allocated per G/L	For Hire and Special Jobs	Difference for True Up (underallocation)
Engineering	12.0%	8.6%	8.6%	12%	907,814	933,121	150,514	25,307
Vehicle	na	na		na	636,865	666,249	87,038	0
					\$827 k total cost of Fleet	2 2 2,	2 ,2 2 2	
Stores	20.0%	17%	22%	22%	689,457	722,844	120,302	33,387
Benefits WIP Payroll	82.0%	82.04%	76.20%	82.07%	660,469	660,469	in Billed Activity	0
(Direct Labour)						1,050,913	in Billed Activity	
		Total Over (Under) Allocation Requiring					0	
		True Up						58,695

#### Comments

85% of Engineering Resources towards Capital Jobs \*\*In relation to only Capital excl. H and S Jobs overallocation in fact \$9,211.

Approx. 80% of fleet utilized for Capital Jobs, S and H Jobs, rest Maint.

Dave - utilizes 70% fleet used for Capital, 10% S&H Jobs

70 % of Stores Resources is utilized for Capital Jobs

Amt of allocation should approx. 82% of direct payroll.

c) What is forecasted level of capitalized overheads for 2007 and 2008 and how was it determined?

The forecasted level of capitalized overheads for 2007 and 2008 was determined by referencing the 2007 Budget, the 2007 Actual expenditures to date, cost allocation results for 2006, and projected overhead (support) expenses as contained in the 2008 Rate Application.

	2007 (\$)	2008 (\$)
Stores	638,000	657,000
Rolling Stock	670,000	691,000
Engineering	822,000	827,000
Payroll	783,000	806,000

# Question #10

Reference: i) Exhibit 2/Tab 4/Schedule 1, pages 4-5

a) Please indicate how the forecasts for the 2007 and 2008 for the various cost of power components were developed.

OPUCN used the four year average cost of energy, as charged by IESO for developing the forecasts for 2007 and 2008 cost of power components.. The details follow.

		2003	2004	2005	2006
235-5000-10	POWER PURCHASED	0.0462	0.0531	0.0726	0.0495
264-5000-10	Wholesale Market Services	0.0062	0.0062	0.0069	0.005
266-5000-10	Transmission Network	0.0054	0.0055	0.0054	0.0056
268-5000-10	Transmission Connection	0.0046	0.0047	0.0047	0.0047
	Cost of Power	0.0624	0.0695	0.0896	0.0648

	2007 Projected	2008 Projected
Normalized Retail kWh Projected	1,131,952,199	1,139,433,702

Normalized Wholesale kWh Projected	1,198,449,548	1,217,395,131

			2007	2008
		Rate	Projected	Projected
235-5000-10	POWER PURCHASED	0.0584	69,989,454	71,095,876
264-5000-10	Wholesale Market Services	0.0060	7,230,646	7,344,951
266-5000-10	Transmission Network	0.0055	6,591,473	6,695,673
268-5000-10	Transmission Connection	0.0047	5,632,713	5,721,757
	Average Total Cost of Power	0.0746	89,444,285	90,858,257

b) What is the average cost of purchased power for 2007 and 2008?

Please see table above.

2007 0.074633 2008 0.074633

# **Question #11**

Reference: i) Exhibit 3/Tab 1/Schedule 1, page 2

ii) Exhibit 3/Tab 3/Schedule 1, pages 1-2

a) Please indicate where the revenues from the monthly Standard Supply Service charge are accounted for.

These revenues are not contained in either Exhibit 3, Tab 1, Schedule 1, Page 2 nor Exhibit 3, Tab 3, Schedule 1, Page 1-2

# Question #12

Reference: i) Exhibit 3/Tab 2/Schedule 2, page 1

- ii) Exhibit 3/Tab 2/Schedule 4, page 3
- a) Please provide the basis for OPUCN's assumption that half of the new apartments will be unmetered basement apartments.

This assumption is based on review by our metering staff and Engineers and based on observation of standard practices within Oshawa. The 50% assumed is very conservative in relation to the large numbers of students at Durham College and University of Ontario Institute of Technology (UOIT). A large percentage of these students are accommodated in single family residential homes, particularly around the Durham College and the UOIT area and most of these owners do not meter their basement apartments separately.

b) Does OPUCN agree that an increase in unmetered basement apartments will lead to an increase in the average use per metered residential customer? If not, why not? If yes, please indicate how this has been accounted for in the load forecast for 2007 and 2008.

OPUCN would agree that average use would change, However, an attempt to quantify this change is very difficult in that average usage has been declining in Oshawa over the past two years due to several interrelated and not fully defined factors and isolating the effects of the relatively small numbers of unmetered apartments is very difficult and has not been attempted.

NOTE: The Board Staff interrogatories #13 - #15 concerning normalized usage calculations were answered by recalculating normalized figures using an alternate normalization method. OPUCN believes that this alternate method would answer the questions in numbers 13 and 14 below. The response can be found starting on page 51 of the Board Staff IRR, available on the OEB website.

# Question #13

Reference: i) Exhibit 3/Tab 2/Schedule 5

- a) Please explain more fully what the HONI weather normalization factor is (page
- 3) and how it was determined.
- b) Based on the response to part (a), please explain why the HONI weather normalization factor is applied to the five-year average use per customer to obtain normalized kWh per customer.
- c) Please explain why average demand is not related to kWh usage (page 5)?

Reference: i) Exhibit 3/Tab 2/Schedule 9

ii) Exhibit 3/Tab 2/Schedule 5

- a) Given that the weather varies from year to year, please explain why the difference between the actual residential use and the normalized residential use is 1.17% in each year.
- b) Reference (i) suggests that weather has no effect on the usage level for the Intermediate Use class (i.e., HONI weather normalization factor is 1.0). However, reference (ii) suggests that weather does have an effect. Please reconcile.
- c) Please provide the data used to determine the 5 year averages by customer class in reference (ii). Please reconcile any differences between the actual consumption values used to determine the averages and the historical consumption values reported in reference (i).
- d) With respect to the 2007 and 2008 usage volumes reported in reference (i) please explain:
- Why there are different values for weather actual and weather normalized
- Why the values do not match those reported in Exhibit 3/Tab 2/Schedule 6 as the normalized volume forecast.

#### Question #15

Reference: i) Exhibit 3/Tab 3/Schedule 3

a) What rates were used in for the 2008 revenues reported in this schedule?

The rates used for calculating revenues in this schedule are the proposed distribution rates for 2008 as calculated for the rate application. These have been changed in response to Board Staff interrogatories. The table below reflects the changes in proposed distribution rates.

		Normalized	
	Normalized	Distribution	Unit
	Consumption	Revenues	Revenues
(Year-			\$ / (kWh /
End)	(kWh / KW)	(\$)	kW)

Residential	47243	497773555	10884709.13	0.02
GS Less than 50 kW	3845	143774408	3443989.846	0.02
GS > 50 kw > 1000				
kw	522	893941	3899292.365	4.36
Intermediate Use				
(1000 - 5000 kW)	9	171299	1088772.239	6.36
Large Use (>5000)	2	140182	750602.9454	5.35
USL	305	2230937	65332.677	0.03
Sentinel Lighting	77	139	3493.473	25.13
Street Lighting	11650	26213	297636.6898	11.35
TOTAL	63653	645010674	20433829.36	

Customer Class	Fixed Rate	Volumetric Rate
Residential	\$8.40	\$0.0123
GS Less than 50 kW	\$10.14	\$0.0207
GS > 50 kW > 1000 kW	\$46.34	\$4.0372
Intermediate Use (1000 - 5000		
kW)	\$2,228.91	\$4.9507
Large Use (>5000)	\$12,001.85	\$3.2997
USL	\$5.05	\$0.0210
Sentinel Lighting	\$2.82	\$6.3870
Street Lighting	\$0.54	\$8.4746

Reference: i) Exhibit 4/Tab 2/Schedule 1

The following table contains the information required in parts a, b, and e of this question.

OM&A	COSTS											
	Operation	Variance from 2006 Board Appr	<u>2006</u> <u>Actual</u>	2007 Bridge	Variance from 2006 Actual			2007 Bridge	2008 Test	Variance from 2007 Bridge		
Code	(Working Capital)											
5005	Operation Supervision and Engineering		273,773	372,516	98,744	36%	New Engineer as permitted EDR 2006	372,516	384,274	11,757	3%	
5010	Load Dispatching						For 2007, reassignment-promotion of existing Staff to Manager level in Tech Services Department. Average compensation increase of 3% (in line with union contract arrangements)	_	_	_		
5012	Station Buildings and Fixtures Expense		_	_	_		arrangementer	_	_	_		
5014	Transformer Station Equipment - Operation Labour		-	-	-			-	-	-		
5015	Transformer Station Equipment - Operation Supplies and Expenses		-	-	-			-	-	-		
5016	Distribution Station Equipment - Operation		-	-	-			-	-	-		

	Labour										
5017	Distribution Station Equipment - Operation Supplies and Expenses	-	-	-			-	-	-		
5020	Overhead Distribution Lines and Feeders - Operation Labour	225,952	440,081	214,128	95%	See IR Response Board Staff Q. 28	440,081	652,369	212,289	48%	2 new linesman
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	(210,688)	(201,497)	9,191	-4%		(201,497)	(184,898)	16,599	-8%	2 new linesman Benefits
5030	Overhead Subtransmission Feeders - Operation	-	-	-			-	_	-		
5035	Overhead Distribution Transformers- Operation	_	_	_			_	_	_		
5040	Underground Distribution Lines and Feeders - Operation Labour	7,751	7,751		0%		7,751	7,984	233	3%	
5045	Underground Distribution Lines & Feeders - Operation Supplies &	1,047	193	(854)	-82%	See IR Response Board Staff Q. 28	193	199		3%	
5045	Expenses Underground Subtransmission Feeders - Operation	-	-	(004)	-02%	20	-	-	-	3%	

5055	Underground Distribution Transformers - Operation	_	_	_			_	_	_		
5060	Street Lighting and Signal System Expense	-	-	-			-	-	-		
5065	Meter Expense	83,869	48,635	(35,234)	-42%		48,635	123,875	75,241	155%	new meter technician
5070	Customer Premises - Operation Labour	-	-	-	4270		-	-	-	10070	teoriiiolari
5075	Customer Premises - Materials and Expenses	-	-	-			-	-	-		
5085	Miscellaneous Distribution Expense	(440,282)	(245,912)	194,370	-44%	See IR Response Board Staff Q. 28 and 32	(245,912)	(184,320)	61,592	-25%	New meter Benefits
5090	Underground Distribution Lines and Feeders - Rental Paid	-	-	-		New pole testing program \$79.4k to id at risk poles, promotion of existing Staff member to tech services dept in 2006. Hiring of student.	-	-	-		
5095	Overhead Distribution Lines and Feeders - Rental Paid	_	_	_			_	-	_		
5096	Other Rent	-	-	-			_	_	_		
3330	Sub-Total	(58,578)	421,767	480,345	820%		421,767	799,482	377,716	90%	
	Maintenance (Working										

	Capital)										
5105	Maintenance Supervision and Engineering	246,245	218,220	(28,025)	-11%	See IR Response Board Staff Q. 28	218,220	225,076	6,856	3%	
5110	Maintenance of Buildings and Fixtures - Distribution Stations	6,773	19,891	13,117	194%	See IR Response Board Staff Q. 28	19,891	20,487	597	3%	
5110	Maintenance of Transformer Station Equipment	-	-	-	194%	20	-	-	-	3%	
5114	Maintenance of Distribution Station Equipment	127,372	126,603	(770)	-1%		126,603	130,401	3,798	3%	
5120	Maintenance of Poles, Towers and Fixtures	503,320	320,397	(182,922)	-36%	See IR Response Board Staff Q. 28	320,397	330,009	9,612	3%	
5125	Maintenance of Overhead Conductors and Devices	-		-			-	_	_		
5130	Maintenance of Overhead Services	-	-	-			-	-	-		
5135	Overhead Distribution Lines and Feeders - Right of Way	_	-	-			-	-	_		
5145	Maintenance of Underground Conduit	150,052	122,039	(28,012)	-19%	See IR Response Board Staff Q. 28	122,039	125,701	3,661	3%	
5150	Maintenance of Underground Conductors and Devices	-	-	-			-	-	-		
5155	Maintenance of Underground Services	33,874	33,874	-	0%		33,874	34,891	1,016	3%	

	Maintenance of									
	Line									
5160	Transformers		1_			l _		_		
3100	Maintenance of	-	-	-		-	-	-		
	Street Lighting									
5405	and Signal									
5165	Systems	-	-	-		-	-	-		
	Sentinel Lights									
5170	- Labour	-	-	-		-	-	-		
	Sentinel Lights									
	- Materials and									
5172	Expenses	-	-	-		-	-	-		
	Maintenance of									
5175	Meters	-	-	-		 -	-	-		
	Customer									
	Installations									
	Expenses-									
5178	Leased Property	-	-	-		-	-	-		
	Water Heater									
5185	Rentals - Labour	_	-	-		_	-	-		
	Water Heater									
	Rentals -									
	Materials and									
5186	Expenses	_	_	_		_	_	_		
0.00	Water Heater									
	Controls -									
5190	Labour	_	1_	_		l <u>-</u>	_	_		
0100	Water Heater									
	Controls -									
	Materials and									
5192	Expenses	_	<u>-</u>			l _	_	l _		
3192		-	+	-		-	-	-		
	Maintenance of Other									
	Installations on							1		
E40E	Customer							1		
5195	Premises	-	<del>  -</del>	-		-	-	-		
	0.4.7.4	4 007 000	044.004	(000 040)	0401	044.004	000 504	05.540	00/	
	Sub-Total	1,067,636	841,024	(226,612)	-21%	841,024	866,564	25,540	3%	
			1							
	Billing and									
	Collections		ļ					ļ		
5305	Supervision	222,974	216,571	(6,403)	-3%	216,571	223,176	6,606	3%	
	Meter Reading									
5310	Expense	386,024	376,158	(9,866)	-3%	376,158	387,950	11,792	3%	

	Customer										
5315	Billing	856,571	886,869	30,298	4%		886,869	913,569	26,700	3%	
						Assistance of Staff on additional Customer					
5320	Collecting	376,008	395,466	19,458	5%	Survey	395,466	407,783	12,318	3%	
5325	Collecting- Cash Over and Short		_				_				
0020	Collection										
5330	Charges	_	_	_			_	_	_		
5335	Bad Debt Expense	211,765	216,000	4,235	2%		216,000	222,480	6,480	3%	
5340	Miscellaneous Customer Accounts Expenses	-	-	-			-	-	-		
	Sub-Total	2,053,343	2,091,064	37,722	2%		2,091,064	2,154,959	63,895	3%	
	Community Relations										
5405	Supervision	109,253	105,594	(3,659)	-3%		105,594	169,589	63,995	61%	new CSR Supervisor
5410	Community Relations - Sundry	14,861	23,200	8,339	56%	Small increase in dollar total	23,200	23,896	696	3%	
5415	Energy Conservation	222,319	_	(222,319)	100%	One time investment program for Energy Conservation (equal to third tranche MBRR). Not re-occurring program for bridge not test year.	-	_	_		
2	Community	,		(,0.0)	12070	Additional Safety Training for Staff					
5420	Safety Program	208,165	276,902	68,737	33%	required.	276,902	285,376	8,474	3%	

5425	Miscellaneous Customer Service and Informational Expenses	455,509	478,470	22,961	5%		478,470	521,354	42,884	9%	new CSR Supervisor Benefits
5505	Supervision	-	-	-			-	-	-		
5510	Demonstrating and Selling Expense	-	-	-			-	-	-		
5515	Advertising Expense	_	_				_	_	_		
5520	Miscellaneous Sales Expense	-	-	-			-	-	-		
	Sub-Total	1,010,108	884,166	(125,942)	-12%		884,166	1,000,216	116,049	13%	
	Administrative and General Expenses										
5605	Executive Salaries and Expenses	1,446,113	1,864,004	417,892	29%	In addition to average compensation increase of 3%, increase in accrual for future benefits (based on AON Actuarial study) \$173k, and costs for a new department for Conservation Services Dept \$154k. Offset reduction in subcontracting costs and reassignment one manager's salary/benefit costs.	1,864,004	1,898,764	34,759	2%	

5610	Management Salaries and Expenses	637,673	726,591	88,918	14%	In addition to average compensation increase of 3%, staff member back from Pregnancy Leave. In 2007 new incentive program \$65k	726,591	1,002,599	276,008	38%	New Project Engineer
5615	General Administrative Salaries and Expenses	670,497	686,448	15,951	2%		686,448	707,993	21,545	3%	
5620	Office Supplies and Expenses	167,356	165,149	(2,207)	-1%		165,149	170,103	4,954	3%	
5625	Administrative Expense Transferred Credit	(722,844)	(1,275,327)	(552,483)	76%	Increase in Stores Allocation in 2007 (as per Cost allocation study)	(1,275,327)	(1,275,327)	-	0%	
5630	Outside Services Employed	412,248	373,008	(39,240)	-10%		373,008	634,198	261,190	70%	New Finance Contractor/ It Contractor/ Reg Costs for 2008 Filing
5635	Property Insurance	62,251	104,669	42,418	68%	Additional Coverage / higher premium due to MS Station fore in 2006.	104,669	116,766	12,097	12%	ŭ .
5640	Injuries and Damages	100,859	153,531	52,672	52%	Additional coverage as per independent insurance review for Directors and Officers insurance.	153,531	161,190	7,659	5%	

	Employee										
5645	Pensions and Benefits	439,811	455,253	15,442	4%		455,253	476,312	21,059	5%	
	Franchise	,	,	10,11			100,000	,			
5650	Requirements	-	-	-			-	-	-		
5655	Regulatory Expenses	130,298	429,818	299,520	230%	New account to comply OEB requirements in 2007 (CDM Operating expenditures \$297k.) Offset to revenue in 2007, this is one time occurrence not repeated in 2008.	429,818	442,713	12,895	3%	
3033	General	130,290	429,010	299,320	23070	Small	429,010	442,713	12,033	370	
	Advertising					increase in					
5660	Expenses	1,300	1,579	279	21%	dollar total	1,579	1,626	47	3%	
	Miscellaneous General										
5665	Expenses	63,026	64,325	1,299	2%		64,325	66,255	1,930	3%	
5670	Rent	264,000	264,000		0%		264,000	264,000		0%	
3670	Maintenance of	204,000	204,000	<del>  -</del>	0%		204,000	264,000	<del>  -</del>	0%	
5675	General Plant	491,918	496,560	4,641	1%		496,560	511,542	14,982	3%	
5680	Electrical Safety Authority Fees	-	-	-			-	-	-		
5685	Independent Market Operator Fees and Penalties	_	_	_			_	_	_		
5000	Taxes Other			1							
0405	Than Income	207.724	202.022	F 000	40/		202.000	045.450	(47.550)	400/	
6105	Taxes	387,704	393,000	5,296	1%		393,000	345,450	(47,550)	-12%	
	Sub-Total	4,552,211	4,902,607	350,397	8%		4,902,607	5,524,182	621,575	13%	
	Amortization Expenses										
5705	Amortization Expense - Property, Plant,	3,659,116	3,896,539	237,423	6%	Per Amortization Schedule	3,896,539	4,508,574	612,035	16%	Per Amortization Schedule

	and Equipment										
											1
5710	Amortization of Limited Term Electric Plant	-	-	-			-	-	-		
5715	Amortization of Intangibles and Other Electric Plant	_	_	_			_	_	_		
5720	Amortization of Electric Plant Acquisition Adjustments	-	_	_			_	_	_		
5725	Miscellaneous Amortization	-	-	-			-	-	-		
5730	Amortization of Unrecovered Plant and Regulatory Study Costs	_	-	-			-	-	-		
5735	Amortization of Deferred Development Costs	-	-	-			-	-	-		
5740	Amortization of Deferred Charges	-	-	-			-	-	-		
	Sub-Total	3,659,116	3,896,539	237,423	6%		3,896,539	4,508,574	612,035	16%	
4705	Power Purchased	56,995,211	69,975,672	12,980,461	23%	Increase associated with load forecast projections as well as rate reflects 5 year average in cost of energy charged by IESO. Increase	69,975,672	70,572,257	596,585	1%	
4708	Charges-WMS	5,776,516	7,229,222	1,452,706	25%	associated with load forecast	7,229,222	7,290,855	61,633	1%	

						projections as well as rate					
						reflects 5 year					
						average in cost					
						of energy					
						charged by IESO.					
						Increase					
						associated					
						with load					
						forecast					
						projections as well as rate					
						reflects 5 year					
						average in cost					
	0					of energy					
4710	Cost of Power Adjustments		_			charged by IESO.	_	_	_		
4710	Charges-One-	†	_	-		ILSO.	_	-	-		
4712	Time	-	-	-			-	-	-		
4714	Charges-NW	6,396,297	6,590,175	193,878	3%		6,590,175	6,646,360	56,185	1%	
	-					Increase					
						associated with load					
						forecast					
						projections as					
						well as rate					
						reflects 5 year					
						average in cost of energy					
						charged by					
4716	Charges-CN	5,372,570	5,631,604	259,034	5%	IESO.	5,631,604	5,679,617	48,013	1%	
	Rural Rate										
4730	Assistance Expense		_				_	_	_		
4/30	Independent	1-	<u> </u>	-			_	-	-		
	Market Operator										
	Fees and										
5685	Penalties	-	-	-			-	-	-		
	Sub-Total	74,540,594	89,426,673	14,886,079	20%		89,426,673	90,189,089	762,416	1%	
							, , ,		,	·	
	Grand Total	86,824,429	102,463,841	<u>15,639,412</u>	18%		102,463,841	105,043,066	<u>2,579,226</u>	3%	

- a) With respect to changes between 2006 Actual and 2007 Forecast, please provide an explanation for any line item with an increase of 5% or more. In particular, please indicate the external factors that give rise to the increase.
- b) Why are the entries for Overhead Distribution Lines and Feeders Operations Supplies and Expenses negative for 2006 actual, 2007 and 2008?
- c) Why are the entries for Miscellaneous Distribution Expenses negative?

Please see OPUCN's replies to Board Staff Interrogatories 28 and 32. These can be found starting on pages 83 and 101 of the document available on the OFB website.

d) Why is the 2007 entry for Overhead Distribution Lines and Feeders – Operation Labour negative?

Please see OPUCN's reply Board Staff Interrogatory 28, starting on page 83 of the reply document.

e) With respect to the 2007 and 2008 Forecasts, please provide an explanation for any line item with an increase of 5% or more. In particular, please indicate the external factors that give rise to the increase.

## Question #17

Reference: i) Exhibit 4/Tab 2/Schedule 3

a) Please provide copies of the Service Agreements between OPUCN and its affiliates as required under Section 2 of the OEB's Affiliate Relationships Code.

The Service Agreement between OPUCN and its affiliates is attached as Appendix B to this document.

b) Are any overhead costs (e.g., A&G costs) included in the charges to affiliates? If not, why not? If yes, how are overhead costs to be included determined?

Please see Board Staff Interrogatories 17 through 21 (pages 65-76) for information on this question. OPUCN does include Administration Costs and other Overhead/ support costs in charges to affiliates.

c) Where are revenues received from fees and charges to affiliates accounted for in the Application? The "offset" does not appear to be reported anywhere.

Please see Board Staff Interrogatories 17 through 21 (pages 65-76) for information on this question. The requested revenues are detailed there.

#### Question #18

Reference: i) Exhibit 4/Tab 2/Schedule 4

a) Please provide a copy of the service agreement between OPUCN and OPUC.

This agreement is attached as Appendix C to this document.

b) Please indicate precisely what "corporate governance services" are provided to OPUCN by OPUC. In particular, what types of legal and consulting services are provided?

Corporate governance services consist primarily of management fees related to the services of the CFO, CEO and Board of Directors. From time to time OPUC engages consultants and / or lawyers to get advice related to broad issues applicable to all of its subsidiaries, such as enterprise risk management, designing and implementing an corporation wide performance management system, etc.

c) How many of OPUCN's executive management are paid by OPUC and what are their positions (per Exhibit 4/Tab 2/Schedule 6)?

OPUCN does not directly employ a CEO or a CFO. These services are provided by OPUC.

#### Question #19

Reference: i) Exhibit 1/Tab 3/Schedule 1, page 12

ii) Exhibit 5/Tab 1/Schedule 2

a) Please reconcile the Regulatory Asset and Liability balances reported in the two references as of December 31, 2006.

Please see OPUCN's response to Board staff interrogatories 47 and 48. These can be found on pages 135 and 140 of the response.

b) Why are there no balances reported in reference (ii) for RCVA-Retail or RCVA-STR?

Please see OPUCN's response Board staff interrogatory 45 iii. It can be found on page 134 of the response.

c) With respect to reference (ii), what is the basis for the (\$1,523,352) adjustment related to Account 1590?

The following table details the calculations for the recovery of account 1590 RARA account up to April 30, 2008. The basis for the calculation is the continued used of approved OEB recovery rates and the application of OPUCN's load forecast.

Customer C	class		Metric	kW	kWhs	# Customers	EDR 2006 Approved Rates*	EDR 2007 Approved Rates**	Jan1/07 to Apr30/07 Disposal	May1/07 to Dec31/07 Disposal	Jan1/08 to Apr30/08 Disposal
Residential	kWhs		kWhs		491,019,690	46,602	0.0012	0.0012	196,408	392,816	196,408
GS < 50 KW	kWhs		kWhs		140,172,782	3,749	0.0009	0.0009	42,052	84,104	42,052
GS > 50 to 999	kW	898,964	kW	899,079	360,799,156	525	0.4043	0.4043	121,166	242,332	121,166
Intermediate	kW	171,299	kW	171,299	80,553,156	9	0.0820	0.0820	4,682	9,364	4,682
Large Users	kW	141,375	kW	140,182	72,303,208	2	0.2860	0.2860	13,364	26,728	13,364
Small Scattered Load	kWhs		kWhs		2,223,662	304	0.0022	0.0022	1,631	3,261	1,631
Sentinel Lighting	kW	139	kW	139	41,229	77	0.1748	0.1748	8	16	8
Street Lighting	kW	25,516	kW	26,213	9,721,448	11,340	0.1748	0.1748	1,527	3,055	1,527
Totals				1,236,912	1,156,834,331	62,608			380,838	761,676	380,838

d) Why Is OPUCN including Account 1590 in the account proposed for clearance? In its December 9, 2004 Decision regarding recovery of regulatory assets the OEB stated (page 94) that any balances outstanding in Account 1590 would be dealt with after April 30, 2008.

The total of the RARA account 1590 that was approved in the EDR 2006, is deducted for projected recovery as per Question c. However, there is a balance as at May 1, 2008 in the RARA account that OPUCN seeks permission to collect in 2008 rate application as a regulatory rate rider.

#### Question #20

Reference: i) Exhibit 5/Tab 1/Schedule 3

a) Please provide a schedule that sets out the allocation factor (definition and values) used to allocate the balance in each account to customer classes.

The allocation factor is based on kWh load for the 2008 Test year by class for all accounts except Deferred PILS (1562) which is disposed by Distribution Revenue percentages per for the 2008 Test year.

Account Description	Account Number	Dec31/06 Balance	Apr 30/08 Balance	Allocation Basis	Residential	GS < 50 KW	GS > 50 to 999	Intermediate	Large Users	Small Scattered Load	Sentinel Lighting	Street Lighting	Totals
Unrecovered Plant and Regulatory Study Costs	1505	-	-										-
Other Regulatory Assets	1508	(21,501)	(21,501)	KWh	(9,126)	(2,605)	(6,706)	(1,497)	(1,344)	(41)	(1)	(181)	(21,501)
Preliminary Survey and Investigation Charges	1510	-	-										_
Emission Allowance Inventory	1515	-	-										-
Emission Allowances Withheld Retail Cost	1516	-	-										-
Variance Account - Retail	1518	-	-										-
Power Purchase Variance Account	1520	_	_										_
Misc. Deferred Debits - incl. Rebate Cheques	1525	-	-										_
Deferred Losses from Disposition of Utility Plant	1530	-	-										-
Unamortized Loss on Reacquired Debt	1540	-	-										-
Development Charge Deposits/	1545	-	-										-

Receivables													
Retail Cost Variance Account - STR	1548	-	-										_
LV Variance Account	1550	_											
Smart Meter Capital Variance Account	1555	-	<u> </u>										<u> </u>
Smart Meters OM&A Variance Account	1556	-	-										-
Deferred Development Costs	1560	-	1										-
Deferred Payments in Lieu of Taxes	1562	782,107	812,655	Dx Revenue	428,169	139,458	156,451	43,435	30,102	3,047	139	11,855	812,655
PILS Contra Account	1563	-	-										-
CDM Expenditures and Recoveries	1565	_	-										-
CDM Contra Account	1566	-											-
Qualifying Transition Costs	1570	-	1										1
Pre-Market Opening Energy Variances Total	1571	_											_
Extra- Ordinary Event Losses	1571	-	-										-
Deferred Rate Impact Amounts	1574	-											1

RSVA - Wholesale													
Market													
Service Charge	1580	(677,570)	(719,903)	KWh	(305,564)	(87,230)	(224,527)	(50,129)	(44,995)	(1,384)	(26)	(6,050)	(719,903)
RSVA - One-	1000	(611,610)	(7.10,000)	1	(000,001)	(01,200)	(221,021)	(00,120)	(11,000)	(1,001)	(20)	(0,000)	(1.10,000)
time													
Wholesale Market													
Service	1582	63,405	67,041	KWh	28,456	8,123	20,909	4,668	4,190	129	2	563	67,041
RSVA -			01,011					1,000	.,	14			01,011
Retail													
Transmission													
Network Charge	1584	2,998,076	3,175,027	KWh	1,347,644	384,716	990,243	221,085	198,442	6,103	113	26,681	3,175,027
RSVA -	100-1	2,000,070	0,170,027	127711	1,047,044	004,710	330,Z40	221,000	100,442	0,100	110	20,001	0,170,027
Retail													
Transmission													
Connection Charge	1586	(1,605,640)	(1,703,767)	KWh	(723,166)	(206,444)	(531,379)	(118,637)	(106,487)	(3,275)	(61)	(14,318)	(1,703,767)
RSVA -	1300	(1,005,040)	(1,703,707)	KVVII	(723,100)	(200,444)	(331,379)	(110,037)	(100,487)	(3,273)	(01)	(14,310)	(1,703,707)
Power	1588	115,716	128,602	KWh	54,585	15,583	40,109	8,955	8,038	247	5	1,081	128,602
Deferred													
PILs Account	1592	144,447	144,447	KWh	61,311	17,503	45,051	10,058	9,028	278	5	1,214	144,447
Other Deferred													
Credits	1590	59,208	59,208	KWh	25,131	7,174	18,466	4,123	3,701	114	2	498	59,208
		,	,		-, -	,	-,	, -	-, -				,
Sub-total to													
Dispose at													
May1/08 or	4 00/00	4 050 040	4 0 44 000				500 04=	400.000	400.075	5.045	400		
Dec31/06?	Apr30/08	1,858,248	1,941,809		907,439	276,277	508,617	122,060	100,675	5,217	180	21,344	1,941,809
Clear													
residual 1590													
balance as of											_		<b>.</b>
April 30/08?	YES	YES	Apr30/08		227,700	48,752	140,470	5,428	15,493	1,890	9	1,771	441,513
Tatalita		NO	Dec31/06										
Total to Dispose at													
May1/08					1,135,139	325,029	649,087	127,489	116,168	7,108	189	23,114	2,383,322
,					, , , , , ,	,	,	•	,	,		,	, ,
Disposal	2									<b>a</b> :			
period?	YEARS	2 YEARS			567,570	162,514	324,543	63,744	58,084	3,554	95	11,557	1,191,661

	3 YEARS										
Projected 2008 Rate Riders			0.0012	0.0012	0.3610	0.3721	0.4143	0.0000	0.0023	0.4409	
Rate Determinant			kWh	kWh	kW	kW	kW	kW	kWh	kW	

## Test Year (2008) Allocations

# KWh for Customers # Non TOU Dx w/Rebate **Customer Class** Metric kW **KW**h Customers Customers Revenue Cheques kWhs 0% Residential 42% 74% 49% 53% 0% GS < 50 KW kWhs 0% 12% 6% 14% 17% 0% GS > 50 to 999kW 73% 31% 1% 36% 19% 0% kW 7% 0% 5% 0% Intermediate 14% kW 4% Large Users 11% 6% 0% 0% **Small Scattered** kWhs 0% 0% 0% Load 0% 0% kW Sentinel Lighting 0% 0% 0% 0% 0% 0% kW 2% 1% 18% 1% 0% Street Lighting **Totals** 100% 100% 100% 100% 100% 0%

#### Question #21

Reference: i) Exhibit 6/Tab 1/Schedule 1

Please see OPUCN's response to Board staff interrogatory # 56 for a more complete capital structure table. This table can be found on page 182 of the response.

- a) Why has OPUCN not include a 4% short-term debt component in its capital structure as directed by the Board in its December 20, 2006 Report on Cost Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors?
- b) Please recalculate the average cost of capital assuming a 4% short-term debt component.

The cost of capital for 2008 contains a 4% short term debt component. Please see Board Staff interrogatory number 56 for more details of this calculation. This response can be found starting at page 123 of OPUCN's IRR which is available on the OEB website.

c) Exhibit 1/Tab 3/Schedule 1 (page 17) states that the note held by the shareholder is payable upon demand. Given this circumstance why is it not more appropriate (for regulatory purposes) to reset the rate every year at the deemed rate applicable for affiliate transactions?

## Question #22

Reference: i) Exhibit 8/Tab 1/Schedule 1, pages 1-2

a) Please provide a copy of the Cost Allocation run supporting the Revenue to Cost Calculations reported on page 2.

This document is appended to OPUCN's response to the Board Staff IRR as Appendix E. The complete document is available on the OEB website.

#### Question #23

Reference: i) Exhibit 8/Tab 1/Schedule 1,page 5

ii) Exhibit 9/Tab 1/Schedule 2

a) What are the current rates (by customers class) used to determine the results shown on page 2 of reference (ii)?

The rates used were those from OPUCN's current rate schedule.

Rate Class	Fixed Rate	Variable Rate
Residential	\$ 7.63	\$0.012 / kWh
General Service < 50 kW	\$9.10	\$0.0190 / kWh
General Service 50 – 1000 kW	\$40.860	\$3.9404 / kW
General Service 1000 – 5000 kW	\$1,952.54	\$4.4182 / kW
General Service > 5000 kW	\$10,512.51	\$3.1762 / kW
Unmetered Scattered Load	\$4.4200 / connection	\$0.0206 / kWh
Sentinel Lighting	\$2.4700	\$5.7689 / kW
Street Lighting	\$0.4700 / light	\$7.5976 / kWh

b) Where/how is the revenue shortfall associated with the transformer ownership discount addressed in the Application?

This shortfall is not addressed directly in the Application. However, it will be revisited before the final rate order is issued.

## Question #24

Reference: i) Exhibit 9/Tab 1/Schedule 12

a) The bill impact tables included in the electronic application filed with the OEB are not completely legible. Please provide a full set of bill impact tables comparable to what was provided in the 2006 EDR process.

RPP Pricing (Summer)

Residential (R1) 0.053 Under 0.062 Over kWh

100 Consumption TLF 1.04660 **600** kWH RPP Limit

			2007 BILL			2008 BILL			IMPACT	
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				7.36			8.40	1.04	14.2%	5.9%
Distribution	kWh	100	0.01080	1.08	100	0.01233	1.23	0.15	14.2%	0.9%
Sub-Total		•		8.44			9.64	1.20	14.2%	6.7%
Regulatory Asset Recovery	kWh	100	0.00120	0.12	100	0.00110	0.11	(0.01)	-8.3%	-0.1%
Retail Transmission - Network	kWh	105	0.00590	0.62	105	0.00590	0.62	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	105	0.00450	0.47	105	0.00450	0.47	0.00	0.0%	0.0%
Wholesale Market Service	kWh	105	0.00520	0.54	105	0.00520	0.54	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	105	0.00100	0.10	105	0.00100	0.10	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	100	0.00700	0.70	100	0.00700	0.70	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	105	0.05300	5.55	105	0.05300	5.55	0.00	0.0%	0.0%

Cost of Power Commodity	kWh	0	0.06200	0.00	0	0.06200	0.00	0.00	#DIV/0!	0.0%
Total Bill				16.54			17.73	1.19	7.2%	6.7%

Residential (R1) 0.053 Under 0.062 Over kWh

250 Consumption TLF 1.04660 **600** kWH RPP Limit

			2007 BILL			2008 BILL			IMPACT	
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				7.36			8.40	1.04	14.2%	3.3%
Distribution	kWh	250	0.01080	2.70	250	0.01233	3.08	0.38	14.2%	1.2%
Sub-Total				10.06			11.49	1.43	14.2%	4.5%
Regulatory Asset Recovery	kWh	250	0.00120	0.30	250	0.00110	0.28	(0.03)	-8.3%	-0.1%
Retail Transmission - Network	kWh	262	0.00590	1.54	262	0.00590	1.54	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	262	0.00450	1.18	262	0.00450	1.18	0.00	0.0%	0.0%
Wholesale Market Service	kWh	262	0.00520	1.36	262	0.00520	1.36	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	262	0.00100	0.26	262	0.00100	0.26	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	250	0.00700	1.75	250	0.00700	1.75	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	262	0.05300	13.87	262	0.05300	13.87	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.06200	0.00	0	0.06200	0.00	0.00	#DIV/0!	0.0%

Total Bill		30.32	31.72	1.40	4.6%	4.4%
	·					

Residential (R1)

kWh

#REF! Consumption

TLF 1.04660

0.053

600

Under

0.062 Ov

Over

kWH RPP Limit

			2007 BILL			2008 BILL		IMPACT			
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill	
Monthly Service				7.36			8.40	1.04	14.2%	1.9%	
Charge Distribution	kWh	500	0.01080	5.40	500	0.01233	6.17	0.77	14.2%	1.4%	
Sub-Total				12.76			14.57	1.81	14.2%	3.3%	
Regulatory Asset Recovery	kWh	500	0.00120	0.60	500	0.00110	0.55	(0.05)	-8.3%	-0.1%	
Retail Transmission - Network	kWh	523	0.00590	3.09	523	0.00590	3.09	0.00	0.0%	0.0%	
Retail Transmission - Line and Transformation Connection	kWh	523	0.00450	2.35	523	0.00450	2.35	0.00	0.0%	0.0%	
Wholesale Market Service	kWh	523	0.00520	2.72	523	0.00520	2.72	0.00	0.0%	0.0%	
Rural Rate Protection Charge	kWh	523	0.00100	0.52	523	0.00100	0.52	0.00	0.0%	0.0%	
Debt Retirement Charge	kWh	500	0.00700	3.50	500	0.00700	3.50	0.00	0.0%	0.0%	
Cost of Power Commodity	kWh	523	0.05300	27.73	523	0.05300	27.73	0.00	0.0%	0.0%	
Cost of Power Commodity	kWh	0	0.06200	0.00	0	0.06200	0.00	0.00	#DIV/0!	0.0%	
Total Bill		•		53.28			55.04	1.76	3.3%	3.2%	

Residential (R1) 0.053 Under 0.062 Over kWh

1,000 Consumption TLF 1.04660 **600** kWH RPP Limit

			2007 BILL			2008 BILL			IMPACT	
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				7.36			8.40	1.04	14.2%	1.0%
Distribution	kWh	1,000	0.01080	10.80	1,000	0.01233	12.33	1.53	14.2%	1.4%
Sub-Total				18.16			20.73	2.57	14.2%	2.4%
Regulatory Asset Recovery	kWh	1,000	0.00120	1.20	1,000	0.00110	1.10	(0.10)	-8.3%	-0.1%
Retail Transmission - Network	kWh	1,047	0.00590	6.17	1,047	0.00590	6.17	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	1,047	0.00450	4.71	1,047	0.00450	4.71	0.00	0.0%	0.0%
Wholesale Market Service	kWh	1,047	0.00520	5.44	1,047	0.00520	5.44	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	1,047	0.00100	1.05	1,047	0.00100	1.05	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	1,000	0.00700	7.00	1,000	0.00700	7.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	600	0.05300	31.80	600	0.05300	31.80	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	447	0.06200	27.69	447	0.06200	27.69	0.00	0.0%	0.0%
Total Bill				103.22			105.70	2.47	2.4%	2.3%

 Residential (R1)
 0.053
 Under Unde

## Consumption

			2007 BILL			2008 BILL			IMPACT	
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				7.36			8.40	1.04	14.2%	0.7%
Distribution	kWh	1,500	0.01080	16.20	1,500	0.01233	18.50	2.30	14.2%	1.5%
Sub-Total				23.56			26.90	3.34	14.2%	2.1%
Regulatory Asset Recovery	kWh	1,500	0.00120	1.80	1,500	0.00110	1.65	(0.15)	-8.3%	-0.1%
Retail Transmission - Network	kWh	1,570	0.00590	9.26	1,570	0.00590	9.26	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	1,570	0.00450	7.06	1,570	0.00450	7.06	0.00	0.0%	0.0%
Wholesale Market Service	kWh	1,570	0.00520	8.16	1,570	0.00520	8.16	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	1,570	0.00100	1.57	1,570	0.00100	1.57	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	1,500	0.00700	10.50	1,500	0.00700	10.50	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	600	0.05300	31.80	600	0.05300	31.80	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	970	0.06200	60.13	970	0.06200	60.13	0.00	0.0%	0.0%
Total Bill				153.85			157.04	3.19	2.1%	2.0%

kWh 2,000 Consumption TLF 1.04660 **600** kWH RPP Limit

			2007 BILL			2008 BILL			IMPACT	
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				7.36			8.40	1.04	14.2%	0.5%
Distribution	kWh	2,000	0.01080	21.60	2,000	0.01233	24.66	3.06	14.2%	1.5%
Sub-Total				28.96			33.06	4.10	14.2%	2.0%
Regulatory Asset Recovery	kWh	2,000	0.00120	2.40	2,000	0.00110	2.20	(0.20)	-8.3%	-0.1%
Retail Transmission - Network	kWh	2,093	0.00590	12.35	2,093	0.00590	12.35	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	2,093	0.00450	9.42	2,093	0.00450	9.42	0.00	0.0%	0.0%
Wholesale Market Service	kWh	2,093	0.00520	10.88	2,093	0.00520	10.88	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	2,093	0.00100	2.09	2,093	0.00100	2.09	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	2,000	0.00700	14.00	2,000	0.00700	14.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	600	0.05300	31.80	600	0.05300	31.80	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	1,493	0.06200	92.58	1,493	0.06200	92.58	0.00	0.0%	0.0%
Total Bill				204.49			208.39	3.90	1.9%	1.9%

GS <50 (C1)

kWh

2,000 Consumption TLF 1.04660

	2007 BILL	2008 BILL	IMPACT

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				8.83			10.08	1.25	14.2%	0.6%
Distribution	kWh	2,000	0.01810	36.20	2,000	0.02066	41.33	5.13	14.2%	2.3%
Sub-Total				45.03			51.41	6.38	14.2%	2.8%
Regulatory Asset Recovery	kWh	2,000	0.00090	1.80	2,000	0.00110	2.20	0.40	22.2%	0.2%
Retail Transmission - Network	kWh	2,093	0.00530	11.09	2,093	0.00530	11.09	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	2,093	0.00410	8.58	2,093	0.00410	8.58	0.00	0.0%	0.0%
Wholesale Market Service	kWh	2,093	0.00520	10.88	2,093	0.00520	10.88	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	2,093	0.00100	2.09	2,093	0.00100	2.09	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	2,000	0.00700	14.00	2,000	0.00700	14.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	600	0.05300	31.80	600	0.05300	31.80	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	1,493	0.06200	92.58	1,493	0.06200	92.58	0.00	0.0%	0.0%
Total Bill				217.86			224.64	6.78	3.1%	3.0%

GS <50 (C1)

kWh Consumption 5,000 TLF 1.04660

	2007 BILL	2008 BILL	IMPACT

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				8.83			10.08	1.25	14.2%	0.2%
Distribution	kWh	5,000	0.01810	90.50	5,000	0.02066	103.32	12.82	14.2%	2.3%
Sub-Total				99.33			113.41	14.08	14.2%	2.5%
Regulatory Asset Recovery	kWh	5,000	0.00090	4.50	5,000	0.00110	5.50	1.00	22.2%	0.2%
Retail Transmission - Network	kWh	5,233	0.00530	27.73	5,233	0.00530	27.73	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	5,233	0.00410	21.46	5,233	0.00410	21.46	0.00	0.0%	0.0%
Wholesale Market Service	kWh	5,233	0.00520	27.21	5,233	0.00520	27.21	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	5,233	0.00100	5.23	5,233	0.00100	5.23	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	5,000	0.00700	35.00	5,000	0.00700	35.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	600	0.05300	31.80	600	0.05300	31.80	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	4,633	0.06200	287.25	4,633	0.06200	287.25	0.00	0.0%	0.0%
Total Bill				539.51			554.59	15.08	2.8%	2.7%

GS <50 (C1)

kWh 15,000 Consumption TL

ption TLF 1.04660

	2007 BILL				2008 BILL	•	IMPACT		
Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e	% of Total

									%	Bill
Monthly Service Charge				8.83			10.08	1.25	14.2%	0.1%
Distribution	kWh	15,000	0.01810	271.50	15,000	0.02066	309.97	38.47	14.2%	2.3%
Sub-Total				280.33			320.05	39.72	14.2%	2.4%
Regulatory Asset Recovery	kWh	15,000	0.00090	13.50	15,000	0.00110	16.50	3.00	22.2%	0.2%
Retail Transmission - Network	kWh	15,699	0.00530	83.20	15,699	0.00530	83.20	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	15,699	0.00410	64.37	15,699	0.00410	64.37	0.00	0.0%	0.0%
Wholesale Market Service	kWh	15,699	0.00520	81.63	15,699	0.00520	81.63	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	15,699	0.00100	15.70	15,699	0.00100	15.70	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	15,000	0.00700	105.00	15,000	0.00700	105.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	600	0.05300	31.80	600	0.05300	31.80	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	15,099	0.06200	936.14	15,099	0.06200	936.14	0.00	0.0%	0.0%
Total Bill				1,611.67			1,654.40	42.72	2.7%	2.6%

# GS>50 kW < 1000 kW (I1) (I4)

kW 50 Consumption TLF 1.04660

			2007 BILI	_		2008 BILI	_	IMPACT		
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service				40.59			46.34	5.75	14.2%	1.2%

Charge					]					
Distribution	kW	50	3.53610	176.81	50	4.03718	201.86	25.05	14.2%	5.2%
Sub-Total				217.40			248.20	30.81	14.2%	6.4%
Regulatory Asset Recovery	kW	50	0.40430	20.22	50	0.35930	17.97	(2.25)	-11.1%	-0.5%
Other Charges	kW	50	4.30060	215.03	50	4.30060	215.03	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	50	1.85650	92.83	50	1.85650	92.83	0.00	0.0%	0.0%
Total Bill				452.64			481.20	28.56	6.3%	5.9%

## GS>50 kW < 1000 kW (I1) (I4)

kW
100 Consumption TLF 1.04660

			2007 BILL			2008 BILL		IMPACT		
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				40.59			46.34	5.75	14.2%	0.6%
Distribution	kW	100	3.53610	353.61	100	4.03718	403.72	50.11	14.2%	5.5%
Sub-Total				394.20			450.06	55.86	14.2%	6.1%
Regulatory Asset Recovery	kW	100	0.40430	40.43	100	0.35930	35.93	(4.50)	-11.1%	-0.5%
Other Charges	kW	100	4.30060	430.06	100	4.30060	430.06	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	100	1.85650	185.65	100	1.85650	185.65	0.00	0.0%	0.0%
Total Bill				864.69			916.05	51.36	5.9%	5.6%

## GS>50 kW < 1000 kW (I1) (I4)

kW

155	Consumption	TLF	1.04660							
			2007 BILL		2008 BILL			IMPACT		
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				40.59			46.34	5.75	14.2%	0.4%
Distribution	kW	155	3.53610	548.10	155	4.03718	625.76	77.67	14.2%	5.6%
Sub-Total				588.69			672.10	83.42	14.2%	6.0%
Regulatory Asset Recovery	kW	155	0.40430	62.67	155	0.35930	55.69	(6.98)	-11.1%	-0.5%
Other Charges Retail Transmission -	kW	155	4.30060	666.59	155	4.30060	666.59	0.00	0.0%	0.0%
Line and Transformation Connection	kW	155	1.85650	287.76	155	1.85650	287.76	0.00	0.0%	0.0%
Total Bill		-		1,317.95			1,394.39	76.44	5.8%	5.5%

# GS>1000 kW < 5000 kW (I2 -Intermediate)

kW

3,000 Consumption

kWh

TLF

1.04660

800,000 Consumption

		2007 BILL			2008 BILL			IMPACT		
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				1,952.27			2,228.91	276.64	14.2%	0.3%
Distribution	kW	3,000	4.33620	13,008.60	3,000	4.95065	14,851.96	1,843.3 6	14.2%	2.0%
Sub-Total				14,960.87			17,080.87	2,120.0 0	14.2%	2.3%

Total Bill				90,811.17			93,789.76	2,978.6 0	3.3%	3.2%
Cost of Power Commodity	kWh	837,280	0.06200	51,911.36	837,280	0.06200	51,911.36	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	800,000	0.00700	5,600.00	800,000	0.00700	5,600.00	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	837,280	0.00100	837.28	837,280	0.00100	837.28	0.00	0.0%	0.0%
Wholesale Market Service	kWh	837,280	0.00520	4,353.86	837,280	0.00520	4,353.86	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	3,000	1.85650	5,569.50	3,000	1.85650	5,569.50	0.00	0.0%	0.0%
Retail Transmission - Network	kW	3,000	2.44410	7,332.30	3,000	2.44410	7,332.30	0.00	0.0%	0.0%
Regulatory Asset Recovery	kW	3,000	0.08200	246.00	3,000	0.36820	1,104.60	858.60	349.0%	0.9%

# GS>1000 kW < 5000 kW (I2 -Intermediate) kW

Consumption kWh 3,000

TLF 1.04660

1,000,000 Consumption

			2007 BILL			2008 BILL			IMPACT		
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill	
Monthly Service Charge				1,952.27			2,228.91	276.64	14.2%	0.3%	
Distribution	kW	3,000	4.33620	13,008.60	3,000	4.95065	14,851.96	1,843.3 6	14.2%	1.7%	

Sub-Total				14,960.87			17,080.87	2,120.0 0	14.2%	1.9%
Regulatory Asset Recovery	kW	3,000	0.08200	246.00	3,000	0.36820	1,104.60	858.60	349.0%	0.8%
Retail Transmission - Network	kW	3,000	2.44410	7,332.30	3,000	2.44410	7,332.30	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	3,000	1.85650	5,569.50	3,000	1.85650	5,569.50	0.00	0.0%	0.0%
Wholesale Market Service	kWh	1,046,600	0.00520	5,442.32	1,046,600	0.00520	5,442.32	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	1,046,600	0.00100	1,046.60	1,046,600	0.00100	1,046.60	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	1,000,000	0.00700	7,000.00	1,000,000	0.00700	7,000.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	1,046,600	0.06200	64,889.20	1,046,600	0.06200	64,889.20	0.00	0.0%	0.0%
Total Bill				106,486.79			109,465.39	2,978.6 0	2.8%	2.7%

# GS>1000 kW < 5000 kW (I2 -Intermediate) kW

Consumption 4,000

TLF 1.04660

kWh Consumption 1,200,000

			2007 BILI	L		2008 BILL			IMPACT		
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill	
Monthly Service Charge				1,952.27			2,228.91	276.64	14.2%	0.2%	

Distribution	kW	4,000	4.33620	17,344.80	4,000	4.95065	19,802.61	2,457.8 1	14.2%	1.8%
Sub-Total				19,297.07			22,031.52	2,734.4 5	14.2%	2.0%
Regulatory Asset Recovery	kW	4,000	0.08200	328.00	4,000	0.36820	1,472.80	1,144.8 0	349.0%	0.8%
Retail Transmission - Network	kW	4,000	2.44410	9,776.40	4,000	2.44410	9,776.40	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	4,000	1.85650	7,426.00	4,000	1.85650	7,426.00	0.00	0.0%	0.0%
Wholesale Market Service	kWh	1,255,920	0.00520	6,530.78	1,255,920	0.00520	6,530.78	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	1,255,920	0.00100	1,255.92	1,255,920	0.00100	1,255.92	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	1,200,000	0.00700	8,400.00	1,200,000	0.00700	8,400.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	1,255,920	0.06200	77,867.04	1,255,920	0.06200	77,867.04	0.00	0.0%	0.0%
Total Bill				130,881.21			134,760.46	3,879.2 5	3.0%	2.9%

Large Use >5MW (I3)

kW 6,000 Consumption TLF 1.01460 kWh

2,800,000 Consumption

Γ	•	2007 BILL			2008 BILL			IMPACT		
	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill

Monthly Service Charge				10,512.24			12,001.85	1,489.6 1	14.2%	0.6%
Distribution	kW	6,000	2.89020	17,341.20	6,000	3.29975	19,798.50	2,457.3 0	14.2%	1.0%
Sub-Total				27,853.44			31,800.35	3,946.9 1	14.2%	1.6%
Regulatory Asset Recovery	kW	155	0.28600	44.33	155	0.41160	63.80	19.47	43.9%	0.0%
Retail Transmission - Network	kW	155	2.60410	403.64	155	2.60410	403.64	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	155	2.02580	314.00	155	2.02580	314.00	0.00	0.0%	0.0%
Wholesale Market Service	kWh	2,840,880	0.00520	14,772.58	2,840,880	0.00520	14,772.58	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	2,840,880	0.00100	2,840.88	2,840,880	0.00100	2,840.88	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	2,800,000	0.00700	19,600.00	2,800,000	0.00700	19,600.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	2,840,880	0.06200	176,134.56	2,840,880	0.06200	176,134.56	0.00	0.0%	0.0%
Total Bill				241,963.42			245,929.80	3,966.3 8	1.6%	1.6%

1 0 5 6 6	Haa	- E N/\A/	(12)
Large	use	>5MW	(13)

kWh 10,000,000 Consumption					1	
	000,000	Consumption				
kW 15,000 Consumption TLF 1.01460	000	KVV Consumption	TLF	1.01460		

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				10,512.24			12,001.85	1,489.6 1	14.2%	0.2%
Distribution	kW	15,000	2.89020	43,353.00	15,000	3.29975	49,496.24	6,143.2 4	14.2%	0.7%
Sub-Total				53,865.24			61,498.10	7,632.8 6	14.2%	0.9%
Regulatory Asset Recovery	kW	155	0.28600	44.33	155	0.41160	63.80	19.47	43.9%	0.0%
Retail Transmission - Network	kW	155	2.60410	403.64	155	2.60410	403.64	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	155	2.02580	314.00	155	2.02580	314.00	0.00	0.0%	0.0%
Wholesale Market Service	kWh	10,146,00 0	0.00520	52,759.20	10,146,00 0	0.00520	52,759.20	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	10,146,00 0	0.00100	10,146.00	10,146,00 0	0.00100	10,146.00	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	10,000,00 0	0.00700	70,000.00	10,000,00 0	0.00700	70,000.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	10,146,00 0	0.06200	629,052.00	10,146,00 0	0.06200	629,052.00	0.00	0.0%	0.0%
Total Bill				816,584.40			824,236.73	7,652.3 3	0.9%	0.9%

Large Use >5MW (I3)

kW
0 Consumption TLF 1.01460 kWh
1,200,000 Consumption

-,,			
	2007 BILL	2008 BILL	IMPACT

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				10,512.24			12,001.85	1,489.6 1	14.2%	1.4%
Distribution	kW	0	2.89020	0.00	0	3.29975	0.00	0.00	#DIV/0!	0.0%
Sub-Total				10,512.24			12,001.85	1,489.6 1	14.2%	1.4%
Regulatory Asset Recovery	kW	155	0.28600	44.33	155	0.41160	63.80	19.47	43.9%	0.0%
Retail Transmission - Network	kW	155	2.60410	403.64	155	2.60410	403.64	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	155	2.02580	314.00	155	2.02580	314.00	0.00	0.0%	0.0%
Wholesale Market Service	kWh	1,217,520	0.00520	6,331.10	1,217,520	0.00520	6,331.10	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	1,217,520	0.00100	1,217.52	1,217,520	0.00100	1,217.52	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	1,200,000	0.00700	8,400.00	1,200,000	0.00700	8,400.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	1,217,520	0.06200	75,486.24	1,217,520	0.06200	75,486.24	0.00	0.0%	0.0%
Total Bill				102,709.07			104,218.15	1,509.0 8	1.5%	1.4%

Unmetered Scattered Load (USL) kWh

200 Consumption TLF 1.04660

	2007 BILL	2008 BILL	IMPACT

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				4.42			5.05	0.63	14.2%	2.5%
Distribution	kWh	200	0.01840	3.68	200	0.02101	4.20	0.52	14.2%	2.1%
Sub-Total				8.10			9.25	1.15	14.2%	4.7%
Regulatory Asset Recovery	kWh	200	0.00220	0.44	200	0.00000	0.00	(0.44)	- 100.0%	-1.8%
Retail Transmission - Network	kWh	209	0.00530	1.11	209	0.00530	1.11	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	209	0.00410	0.86	209	0.00410	0.86	0.00	0.0%	0.0%
Wholesale Market Service	kWh	209	0.00520	1.09	209	0.00520	1.09	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	209	0.00100	0.21	209	0.00100	0.21	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	200	0.00700	1.40	209	0.00700	1.47	0.07	4.7%	0.3%
Cost of Power Commodity	kWh	200	0.05300	10.60	200	0.05300	10.60	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.06200	0.00	0	0.06200	0.00	0.00	#DIV/0!	0.0%
Total Bill				23.81			24.58	0.77	3.2%	3.1%

**Unmetered Scattered Load (USL)** 

kWh

500 Consumption TLF 1.04660

2007 BILL	2008 BILL	IMPACT

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				4.42			5.05	0.63	14.2%	1.6%
Distribution	kWh	500	0.01840	9.20	500	0.02101	10.50	1.30	14.2%	3.4%
Sub-Total				13.62			15.55	1.93	14.2%	5.1%
Regulatory Asset Recovery	kWh	500	0.00220	1.10	500	0.00000	0.00	(1.10)	- 100.0%	-2.9%
Retail Transmission - Network	kWh	523	0.00530	2.77	523	0.00530	2.77	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kWh	523	0.00410	2.15	523	0.00410	2.15	0.00	0.0%	0.0%
Wholesale Market Service	kWh	523	0.00520	2.72	523	0.00520	2.72	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	523	0.00100	0.52	523	0.00100	0.52	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	500	0.00700	3.50	523	0.00700	3.66	0.16	4.7%	0.4%
Cost of Power Commodity	kWh	200	0.05300	10.60	200	0.05300	10.60	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.06200	0.00	0	0.06200	0.00	0.00	#DIV/0!	0.0%
Total Bill			_	36.98			37.98	0.99	2.7%	2.6%

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e	% of Total
			2007 BILL	•		2008 BILI	_		IMPACT	
150	Consumption									
1.00	kW Consumption kWh	TLF	1.04660							

									%	Bill
Monthly Service Charge				2.47			2.82	0.35	14.2%	1.5%
Distribution	kW	1.00	5.59410	5.59	1.00	6.38680	6.39	0.79	14.2%	3.3%
Sub-Total				8.06			9.21	1.14	14.2%	4.8%
Regulatory Asset Recovery	kW	1.00	0.17480	0.17	1.00	0.00230	0.00	(0.17)	-98.7%	-0.7%
Retail Transmission - Network	kW	1.00	1.31520	1.32	1.00	1.31520	1.32	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	1.00	1.71580	1.72	1.00	1.71580	1.72	0.00	0.0%	0.0%
Wholesale Market Service	kWh	157	0.00520	0.82	157	0.00520	0.82	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	157	0.00100	0.16	157	0.00100	0.16	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	150	0.00700	1.05	150	0.00700	1.05	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	157	0.06200	9.73	157	0.06200	9.73	0.00	0.0%	0.0%
Total Bill				23.03			24.00	0.97	4.2%	4.0%

			2007 BILL	2008 BILL	IMPACT
200	kWh Consumption				
1.00	kW Consumption	TLF	1.04660		
<u>Sentinel</u>					

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				2.47			2.82	0.35	14.2%	1.3%
Distribution	kW	1.00	5.59410	5.59	1.00	6.38680	6.39	0.79	14.2%	2.8%
Sub-Total				8.06			9.21	1.14	14.2%	4.1%
Regulatory Asset Recovery	kW	1.00	0.17480	0.17	1.00	0.00230	0.00	(0.17)	-98.7%	-0.6%
Retail Transmission - Network	kW	1.00	1.31520	1.32	1.00	1.31520	1.32	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	1.00	1.71580	1.72	1.00	1.71580	1.72	0.00	0.0%	0.0%
Wholesale Market Service	kWh	209	0.00520	1.09	209	0.00520	1.09	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	209	0.00100	0.21	209	0.00100	0.21	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	200	0.00700	1.40	200	0.00700	1.40	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	209	0.06200	12.98	209	0.06200	12.98	0.00	0.0%	0.0%
Total Bill				26.95			27.92	0.97	3.6%	3.5%

150	kWh Consumption			
1.00	Consumption kWh	TLF	1.04660	
Street Light	kW			

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				0.47			0.54	0.07	14.2%	0.3%
Distribution	kW	1.00	7.42280	7.42	1.00	8.47463	8.47	1.05	14.2%	4.3%
Sub-Total				7.89			9.01	1.12	14.2%	4.6%
Regulatory Asset Recovery	kW	1.00	0.17480	0.17	1.00	0.44280	0.44	0.27	153.3%	1.1%
Retail Transmission - Network	kW	1.00	1.29290	1.29	1.00	1.29290	1.29	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	1.00	1.68670	1.69	1.00	1.68670	1.69	0.00	0.0%	0.0%
Wholesale Market Service	kWh	157	0.00520	0.82	157	0.00520	0.82	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	157	0.00100	0.16	157	0.00100	0.16	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	150	0.00700	1.05	150	0.00700	1.05	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	157	0.06200	9.73	157	0.06200	9.73	0.00	0.0%	0.0%
Total Bill		•		22.80			24.19	1.39	6.1%	5.7%

Street Light	kW				
1.00	Consumption kWh	TLF	1.04660		
200	Consumption				
			2007 BILL	2008 BILL	IMPACT

	Metric	Volume	Rate \$	Charge \$	Volume	Rate \$	Charge \$	Change \$	Chang e %	% of Total Bill
Monthly Service Charge				0.47			0.54	0.07	14.2%	0.2%
Distribution	kW	1.00	7.42280	7.42	1.00	8.47463	8.47	1.05	14.2%	3.7%
Sub-Total				7.89			9.01	1.12	14.2%	4.0%
Regulatory Asset Recovery	kW	1.00	0.17480	0.17	1.00	0.44280	0.44	0.27	153.3%	1.0%
Retail Transmission - Network	kW	1.00	1.29290	1.29	1.00	1.29290	1.29	0.00	0.0%	0.0%
Retail Transmission - Line and Transformation Connection	kW	1.00	1.68670	1.69	1.00	1.68670	1.69	0.00	0.0%	0.0%
Wholesale Market Service	kWh	209	0.00520	1.09	209	0.00520	1.09	0.00	0.0%	0.0%
Rural Rate Protection Charge	kWh	209	0.00100	0.21	209	0.00100	0.21	0.00	0.0%	0.0%
Debt Retirement Charge	kWh	200	0.00700	1.40	200	0.00700	1.40	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	0	0.05300	0.00	0	0.05300	0.00	0.00	0.0%	0.0%
Cost of Power Commodity	kWh	209	0.06200	12.98	209	0.06200	12.98	0.00	0.0%	0.0%
Total Bill				26.72			28.11	1.39	5.2%	4.9%

- b) Based on a recent 12 consecutive months of actual billing data, please indicate the percentage of total residential customers that:
- Consume less than 100 kWh per month
- Consume 100 -> 250 kWh per month
- Consume 250 -> 500 kWh per month
- Consume 500 -> 750 kWh per month
- Consume 750 -> 1000 kWh per month

OPUCN regrets that the information requested is not available in the format requested.

#### Question #25

Reference: i) Exhibit 4/Tab 2/Schedule 8

a) Can OPUCN explain the sharp increase in Loss Factor observed for 2006 relative to previous years? If yes, what are the reasons?

Please see OPUCN's response to Board staff interrogatory # 36 II for a full discussion of this issue. The discussion is on page 110 of the response.

#### Question #26

Reference: i) Exhibit 11/Appendix F

a) Please provide a copy of the Appendix 1 referred to on the third page (last paragraph).

	NPV(\$	6000)	OEB Tab	le Used	Correct Peri		Utility Progra m Costs		2006 F	Report	Correct	WACC		
Program	Submitt ed	Revise d	Submitt ed	Revise d	Submitt ed	Revise d	Submitt ed	Revise d	Submitt	Revise d	Submitt ed	Revise d	Append ix C Aligned	Comments
Library Watt Reader Program	3.1	3.1	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Commonic
Retrofit Non-profit Housing TOTAL	37.0	32.1	120	120	120	120	120	120	120	120	120	120	NO	
Т8	12.7	7.8	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES		Added program costs of \$4,967 to TRC Calculator
CFL's	1.1	1.1	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES		Calculator
15W CFL Socket Replace	14	14.0	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES		
Exit Lights	9.2	9.2	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES		
Christmas Light Retrofit OPUC	-3.2	11.6	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	Qty changed from 36 to 900
Every Kilowatt Counts (Spring) TOTAL	218.3	477.9											NO	
Ceiling Fans	25.7	27.9	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES		
Timers	54.4	83.4	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES		
Programmable Thermostats	40.1	54.2	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES		Added program costs of \$150.00 for EKC. Assumption: Represents electric heated homes - Space Heating 11%; Space Cooling 46%. Mearie Program Report Spring 2006

CFL's	103.3	312.4	NO	YES	YES	YES	NO	NO	YES	YES	YES	YES		Assumption: coupon redemption values are multiplied by 2.77 to give total number of bulbs purchased. Mearie Program Report Spring 2006
Every Kilowatt Counts (Fall/Winter) TOTAL	972.7	715.9											NO	
CFL's	171.1	489.3	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES		Assumption: coupon redemption values are multiplied by 2.86 to give total number of bulbs purchased. Mearie Program Report Spring 2006
Dimmers	19.6	19.6	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES		
Motion Sensors	7.5	7.5	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES		
Baseboard Programmable Thermostats		19.7	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES		Assumption: Represents 25% of total number of main room baseboard thermostats in home
Programmable Thermostats	685.6	121.4	YES		Added program costs of \$150.00 for EKC. Assumption: Represents electric heated homes - Space Heating 11%; Space Cooling 46%. Mearie Program Report									

														Spring 2006
LED's	88.9	58.4	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES		Assumption: Results are split 50% between 5 watt and mini light replacement
Residential 155	00.0			1.20	0	0			0		0	0		g.n.replacement
Colbourne Replace														
<b>Bulk with Individual</b>														
Meters	1.7	1.7	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	
Residential –													]	
Establish Baselines														
and Measuring	_	_												
Impacts	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
AMR/DTM Pilot	0	0	NI/A	N1/A	VE0	\/F0	\/F0	VE0	\/F0	VE0	\/F0	VE0	VE0	
Program	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Residential System Prototype and Pilot	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Residential	U	U	IN/A	IN/A	IES	IES	TES	IES	TES	IES	TES	IES	IES	
Customer														
Satisfaction Survey	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Residential DSM	_	_	-											
Indentification –														
Water Heater Data	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Smart Meter Pilot														
(Residential-														
Tantalus Systems)	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Smart Meter –														
Residential														
(Operation Group Fee)	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Customer	0		1 1 1 / / \	111/7	120	123	120	123	120	123	123	123	120	In App C, used
Awareness														Life to date
Education														Benefits to adjust
	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	NO	Net TRC
Generation														
Conservation	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	

Commercial and Industrial System Protype and Pilot	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	Check Program Costs - not the same as Summary of CDM Expenditures
Independent Market Operator Demand Response Pilot	0		NI/A	N/A	V50	VE0.	V50	V/50	VE0	V/50	VE0	VE0	V50	
Project System Optimization	0	0	N/A N/A	N/A N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
CDM Web Infrastructure	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Total Resource Cost Tool for OEB Reporting	0	0	N/A	N/A	YES	YES	YES	YES	YES	YES	YES	YES	YES	

Total 1229.6 1242.3

b) Please provide a copy of OPUCN's 2006 CDM report.

This report is appended as Appendix A to this response.

c) Is the LRAM request related to lost revenues for 2005 or 2006? The Application suggests that LRAM and SSM relate to 2006 (Exhibit 10/Tab 1/Schedule 1). However, the Table on the third page makes reference to 2005 revenue impacts.

The LRAM amounts are for reported 2006 CDM and so relate to "2006 Residential Load and Revenues Impacts".

d) Were all of the assumptions used in the SSM and LRAM calculations regarding unit savings, free ridership, measure longevity, etc. taken straight from the OEB's TRC Guide? If not, what are exceptions and what was the basis for the assumptions used in each case?

All assumptions were taken from the OEB's TRC Guide.

e) Please confirm that the \$0.0119 rate used in the LRAM calculation includes the Regulatory Asset Recovery rider. Will OPUCN attribute the LRAM recovery associated with the Regulatory Asset Recovery rider to the Regulatory Asset Recovery Account? If not, why not?

Collecting these amounts of LRAM and SSM is a difficult matter in that the only class reflected in the calculation of a possible rate rider would be residential and that rate would be \$0.0001 per kWh. This rate is so low, even at 6 months recovery period, it does not register in rate riders. Therefore, the rate rider for residential of \$0.0110 kWh is unable to reflect inclusion of LRAM/ SSM.

f) The determination of the LRAM for the replacement of bulk with individual meters does not appear to account for the fact that billing the customers at a different rate (i.e., residential as opposed to GS) will also impact (and may increase) revenues. Please comment.

Meter changes would be recorded at the customer category which is being impacted by the change. However, as indicated in question 26 d, LRAM amounts are basically uncollectible given the calculation of the rate rider. This is as true for a two month recovery period as for a six month period.

g) Why is a 6-month rate rider considered appropriate?

Please see responses e and f. The amount of total LRAM and SSM that OPUCN is proposing for recovery when applied to large amount of kWhs generated by the Residential customer class results in a very low rate.

#### Question #27

Reference: i) Exhibit 11/Appendix E, pages 6-7

a) What would be the Revenue to Cost Ratios for General Service > 50 kW classifications, if the revenues for each class were reduced to account for the transformer ownership allowance discount they received?

These calculations are shown in the tables below.

Customer Class	Histori	cal Approve	d Data	Histo	Historical Actual Data			Bridge Year Projection			Test Year Projection		
	Volume	Rate	Total	Volume	Rate	Total	Volume	Rate	Total	Volume	Rate	Total	
Residential (R1)			0			0			0			0	
GS <50 (C1)			0			0			0			0	
GS>50 kW < 200 kW (I1)	108,912	\$0.6000	65,347	92,405	\$0.6000	55,443	92,405	\$0.6000	55,443	92,405	\$0.6000	55,443	
GS>1000 kW < 5000 kW (I2 - Intermediate)	130,203	\$0.6000	78,122	106,913	\$0.6000	64,148	106,913	\$0.6000	64,148	106,913	\$0.6000	64,148	
Large Use >5MW (I3)	243,131	\$0.6000	145,879	199,641	\$0.6000	119,785	199,641	\$0.6000	119,785	199,641	\$0.6000	119,785	
Street Light			0			0			0			0	
Sentinel			0			0			0			0	
Unmetered Scattered Load (USL)			0			0			0			0	
TOTAL			289,348			239,375			239,375			239,375	

The following show the results of using these amounts as input to the relevant portion of the cost allocation filing.



# 2006 COST ALLOCATION

# INFORMATION FILING

Oshawa PUC Networks Inc.

EB-2005-0402 EB-2006-0247 Monday, January 15, 2007

# **Sheet O1 Revenue to Cost Summary Worksheet - Second Run**

		3	4	5	6	7	8	9
Rate Base Assets		GS>50 kW < 200 kW (I1)	GS>200 kW < 1000 kW (I4)	GS>1000 kW < 5000 kW (I2 - Intermediate)	Large Use >5MW (I3)	Street Light	Sentinel	Unmetered Scattered Load (USL)
crev	Distribution Revenue (sale)	\$2,912,487	\$407,608	\$870,450	\$700,609	\$154,841	\$3,226	\$70,874
mi	Miscellaneous Revenue (mi)	\$174,669	\$13,926	\$18,217	\$15,466	\$37,565	\$288	\$2,285
	Total Revenue	\$3,087,156	\$421,534	\$888,667	\$716,075	\$192,406	\$3,514	\$73,159
	Expenses							
	Distribution							
di	Costs (di)	\$277,453	\$15,544	\$23,663	\$27,212	\$98,079	\$750	\$5,567
CII.	Customer Related Costs	\$212,754	\$49,762	<b>\$12,215</b>	\$12,233	\$17	\$2	\$2,581
cu	(cu)	\$212,734	\$49,762	\$12,215	\$12,233	Φ17	⊅∠	\$≥,561
ad	General and Administration (ad) Depreciation and Amortization	\$871,650	\$111,522	\$65,728	\$72,856	\$181,697	\$1,391	\$14,568
dep	(dep)	\$650,236	\$45,387	\$65,464	\$77,538	\$192,183	\$1,468	\$11,445
INPUT	PILs (INPUT)	\$399,300	\$28,227	\$39,913	\$47,162	\$116,696	\$891	\$6,950
INT	Interest	\$369,447	\$26,117	\$36,929	\$43,636	\$107,971	\$825	\$6,431
	Total Expenses	\$2,780,841	\$276,558	\$243,913	\$280,637	\$696,642	\$5,327	\$47,541

	Direct Allocation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NI	Allocated Net Income (NI)	\$458,623	\$32,421	\$45,843	\$54,169	\$134,033	\$1,024	\$7,983
	Revenue Requirement (includes NI) \$18,900,315 (\$0)	\$3,239,464	\$308,979	\$289,756	\$334,806	\$830,675	\$6,351	\$55,523
	Rate Base Calculation							
	Net Assets							
dp	Distribution Plant - Gross	\$18,909,577	\$1,299,760	\$1,882,269	\$2,224,081	\$5,555,640	\$42,444	\$332,193
gp	General Plant - Gross	\$1,509,979	\$103,985	\$150,857	\$178,271	\$462,147	\$3,530	\$27,100
accum dep	Accumulated Depreciation	(\$11,465,348)	(\$787,111)	(\$1,138,540)	(\$1,345,202)	(\$3,277,246)	(\$25,039)	(\$198,591)
со	Capital Contribution	(\$1,388,270)	(\$82,216)	(\$138,323)	(\$163,531)	(\$526,172)	(\$4,021)	(\$28,882)
	Total Net Plant	\$7,565,938	\$534,418	\$756,263	\$893,619	\$2,214,370	\$16,915	\$131,820
	Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
СОР	Cost of Power (COP)	\$19,170,895	\$3,115,811	\$8,039,123	\$6,695,288	\$544,988	\$3,017	\$207,751

OM&A Expenses Directly	\$1,361,858	\$176,828	\$101,607	\$112,300	\$279,792	\$2,142	\$22,715
Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$20,532,753	\$3,292,639	\$8,140,729	\$6,807,588	\$824,780	\$5,159	\$230,466
Working Capital \$53,013,382	\$3,079,913	\$493,896	\$1,221,109	\$1,021,138	\$123,717	\$774	\$34,570
<b>Total Rate Base</b>	\$10,645,851	\$1,028,314	\$1,977,373	\$1,914,757	\$2,338,087	\$17,689	\$166,390
(\$1)							
Equity Component of Rate Base	\$5,322,926	\$514,157	\$988,686	\$957,378	\$1,169,043	\$8,844	\$83,195
Net Income on Allocated Assets	\$306,315	\$144,976	\$644,754	\$435,438	(\$504,235)	(\$1,813)	\$25,618
Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income	\$306,315	\$144,976	\$644,754	\$435,438	(\$504,235)	(\$1,813)	\$25,618
RATIOS ANALYSIS							
REVENUE TO EXPENSES %	95.30%	136.43%	306.69%	213.88%	23.16%	55.33%	131.76%

EXISTING REVENUE MINUS ALLOCATED COSTS	(\$152,308)	\$112,555	\$598,911	\$381,269	(\$638,268)	(\$2,837)	\$17,635
RETURN ON EQUITY COMPONENT OF RATE BASE	5.75%	28.20%	65.21%	45.48%	-43.13%	-20.50%	30.79%

# Appendix A

# Oshawa PUC Networks Inc. ED-2002-0560

**CDM Third Tranche Funding** 

2006 Annual Report



# Oshawa PUC Networks Inc. ED-2002-0560

# **CDM Third Tranche Funding**

# **2006 Annual Report**

March 31 2007

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## 1. Introduction

On December 10, 2004 Oshawa PUC Networks Inc. (OPUCN) was granted final approval for its Conservation and Demand Management (CDM) Plan as filed with the Ontario Energy Board (the "Board"). The Board's decision stated that annual reporting "should be done on a calendar year and should be filed with the Board no later than March 31st of the following year". On March 1, 2007 the Board issued an updated guideline on CDM reporting, this report has been prepared in accordance with those guidelines.

OPUCN serves more than 46,089 residential, 4,277, commercial and 537 industrial customers within its 149 square kilometers service area. Oshawa has traditionally been a winter peaking Utility with a large distribution of electric heating within its customer base. New construction along with continued growth in residential central air conditioning in part created a summer peak for Oshawa in 2006.

OPUCN's Conservation and Demand Management plan was designed to identify, alter, and measure reductions in consumption and demand for all customer classifications. Our second year of work includes the continuation of 2005 programs and the addition of some new for 2006. This report details our progress to the end of 2006 and provides some insight into programs in 2007.

#### 2. Evaluation of Overall Plan

Please refer to Appendix "C" for an evaluation of OPUCN's Conservation and Demand Initiatives for the year ending December 31, 2006.

In reviewing the information provided in both Appendixes A, B, and C it should be noted that some of the work undertaken by OPUCN during 2006 was related to the continuance of programs from 2005. One such program is the UOIT residential electrical usage baseline study that will conclude in 2008. This will help us design 'best fit' CDM programs for our residential customers.

We have made solid strides in the area of customer education with our radio awareness program and our 36 minutes of "Watt Wise" energy tips on Roger's Television. For the first time since the early 90's we reached out to the young minds of grade five students with the "Generation Conservation" Education Pilot a program to teach students about energy and the value of conserving it. This project was funded in partnership with Whitby Hydro and Veridian Connections.

We produced measurable energy reductions through the promotion of Compact Fluorescent Bulbs, LED Christmas Lighting, and non-profit housing energy retrofits. Our progress to date has generated 1.3 million dollars in TRC, savings of 2.9 million kWh annually and a demand reduction of 1.028 mega watts.

We look forward to continued improvements in all areas for 2007 along with new focuses on commercial load management, education, and the proposed Ontario Power Authority programs.

# 3. Discussion of the Programs

#### 3.1 Residential Customers

# **Establishing Baselines and Measuring Impacts**

#### Program Description

In order to provide greater return on our CDM investment, we continue our quest to create targeted programs by studying energy usage patterns over a wide variety of residential customers. Partnering with the University of Ontario Institute of Technology (UOIT) this baseline study will examine, analyze, and conclude valuable information about energy consumption habits based on several criteria that can benefit CDM not only for today, but for years to come.

#### **Discussion of 2006 Activities**

#### Actions

- Another 300 potential smart meter locations were selected based on criteria such as income level, type of heating, age, and size of houses in 20 different categories.
- In depth surveys were compiled for each residence participating in the study. These surveys contained valuable questions on energy habits, types of appliances used, and views and beliefs on energy conservation.
- "Smart" meter technology was installed on participating residences to capture energy usage on an hourly basis in order to fully comprehend consumer usage patterns. This data will be collected and analyzed for a two-year period.
- Two compact fluorescent light bulbs (CFLs) will be given to each household as an incentive for their participation in the study. Once provided this will facilitate savings of almost 249,600 kWh.
- 87 Energuide energy audits were scheduled on participating households. The energy audits will establish a baseline and augment information we have on the homes today.

#### Target Group

• Residential customers

#### Benefits

• Allows the utility to establish a baseline that reflects Oshawa's customers' consumption patterns and work towards a custom fit solution for the energy efficiency programs we wish to provide.

#### Results to Date

- A preliminary study on the first 50 households is now complete.
- An Interim Report analyzing the data has been finalized.
- Certain trends have been recognized from the preliminary study. The ongoing data will confirm these trends.
- To date 190 (of 300) have agreed to the study.
- 40 of 87 home energy audits are complete.
- Smart meters have been installed.

#### Next Steps

- Continue our progress and achieve another 110 accepted residences for the study.
- Sustain our partnership with the University of Ontario Institute of Technology and the Ontario Centre of Excellence for continued results.

#### **Customer Awareness and Education**

#### Program Description

OPUCN continues to use several forms of media to promote more efficient use of
electricity within and beyond its own service area. In 2006 we have seen major advances
in this category including the success of the Every Kilowatt Counts Campaign, the launch
of the educational pilot "Generation Conservation", the creation and airing of energy
conservation tips on Roger's Television, our continued efforts with flyers and inserts, and
the media exposure we have achieved on these projects.

#### **Target**

All residential and business customers in the City of Oshawa

#### Benefits

Raises awareness and perpetuates the need to reduce electricity consumption through
wise use and more efficient technologies and to reduce demand during peak periods. Part
of the program was also used to dispel misconceptions about electrical usage.

#### **Discussion of 2006 Activities**

#### Actions

- Participated in the Every Kilowatt Counts campaign and provided direct mailing addresses for coupon booklets to 50,000 customers.
- Took a lead role in the development and delivery of "Generation Conservation" an energy education pilot program. This was done in a partnership with Whitby Hydro and Veridian Connections. The pilot delivered science, math and reading exercises all geared at conservation of electricity to over 400 students in 16 schools from both the public and separate Boards of Education. The program was a curriculum based pilot giving our youth education, knowledge, and tools, to become Generation C a generation of dedicated energy conservers.
- Designed and delivered a Watt Reader lending program jointly with the Oshawa Public Libraries that allows customers to borrow Watt Readers free of charge. Watt Readers empower the customer with real time knowledge and the ability to target electricity costs within the home and adjust their consumption accordingly.
- Wrote, produced, and aired 12 energy saving video tips on Rogers Television. These are two minute segments each targeting specific areas of residential dwellings to educate customers in several areas of energy conservation.
- Distributed in our bills a "Winter Lights" promotional flyer. This pamphlet promoted energy conservation and the benefits of Seasonal LED lights. Several energy saving tips were included. A cost effective collaboration with the City of Oshawa that included information on their Winter Lights Celebrations.
- Published a customer newsletter that was delivered twice last year with a focus on saving energy.
- Promoted OPUC Website specifically in the energy conservation category.

#### Results to Date

• With the Every Kilowatt Counts campaign, OPUCN was the leader in coupon redemption when compared to shouldering utilities.

#### Total number of redeemed coupons (including the Spring and Fall Campaign):

Ajax	10,055
Oshawa	18,711
Whitby	13,927
Courtice	14
Pickering	6,361

- The launch of Generation Conservation was a huge success. Peter Love, Chief Conservation Officer from the Conservation Bureau spoke passionately about his belief in this program and its impact for the future. All local media were present. Generation Conservation will deploy to the grade five students in Durham Region this fall but we hope the model will be adopted province-wide. OPUCN's was proud to bring our neighbouring Utilities together and develop this program.
- There have been 133 watt readers borrowed from Oshawa libraries since the launch of the program in November 2006. Local media were present to witness the launch and Oshawa's Mayor John Gray signed out the first Watt Reader. Program interest continues strong.
- Upon the watt readers return library patrons receive a free CFL. We had provided 133 complimentary CFLs to the end of 2006.
- Rogers Television was so pleased with the quality of our 12 Energy Saving Tips that they generously aired the tips several times more than originally agreed. A few of the energy savings tips can be viewed on our website at <a href="http://www.opuc.on.ca/conservation/conservation-commercials/">http://www.opuc.on.ca/conservation/conservation-commercials/</a>.
- Received an award of recognition for our assistance in the Winter Lights program for promoting LED Christmas lights and general winter energy savings tips.

#### Next Steps

- The momentum of Generation Conservation continues to grow strong and receive additional support. It is slated for full deployment into all grade five classes in the Region of Durham public and separate schools in the fall of 2007.
- A pilot program called "Conservation Through Education" will be launched on earth day in five Oshawa schools. This pilot is designed to replace chocolate bars with CFLs in their fundraisers and to promote energy awareness. Local principals have showed great enthusiasm and want this to be an ongoing fundraiser. Zapper, our mascot will introduce the program to young students.
- The library watt reader program will continue with the addition of energy seminars.
- We look forward to continuing to leverage our relationship with the local media. They have been most supportive over the past year.
- We will continue to investigate the merits of being aligned with the "POWERWISE" branding that Ontario Government recently adopted.

# **Residential Non-Profit Housing Lighting Retrofit**

#### Program Description

• Our goal is to identify areas where retrofit funding will generate the greatest energy savings for the Non-Profit housing sector. The plan helps offset the capital costs associated with lighting, cooling and other energy retrofits. Submitted proposals are accepted and a Total Resource Cost analysis is completed to ensure the viability of the project. If the proposal provides a positive TRC the money is allocated until the program is completed. Verification of the retrofit must be presented and then Utilities portion of the funding is advanced.

#### Target

• All "Not for Profit" housing in the City of Oshawa

#### Benefit

• Assist in the cost of energy retrofits providing funding for organizations that wouldn't normally be able to pay for the entire capital retrofit program.

#### **Discussion of 2006 Activities**

#### Action

- Two applications for funding were received on four locations in Oshawa. Both were accepted with approximately \$6,000 allocated to the first request and \$40,000 to the second.
- The first retro fit involved lighting only and has been verified and the funds advanced. The second involved the upgrading lighting and the replacement of refrigerators. Verification of the work is now complete and the funding was advanced in early March of 2007.

#### Results to Date

• For these two locations alone, the annual energy savings total 230,400 kWh with a demand reduction of 106 kW.

#### Next Steps

- Identify further opportunities to assist energy reduction.
- Leverage the OPA's Business Incentive Program in the upcoming year that will allow us to continue energy conservation for additional non-profit housing projects.
- Watch to see if the OPA Conservation fund makes additional money available for this sector.

# Co-Branding

#### Program Description

• The powerWISE<sup>TM</sup> co-branding program was originally designed to become the 'top of mind" brand for energy efficient products and programs in Ontario. Although an agreement was reached with the former owner of the brand and the Ontario Power Authority to licence its right of use there has no further information regarding its use.

#### **Target**

• All consumers in the Oshawa area.

#### **Benefit**

• A Single recognizable branding for Ontarians.

#### **Discussion of 2006 Activities**

#### Action

- OPUCN has signed up for the initial stages to become an affiliate member. Early indication suggested the powerWISE<sup>TM</sup> branding would be available to OPUCN in March 2007. At the time of this report, there is no available date set when this brand sharing will take place.
- Keeping with the co-branding promotions, OPUCN partnered with the Conservation Bureau and participated in a seasonal LED light exchange. With local media present, Oshawa customers brought in a string of Christmas lights and exchanged them for free for a string of energy-saving LED lights. This program was launched at a local retail location.

#### Results to Date

• Generally the powerWISE<sup>TM</sup> brand has gained recognition and the large media exposure has helped it keep its momentum. The brand is recognizable for many now but needs to be released for all to use under license in Ontario.

#### Next Steps

• Once the branding of powerWISE<sup>TM</sup> becomes available to OPUCN, we will be evaluating the costs involved. The primary concern is how the cost of media purchases will be allocated to the powerWISE<sup>TM</sup> affiliates.

#### Smart Meter Residential

#### Program Description

- OPUCN actively supports the Minister of Energy's directive for the installation of 800,000 Smart Meters across Ontario by 2007. Keeping with this mandate, a study including an additional 300 Smart Meters was slated for 2006. It is important to understand which of the advancing communications technology is most efficient in order to effectively expand the Smart Meters citywide.
- Two pilot programs for residential "Smart" meters are already in place to enable the
  assessment of metering, communications, settlement, load control and other technologies
  used to accommodate the universal application of "Smart" meters. This also provides
  customers participating in the pilot programs with an incentive to conserve or shift
  energy use.
- As an element of the joint effort with the University of Ontario Institute Of Technology, the additional 300 Smart Meters play a key role in the execution of this study.

#### Target

Residential Homes

#### Benefit

• This effort is designed to test technology that will assist the government in meeting its goal of 800,000 "Smart meters" installed by the end of 2007.

#### **Discussion of 2006 Activities**

#### Action

- Monitored and expanded existing Smart meter locations to assist in data acquisition for University of Ontario Institute of Technology residential energy use study.
- Participated as an active member in the Ontario Utility Smart Metering (O.U.S.M.) working group to share our results with utilities across the province.

#### Results to Date

• Meter functionality has been encouraging and meter testing continues.

#### Next Steps

• Complete the install of 300 Smart meters in the City to continue the test the technology.

#### **Harris CDM Customer Module**

#### Description

• In late 2006 Oshawa added the Harris CDM customer care module to its billing system and has made it available to customers. This software allows customers to look at their billing data on line and make choices of energy retro fits in the home and see the cumulative results.

#### Results to Date

• The module has only been in service three months and has not been widely advertised until it has been thoroughly tested by staff.

#### Next Steps

- We plan to introduce module to more customers in the first half of 2007. We will do this through our own website, mailings and seminars.
- We will monitor the "hits" to this portion of the customer platform and customer feed back. In future we may compare consumptions to see if actual reductions have resulted from the customer's changes.

## 3.2 Commercial and Industrial Customers

# Independent Electricity System Operator Demand Response Pilot Project (TDRP)

# **Program Description**

• This program was designed to help customers benefit from the I.E.S.O's demand response pilot project. Customers were assisted in determining what load they could easily drop from when requested to by the I.E.S.O. This was a two-year pilot, directed at customers who can reduce demand when notified.

#### **Target**

 This program is aimed at interval metered larger customers who can shed loads on notification from the I.E.S.O.

#### Benefits

• Allows the I.E.S.O. to shed load in emergencies and high price point times quickly.

#### Discussion of 2006 Activities

#### Action

- An email advisory program that was price driven was set up. This program sent alerts to a
  customer indicating a price threshold has been attained and that it would be beneficial for
  the system and for them financially to drop load.
- Given the cooler summer of 2006 there was less of a system loading issue.

#### Results to Date

- There were 1282 notifications to customers to drop load from the system
- There were 8 customer responses to this request
- A total of 88,000 kWh were removed from the system in 2006.

#### Next Steps

- The TDRP program winds up in April of 2007.
- We are reviewing what program(s) might provide viable alternatives to TDRP. OPUCN
  continues to have interest in Commercial and Industrial load control and we look forward
  to offering this to our customer base.

## **LED Street Light Initiative**

#### Program Description

• This initiative involves replacing traffic signals at intersections with light-emitting diode (LED) technology that is quickly becoming the standard due to its longevity and energy saving qualities.

#### **Target**

• The initial target is intersections that will provide the highest level of return on investment (ie the largest energy reduction per intersection).

#### Benefits

• The LED technology in traffic lights reduces energy use by over 80%. Coincidental benefits include less maintenance (due to the longer life span) and improved signal visibility.

#### Action

• OPUCN and the City of Oshawa have agreed on a funding formula of one third of the costs to a maximum of \$25,000 to retrofit 8 intersections with LED technology.

#### Results to Date

• City counsel is currently finalizing their 2007 budget and this project will go forth once these details are established.

#### Next Steps

• Begin installations in mid summer of 2007.

#### Multi Unit Residential Bulk Meter Conversion

#### Program Description

• Switch multi rental units from a bulk metering style to individual metering units.

#### <u>Target</u>

• Pilot One Bulk Metered Residential Apartment Complex.

#### Benefits

- Studies have shown that switching from bulk metering to individual metering generates an energy savings between 15% and 25% for non-electrical heated buildings and over 30% in electrically heated buildings
- By enabling residents to track their consumption and take advantage of possible price differences, choices of energy conservation or shifting their electricity use to off peak hours becomes beneficial.

#### **Action**

- 155 Colborne St. has been switched from bulk metering to individual metering.
- This building now consists of eight apartment meters and one house meter.

#### Results To Date

• When comparing the three years average consumption to the first full year of individual metered consumption there has been a 23,000 kWh reduction in consumption. This translates into a savings of just over 10% from the baseline consumption of the bulk meter.

# Next Steps

• There are no plans to further retro fit other buildings with individual metering at this time.

# Commercial "LED Seasonal Lighting Retrofit"

#### Program Description

- The Utility has had seasonal lighting on its building for more than 40 years. The fixtures
  were illuminated with 900-7 watt bulbs. In order to showcase LED Technology we
  investigated the cost of fixture replacement or a bulb retro fit. It was decided the bulb
  retro fit was far les costly.
- The existing seven-watt bulbs were replaced with comparable lumen output LED bulbs.
- The original load for the fixtures was 6.3 kW after the retro fit the load dropped to .405 kW. These displays we illuminated five hours a day for 45 days. Savings over a ten year life span of the bulbs is estimated to be13000 kWh

#### "The Power Corner" Articles

#### **Program Description**

A monthly advertorial column sponsored by OPUCN's in the Greater Oshawa Chamber
of Commerce Business Matters monthly publication entitled "The Power Corner" aimed
directly at the commercial and industrial sector.

# **Target**

• All commercial and industrial customers in the City of Oshawa.

#### Benefits

• In preparation for the upcoming OPA programs, it is necessary to inform commercial and industrial customers regarding the forthcoming projects so they can prepare to take advantage of such programs. It is imperative that these customers recognize that energy conservation is a win-win situation.

#### Action

 Monthly articles are written from an energy management standpoint for industrial and commercial customers to promote the understanding of the electricity markets and programs.

#### Results to Date

• Two monthly articles have appeared with several more slated for the upcoming year.

#### Next Steps

• Continue to use the column as a vehicle to communicate any prospective information from the OPA to business customers in our community.

# 3.3 System Optimization

# **Program Description**

- OPUCN has identified that it requires technology enhancements in order to properly
  perform distribution system optimization. The technology enhancement involves the
  purchase of distribution system software.
- Distribution system optimization software has been researched and a software package has been selected for purchase. The components of the GIS system requiring upgrade have been identified and a short list of vendors has been created.

#### Results to Date

• We have reviewed and assessed several geographical information systems and have selected a vendor.

#### Next Steps

- Purchase and install the distribution system optimization software (We have secured a satisfactory quote and the software will be installed shortly after the completion of the GIS upgrade).
- Use the software to perform the distribution system optimization calculations.
- Perform the necessary field operations to optimize the distribution system.
- Measure the actual results of optimizing the distribution system.

#### 4. Lessons Learned

## **Working Together**

This year OPUCN partnered with two other local utilities to develop and launch a pilot education program. The result was the Generation Conservation grade 5-science program that designed to create a generation of conservers. Without the co operation and financial support of the other utilities the program could not have been developed. Generation Conservation is scheduled for launch in all Durham Public and Catholic School Board grade five classrooms fall of 2007.

We are pleased to be participating with the University of Ontario Institute of Technology (UOIT) and The Ontario Centers of Excellence in a jointly funded study of residential customer energy consumption patterns. Looking for synergies and partnerships in CDM is essential to the success of future CDM initiatives and maximizing the return for each CDM dollar invested.

In conjunction with the Independent Electricity System Operator (IESO), OPUCN distributed an introductory letter and a guide entitled "Managing Your Electricity Costs – A Guide For Business" to local businesses not only to educate and instigate energy conservation, but also to invite comments and questions on a feedback basis to build a trusting relationship with our commercial clientele. An ongoing database has been established to keep abreast of any energy conservation issues and questions that arise.

Oshawa is located ½ hour east of Toronto and we often find ourselves challenged to provide similar CDM programs to those offered by utilities in the Toronto market. A unified approach to programs from the Ontario Power Authority coupled with customized local programs should help drive customer participation.

#### **Market Conditions**

The term "greening" has picked up considerable momentum in the media and this is helping to drive many residences and business to review their personal and operational impacts on the environment and community. This continued focus should help contribute to the success of both existing and new programs.

The current form of pricing in the residential sector has taken some of the "sting" out of the pricing of electricity and may not be sending the kind of price signals to customers that would drive load shifting through savings.

Through our continued efforts to target residential customers to educate them on energy conservation using the media (such as the Rogers Television Energy Saving Tips) customers are becoming more and more comfortable with the term "Smart" meter and there seems to be a growing appetite for this metering style.

We believe that ongoing education is key ingredient to the success of all CDM initiatives. It is essential that we make the young energy users of today aware of the finite energy resources and create a new culture of conservation that stays with them for a lifetime.

# **Regulatory and Policy Environment**

During 2006 the Ontario Power Authority (OPA) emerged as the primary agency charged with developing and delivering Conservation and Demand Management (CDM) programs for electricity consumers in Ontario. The OPA is gearing up to provide \$400 million in funding for CDM programs targeted at all classes of consumers. The Local Distribution Companies (LDCs) will be the primary delivery agents for the programs. The relationship between individual LDCs and the OPA will be formalized by means of contracts between the two parties. These contracts consist of a master contract governing the roles and responsibilities of each party and schedules containing the details of each program to be delivered.

The OPA programs are designed for universal, or at the least regional, delivery throughout the province. The Ontario Energy Board (OEB) will continue to fund local initiatives which are designed for unique local conditions through distribution rates.

## 1. Conclusion

Overall, 2006 has proved to be a very successful CDM year for Oshawa PUC Networks Inc. An internal reorganization coupled with incremental staffing allowed a more refined and focused approach generating stronger results.

We believe that education is key to the sustainability of all CDM programs and to that end we encourage the Board to review its treatment of educational CDM expenditures. Creating a "Culture of Conservation" is an ongoing process and with the appropriate funding model Local Distribution Companies will be able to play an important role in this area.

2007 will prove to be an aggressive year for Conservation and Demand Management at OPUCN. Programs targeting peak load control, continued education, the Every Kilowatt Counts Campaign, and a stronger focus on industrial and commercial customers should yield some of the greatest reductions in energy and demand to date. OPUCN looks forward to continuing to assist the province in achieving "a Culture of Conservation" in Ontario.

For further Information about Oshawa PUC Networks Inc. and it's Conservation and Demand efforts please contact:

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Oshawa PUC Networks Inc.
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Appendix B

Service Agreement between

Oshawa PUC Networks Inc.

And its Affiliates

#### SERVICES AGREEMENT

THIS SERVICES AGREEMENT is made as of the 10<sup>th</sup> day of August, 2007

BETWEEN:

OSHAWA POWER and UTILITIES CORPORATION, a corporation incorporated pursuant to the laws of the Province of Ontario

- and -

**OSHAWA PUC SERVICES INC.**, a corporation incorporated pursuant to the laws of the Province of Ontario

- and -

OSHAWA PUC ENERGY SERVICES INC., a corporation incorporated pursuant to the laws of the Province of Ontario

(referred to collectively as "Affiliates" and individually as an "Affiliate" after this)

- and -

OSHAWA PUC NETWORKS INC., a corporation incorporated pursuant to the laws of the Province of Ontario

(referred to as "Networks" after this)

#### WHEREAS:

- 1. Each of the Parties to this Agreement are corporations incorporated under the *Business Corporations Act* (Ontario);
- 2. Networks carries on the business of distributing electricity within the City of Oshawa; and

3. Networks agrees to provide certain services to the Affiliates on the terms as set forth in this Agreement.

NOW THEREFORE in consideration of the mutual covenants contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

## **ARTICLE 1 – INTERPRETATION**

#### 1.1 **Definitions**

Unless the context otherwise specifies or requires, for the purposes of this Agreement all capitalized terms herein shall have the meanings set forth below

- (a) "Agreement" means this Services Agreement together with all Schedules attached to it, as they may be amended from time to time;
- (b) "Business Day" means any day other than a Saturday, Sunday, statutory or bank holiday in the Province of Ontario;
- (c) "Claim" has the meaning ascribed to it in Section 4.4;
- (d) "Confidential Information" means information Networks has obtained relating to a specific consumer, retailer or generator in the process of providing current or prospective distribution service;
- (e) "Defaulting Party" has the meaning ascribed to it in Section 8.1;
- (f) "Effective Date" means 2<sup>nd</sup> January 2003;
- (g) "Event of Default" has the meaning described to it in Section 8.1;
- (h) "Force Majeure Event" has the meaning ascribed to it in Section 11.1;
- (i) "IESO" means the Independent Electricity System Operator;
- (j) "Law" means any law, rule, regulation, code, order, writ, judgement, decree or other legal or regulatory determination by a court, regulatory agency, including the IESO, or governmental authority of competent jurisdiction;
- (k) "Party" means a party to this Agreement and "Parties" means every party;
- (l) "Person" means an individual, corporation, partnership, joint venture, association, trust, pension fund, union, governmental agency, official, board, tribunal, ministry, commission or department;
- (m) "Personnel" means employees, agents, professional advisors, contractors and subcontractors;

- (n) "Prime Rate" means, for any day, an annual rate of interest equal to the rate of interest which Networks' principal bank establishes at its principal office in Toronto as the reference rate of interest to determine interest rates that it will charge on such day for commercial loans in Canadian dollars made to its customers in Canada and which it refers to as its "prime rate of interest";
- (o) "Services" are Services that are provided under Section 3.1 of this Agreement;
- (p) "Term" has the meaning ascribed to it in Section 2.1 of this Agreement; and
- (q) "Third Party Expenses" means all fees, costs and charges paid to third parties by Networks on behalf of an Affiliate in connection with providing the Services or incurred by Networks' employees while providing Services under this agreement.

# 1.2 Construction of Agreement

# In this Agreement:

- (a) words denoting the singular include the plural and vice versa and words denoting any gender include all genders;
- (b) all usage of the word "including" or the phrase "e.g.," in this Agreement shall mean "including, without limitation," throughout this Agreement;
- (c) any reference to a statute shall mean the statute in force as at the date hereof, together with all regulations promulgated under it, as the same may be amended, re-enacted, consolidated or replaced, from time to time, and any successor statute, unless otherwise expressly provided;
- (d) any reference to a specific executive position or an internal division or department of a Party shall include any successor positions, divisions or departments having substantially the same responsibilities or performing substantially the same functions;
- (e) when calculating the period of time within which or following which any act is to be done or step taken, the date which is the reference day in calculating such period shall be excluded, and if the last day of such period is not a Business Day, the period shall end on the next Business Day;
- (f) all dollar amounts are expressed in Canadian dollars;
- (g) the division of this Agreement into separate Articles, Sections, subsections and Schedules and the insertion of headings is for convenience of reference only and shall not affect the construction or interpretation of this Agreement;
- (h) words or abbreviations which have well known or trade meanings are used in accordance with their recognized meanings;
- (i) the terms and conditions are the result of negotiations between the Parties and the Parties therefore agree that this Agreement shall not be construed in favour of or

against any Party by reason of the extent to which any Party or its professional advisors participated in the preparation of this Agreement.

## **ARTICLE 2 – TERM**

#### 2.1 Term

Unless terminated in accordance with **Section 10.1** of this Agreement, this Agreement shall come into force on the Effective Date and shall continue in full force and effect for a period of five (5) years and the term shall be continuously extended for a further period of one (1) year unless a Party gives notice in writing that the Agreement is not to be extended, as it relates to that Party, on a date which is at least ninety (90) days prior to the end of the term, or the end of renewal as the case may be.

#### ARTICLE 3 – NETWORKS SERVICES AND COVENANTS

#### 3.1 Services

Subject to the terms, covenants and conditions contained in this Agreement, Networks will provide, or cause to be provided, to the Affiliates the services set out in **Schedule "A"** (collectively the "**Services"**), as may be required by the Affiliates.

#### 3.2 Service Standards

Subject to the terms, covenants and conditions contained in this Agreement, Networks will provide the Services to the Affiliates, or cause them to be provided, to the standards set out in **Schedule "B"** (collectively the "**Service Standards"**).

# 3.3 Changes

The Affiliates, collectively or individually and Networks may, from time to time, agree to modifications to a Service or a Service Standard by negotiating appropriate changes to the descriptions of the Service on the Service Standard and the consideration in connection with such changes and shall initial and attach amended schedules in this Agreement.

#### 3.4 General Networks Covenants

- (a) Networks shall be responsible for obtaining all necessary licences and permits and for complying with all applicable federal, provincial and municipal laws, codes and regulations in connection with the provision of the Services and Networks shall, when requested, provide an Affiliate with adequate evidence of its compliance with this **Section 3.4**;
- (b) Networks shall, while on the premises used by an Affiliate, comply with all the rules and regulations of the Affiliate from time to time in force, which are brought to its notice or of which it could reasonably be aware;
- (c) Networks shall pay for and maintain for the benefit of Networks appropriate insurance concerning the operations and liabilities of Networks relevant to this Agreement including, without limiting the generality of the foregoing, workers' compensation and

employment insurance in conformity with applicable statutory requirements in respect of any remuneration payable by Networks to any employees of Networks and public liability and property damage insurance;

# 3.5 Regulatory Change

If any change of Law after the date of this Agreement renders this Agreement illegal or unenforceable, then the Parties shall be required to renegotiate in good faith for thirty (30) days with a goal of developing a substitute agreement with such amendments as are necessary to comply with such change of Law.

#### **ARTICLE 4 – MUTUAL COVENANTS**

# 4.1 Confidentiality of Confidential Information

No Personnel of a Party shall have access to any Confidential Information in the possession of another Party, except for purposes related to the Services and in compliance with the Affiliate Relationship Code for Electricity Distributors and Transmitters prescribed by the Ontario Energy Board.

#### 4.2 Maintain Records

The Parties will maintain such records as may be necessary in connection with this Agreement and as are agreed upon by the Parties acting reasonably.

# 4.3 Notification of Changes of Circumstances

Networks shall promptly give written notice to an Affiliate of any changes or prospective changes in circumstances that would materially affect the resources required for the Services provided to the Affiliate, including any anticipated material change in the nature or level of business of Networks, the number of employees of Networks, or any efforts relating to the organization of or collective bargaining by employees of Networks, or any lease or service arrangements contemplated with any third parties.

#### 4.4 Notice of Claims, Etc.

Networks shall promptly give written notice to the Affiliates, and an Affiliate shall promptly give written notice to Networks, of all material claims, proceedings, notice of regulatory non-compliance from any regulatory authority, disputes (including labour disputes) or litigation (collectively, "Claims") which it reasonably believes could have a material adverse effect on the fulfillment of any of the material terms hereof by Networks or the Affiliate (whether or not any such Claim is covered by insurance) in respect of its own operations of which any of them is aware. Each Party shall provide the other Party with all information reasonably requested from time to time concerning the status of such Claims and any developments relating thereto.

### ARTICLE 5 – FEES AND COSTS

### 5.1 Fees

(a) The Affiliates shall pay to Networks the fees and charges set out in **Schedule "C"** for services received from Networks.

### 5.2 Taxes

In addition to the fees, the Affiliates shall pay to Networks an amount equal to any and all goods and services taxes, sales taxes, value-added taxes or any other taxes (excluding income taxes) properly eligible on the supply of services provided by a third party under this Agreement.

### ARTICLE 6 – REPRESENTATIONS AND WARRANTIES

# 6.1 Representations and Warranties of Networks

Networks represents and warrants to the Affiliates as follows and acknowledges that the Affiliates are relying on such representations and warranties:

- (a) Networks is a corporation, duly incorporated, validly existing and in good standing under the laws of the Province of Ontario and it has the rights, powers and privileges to execute and deliver this Agreement and to perform its obligations hereunder;
- (b) the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate action;
- (c) this Agreement constitutes a legal, valid and binding obligation of Networks, enforceable against Networks by the Affiliates in accordance with its terms; and
- (d) Networks has the necessary resources and expertise to acquire or perform the Services.

# 6.2 Representations and Warranties of the Affiliates

Each Affiliate represents and warrants to Networks as follows and acknowledges that Networks is relying on such representations and warranties:

- (a) the Affiliate is a company, duly organized, validly existing and in good standing under the laws of the Province of Ontario and it has the rights, powers and privileges to execute and deliver this Agreement and to perform its obligations hereunder;
- (b) the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate actions; and
- (c) this Agreement constitutes a legal, valid and binding obligation of the Affiliate, enforceable against the Affiliate by Networks in accordance with its terms.

# 6.3 Warranty

- (a) Networks warrants that the work and services it provides will be performed in a professional and workman like manner subject to Section 6.3(b) and 6.3(c) below. Networks warrants that any fault or defect due solely or indirectly to workmanship of Networks shall be corrected as soon as is reasonably possible upon notification by the affected Affiliate at no cost to the Affiliate;
- (b) in respect of Networks workmanship, this warranty period shall extend to a defect or failure occurring within 90 days of the date that the original Work was completed.
- (c) Networks provides no warranty for meters and metering equipment manufactured by a third party. Networks shall not be liable for any losses, damages, loss of opportunity or profit whether direct or consequential, that may be suffered by any party as a result of the malfunction of such third party meters and metering equipment.

### ARTICLE 7 – INDEMNIFCATION

### 7.1 Indemnification

- (a) Each Affiliate shall indemnify, defend and hold harmless Networks, its officers, directors, and employees (each a "Networks Indemnitee") from and against any and all claims, demands, suits, losses, liabilities, damages, obligations, payments, costs and expenses and accrued interest thereon (including the costs and expenses of, and accrued interest in respect of, any and all actions, suits, proceedings, assessments, judgements, awards, settlements and compromises relating thereto and reasonable lawyers' fees and reasonable disbursements in connection therewith) (each an "Indemnifiable Loss"), asserted against or suffered by any Networks Indemnitee relating to, or in connection with, or resulting from or arising out of the provision of the Services to that Affiliate.
- (b) Networks shall deemed to hold the provisions of **Section 7.1(a)** that are for the benefit of the Networks Indemnitees that are not party to this Agreement in trust for such persons as third party beneficiaries under this Agreement.

# 7.2 Limit of Liability

(a) Each Affiliate agrees that Networks liability, if any, to that Affiliate or any third party in connection with or arising under this Agreement, including without limitation, any liability arising from any act or omission of Networks in the provision of the Services, whether arising in contract, tort, equity or otherwise, shall be limited to actions or liabilities resulting solely from the fraud or wilful misconduct of Networks in the provision of the Services and shall not exceed an amount equal to the total amount paid by that Affiliate to Networks under this Agreement for Services over the twelve month period preceding the date that the cause of action or claim giving rise to the liability first arose.

- (b) Networks shall not be liable for any damages caused by delay in delivering or furnishing any Services referred to in this Agreement.
- 7.3 Notwithstanding anything else to the contrary in this Agreement, the Parties agree that Networks shall not be responsible for any sanctions, fines, penalties, or similar obligations imposed on an Affiliate, and each Affiliate agrees to indemnify and hold harmless Networks from any such sanctions fines, penalties or similar obligations.

# **ARTICLE 8 – DEFAULT**

# 8.1 Events of Default

The occurrence of any one or more of the following events shall constitute a Default by a Party (the "Defaulting Party") under this Agreement and shall constitute an Event of Default if such Default is not remedied prior to the expiry of any notice period and any cure period applicable to such Default:

- (a) if the Defaulting Party defaults in the payment of any amount due to the other Party under this Agreement and such default shall continue unremedied for sixty (60) days following notice in writing thereof to the Defaulting Party by the other Party; and
- (b) if the Defaulting Party fails in any material respect to perform or observe any of its other material obligations under this Agreement and such failure shall continue unremedied for a period of sixty (60) days following notice in writing thereof (giving particulars of the failure in reasonable detail) from the other Party to the Defaulting Party or such longer period as may be reasonably necessary to cure such failure (if such failure is capable of being cured), provided that the Defaulting Party:
  - (i) proceeds with all due diligence to cure or cause to be cured such failure; and
  - (ii) in proceeding so, can be reasonably expected to cure or cause to be cured such failure within a reasonable time frame acceptable to the other Party acting reasonably.

### **ARTICLE 9 – REMEDIES**

### 9.1 **Default Remedies**

- (a) Unless otherwise agreed to in writing, in the event of an Event of Default the non-defaulting Party may terminate this Agreement as it relates to the non-defaulting Party upon notice in writing and all amounts payable by the defaulting Party hereunder shall become due and payable forthwith;
- (b) The remedies in this section are expressly in lieu of any or all of the remedies which may be available to each of Networks and an Affiliate in respect of or under this Agreement resulting from the furnishing, the failure to furnish or the quality of any Services.

### **ARTICLE 10 – TERMINATION**

### 10.1 **Termination**

This Agreement shall terminate:

- (a) In accordance with the provisions of Section 9.1; or
- (b) upon issuance of a notice of non-renewal in accordance with Section 2.1.

### 10.2 Notice of Termination

Any termination hereof pursuant to Section 10.1 shall be by written notice of the terminating Party.

# ARTICLE 11 – GENERAL

# 11.1 Force Majeure

No Party shall be liable for a failure or delay in the performance of its obligations pursuant to this Agreement:

- (a) provided that such failure or delay could not have been prevented by reasonable precautions;
- (b) provided that such failure or delay cannot reasonably be circumvented by the non-performing Party through the use of alternate sources, work around plans or other means; and
- (c) if and to the extent such failure or delay is caused, directly or indirectly, by fire, flood, earthquake, elements of nature or acts of God, acts of war, terrorism, riots, civil disorders, rebellions, strikes, lock outs or labour disruptions or revolutions in Canada, or any other similar causes beyond the reasonable control of such Party, (each a "Force Majeure Event").

Upon the occurrence of a Force Majeure Event, the non-performing Party shall be excused from any further performance of those of its obligations pursuant to this Agreement affected by the Force Majeure Event only for so long as:

- (a) such Force Majeure Event continues; and
- (b) such Party continues to use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay.

The Party delayed by a Force Majeure Event shall:

(a) immediately notify the other Parties by telephone (to be confirmed in writing within five (5) days of the inception of such delay) of the occurrence of a Force Majeure Event; and

(b) describe in reasonable detail the circumstances causing the Force Majeure Event.

# 11.2 **Dispute Resolution**

If any dispute arising in relation to an event of default under Section 8.1(b) or its implementation of Section 8.1(b) cannot be resolved by negotiation between the two disputing Parties, then the dispute shall be referred to one arbitrator agreeable to and appointed by both Parties to the dispute. If the Parties cannot agree on one arbitrator, the matter in dispute shall be referred to a panel of three arbitrators, one of which shall be appointed by Networks, one appointed by the Affiliate in the dispute and the third appointed by the two arbitrators selected by the disputing Parties. The arbitrator or arbitrators shall receive such oral and written evidence as may be required to investigate the matter in dispute and to render a decision and shall be guided by this Agreement and the intent of this Agreement. The decision of the arbitrator or arbitrators shall be provided in writing to the disputing Parties no later than thirty (30) days after the sole arbitrator or the third arbitrator has been appointed. The decision of the arbitrator or arbitrators shall be final and binding on the disputing Parties.

# 11.3 Assignment

No Party shall, without the written consent of the other Parties, which may be arbitrarily withheld in the sole discretion of a Party, assign or transfer its interest in this Agreement. This Agreement shall be binding on the Parties and their respective successors and permitted assigns. Any purported assignment in contravention of this Agreement shall be void.

### 11.4 Notices

All notices, request, approvals, consents and other communications required or permitted under this Agreement shall be in writing and addressed as follows:

(a) If to the Affiliates,

100 Simcoe St. South Oshawa, ON L1H 7M7

Attn: Atul Mahajan, CFO

Fax: 905-723-7947

(b) if to Networks,

100 Simcoe St. South Oshawa, ON L1H 7M7

Attn: Mark Turney, VP Operations and Engineering

Fax: 905-723-7947

and shall be sent by fax and the Party sending such notice shall telephone to confirm receipt. A copy of any such notice shall also be sent on the date such notice is transmitted by fax by registered express mail or courier with the capacity to verify receipt of delivery. Any Party may change its address or fax number for notification purposes by giving the other Party notice of the new address or fax number and the date upon which it will become effective in accordance with the terms of this Agreement. A notice shall be deemed to have been received as of the next Business Day following its transmission by fax.

# 11.5 Severability

If any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable or contrary to law, then the remaining provisions of this Agreement, or the application of such provisions to persons or circumstances other than those as to which it is invalid or unenforceable shall not be affected thereby, and each such provision of this Agreement shall be valid and enforceable to the extent granted by law. If any clause is deemed unenforceable or contrary to law, the parties shall alter the said clause and this agreement to produce enforceability or compliance with law such that the intent of the original clause is maintained and such change or alteration may be established through the dispute resolution clause in this agreement.

### 11.6 Waiver

No delay or omission by a Party to exercise any right or power it has under this Agreement or to object to the failure of any covenant of any other Party to be performed in a timely and complete manner, shall impair any such right or power or be construed as a waiver of any succeeding breach or any other covenant. All waivers must be in writing and signed by the Party waiving its rights

# 11.7 Entire Agreement

This Agreement supercedes any prior agreement between Networks and any of the Affiliates in relation to the Services provided for in this Agreement, and constitutes the entire Agreement between the Parties with respect to the Services, and there are no other representations, understandings or agreements, either oral or written, between the Parties other than as set out in this Agreement.

### 11.8 Amendments

No amendment to, or change, waiver or discharge of, any provision of this Agreement shall be valid unless in writing and signed by authorized representatives of each Party.

# 11.9 Governing Law

This Agreement shall be governed by the laws of the Province of Ontario and the laws of Canada applicable therein. The Parties hereby agree that the courts of the Province of Ontario shall have exclusive jurisdiction over disputes under this Agreement, and the Parties agree that jurisdiction and venue in such courts is appropriate and irrevocably attorn to the jurisdiction of such courts.

### 11.10 Survival

The terms of Article 7, Article 9 and Article 11 shall survive the expiration of this Agreement or termination of this Agreement for any reason.

# 11.11 Third Party Beneficiaries

Each Party intends that this Agreement shall not benefit or create any right or cause of action in or on behalf of any person or entity other than the Parties.

# 11.12 Covenant of Further Assurances

The Parties agree that, subsequent to the execution and delivery of this Agreement and without any additional consideration, the Parties shall execute and deliver or cause to be executed and delivered any further legal instruments and perform any acts which are or may become necessary to effectuate the purposes of this Agreement and to complete the transactions contemplated under it.

IN WITNESS WHEREOF this Agreement has been executed by the duly authorized signatories of the parties hereto as of the date first written above.

# OSHAWA POWER and UTILITIES CORPORATION Per: Name: Atul Mahajan Title: CFO Per: Name: Title: Name: Atul Mahajan Title: CFO Per: Name: Atul Mahajan Title: CFO Per:

Title:

# OSHAWA PUC ENERGY SERVICES INC.

Per:	Ancheji
	Name: Atul Mahajan
	Title: CFO
Per:	
	Name:
	Title:
OSHAWA P	UC NETWORKS INC.
Per:	marklurney
	Name: Mark Turney
	Title: VP, Operations and Engineering
Per:	
	Name:
	Title:

### **SCHEDULE A**

# **Description of Services**

- 1. **"Finance Services"**, if any, will include treasury services, controllership services and audit services.
  - (a) Treasury services will include financing, i.e., bond issue, operating line of credit, cash flow management and investment of funds, banking, financial guarantees, ie: letters of credit, bonds, prudentials, payroll services, accounts payable services, account receivables, office services, obtaining and maintaining credit ratings, Securities Commission reporting, management of customer deposits, interest and T5 reporting, taxation (PILs), GST and PST remittances and corporate VISA card.
  - (b) Controllership services will include financial systems, financial processes, policies and procedures, financial controls and compliance, financial reporting and analysis, annual budgets, financial operations, billing, collecting, capitalization and depreciation, WIP and inventory, labour charging, allocations and burdens, managing external audit, risk and contract management, insurance programs, liability, D&O, fleet, facilities, OEB reporting, incentive plan reporting, billing system quality control.
  - (c) Audit services will include risk management audit reports to Audit Committee and Board of Directors.
- 2. "Corporate Support Services", if any, will include call centre services, human resources services, IT services, safety services and new services.
  - (a) Call centre services will include call answering services and switchboard services.
  - (b) Human resources services will include programming and consulting including recruitment, compensation and benefits, employee relations, labour relations.
  - (c) IT services will include personal computer systems support and communications support.
  - (d) Safety services will include safety program development, monitoring, reporting, implementation and support.
  - (e) New support services will include such new services as may be agreed upon by the parties from time to time with a price to be negotiated at that time.

### **SCHEDULE B**

# **Description of Service Standards**

# **Service Standards**

- (a) NETWORKS will adhere to industry standards, based on standards set by the WSIB, Electric Utility Safety Association, and Occupational Health & Safety Standards as applicable and in any case shall perform the Services in a good and workmanlike manner and to a standard of performance that a competent professional and diligent independent provider of the services in the same circumstances would reasonably be expected to provide.
- (b) NETWORKS will make all reasonable efforts to meet or exceed performance measures established by the Ontario Energy Board, Measurement Canada and by the IESO.

# SCHEDULE C

# Fees & Charges

	SERVICES	FEES	PERIOD OF FEE
1.	Finance Services	Cost	Monthly
2.	Corporate Support Services	Cost	Monthly
3.	Wholesale Metering Services	\$75 (Regular Business Hrs) \$100 (After Regular Business Hrs)	Hourly
4.	Retail Metering Services	\$75 (Regular Business Hrs) \$100 (After Regular Business Hrs)	Hourly

	Terms & Conditions		
1	Regular Business Hours	8:00 am to 4:30 pm weekdays, excluding holidays	
2	Prices	Subject to Applicable Taxes	
3	Payment	Monthly invoice, Net 30 days	

<sup>&</sup>quot;Cost" means Networks' fully allocated cost to provide the Services.

Appendix C

Service Agreement between

**Oshawa PUC Networks Inc.** 

And

**Oshawa Power & Utilities** 

### SERVICES AGREEMENT

THIS SERVICES AGREEMENT is made as of the 15<sup>th</sup> day of August, 2007

BETWEEN:

OSHAWA POWER and UTILITIES CORPORATION, a corporation incorporated pursuant to the laws of the Province of Ontario

(referred to as "OPUC" after this)

- and -

OSHAWA PUC NETWORKS INC., a corporation incorporated pursuant to the laws of the Province of Ontario

(referred to as "Networks" after this)

# WHEREAS:

- 1. The Parties to this Agreement are corporations incorporated under the *Business Corporations Act* (Ontario);
- 2. Networks carries on the business of distributing electricity within the City of Oshawa; and
- 3. OPUC agrees to provide certain services to Networks on the terms as set forth in this Agreement.

**NOW THEREFORE** in consideration of the mutual covenants contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

### **ARTICLE 1 – INTERPRETATION**

### 1.1 **Definitions**

Unless the context otherwise specifies or requires, for the purposes of this Agreement all capitalized terms shall have the meanings set forth below

- (a) "Agreement" means this Services Agreement together with all Schedules attached to it, as they may be amended from time to time;
- (b) "Business Day" means any day other than a Saturday, Sunday, statutory or bank holiday in the Province of Ontario;
- (c) "Claim" has the meaning ascribed to it in Section 4.4;
- (d) "Confidential Information" means information Networks has obtained relating to a specific consumer, retailer or generator in the process of providing current or prospective distribution service;
- (e) "Defaulting Party" has the meaning ascribed to it in Section 8.1;
- (f) "Direct Costs" means costs incurred directly by Networks for its own operations including all income, property and land taxes and payments in lieu of taxes of Networks, fees and expenses in respect of directors of Networks, insurance in respect of Networks, its assets, employees, directors and agents, including, where insurance is jointly held with an affiliate, Networks' pro rata share of the premiums in respect of such insurance, regulatory, legal and accounting costs, fees and expenses of Networks, and costs of membership in industry organizations;
- (g) "Effective Date" means 1<sup>st</sup> day of July, 2002;
- (h) "Event of Default" has the meaning described to it in Section 8.1;
- (i) "Force Majeure Event" has the meaning ascribed to it in Section 11.1;
- (j) "Law" means any law, rule, regulation, code, order, writ, judgement, decree or other legal or regulatory determination by a court, regulatory agency, or governmental authority of competent jurisdiction;
- (k) "Party" means a party to this Agreement and "Parties" means every party;
- (l) "Person" means an individual, corporation, partnership, joint venture, association, trust, pension fund, union, governmental agency, official, board, tribunal, ministry, commission or department;
- (m) "Personnel" means employees, agents, professional advisors, contractors and subcontractors;
- (n) "Prime Rate" means, for any day, an annual rate of interest equal to the rate of interest which Networks' principal bank establishes at its principal office in Toronto as the reference rate of interest to determine interest rates that it will charge on such day for commercial loans in Canadian dollars made to its customers in Canada and which it refers to as its "prime rate of interest";
- (o) "Services" are Services that are provided under Section 3.1 of this Agreement;
- (p) "Term" has the meaning ascribed to it in Section 2.1 of this Agreement; and

# 1.2 Construction of Agreement

# In this Agreement:

- (a) words denoting the singular include the plural and vice versa and words denoting any gender include all genders;
- (b) all usage of the word "including" or the phrase "e.g.," in this Agreement shall mean "including, without limitation," throughout this Agreement;
- (c) any reference to a statute shall mean the statute in force as at the date hereof, together with all regulations promulgated under it, as the same may be amended, re-enacted, consolidated or replaced, from time to time, and any successor statute, unless otherwise expressly provided;
- (d) any reference to a specific executive position or an internal division or department of a Party shall include any successor positions, divisions or departments having substantially the same responsibilities or performing substantially the same functions;
- (e) when calculating the period of time within which or following which any act is to be done or step taken, the date which is the reference day in calculating such period shall be excluded, and if the last day of such period is not a Business Day, the period shall end on the next Business Day;
- (f) all dollar amounts are expressed in Canadian dollars;
- (g) the division of this Agreement into separate Articles, Sections, subsections and Schedules and the insertion of headings is for convenience of reference only and shall not affect the construction or interpretation of this Agreement;
- (h) words or abbreviations which have well known or trade meanings are used in accordance with their recognized meanings;
- (i) the terms and conditions are the result of negotiations between the Parties and the Parties therefore agree that this Agreement shall not be construed in favour of or against any Party by reason of the extent to which any Party or its professional advisors participated in the preparation of this Agreement.

### **ARTICLE 2 – TERM**

# 2.1 **Term**

Unless terminated in accordance with Section 10.1 of this Agreement, this Agreement shall come into force on the Effective Date and shall continue in full force and effect for a period of five (5) years and the term shall be continuously extended for a further period of one (1) year unless a Party gives notice in writing that the Agreement is not to be extended, on a date which is at least ninety (90) days prior to the end of the term, or the end of renewal as the case may be.

# ARTICLE 3 – NETWORKS SERVICES AND COVENANTS

### 3.1 Services

Subject to the terms, covenants and conditions contained in this Agreement, OPUC will provide, or cause to be provided, to Networks the services set out in **Schedule "A"** (collectively the "**Services"**).

# 3.2 Service Standards

Subject to the terms, covenants and conditions contained in this Agreement, OPUC will provide the Services, or cause them to be provided, to the standards set out in **Schedule "B"** (collectively the "**Service Standards"**).

# 3.3 Changes

The Parties may, from time to time, agree to modifications to a Service or a Service Standard by negotiating appropriate changes to the descriptions of the Service on the Service Standard and the consideration in connection with such changes and shall initial and attach amended schedules in this Agreement.

# 3.4 General OPUC Covenants

- (a) OPUC shall be responsible for obtaining all necessary licences and permits and for complying with all applicable federal, provincial and municipal laws, codes and regulations in connection with the provision of the Services and OPUC shall, when requested, provide Networks with adequate evidence of its compliance with this Section 3.4;
- (b) OPUC shall, while on the premises used by Networks, comply with all the rules and regulations of Networks from time to time in force, which are brought to its notice or of which it could reasonably be aware;
- (c) OPUC shall pay for and maintain for the benefit of OPUC appropriate insurance concerning the operations and liabilities of OPUC relevant to this Agreement including, without limiting the generality of the foregoing, workers' compensation and employment insurance in conformity with applicable statutory requirements in respect of any remuneration payable by OPUC to any employees of OPUC and public liability and property damage insurance;

# 3.5 Regulatory Change

If any change of Law after the date of this Agreement renders this Agreement illegal or unenforceable, then the Parties shall be required to renegotiate in good faith for thirty (30) days with a goal of developing a substitute agreement with such amendments as are necessary to comply with such change of Law.

### **ARTICLE 4 – MUTUAL COVENANTS**

# 4.1 Confidentiality of Confidential Information

No Personnel of a Party shall have access to any Confidential Information in the possession of another Party, except for purposes related to the Services and in compliance with the Affiliate Relationship Code for Electricity Distributors and Transmitters prescribed by the Ontario Energy Board.

# 4.2 Maintain Records

The Parties will maintain such records as may be necessary in connection with this Agreement and as are agreed upon by the Parties acting reasonably.

# 4.3 Notification of Changes of Circumstances

OPUC shall promptly give written notice to Networks of any changes or prospective changes in circumstances that would materially affect the resources required for the Services provided to Networks, including any anticipated material change in the nature or level of business of OPUC, the number of employees of OPUC, or any efforts relating to the organization of or collective bargaining by employees of OPUC, or any lease or service arrangements contemplated with any third parties.

# 4.4 Notice of Claims, Etc.

OPUC shall promptly give written notice to Networks, and Networks shall promptly give written notice to OPUC, of all material claims, proceedings, notice of regulatory non-compliance from any regulatory authority, disputes (including labour disputes) or litigation (collectively, "Claims") which it reasonably believes could have a material adverse effect on the fulfillment of any of the material terms of this Agreement by OPUC or Networks (whether or not any such Claim is covered by insurance) in respect of its own operations of which any of them is aware. Each Party shall provide the other Party with all information reasonably requested from time to time concerning the status of such Claims and any developments relating thereto.

### ARTICLE 5 - FEES AND COSTS

### 5.1 Fees

- (a) Networks shall pay to OPUC the fees and charges set out in **Schedule "C"** for services received from OPUC.
- (b) Networks shall bear and assume all Direct Costs.

# 5.2 Taxes

In addition to the fees, Networks shall pay to OPUC an amount equal to any and all goods and services taxes, sales taxes, value-added taxes or any other taxes (excluding income taxes) properly eligible on the supply of services provided by a third party under this Agreement.

# ARTICLE 6 – REPRESENTATIONS AND WARRANTIES

# 6.1 Representations and Warranties of Networks

Networks represents and warrants to OPUC as follows and acknowledges that OPUC is relying on such representations and warranties:

- (a) Networks is a corporation, duly incorporated, validly existing and in good standing under the laws of the Province of Ontario and it has the rights, powers and privileges to execute and deliver this Agreement and to perform its obligations hereunder;
- (b) the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate action;
- (c) this Agreement constitutes a legal, valid and binding obligation of Networks, enforceable against Networks by OPUC in accordance with its terms; and

# 6.2 Representations and Warranties of OPUC

OPUC represents and warrants to Networks as follows and acknowledges that Networks is relying on such representations and warranties:

- (a) OPUC is a company, duly organized, validly existing and in good standing under the laws of the Province of Ontario and it has the rights, powers and privileges to execute and deliver this Agreement and to perform its obligations hereunder;
- (b) the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate actions; and
- (c) this Agreement constitutes a legal, valid and binding obligation of OPUC, enforceable against OPUC by Networks in accordance with its terms.
- (d) OPUC has the necessary resources and expertise to acquire or perform the Services.

# 6.3 Warranty

- (a) OPUC warrants that the work and services it provides will be performed in a professional and workman like manner subject to Section 6.3(b) and 6.3(c) below. OPUC warrants that any fault or defect due solely or indirectly to workmanship of OPUC shall be corrected as soon as is reasonably possible upon notification by Networks at no cost to Networks;
- (b) in respect of OPUC workmanship, this warranty period shall extend to a defect or failure occurring within 90 days of the date that the original Work was completed.

### ARTICLE 7 – INDEMNIFCATION

# 7.1 **Indemnification**

- (a) Networks shall indemnify, defend and hold harmless OPUC, its officers, directors, and employees (each an "OPUC Indemnitee") from and against any and all claims, demands, suits, losses, liabilities, damages, obligations, payments, costs and expenses and accrued interest thereon (including the costs and expenses of, and accrued interest in respect of, any and all actions, suits, proceedings, assessments, judgements, awards, settlements and compromises relating thereto and reasonable lawyers' fees and reasonable disbursements in connection therewith) (each an "Indemnifiable Loss"), asserted against or suffered by any OPUC Indemnitee relating to, or in connection with, or resulting from or arising out of the provision of the Services to Networks.
- (b) OPUC shall deemed to hold the provisions of **Section 7.1(a)** that are for the benefit of the OPUC Indemnitees that are not party to this Agreement in trust for such persons as third party beneficiaries under this Agreement.

# 7.2 Limit of Liability

- (a) Networks agrees that OPUC's liability, if any, to Networks or any third party in connection with or arising under this Agreement, including without limitation, any liability arising from any act or omission of OPUC in the provision of the Services, whether arising in contract, tort, equity or otherwise, shall be limited to actions or liabilities resulting solely from the fraud or wilful misconduct of OPUC in the provision of the Services and shall not exceed an amount equal to the total amount paid by Networks to OPUC under this Agreement over the twelve month period preceding the date that the cause of action or claim giving rise to the liability first arose.
- (b) OPUC shall not be liable for any damages caused by delay in delivering or furnishing any Services referred to in this Agreement.
- 7.3 Notwithstanding anything else to the contrary in this Agreement, the Parties agree that **OPUC** shall not be responsible for any sanctions, fines, penalties, or similar obligations imposed on Networks, and Networks agrees to indemnify and hold harmless **OPUC** from any such sanctions fines, penalties or similar obligations.

### ARTICLE 8 – DEFAULT

### 8.1 Events of Default

The occurrence of any one or more of the following events shall constitute a Default by a Party (the "Defaulting Party") under this Agreement and shall constitute an Event of Default if such Default is not remedied prior to the expiry of any notice period and any cure period applicable to such Default:

(a) if the Defaulting Party defaults in the payment of any amount due to the other

- Party under this Agreement and such default shall continue unremedied for sixty (60) days following notice in writing thereof to the Defaulting Party by the other Party; and
- (b) if the Defaulting Party fails in any material respect to perform or observe any of its other material obligations under this Agreement and such failure shall continue unremedied for a period of sixty (60) days following notice in writing thereof (giving particulars of the failure in reasonable detail) from the other Party to the Defaulting Party or such longer period as may be reasonably necessary to cure such failure (if such failure is capable of being cured), provided that the Defaulting Party:
  - (i) proceeds with all due diligence to cure or cause to be cured such failure; and
  - (ii) in proceeding so, can be reasonably expected to cure or cause to be cured such failure within a reasonable time frame acceptable to the other Party acting reasonably.

### **ARTICLE 9 – REMEDIES**

### 9.1 **Default Remedies**

- (a) Unless otherwise agreed to in writing, in the event of an Event of Default the non-defaulting Party may terminate this Agreement as it relates to the non-defaulting Party upon notice in writing and all amounts payable by the defaulting Party hereunder shall become due and payable forthwith;
- (b) The remedies in this section are expressly in lieu of any or all of the remedies which may be available to each of Networks and an Affiliate in respect of or under this Agreement resulting from the furnishing, the failure to furnish or the quality of any Services.

### **ARTICLE 10 – TERMINATION**

### 10.1 **Termination**

This Agreement shall terminate:

- (a) In accordance with the provisions of Section 9.1; or
- (b) upon issuance of a notice of non-renewal in accordance with **Section 2.1**.

### 10.2 Notice of Termination

Any termination hereof pursuant to Section 10.1 shall be by written notice of the terminating Party.

### **ARTICLE 11 – GENERAL**

# 11.1 Force Majeure

No Party shall be liable for a failure or delay in the performance of its obligations pursuant to this Agreement:

- (a) provided that such failure or delay could not have been prevented by reasonable precautions;
- (b) provided that such failure or delay cannot reasonably be circumvented by the nonperforming Party through the use of alternate sources, work around plans or other means; and
- if and to the extent such failure or delay is caused, directly or indirectly, by fire, flood, earthquake, elements of nature or acts of God, acts of war, terrorism, riots, civil disorders, rebellions, strikes, lock outs or labour disruptions or revolutions in Canada, or any other similar causes beyond the reasonable control of such Party, (each a "Force Majeure Event").

Upon the occurrence of a Force Majeure Event, the non-performing Party shall be excused from any further performance of those of its obligations pursuant to this Agreement affected by the Force Majeure Event only for so long as:

- (a) such Force Majeure Event continues; and
- (b) such Party continues to use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay.

The Party delayed by a Force Majeure Event shall:

- (a) immediately notify the other Party by telephone (to be confirmed in writing within five (5) days of the inception of such delay) of the occurrence of a Force Majeure Event; and
- (b) describe in reasonable detail the circumstances causing the Force Majeure Event.

# 11.2 **Dispute Resolution**

If any dispute arising in relation to an event of default under Section 8.1(b) or its implementation of Section 8.1(b) cannot be resolved by negotiation between the Parties, then the dispute shall be referred to one arbitrator agreeable to and appointed by both Parties. If the Parties cannot agree on one arbitrator, the matter in dispute shall be referred to a panel of three arbitrators, one of which shall be appointed by Networks, one appointed by OPUC and the third appointed by the two arbitrators selected by the Parties. The arbitrator or arbitrators shall receive such oral and written evidence as may be required to investigate the matter in dispute and to render a decision, and shall be guided by this Agreement and the intent of this Agreement. The decision of the arbitrator or arbitrators shall be provided in writing to all of

the Parties no later than thirty (30) days after the sole arbitrator or the third arbitrator has been appointed. The decision of the arbitrator or arbitrators shall be final and binding on the Parties.

# 11.3 Assignment

No Party shall, without the written consent of the other Party, which may be arbitrarily withheld in the sole discretion of that Party, assign or transfer its interest in this Agreement. This Agreement shall be binding on the Parties and their respective successors and permitted assigns. Any purported assignment in contravention of this Agreement shall be void.

### 11.4 Notices

All notices, request, approvals, consents and other communications required or permitted under this Agreement shall be in writing and addressed as follows:

(a) If to OPUC

100 Simcoe St. South Oshawa, ON L1H 7M7

Attn: Atul Mahajan, CFO Fax: 905-723-7947

(b) if to Networks,

100 Simcoe St. South Oshawa, ON L1H 7M7

Attn: Mark Turney, VP Operations and Engineering

Fax: 905-723-7947

and shall be sent by fax and the Party sending such notice shall telephone to confirm receipt. A copy of any such notice shall also be sent on the date such notice is transmitted by fax by registered express mail or courier with the capacity to verify receipt of delivery. Any Party may change its address or fax number for notification purposes by giving the other Party notice of the new address or fax number and the date upon which it will become effective in accordance with the terms of this Agreement. A notice shall be deemed to have been received as of the next Business Day following its transmission by fax.

### 11.5 Severability

If any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable or contrary to law, then the remaining provisions of this Agreement, or the application of such provisions to persons or circumstances other than those as to which it is invalid or unenforceable shall not be affected thereby, and each such provision of this Agreement shall be valid and enforceable to the extent granted by law. If any clause is deemed

unenforceable or contrary to law, the parties shall alter the said clause and this agreement to produce enforceability or compliance with law such that the intent of the original clause is maintained and such change or alteration may be established through the dispute resolution clause in this agreement.

### 11.6 Waiver

No delay or omission by a Party to exercise any right or power it has under this Agreement or to object to the failure of any covenant of any other Party to be performed in a timely and complete manner, shall impair any such right or power or be construed as a waiver of any succeeding breach or any other covenant. All waivers must be in writing and signed by the Party waiving its rights

# 11.7 Entire Agreement

This Agreement supercedes any prior agreement between OPUC and Networks in relation to the Services provided for in this Agreement, and constitutes the entire Agreement between the Parties with respect to the Services, and there are no other representations, understandings or agreements, either oral or written, between the Parties other than as set out in this Agreement.

# 11.8 Amendments

No amendment to, or change, waiver or discharge of, any provision of this Agreement shall be valid unless in writing and signed by authorized representatives of each Party.

# 11.9 Governing Law

This Agreement shall be governed by the laws of the Province of Ontario and the laws of Canada applicable therein. The Parties hereby agree that the courts of the Province of Ontario shall have exclusive jurisdiction over disputes under this Agreement, and the Parties agree that jurisdiction and venue in such courts is appropriate and irrevocably attorn to the jurisdiction of such courts.

### 11.10 Survival

The terms of Article 7, Article 9 and Article 11 shall survive the expiration of this Agreement or termination of this Agreement for any reason.

# 11.11 Third Party Beneficiaries

Each Party intends that this Agreement shall not benefit or create any right or cause of action in or on behalf of any person or entity other than the Parties.

# 11.12 Covenant of Further Assurances

The Parties agree that, subsequent to the execution and delivery of this Agreement and without any additional consideration, the Parties shall execute and deliver or cause to be executed and delivered any further legal instruments and perform any acts which are or may become necessary to effectuate the purposes of this Agreement and to complete the transactions contemplated under it.

IN WITNESS WHEREOF this Agreement has been executed by the duly authorized signatories of the parties hereto as of the date first written above.

	AWA POWER and UTILITIES RPORATION
Per:	
	Anchejo
	Name: Atul Mahajan Title: CFO
Per:	
	Name: Title:
OSH	AWA PUC NETWORKS INC.
Per:	
	Mark Turney
	Name: Mark Turney Title: VP, Operations and Engineering
Per:	
	Name: Title:

# **SCHEDULE A**

# **Description of Services**

Corporate Governance, including services associated with the governance of a company's activities, such as activities to support its board of directors, board committees and executive management and legal and consulting services.

### **SCHEDULE B**

# **Description of Service Standards**

# **Service Standards**

- (a) OPUC will adhere to applicable industry standards, based on standards set by the WSIB, Electric Utility Safety Association, and Occupational Health & Safety Standards as applicable and in any case shall perform the Services in a good and workmanlike manner and to a standard of performance that a competent professional and diligent independent provider of the services in the same circumstances would reasonably be expected to provide.
- (b) OPUC will make all reasonable efforts to meet or exceed applicable performance measures established by the Ontario Energy Board, Measurement Canada and by the IESO.

# **SCHEDULE C**

# Fees & Charges

SERVICES		FEE	PERIOD OF FEE
1. Corporate Governa	nce Services	on a Cost basis	Monthly

	Term & Conditions		
1	Regular Business Hours	8:00 am to 4:30 pm weekdays, excluding holidays	
2	Prices	Subject to Applicable Taxes	
3	Payment	Monthly invoice, Net 30 days	

<sup>&</sup>quot;Cost" means Networks' proportionate share of OPUC's cost to provide the Services to Networks, based on Networks' proportionate use of the Services.