2007 NSUARB-P-886

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: The *Public Utilities Act,* R.S.N.S. 1989, c.380 as amended

IN THE MATTER OF: An Application by Nova Scotia Power Incorporated for Approval of Certain Revisions to its Rates, Charges and Regulations

RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM **REDACTED**

Question IR-8: **With regard to the response to HRM IR-2:**

a. **How much direct labour is included in the $2.919M figure provided in the response?**
b. **Of the labour figure provided in response to part (a) of this question, what portion is associated with NSPI's affiliate versus internal labour?**
c. **What is the job title of the minimum tradesman standard qualified to perform street light replacement and maintenance? What is the going rate for this level of tradesman?**
d. **What are the job titles and going labour rates for other tradesman levels that have performed street lighting replacement and maintenance, e.g., labourer-electrical; electrical apprentice; journeyman electrician; journeyman lineman; welder; and aerial truck operator?**
e. **Please provide a breakdown or estimate of labour in the $2.919M figure by job title.**
f. **To what extent does NSPI perform street lighting maintenance during their down time?**
g. **To what extent do linesmen do street lighting maintenance that could otherwise be performed by a qualified lower level tradesman?**
h. **To what extent does NSPI perform street lighting preventative maintenance? Please describe what preventive maintenance is done, if any.**
i. **If, in the course of NSPI's street light replacement and maintenance activities, needed ancillary maintenance is performed, such as tree trimming, righting of poles supporting**

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TO: **NSPI**

FROM: **HRM** **REDACTED**

Question IR-8: (cont'd)

a street light, etc., are these activities charged to street lights or to distribution maintenance?

Response IR-8:

a. This level of detail is not available for 2007. Direct labour represents 64 percent of total direct street light maintenance costs for 2006F.

b. None.

c. The street light maintenance program is a component of NSPI's one-person Shift Powerline Technician strategy. One-person shift crews are primarily responsible for responding to trouble calls. The remainder of the shift is made up of work suitable for one-person shift crews, such as street light maintenance, new street light installs and new customer related work such as service drops and meter installs. The work these one-person shift crews perform originates directly from NSPI's Work Management System (WMS). The hourly rate of a Powerline Technician is [redacted]

d. The job titles and labour rates for other tradespeople that may perform street lighting replacement and maintenance are as follows:

- Leading Powerline Technician - [redacted]
- Powerline Technicians - [redacted]
- Apprentice Powerline Technicians (4th 6 month) - [redacted]

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Response IR-8: (cont'd)

Note: Apprentice Powerline Technicians are only involved in street lighting repair and maintenance for training purposes, or to assist Powerline Technicians in repairing lights located within the four-foot primary zone.

e. Estimated breakdown of labour by job title:

- Powerline Technician (Shift) $ 0.470 million
- Powerline Technician $ 0.125 million
- Powerline Technician Leading $ 0.090 million
- Tech Powerline Apprentice $ 0.015 million

f. See part c.

g. See part c.

h. Please refer to HRM IR-12.

i. Ancillary maintenance performed in the course of repairing street lights is charged to the respective maintenance accounts. Tree trimming is charged to Right of Way; and righting of poles supporting a street light is charged to Overhead Maintenance.

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TO: NSPI

FROM: HRM **REDACTED**

Question IR-9: **With regard to the response to HRM IR-3 dealing with Exhibit 9A of Appendix G, Exhibit 9A in NSPI's compliance filing in NSUARB – NSPI-P882, NSPI's updated street lighting analysis, and the response to HRM IR-4:**

a. **Please confirm that all data in NSPI's updated street lighting analysis was based on its 2006 compliance filing. If not, indicated which data were not and the source.**

b. **Column (4), line (10) of Exhibit 9A in this proceeding shows a figure of 27,277 kW, which as indicated in response to HRM IR-3, represents connected demand for the unmetered class in 2007 of approximately 27 MW, with about 25 MW of the total affected by the number of hours of darkness. The corresponding figure in Exhibit 9A of the compliance filing is 26,742. What is the MW level included in this figure that represents fixtures associated with the number of hours of darkness?**

c. **Please confirm that in Schedule 1 of the updated street lighting analysis, if the wattage for each fixture in the second column of this schedule is multiplied by the quantity for that fixture type in the last column, excluding fixtures designated as continuous operation, the addition of the products will equal to approximately 134,183 fixtures and 17.213 MW and that this figure reasonably represents the connected lighting load for photocell actuated fixtures for the period covered by the compliance filing. If not, please explain. If NSPI's calculation differs, please provide a copy of that calculation.**

d. **Please confirm that the same calculation (in part (c) of this question) performed using the data contained in the proof of**

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TO: NSPI

FROM: HRM **REDACTED**

Question IR-9: (cont'd)

revenues provided in response to HRM IR-4 results in effectively the same figures as in part (c) of this question.

e. **Please explain why Exhibit 8A in the cost of service compliance filing reports 8,950 unmetered accounts compared with 9,606 unmetered accounts in the same exhibit in this proceeding – an increase of 656 accounts, while the number of photocell-actuated fixtures remains constant. Have accounts been added without the addition of fixtures? Which of these figures are correct? Which are incorrect? If any figures are incorrect, what are the implications with respect to: (i) NSPI's 2007 forecast cost of service study; and (ii) realized versus projected revenues from the unmetered class in calendar year 2007?**

f. **Please reconcile quantitatively the difference between the 17.213 MW figure calculated in part (c) of this question with the 25 MW figure provided in response to HRM IR-3.**

g. **In Table 2 of Appendix A of NSPI's updated street lighting analysis, the second column lists total accounts by customer class. What time period or test year do the number of accounts reported in this table pertain to?**

h. **Please provide the representative class curve, developed on engineering principles, that is referred to in response to HRM IR-3.**

i. **Please provide the electronic file or a hard copy of NSPI's calculations that develops and displays the figures shown in columns (4), (5) and (6) of line (10) of Exhibit 9A of Appendix G.**

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FROM: HRM **REDACTED**

Question IR-9: (cont'd)

j. To what extent were photocell-actuated fixtures considered to be coincident with NSPI's system peak in December, January and February of the 2007 forecast test-year?

Response IR-9:

a. Confirmed.

b. The demand level included in Exhibit 9A of the Compliance Filing that represents fixtures associated with the number of hours of darkness is 24.426 MW.

c. The calculation presented in the question does not represent the connected load for street and crosswalk lighting operating on photocell control. Ballast losses were not included in HRM's calculation. Please refer to part c Attachment 1 for the calculation including ballast losses.

d. Because ballast losses were not taken into account in part c of the question, the calculation does not result in the same figures contained in the proof of revenue calculation in HRM IR-4.

e. The figures are correct. The number of unmetered accounts is forecast to grow from 8,950 in 2006 to 9,606 in 2007. The proof of revenue calculations by individual fixture type separated the number of existing photocell-actuated fixtures (as of December 31, 2005) from the new fixtures expected to be added. In estimating growth for 2007, NSPI projects an additional 2,862 fixtures, resulting in a total forecast of 137,142 fixtures (please refer to HRM IR-4, page 4 of Attachment 1). Many of these additional

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Response IR-9: (cont'd)

fixtures will result in new unmetered service accounts. Miscellaneous other unmetered services will also experience new account growth expected from new cable power supply units, customer-owned outdoor signs, telephone power supply cabinets, bus shelters, telephone booths and traffic control intersections within municipalities.

f. Please refer to NSPI's response to part c.

g. The total accounts by customer class identified in Table 2, column 2 in Appendix A of the updated street light study refer to actual accounts as of the end of June 2006.

h. Please refer to the Confidential Microsoft Excel attachment filed electronically which contains an example of the hourly class curve for the Unmetered service.

i. The energy and demand numbers used in the calculations for Exhibit 9A are extracted from the unmetered class curve developed for 2007. Please refer to part h.

j. The system peaks for the winter months of 2007 are forecast to occur in the evening, near the time of sunset, so not all fixtures are assumed to operate for the complete hour and therefore, their hourly average coincident demand is expected to be less than the maximum class demand.

TABLE HRM IR-9(c)

DETERMINATION OF STREET AND CROSSWALK LIGHTING CONNECTED LOAD BY UNIT BASED ON DECEMBER 2005 INVENTORY LEVELS

Description	Rate Code	kW.h/Mo.	Units	Unit Connected Load (kW)	Total Load (kW)
Incandescent :					
Incandescent < 300 Watts	001	97	31	0.291	9.021
Incandescent > 300 Watts	002	154	3	0.462	1.386
Incandescent < 300 Watts	003	97	7	0.291	2.037
			41		12.444
Mercury Vapour :					
Mercury Vapour 100 Watts	100	43	269	0.129	34.701
Mercury Vapour 125 Watts	101	52	11,962	0.156	1,866.072
Mercury Vapour 175 Watts	102	69	3,150	0.207	652.050
Mercury Vapour 250 Watts	103	97	1,149	0.291	334.359
Mercury Vapour 400 Watts	104	154	1,484	0.462	685.608
Mercury Vapour 700 Watts	105	260	12	0.780	9.360
Mercury Vapour 1000 Watts	106	363	76	1.089	82.764
Mercury Vapour 125 Watts	201	52	9	0.156	1.404
Mercury Vapour 175 Watts	202	69	24	0.207	4.968
Mercury Vapour 250 Watts	203	97	34	0.291	9.894
Mercury Vapour 400 Watts	204	154	10	0.462	4.620
Mercury Vapour 700 Watts	205	260	0	0.780	0.000
Mercury Vapour 1000 Watts	206	363	17	1.089	18.513
Mercury Vapour 125 Watts	301	52	11	0.156	1.716
Mercury Vapour 175 Watts	302	69	153	0.207	31.671
Mercury Vapour 250 Watts	303	97	54	0.291	15.714
Mercury Vapour 400 Watts	304	154	16	0.462	7.392
Mercury Vapour 700 Watts	305	260	1	0.780	0.780
Mercury Vapour 1000 Watts	306	363	7	1.089	7.623
			18,443		3,769.209
Fluorescent :					
Fluorescent 2x24" 70 Watts	110	30	913	0.091	83.083
Fluorescent 2x48" 220 Watts	111	85	153	0.254	38.862
Fluorescent 2x72" 300 Watts	112	116	68	0.348	23.664
Fluorescent 4x72" 600 Watts	113	222	15	0.665	9.975
Fluorescent 1x96" 110 Watts	114	47	5	0.141	0.705
Fluorescent 1x72" 150 Watts	115	60	2	0.180	0.360
Fluorescent 4x48" 440 Watts	116	166	2	0.499	0.998
			1,158		157.647
Fluorescent 4x72" 600 Watts	213	222	0	0.665	0.000
Fluorescent 1x96" 110 Watts	214	47	26	0.141	3.666
Fluorescent 1x72" 150 Watts	215	60	3	0.180	0.540
Fluorescent 4x48" 440 Watts	216	166	0	0.499	0.000
Fluorescent 1x48" 120 Watts	217	49	1	0.146	0.146
Fluorescent 2x48" 220 Watts	218	85	0	0.254	0.000
Fluorescent 4x35"	330	47	2	0.140	0.280
			32		4.632
Fluorescent Crosswalk - Photocell Burning - Customer Owned :					
Fluorescent 2x24" 70 Watts	310	30	1	0.091	0.091
Fluorescent 4x48" 440 Watts	311	166	5	0.499	2.495
Fluorescent 4x72" 600 Watts	313	222	0	0.665	0.000
Fluorescent 2x72"	312	116	2	0.348	0.696
Fluorescent 1x96"	314	47	25	0.142	3.550
Fluorescent 1x72"	315	60	0	0.180	0.000
Fluorescent 4x96"	350	280	78	0.841	65.598
			111		72.430

TABLE HRM IR-9(c)

DETERMINATION OF STREET AND CROSSWALK LIGHTING CONNECTED LOAD BY UNIT BASED ON DECEMBER 2005 INVENTORY LEVELS

Description	Rate Code	kW.h/Mo.	Units	Unit Connected Load (kW)	Total Load (kW)
Low Pressure Sodium :					
Low Pressure Sodium 90 Watts	132	45	2	0.135	0.270
Low Pressure Sodium 135 Watts	130	60	61	0.180	10.980
Low Pressure Sodium 180 Watts	131	80	870	0.240	208.800
Low Pressure Sodium 180 Watts E&M	231	80	43	0.240	10.320
Low Pressure Sodium 180 Watts E/O	331	80	37	0.240	8.880
			1,013		239.250
High Pressure Sodium :					
High Pressure Sodium 70 Watts	123	32	38,321	0.096	3,678.816
High Pressure Sodium 100 Watts	124	45	45,889	0.135	6,195.015
High Pressure Sodium 150 Watts	125	65	5,241	0.195	1,021.995
High Pressure Sodium 250 Watts	121	100	5,256	0.300	1,576.800
High Pressure Sodium 400 Watts	122	150	3,667	0.450	1,650.150
High Pressure Sodium 70 Watts	222	32	224	0.096	21.504
High Pressure Sodium 100 Watts	223	45	110	0.135	14.850
High Pressure Sodium 150 Watts	224	65	232	0.195	45.240
High Pressure Sodium 250 Watts	221	100	160	0.300	48.000
High Pressure Sodium 70 Watts	323	32	6,299	0.096	604.704
High Pressure Sodium 100 Watts	324	45	2,508	0.135	338.580
High Pressure Sodium 150 Watts	325	65	1,299	0.195	253.305
High Pressure Sodium 250 Watts	321	100	1,677	0.300	503.100
High Pressure Sodium 400 Watts	322	150	86	0.450	38.700
High Pressure Sodium 500 Watts	327	183	3	0.550	1.650
			110,972		15,992.409
Metallic Additive :					
Metallic Arc 250 Watts	142	100	64	0.300	19.200
Metallic Arc 400 Watts	140	150	1,215	0.450	546.750
Metallic Arc 1000 Watts	141	360	833	1.080	899.640
Metallic Arc 150 Watts	143	67	1	0.200	0.200
Metallic Arc 250 Watts	343	100	66	0.300	19.800
Metallic Arc 400 Watts	342	150	153	0.450	68.850
Metallic Arc 1000 Watts	341	360	11	1.080	11.880
Metallic Arc 175 Watts	344	67	72	0.225	16.200
Metallic Arc 150 Watts	345	57	3	0.200	0.600
			2,418		1,583.120
TOTALS			**134,183**		**21,831.141**

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM **REDACTED**

Question IR-10: **With respect to the responses to HRM IR-6:**

a. **In response to HRM IR-6(a)(i), please estimate how many street lighting fixture changes NSPI is processing in a one-year period. Approximately what percent is occurring within HRM's territory?**

b. **What is the residential move-out/move-in rate, or customer turnover rate in NSPI's service territory?**

c. **Approximately how much time does it take NSPI to process a customer moving out and a customer moving in and initiating service?**

d. **Are residential credit checks and customer deposit calculations included under billing services? Approximately how much time per departing customer and per new customer does it take to do these activities? Are there any costs other than internal labour? Explain. Please compare the time for a new residential account with that of a new street light account.**

e. **Are residential billing inquiries included under billing services? Approximately how many residential billing inquiries are received each year and what is the average time NSPI spends on each billing inquiry?**

f. **Please provide a response as NSPI has provided for IRM IR-6(a)(i), but as it pertains to residential, in the same level of detail.**

g. **For calendar years 2004, 2005, 2006 (estimated through year-end) and projected for 2007, please provide the average number of street lighting fixtures billed under the street lighting rate.**

h. **Approximately how many accounts have more than 10 fixtures per account?**

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TO: NSPI

FROM: HRM **REDACTED**

Question IR-10: (cont'd)

i. **In response to HRM IR-6(a)(ii), NSPI indicates that 50 percent of 1.0 FTE is related to LED TCL conversions. As HRM has only converted approximately 50 intersections to date, please provide support why it should take one-half year, each year, to process such a small number of account changes for TCL conversions.**

j. **How many LED TCL conversions has HRM done in 2006? How much time did it take NSPI to process each conversion?**

k. **How many municipalities are doing LED traffic light conversions? And how many intersections in those municipalities in total have been converted or partially converted?**

l. **With regard to NSPI's response to HRM IR-6(e), please redo Table 2 in Appendix A of NSPI's updated street lighting analysis as two separate tables: (i) reflecting the $0.6 million of direct labour only; and (ii) reflecting the $2.0 million associated with bill printing, preparation and postage.**

m. **With regard to the response to HRM IR-6(f), please clarify the response, i.e., is the $2.6 million figure a more recent estimate than the $3.272 million figure from the 2006 compliance filing? Why would the compliance filing figure of $3.272 million not have been used in Appendix A, Table 2? Does the $2.6 million figure tie into any of NSPI's cost of service studies?**

Response IR-10: a. Streetlight changes for 2005 and 2006 are indicated in the table below. NSPI is not able to identify specifically the number of fixture changes. The number of installs, removals and repairs

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TO: **NSPI**

FROM: **HRM** **REDACTED**

Response IR-10: (cont'd)

indicated below represent the number of streetlight service orders. Some of these orders would be for multiple fixtures.

Year	Installs	Removals	Repairs
2005	1,655	1,406	17,170
2006 (YTD October 31)	1,117	1,232	13,817

The percentage of these changes occurring within the Halifax Regional Municipality (HRM) is indicated in the table below. This number is estimated based on NSPI's best effort to align its data with HRM boundaries.

Year	Installs	Removals	Repairs
2005	31%	22%	31%
2006 (YTD October 31)	27%	20%	31%

b. The residential turnover rate, defined as the number of customers connecting service, divided by the total number of residential accounts, was 15.6 percent in 2005. The residential turnover rate to the end of October 2006 is 13.1 percent. This is slightly below the 2005 rate which was 13.3 percent at the end of October 2005.

c. NSPI does not track transaction time for move-ins (connects) and move-outs (disconnects) separately. Based upon 2006 YTD data, the average connect/disconnect transaction in the Call Centre takes

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Response IR-10: (cont'd)

seven minutes and 50 seconds. This includes call time and post call processing time.

d.

i. Residential credit checks and customer deposits are not included in Billing Services, they are included as part of the Call Centre services.

ii. NSPI estimates that securing an account via a residential credit check takes one to two minutes per customer. Deposit amounts for new customers are based upon the customers rate class and type of premises (non-electrically heated apartment - $100; electrically heated apartment - $150; non-electrically heated home - $150; electrically heated home - $300). For existing customers, deposit amounts are based upon three months of average usage for the premise they are moving into. Neither credit checks nor deposit calculations are applicable to a departing customer.

iii. There are costs associated with credit checks beyond internal labour. NSPI contracts with an external credit rating agency for credit checks. These costs, approximately [redacted]/year, are included in the Call Centre's operating budget under "contracts". There are costs associated with deposits beyond internal labour. Customers that are billed a deposit would receive a deposit notification letter as well as an off cycle deposit invoice. The cost to produce these is $1.22 per customer. These costs are part of Billing Services budget.

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Response IR-10: (cont'd)

iv. NSPI does not track transaction times for new streetlight account requests.

e.

i. Residential billing inquiries are not included in Billing Services, they are included in the Call Centre services. Some billing inquiries managed in the Call Centre are referred to the Billing Services group for follow up and subject matter expertise.

ii. Residential billing inquiries to the Call Centre for 2005 and 2006 are indicated in the table below:

Year	Total Billing Inquiries managed by Call Centre	Billing Inquiries requiring Billing Services Support
2005	136,535	12,287
2006 (YTD October 31)	92,172	9,755

iii. Based upon 2006 YTD data, the average billing inquiry transaction in the Call Centre takes six minutes and 21 seconds. This includes talk time and post call processing time. This does not include the Billing Services support time.

f. The following functions are performed by Billing Services personnel for residential bills:

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Response IR-10: (cont'd)

- Transfer daily meter readings into Customer Information System for billing;
- Process daily billing exceptions from daily bill runs;
- Process daily customer inquiries, over/under billing, customer connected/disconnected in error, remove interest charges and Budget Billing changes;
- Review multiple daily, weekly and monthly reports to ensure NSPI bills customers in a timely and accurate manner;
- Perform testing and updates on residential rate changes.

g. Please refer to the following table:

Year	Average Number of Streetlight Fixtures
2004	133,741
2005	134,280
2006 September	135,768
2007	137,142

h. There are 530 unmetered billing accounts with more than 10 fixtures per account.

i. The fifty percent full time equivalent (FTE) position in Billing Services is required to serve the various municipalities that are conducting light emitting diode traffic control light (LED TCL) conversions throughout Nova Scotia, including HRM. The

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Response IR-10: (cont'd)

conversion processing involves the tracking and coordination of a wide variety of items, including:

1. Receiving and recording official request to convert an intersection.
2. Creation of meter removal service request, if the intersection had been metered previously.
3. Determination if work site is ready to be scheduled for inspection (if required) or determine if line work is required such as to connect new disconnect switch in order to complete the request.
4. Identifying NSPI and/or municipality resources that are required to complete the request.
5. Preparation of NSPI and municipality service requests for work to be scheduled.
6. Coordination with NSPI dispatch to arrange/modify convenient scheduling of work.
7. Follow up to ensure service request is completed and the appropriate closing bill has been produced and issued (for conversion of a metered intersection to unmetered).
8. Identify and remove incandescent TCLs' from existing unmetered service account for the particular intersection.
9. Record new LED TCLs on customer's unmetered service account(s) and verify completion of service request.

j. Thirty five HRM intersections have been converted in 2006, year-to-date. NSPI does not have information on the time per transaction.

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Response IR-10: (cont'd)

k. There are currently eight municipalities, excluding HRM, conducting LED traffic light conversions. There have been approximately 100 intersections converted in the province.

l. Please refer to Attachment 1.

m. NSPI has determined that the first column of Appendix A, Table 1 of NSPI's 2006 Unmetered Class Cost of Service Review and Street Lighting Report, was not clearly labelled. It should have read "Total Direct Costs plus pension costs." The $3.272 million figure is comprised of $2.6 million direct costs, plus pension costs. Either $3.272 million or $2.6 million can be used in Appendix A, Table 2 without changing the resulting weighting factor that is the purpose of Table 2.

The $2.6 million figure relates to 2006, and is therefore not included in NSPI's 2007 Cost of Service Study.

BILLING SERVICES OPERATIONS

Rate Class	Total Accts	% of Accounts	Meter Reading Processing	Billing	Inquiries	Large Accts requiring manual effort	Unmetered Accts with more than 10 lights & LED TCL Conversions	Total FTEs	% of FTEs	Labour Budget allocated by Rate Class	Other Budget allocated by Rate Class
			2.5 FTE	7.25 FTE	2.75	1.5 FTE	1.0 FTE			$0.6 Million	$2.6 million
Residential	415,831	89.90%	2.28	6.52	2.47			11.27	75.17%	451,002	1,503,340
Tou	3,296	0.71%	0.02	0.05	0.02			0.09	0.60%	3,576	11,920
General (Rate 10)	22,391	4.84%	0.12	0.35	0.13			0.61	4.05%	24,282	80,940
General Demand (Rate 11)	11,103	2.40%	0.06	0.17	0.07			0.30	2.01%	12,042	40,140
Industrial (Rate 21 & 22)	2,419	0.52%	0.01	0.04	0.01			0.07	0.44%	2,622	8,740
Unmetered	7,491	1.62%	0.00	0.12	0.04		1.00	1.16	7.75%	46,476	154,920
Sub-Total	462,531	100.00%	2.50	7.25	2.75						
LCB/LCCB	57		0.00	0.00	0.00	1.50		1.50	10.00%	60,000	200,000
Total	462,588		2.50	7.25	2.75	1.50	1.00	15.00	100.00%	600,000	2,000,000
FTE			2.50	7.25	2.75	1.50	1.00				
										$600,000	$2,000,000

Billing Services Weighting Factor Calculation = (Unmetered Billing Services Costs / Total Billing Services Costs) / (Total Unmetered Accounts / Total NSPI Accounts)
= ($201,396 / $2,600,000) / (7,491 / 462,531)

Weighting Factor = **4.78**

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-11: **With respect to the responses to HRM IR-7:**

a. Please respond to the original question in HRM IR-7(a) by: (i) providing the magnitude of costs included in the Misc. Small Loads Tariff by functional and classified components, e.g., production demand; production energy; transmission demand; down through customer-related costs; (ii) quantify the extent to which each of these functionalized and classified components were targeted to be in the demand and energy charge of the Misc. Small Loads Tariff; and (iii) indicate the kW and kWh billing determinants used to divide the grouped demand and energy costs and show how it results in the rates reported on the last page of Schedule 9 of the updated street lighting analysis.

b. What would the energy rate be in the Misc. Small Loads Tariff if it were designed with the same demand charge, but as a flat energy rate rather than a declining block rate?

c. Please clarify the response to HRM-7(c) in light of the question.

d. With respect to the response to HRM-7(e), please confirm that if photocell-actuated street lights were to shift to off-peak hours, given the same demand charge for photocell versus continuous in the Misc. Small Loads Tariff, the effect would be for photocell fixtures to provide a subsidy to continuous burning fixtures.

Response IR-11: a. Costs are functionalized, classified and allocated to the Unmetered class using the same cost of service study methodology used for all other classes. The Miscellaneous Small Loads rate was originally designed to be the same as the General Demand tariff.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Response IR-11: (cont'd)

The two tariffs have been increased differently during each rate case proceeding since 1996. The current relationship of Unmetered costs to the rate components of the Miscellaneous Small Loads Tariff cannot be determined.

b. If the Miscellaneous Small Loads Tariff were designed with the same demand charge, but as a flat energy rate rather than a declining block rate, the proposed energy rate for 2007 would be 8.96 cents per KWh.

c. See response to part a.

d. The demand and energy components of the Miscellaneous Small Loads rate are not tied on a one-to-one basis to the specific demand and energy costs as they are determined in the COSS (see response to part a). Rates are determined by the Board to be cost based (i.e. no subsidization) at the class level. It is understood that there may be situations where the cost and revenue characteristics of subgroups within a class will not perfectly match the characteristics of the class as a whole.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-12: **Please provide a detailed description of the maintenance practices for street lighting.**

Response IR-12: NSPI issues work orders to repair defective street lights that have been identified by customers or NSPI staff. Once on site, the crew inspects the lamp, ballast and head assembly, and makes the necessary repairs.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-13: **Please provide a description of the process for addressing street lighting repair calls/website requests - i.e. workflow from initial NSPI contact via the call centre to dispatch to repairman. How many steps in this process are there, and how long does it typically take to make repairs from the time the call is received until the repair is completed?**

Response IR-13: There are four steps in the streetlight repair process, as outlined below. NSPI's service level target is to complete 80 percent of streetlight repairs within seven business days. Year to date 2006, 86 percent of streetlights have been repaired within the seven business days target.

Streetlight repair requests are received through various channels and are handled in the following manner:

Step 1 – Create streetlight repair service order.

Service order creation and timing is dependent upon the channel of the request.

- If a request is received via phone to the Call Centre, the service order is created while on the phone with the customer.
- If a request is received via website, the Call Centre would create the service order that night, between 8PM and 8AM.
- If Request is received via e-mail to the regional office as is the case with HRM, the request is forwarded to the Call Centre for the creation of the service orders. These e-mail requests can contain multiple streetlight repair requests. Once received by the Call

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Response IR-13: (cont'd)

Centre, these service orders would generally be completed within one business day.

Once a service order is created, it is automatically fed to a work management system for scheduling by the appropriate regional planning office.

Step 2 – Schedule and dispatch work

Once the repair service order is received in the work management system, a regional operations planner will schedule the work and dispatch field crews accordingly.

Step 3 – Complete work.

Step 4 – Close service order.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-14: **Please indicate a breakdown of budget costs for labour, material, and all contracted work to the NSPSO. Include in contracted work, the cost for outsourced IT requirements to the NBSO.**

Response IR-14: Matters relating to the System Operator function are not on the Issues List for this proceeding.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-15: **How many FTE's will be responsible for NSPSO functions. If these functions overlap with NSPI duties, please indicate the % breakdown of time for NSPSO/NSPI?**

Response IR-15: Matters relating to the System Operator function are not on the Issues List for this proceeding.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-16: **Please provide job descriptions for all NSPSO staff, an organizational chart for NSPSO, and how it interacts with NSPI generation/planning/transmission/customer service.**

Response IR-16: Matters relating to the System Operator function are not on the Issues List for this proceeding.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-17: **Please provide a list of requests in the last 2 years to either NSPI or NSPSO for cost sharing of studies (e.g. for wind) or ancillary services or RFP with other jurisdictions, for example that could have led to reduced costs. Please provide copies of these studies or RFP. If NSPI chose not to participate in these studies, please provide the rationale.**

Response IR-17: Matters relating to the System Operator function are not on the Issues List for this proceeding.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-18: **Please provide a breakdown of how many street lighting repairs are directed to NSPI through its website/direct call centre contact/or from municipalities. If this level of detail does not exist please provide a best efforts estimate.**

Response IR-18: NSPI does not track streetlight repair inquiries separately from streetlight install and removal inquiries. Total streetlight inquiries are indicated in the table below:

Year	Via website	Via Phone
2005	2,438	16,343
2006 (YTD October 31)	2,603	9,942

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-19: **Is street lighting maintenance done on an "as needed" basis, or is there a preventive maintenance program? Please provide detailed work procedures.**

Response IR-19: NSPI's street light maintenance program relies primarily on information from its customers to report street lights requiring maintenance. NSPI occasionally surveys street lights and incorporates the results of the survey into its Work Management System. This is an effective and cost efficient approach.

Please refer to HRM IR 21 for further information.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-20: **Are re-adjustments to the fixture or possibly the pole done during repairs to align lighting correctly?**

Response IR-20: Adjustments would be made if the light fixture had been damaged or dislodged from its original installation location.

Any adjustments to reposition a light for a different coverage area would be driven by customer requests.

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TO: NSPI

FROM: HRM

Question IR-21: **When a street light is not working, what components will be replaced during the repair, some or all of the high failure parts? ie If a lamp is burnt out, are photocells/relays/and or ballasts replaced at the same time?**

Response IR-21: In this circumstance, NSPI follows the following troubleshooting and maintenance procedure:

- Scenario 1: Change the bulb. If the light works, check the age of the photocell; if less than nine years, clean the glass, no replacement (photocells have a life expectancy of 12 years). If greater than nine years NSPI will replace the photocell.

- Scenario 2: Change the bulb, if the light still does not work, change the photocell, if light works, clean the glass.

- Scenario 3: Change the bulb, change the photocell, if light still does not work, check to confirm voltage is going to the head, then replace the street light head. If street light still does not work, disconnect electrical source, replace complete fixture.

Relays and ballasts are replaced on an as required basis.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-22: **Please provide a list of contractors who street lighting repairs are out sourced to, and at what rates. Please describe the procurement process for this contracted work, and the last time a Competitive tender was issued.**

Response IR-22: NSPI has not contracted out street light maintenance.

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RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: HRM

Question IR-23: **When was the last time outsourcing for street lighting work was tendered? How many respondents were there?**

Response IR-23: Street light work has not been contracted out.