

Reading Municipal Light Department (RMLD) Board of Commissioners
Power & Rate Committee Regular Session Agenda

Tuesday, December 7, 2010

7:30 p.m.

General Manager's Conference Room

1. Concord Steam
2. Renewable RFP
3. First Wind
4. Electric Hot Water Heater Rate
5. NStar Customers at Woburn apartments:
KWh sales, capacity used, total billings for last year and the percent mark up on the sales. How is capacity taken off books including 25% margin imposed by ISO New England.
6. Last Year Rate Classes total non-fuel collections and the percent mark up for each of the rate classes.
7. Residential and Industrial Time of Use Rates
Note: Vote required.
8. Executive Session:
Move that the Board go into Executive Session to discuss power supply issues based on Chapter 164 Section 47D exemption from public records and open meeting requirements, and return to regular session for the sole purpose of adjournment.
9. Motion to Adjourn

Item 4



Reading Municipal Light Department

Memo

To: Vincent Cameron, Jane Parenteau

From: Jared Carpenter

Date: December 1, 2010

Subject: Current Residential Schedule RW Controlled Water Heater Rate

The RMLD has a total of 654 using the Residential Schedule RW Controlled Water Heater Rate. The current technology shuts the meter off between the 5pm and 7pm and must be connected using a licensed electrician. The meter department estimates we have not serviced the current technology in at least 7 years. The details of the rate are as follows:

Customer Charge:

\$3.48 per month.

Energy Charge:

\$0.0872 per Kilowatt-hour for the first 100 kWh

\$0.03662 per Kilowatt-hour for energy in excess of 100 kWh up to 433 kWh

\$0.08072 per Kilowatt-hour for energy in excess of 433 kWh

There are currently 3 different types of technologies utilized. These types and quantities are as follows:

- **Intermatic**
 - Total = 134, located indoors, needs yearly maintenance for daylight savings time adjustment, requires maintenance visit after any power outage.
- **Socket/2 Gang**
 - Total = 198, located outdoors, needs yearly maintenance for daylight savings time adjustment, requires maintenance visit after any power outage.
- **Timers x/Adapters**
 - Total = 322, located outdoors, needs yearly maintenance for daylight savings time adjustment.

Notes:

A typical 50-gallon electric hot water heater has two 4500-watt heating element (only one operates at a time). The annual cost to heat the water at \$.14/kWh is \$549 and uses 3,925 kWh (at 52.2 gallons/day). In comparison a natural gas system uses 203 therms/year and has an annual operating cost of \$274 (\$1.36/therm NG). An oil system will use 222 gallons in a year and cost \$506 (\$2.25/gallon). There is an estimated 4000 electric hot water heaters on the RMLD grid. The potential is as high as 15,000 electric water heaters on our grid.

Jared Carpenter
Energy Efficiency Engineer, RMLD
11/31/10

NSTAR
1 Inwood Rd.
Reading, MA 01867
Demand Report
528260-132521

NSTAR - IN WOOD METER

ITEM 5

	kWh Usage	Read Demand	Billed Demand	Amt. Billed	Read Days	kWh/Days
11/10/2010	218,400	537.600	913.920	\$33,058.92	32	6,825.00
10/13/2010	218,400	739.200	913.920	\$33,525.54	28	7,800.00
09/13/2010	352,800	1,008.000	1,008.000	\$97,266.50	32	11,025.00
08/11/2010	336,000	974.400	974.400	\$45,962.15	27	12,444.44
07/14/2010	403,200	1,142.400	1,142.400	\$52,952.36	33	12,218.18
06/14/2010	268,800	436.800	779.520	\$36,074.04	31	8,670.97
05/11/2010	226,800	840.000	840.000	\$31,566.36	32	7,087.50
04/09/2010	218,400	571.200	779.520	\$32,002.92	30	7,280.00
03/10/2010	252,000	638.400	779.520	\$36,128.38	28	9,000.00
02/10/2010	260,400	638.400	779.520	\$39,577.01	28	9,300.00
01/13/2010	319,200	638.400	779.520	\$48,368.56	35	9,120.00
12/09/2009	210,000	571.200	779.520	\$62,386.04	29	7,241.38
11/12/2009	218,400	504.000	779.520	\$30,792.45	31	7,045.16
10/13/2009	201,600	638.400	779.520	\$29,106.97	29	6,951.72

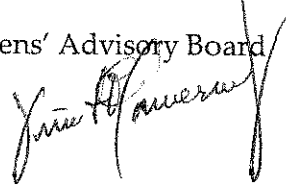
3,704,400	1,142.400	873.600	\$700,692.50
Total kWh	Peak kW	Average kW	Total Billed

READING MUNICIPAL LIGHT DEPARTMENT

To: RMLD Board, Citizens' Advisory Board

Date: December 1, 2010

From: Vinnie Cameron



Subject: Addendum to FY11 Cost of Service Study

The Reading Municipal Light Department (RMLD) has revised its Residential and Industrial Time of Use rates, which were filed in August of this year. The proposed changes to these rates reflect a wider difference between the On-Peak and Off-Peak rates and decreasing the amount of On-Peak hours. The RMLD has developed an Addendum to the FY11 Cost of Service Study, which describes the proposed changes to both rates.

The result of these proposed changes shows that based on the average customer use in the Residential and Industrial Time of Use rates, these customers should see a slight decrease in their monthly bills. The estimated effect of the new rates to the total forecast revenue is a decrease of \$100,690 or .22%.

The attached addendum is being presented to the RMLD's Power and Rate Committee on December 7, 2010 and the Citizens' Advisory Board on December 8, 2010.

c: Jane Parenteau
Bill Seldon
Joe Bilicki
Jared Carpenter

Addendum to the FY2011 Cost of Service Study

The Reading Municipal Light Department (RMLD) filed a rate change with the Massachusetts Department of Public Utilities (MDPU) on August 1, 2010. The rate change was based on a Cost of Service Study (COSS), developed by the RMLD and approved by the RMLD Board of Commissioners on July 28, 2010. All RMLD electric rates were filed with the MDPU at this time. The Residential A-Rate, Residential A-Water Heating Rate and the Commercial C-Rate all experienced base rate increases. In addition, the Purchased Power Adjustment (PPA) was readjusted and the increased Base Purchased Power costs from FY08 through FY10 were rolled into the Base Energy rates of all the customer classes.

When the RMLD filed its rate increase the RMLD told the RMLD Board of Commissioners that the Time of Use Rates and the Street Lighting Rates were going to be further studied and filed with changes (after the ninety day limit for re-filing rates). The following is a discussion of the proposed adjustments to the Residential Time of Use (RTOU) rate and Industrial Time of Use (ITOU) rate. The Street Light Rate analysis is presently ongoing.

On-Peak /Off-Peak Period

Both the RTOU and the ITOU rates have On-Peak and Off-Peak periods that delineate what constitutes On-Peak and Off-Peak energy usage. The existing rates have an On-Peak period of 10 am to 8 pm weekdays excluding holidays. The Off-Peak hours are all other hours. The RMLD has examined its monthly peak demands over the last two years and has found the monthly peak demands have occurred between 12 pm and 8 pm. The existing On-Peak and Off-Peak period were based on the RMLD's analysis performed in 1993, when the Time of Use rates were developed for the RMLD's rate structure.

The RMLD is recommending that the On-Peak hours be changed to 12 pm to 8 pm. The RMLD has examined the 2009 monthly peak days for two feeders, 3W7 and 3W14, which are largely residential feeders. The hourly readings for the day of each monthly peak day were totaled by hour. The RMLD then compared the difference in kWh use on the feeder data by changing the On-Peak period from 10 am to 8 pm. The difference resulted in a 15.53% decrease in the On-Peak kWh.

The reduction in On-Peak hours is also proposed for the ITOU rate. The RMLD examined the hourly demand data of five of the largest ITOU customers and that decreasing the On-Peak period to 12 pm to 8 pm would result in a reduction of On-Peak energy of approximately 15 %.

Later in this addendum the change in the RTOU and ITOU On-Peak/Off-Peak periods will be analyzed to determine the impact on the RMLD's revenue requirement.

On-Peak/Off-Peak Differential

The RMLD has determined that the differential between the On-Peak and Off-Peak TOU rates need to be expanded so that is more reflective of energy pricing that occurs in the New England Power Pool (NEPOOL).

In order to determine the expanded differential between the On-Peak and Off-Peak hours the RMLD analyzed the calendar year 2009 Hourly Locational Marginal Prices (LMP) in NEPOOL to determine the difference between the On-Peak and Off-Peak rates for the RTOU and ITOU rates. The RMLD examined the 200 highest priced hours in NEPOOL during the calendar year 2009 to determine the On-Peak pricing. The 200 hour period was used because peaking generating units are expected to run an average of 200 hours a year to shave peak load. The average LMP of the 200 highest price hours for the calendar year 2009 was \$116.46/MWh. The average price for the remainder of the hours for 2009 was \$40.05/MWh. The differential is 2.91 or the average 200 highest LMPs in 2009 is almost three times higher than the average price for the remainder of the year. To expand the difference between the On-Peak and Off-Peak rates the RMLD increased the On-Peak rates in the RTOU and ITOU rates by a factor of 1.5 and decreased the Off-Peak RTOU and ITOU rates by a factor of .7. The adjustments resulted in the differential in the On-Peak and Off-Peak rates in the RTOU of 2.88 and the ITOU and 2.86, which are similar to the On-Peak/Off-Peak prices as determined above. The adjustments to these rates will more effectively reflect the differential seen in the NEPOOL On-Peak/Off-Peak pricing.

Residential Time of Use Rates

The Residential Time of Use (RTOU) rate has been part of the RMLD's rate structure since the early 1990s and is made up of an On-Peak Rate (higher kWh cost) and an Off-Peak Rate (lower kWh cost), in addition to other charges common to other residential rates. The purpose behind the RTOU is to give customers financial encouragement to decrease On-Peak energy usage or move electricity usage from the On-Peak period to the Off-Peak period.

Table 1 shows an analysis of the Residential A-Rate as compared to the RTOU rate. The first block in Table 1 shows the average monthly cost of the Residential A-Rate at a monthly usage of 815 kWh, a Customer Charge of \$3.47/month, a Base Energy Charge of \$.08365/kWh, an Energy Conservation Charge of \$.0005/kWh, the HazMat charge of \$.001/kWh, Purchased Power Adjustment (PPA) of \$.00073, a PASNY Credit of \$.00095/kWh, the prompt payment discount of 10%, and a Fuel Cost of \$.059/kWh. The resulting cost is \$113.43 or a unit cost of \$.1392/kWh.

The next block shows the same average monthly residential usage (815 kWh) applied to the existing RTOU rate at a 50% On-Peak and 50% Off-Peak energy usage split. The resulting average monthly cost is \$106.72 or a unit cost of \$.1309/kWh. Presently, the

Table 1

Comparison of the Residential A Rate and the Residential Time of Use Rate

815 kWh Monthly Usage

	Existing	Residential A Rate
Monthly Average kWh	815	
Customer Charge	\$3.47	\$3.47
Base Energy Rate	815	\$68.17
Base Energy On-Peak Rate		
Base Energy Off-Peak Rate		
Conservation Charge	815	\$0.000500
HazMat Charge	815	\$0.001000
Purchased Power Adjustment	815	\$0.000730
Fuel Charge	815	\$0.059000
PASNY Credit	815	-\$0.000950
Discount	-10%	(\$7.35)
Total		\$113.43
Unit Cost		\$0.1392

	Existing	Residential TOU Rate
		815
	\$5.51	\$5.51
408	\$0.08260	\$33.66
408	\$0.06140	\$25.02
815	\$0.00050	\$0.41
815	\$0.00100	\$0.82
815	\$0.00073	\$0.59
815	\$0.05900	\$48.09
815	-\$0.00095	-\$0.77
	-10%	(\$6.60)
		\$106.72
	-\$6.71	
	-6.29%	\$0.1309

	Proposed	Residential TOU Rate
		815
	\$5.51	\$5.51
408	\$0.12390	\$50.49
408	\$0.04298	\$17.51
815	\$0.00050	\$0.41
815	\$0.00100	\$0.82
815	\$0.00073	\$0.59
815	\$0.05900	\$48.09
815	-\$0.00095	-\$0.77
	-10%	(\$7.53)
		\$115.11
	\$1.68	
	1.46%	\$0.1412

difference between the Residential A Rate and the RTOU rate is approximately \$6.71 or 6.29%.

As mentioned above, the existing difference between the On-Peak and Off-Peak rate needs to be increased to create more of an incentive for moving kWh from the On-Peak period to the Off-Peak period.

The third block on Table 1 shows the proposed RTOU rate. The On-Peak rate is \$.1239/kWh, which represents the existing On-Peak of \$.0826/kWh being increased by a factor of 1.5. The proposed Off-Peak rate is \$.04298/kWh, which represents applying a factor of .7 to the existing Off-Peak rate of \$.0614/kWh.

The resulting cost for a RTOU rate customer using 815 kWh per month at a 50%/50% split is \$115.11, which is \$1.68 or 1.46% more than the equivalent billing for a customer on the Residential A-Rate. The RMLD has used the 50% On-Peak and 50% Off-Peak split as the point of indifference between whether a customer is billed on the Residential A-Rate or the RTOU rate.

Table 2 shows the monthly cost an average customer would pay on the RTOU Rate and the savings at multiple On-Peak/Off-Peak splits. At a 40%/60% split the energy usage split will pay \$109.17/month, which is \$4.25 or 3.90% lower than the Residential A-Rate. As the On-Peak usage decreases costs become lower and the savings increase.

Table 2
Average Residential A Rate Customer
Billed under the RTOU Rate

<u>Monthly kWh</u>	<u>On-Peak</u>	<u>Off-Peak</u>	<u>Cost</u>	<u>Savings</u>	<u>Percent</u>
815	50%	50%	\$115.11	(\$1.68)	(1.46%)
815	40%	60%	\$109.17	\$4.25	3.90%
815	35%	65%	\$106.21	\$7.22	6.80%
815	30%	70%	\$103.24	\$10.19	9.87%
815	25%	75%	\$100.27	\$13.16	13.12%

Table 3 shows a similar analysis as in Table 1; however the average monthly energy usage is 1,151 kWh, which is the average for a customer on the RTOU rate and is used in the FY11 Cost of Service Study. The first block shows that this customer will pay \$158.90 under the Residential A-Rate. The second block shows that the average residential customer on the RTOU rate would pay \$148.67 under the existing RTOU Rate, which is \$10.23 or 6.88% less than the Residential A-Rate. The third block shows that the same customer on the proposed RTOU rate will pay \$160.52 at a 50%/50% split, which is \$1.62 or 1.01% more than the equivalent billing on the Residential A-Rate.

Comparison of the Residential A Rate and the Residential Time of Use Rate

Existing		Residential A Rate	Existing		Residential TOU Rate	Proposed		Residential TOU Rate
	1,151				1,151			1,151
	\$3.47	\$3.47		\$5.51	\$5.51		\$5.51	\$5.51
1,151	\$0.083650	\$96.28						
			576	\$0.08260	\$47.54	576	\$0.12390	\$71.30
			576	\$0.06140	\$35.34	576	\$0.04298	\$24.73
						1151		
1,151	\$0.000500	\$0.58	1,151	\$0.00050	\$0.58		\$0.00050	\$0.58
1,151	\$0.001000	\$1.15	1,151	\$0.00100	\$1.15	1,151	\$0.00100	\$1.15
1,151	\$0.000730	\$0.84	1,151	\$0.00073	\$0.84	1,151	\$0.00073	\$0.84
1,151	\$0.059000	\$67.91	1,151	\$0.05900	\$67.91	1,151	\$0.05900	\$67.91
1,151	-\$0.000950	-\$1.09	1,151	-\$0.00095	-\$1.09	1,151	-\$0.00095	-\$1.09
	-10%	(\$10.23)		-10%	(\$9.09)		-10%	(\$10.41)
		\$158.90			\$148.67			\$160.52
		\$0.1381	-\$10.23		\$0.1292	\$1.62		\$0.1395
			-6.88%			1.01%		

Table 4 shows the average monthly usage for a RTOU customer is 1,151 kWh. The On-Peak/Off-Peak usage levels are the same as what was used in Table 2. The results of Table 4 shows that a customer using energy at a 40%/60% split will pay \$152.14 per month, which is \$6.76 or 4.45% less than the equivalent billing on the Residential A-Rate.

Table 4
Average RTOU Customer
Billed Under the RTOU Rate

<u>Monthly kWh</u>	<u>On-Peak</u>	<u>Off-Peak</u>	<u>Cost</u>	<u>Savings</u>	<u>Percent</u>
1,151	50%	50%	\$160.52	(\$1.62)	(1.01%)
1,151	40%	60%	\$152.14	\$6.76	4.45%
1,151	35%	65%	\$147.95	\$10.96	7.40%
1,151	30%	70%	\$143.76	\$15.15	10.54%
1,151	25%	75%	\$139.56	\$19.34	13.86%

As the On-Peak percentage of energy use decreases, the monthly cost and the unit cost will decrease. In addition, as the overall monthly usage increases (815 kWh versus 1,151 kWh) the savings at the different split levels also increases because more energy is being used Off-Peak.

Table 5 shows the effect of applying the new On-Peak/Off-Peak period and the proposed RTOU rates to the Revenue Proof calculation that was used in the FY11 Cost of Service Study. The resulting Forecast Class Total revenue is \$114,417, which is \$1,963 or 1.69% less than the Reallocated Revenue Requirement Class Total from the Cost of Service Study of \$116,380.

Industrial Time of Use Rate

The Industrial Time of Use Schedule I (ITOU) rate has been a part of the RMLD's rate structure since 1993. The rate is designed for high load factor companies that have two or three shift operations and also have the flexibility to move electricity usage to the Off-Peak periods. The proposed On-Peak and Off-Peak periods are the same as in the proposed RTOU rates. The ITOU rate structure is similar to the RTOU rate; however, the ITOU rate also has a demand component. The ITOU rate has a monthly demand charge, which is calculated based on the highest demand recorded during the On-Peak period.

Table 6 shows the monthly billing for an average commercial customer being billed under the Commercial C rate. The average commercial customer has a monthly demand of 20 kW and monthly energy usage of 5,229 kWh, which results in a load factor of

Table 5
Revenue Proof
Residential Time of Use

Reading Municipal Light Department
Electric Cost of Service/Unbundling Study
Forecasted Test Year Ending June 30th, 2011
Revenue Proof

RESIDENTIAL TOU									
Forecasted Revenues at Current Rates					Potential New Rate				
		Year Ending 6/30/11 Units	Test Year Rate	Calculated Year Ending 6/30/11 Revenue	Rate (\$)	Test Year Units	Estimated Revenue		
Customer:									
Total Customers									
Customer Charge									
	0.00%	1,572	\$ -	\$ -	\$ -	1,572	\$ -		8,662
		1,572	5.51	8,662	5.51	1,572	1,572		
Energy:									
Total Energy	1,150	1,808,521	-	-	-	1,908,994	-		
On-Peak Energy	29.97%	542,083	0.08261	44,781	0.12392	460,771	57,096		
Off-Peak Energy	67.01%	1,211,902	0.06135	74,350	0.04295	1,393,687	59,852		
TOU Water Heater	3.02%	54,536	0.03500	1,909	0.03500	54,536	1,909		
Adjustments:	100.00%								
PPA		1,808,521	0.00073	1,320	\$ -	1,808,521	1,322		
Energy Audit		1,808,521	-	-	-	1,808,521	-		
Pasny Credit		1,808,521	0.00095	(1,711)	0.00095	1,808,521	(1,711)		
Discounts			10%	(12,931)	10%		(12,713)		
Forecast Class Total						Forecast Class Total			
Revenue Req. Class Total					\$ -	Revenue Req. Class Total		\$ -	
Change in Rate Required (%)					0.00%	Reallocated Revenue Req. Class Total		\$ -	
						Difference (\$)			1,963

Table 6

Comparison of the Commercial C-Rate and the Industrial Time of Use Rate

Average Commercial Customer

	Monthly Aver. Energy Usage	Existing C - Rate
Customer Charge		\$6.58
Demand kW	20	\$6.8799
Base Energy Rate kWh	5,229	\$0.04893
Load Factor	36.1%	
Base Energy On-Peak Rate		
Base Energy Off-Peak Rate		
Conservation Charge	5,229	\$0.00100
HazMat Charge	5,229	\$0.00100
Purchased Power Adjustment	5,229	\$0.00073
Fuel Charge	5,229	\$0.05900
Discount		-10%
Total		\$680.48
Unit Cost (\$/kWh)		\$0.1301

	Monthly Aver. kWh Usage	Existing TOU Rate
	20	\$27.54
	5,229	\$7.90
	36.1%	
	2,614	\$0.04835
	2,614	\$0.03622
	5,229	
	5,229	\$0.00100
	5,229	\$0.00100
	5,229	\$0.00073
	5,229	\$0.05900
		-10%
		\$686.30
		\$5.82
		\$0.1313

	Monthly Aver. kWh Usage	Proposed TOU Rate	Industrial TOU Rate
	20	27.54	\$27.54
	5,229	7.90	\$156.85
	36.1%		
	2,614	0.07253	\$189.61
	2,614	0.02535	\$66.29
	5,229		
	5,229	0.00100	\$5.23
	5,229	0.00100	\$5.23
	5,229	0.00073	\$3.82
	5,229	0.05900	\$308.51
		-10%	(\$45.46)
			\$717.62
	\$37.14		\$0.1372
	5.176%		

36.1% and is low compared to customers on the ITOU rate. The billing in the first block shows that this customer would pay \$680.48 under the Commercial C-Rate.

The second block shows the average commercial customer being billed under the existing ITOU rate, which at an On-Peak/Off-Peak split of 50%/50%, would cost \$686.30, which is \$5.82 or .85% higher than the billing under the Commercial C-Rate.

The third block shows the proposed ITOU rate, which is similar to the existing ITOU rate, however, the On-Peak rate has been adjusted by a factor 1.5 and the Off-Peak rate has been adjusted by .7. The resulting proposed On-Peak rate is \$.07253/kWh and the proposed Off-Peak rate is \$.02535. The average commercial customer with a monthly 50%/50% On-Peak/Off-Peak would be billed \$717.62, which is \$37.14 or 5.2% higher than the equivalent billing under the Commercial C-Rate.

Table 7 shows an average commercial customer having a monthly On-Peak/Off-Peak split of 40%/60% will be billed \$695.42 or an additional \$14.94 or 2.15% more than they would be if they were billed under the Commercial C-Rate. This occurs mainly because the customer's load factor is 36.1%, which is too low to save money on the ITOU rate.

The result of Table 7 is that an average commercial customer will not see savings on the ITOU rate until the split approaches a 30%/70% split, and at this level the savings is only 1.08%.

Table 7
Average Commercial C-Rate Customer
Billed Under the ITOU Rate

<u>Monthly kW/kWh</u>	<u>On-Peak</u>	<u>Off-Peak</u>	<u>Cost</u>	<u>Savings</u>	<u>Percent</u>
20 5,229	50%	50%	\$717.62	(\$37.14)	(5.18%)
20 5,229	40%	60%	\$695.42	(\$14.94)	(2.15%)
20 5,229	35%	65%	\$684.32	(\$3.84)	(.56%)
20 5,229	30%	70%	\$673.22	\$7.26	1.08%
20 5,229	25%	75%	\$662.12	\$18.36	2.77%

The RMLD then analyzed what a typical ITOU customer would pay on the Commercial C-Rate versus the ITOU Rate. Table 8 is similar to Table 6 and shows in the first block the monthly billing for a typical ITOU customer having an average monthly demand of 853 kW and average monthly energy of 435,702 kWh, which is from the bill frequency in the FY11 Cost of Service Study. The average ITOU customer would pay \$51,252.19 under the Commercial C-Rate, as shown in the first block of Table 8.

In the second block of Table 8 shows cost for the same customer being billed under the existing ITOU Rate at an On-Peak/Off-Peak split of 50%/50%, results in a cost of

Table 8

Comparison of the Commercial C-Rate and the Industrial Time of Use Rate

Average Industrial Customer

	Monthly Aver. Energy Usage	Existing	Commercial C - Rate
Customer Charge		\$6.58	\$6.58
Demand kW	853 ✓	\$6.8799	\$5,869.67
Base Energy Rate kWh	435,702 ✓	\$0.04893	\$21,318.45
Load Factor	70.0%		
Base Energy On-Peak Rate			
Base Energy Off-Peak Rate			
Conservation Charge	435,702	\$0.00100	\$435.70
HazMat Charge	435,702	\$0.00100	\$435.70
Purchased Power Adjustment	435,702	\$0.00073	\$318.06
Fuel Charge	435,702	\$0.05900	\$25,706.44
Discount		-10%	(\$2,838.42)
Total			\$51,252.19
Unit Cost (\$/kWh)			\$0.1176

	Monthly Aver. kWh Usage	Existing	Industrial TOU Rate
		\$27.54	\$27.54
	853	\$7.90	\$6,739.97
	435,702		
	70.0%		
	217,851	\$0.04835	\$10,533.11
	217,851	\$0.03622	\$7,890.57
	435,702		
	435,702	\$0.00100	\$435.70
	435,702	\$0.00100	\$435.70
	435,702	\$0.00073	\$318.06
	435,702	\$0.05900	\$25,706.44
		-10%	(\$2,638.07)
			\$49,449.04
			-\$1,803.16
			\$0.1135
			-3.65%

	Monthly Aver. kWh Usage	Proposed	Industrial TOU Rate
		27.54	\$27.54
	853	7.90	\$6,739.97
	435,702		
	70.0%		
	217,851	0.07253	\$15,799.66
	217,851	0.02535	\$5,523.40
	435,702		
	435,702	0.00100	\$435.70
	435,702	0.00100	\$435.70
	435,702	0.00073	\$318.06
	435,702	0.05900	\$25,706.44
		-10%	(\$2,928.00)
			\$52,058.48
	\$806.29		
	1.549%		\$0.1195

\$49,449.04, which is \$1,803.16 or 3.65% less than the equivalent billing on the Commercial C-Rate.

The third block on Table 8 shows the proposed ITOU Rate, which is similar to that shown in Table 6, with an On-peak rate of \$.07253/kWh and an Off-Peak rate of \$.02535/kWh. At a 50%/50% split the resulting cost of an average Industrial Customer on the ITOU rate is \$52,058.48, which is \$806 or 1.6% more than the equivalent billing on the Commercial C-Rate.

Table 9, is similar to Table 7, and shows the amount of billing and relative savings for an average Industrial Customer being billed under the proposed ITOU rate as compared to the Commercial C-Rate. According to Table 9, an average Industrial Customer, as defined in the FY11 Cost of Service Study, has an average monthly demand of 853 kW and monthly energy usage of 435,702 kWh. Table 9 also shows that an average Industrial Customer will not realize credible savings until it reaches a 40%/60% split, which will afford them an average monthly savings of \$1,043 or 2.08%.

The reason behind the Industrial Customers savings on the ITOU Rate is linked to the fact that the average ITOU customer has a 70% load factor, which means more energy is being used relative to the monthly demand, which equates to more Off-Peak energy usage at a lower kWh charge.

As the On-Peak energy usage decreases the savings increase to a point where, at a 25%/75% split, the monthly savings on the ITOU Rate is \$3,818 or 8.05%.

Table 9
Average ITOU Customer
Being Billed under the ITOU Rate

<u>Monthly kW/kWh</u>		<u>On-Peak</u>	<u>Off-Peak</u>	<u>Cost</u>	<u>Savings</u>	<u>Percent</u>
853	435,702	50%	50%	\$52,058	(\$806)	(1.55%)
853	435,702	40%	60%	\$50,208	\$1,043	2.08%
853	435,702	35%	65%	\$49,284	\$1,968	3.99%
853	435,702	30%	70%	\$48,359	\$2,893	5.98%
853	435,702	25%	75%	\$47,434	\$3,818	8.05%

Table 10 shows the Revenue Proof for the proposed ITOU Rate, which includes both the On-Peak/Off-Peak period change and the proposed rates. The Revenue Proof is the same as that which was used in the FY11 Cost of Service Study. The resulting revenue from the proposed ITOU Rate is \$11,313,099, which is \$98,727 or .87% lower than the Reallocated Revenue Requirement Class Total of \$11,411,826.

Table 10

Reading Municipal Light Department

Electric Cost of Service/Unbundling Study

Forecasted Test Year Ending June 30th, 2011

Revenue Proof

Forecasted Revenues at Current Rates		Potential New Rate	
	Year Ending 6/30/11 Units	Test Year Rate	Calculated Year Ending 6/30/11 Revenue
Customer:			
Total Customers	516 \$	-	-
Customer Charge	516	27.54	14,211
Demand:			
Total Demand	440,231	7.90	3,477,827
Energy:			
Total Energy	224,822,454	-	-
On-Peak Energy	72,595,208	0.04835	3,509,978
Off-Peak Energy	152,227,246	0.03622	5,513,671
Energy Conservation Charge	224,822,454	-	-
PPA	224,822,454	0.00073	164,120
Discounts	1	10%	(1,267,981)
Forecast Class Total			
Revenue Req. Class Total	\$	\$	11,411,826
Change in Rate Required (%)			0.00%

	Test Year Units	Rate (\$)	Estimated Revenue
	516	\$	-
	516	27.54	14,211
	440,231	7.90	3,477,827
	224,822,454	-	-
	61,705,927	0.07253	4,475,222
	175,061,332	0.02535	4,438,505
	224,822,454	\$	164,345
		10%	(1,257,011)
Forecast Class Total			11,313,099
Reallocated Revenue Req. Class Total			11,411,826
Difference (\$)			98,727

Summary

The RMLD is recommending that the RTOU and the ITOU rates be adjusted as presented in this addendum, which should encourage customers to decrease their On-Peak energy usage and/or move usage to the Off-Peak period. The recommended revenue adjustments to both the RTOU (\$1,963) and the ITOU (\$98,727) rates results in marginally lower revenue and is \$100,690 or .22% less than the Total Forecast Revenue Requirement for all rate classes.

ITEM 6

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT
BUDGETED REVENUE VARIANCE REPORT
6/30/10

SCHEDULE F

	ACTUAL YEAR TO DATE	BUDGET ** YEAR TO DATE	VARIANCE *	% CHANGE
SALES OF ELECTRICITY:				
RESIDENTIAL	17,133,391.34	16,374,576.00	758,815.34	4.63%
COMM AND INDUSTRIAL SALES				
PRIVATE STREET LIGHTING	20,443,254.23	20,592,792.00	(149,537.77)	-0.73%
MUNICIPAL BUILDINGS				
PUBLIC STREET LIGHTING	380,544.54	443,064.00	(62,519.46)	-14.11%
SALES FOR RESALE	236,349.34	217,018.00	19,331.34	8.91%
SCHOOL	<u>913,414.96</u>	<u>849,937.00</u>	<u>63,477.96</u>	7.47%
TOTAL BASE SALES	39,106,954.41	38,477,387.00	629,567.41	1.64%
TOTAL FUEL SALES	<u>41,546,344.64</u>	<u>42,169,314.00</u>	<u>(622,969.36)</u>	-1.48%
TOTAL OPERATING REVENUE	80,653,299.05	80,646,701.00	6,598.05	0.01%
FORFEITED DISCOUNTS	855,588.10	838,430.00	17,158.10	2.05%
PURCHASED POWER CAPACITY	5,063,828.87	4,877,529.00	186,299.87	3.82%
ENERGY CONSERVATION - RESIDENTIAL	124,650.65	148,535.00	(23,884.35)	-16.08%
ENERGY CONSERVATION - COMMERCIAL	425,312.68	416,246.00	9,066.68	2.18%
PASNY CREDIT	(579,841.21)	(210,225.00)	(369,616.21)	175.82%
TOTAL OPERATING REVENUES	<u>86,542,838.14</u>	<u>86,717,216.00</u>	<u>(174,377.86)</u>	-0.20%

* () = ACTUAL UNDER BUDGET

** REFORECASTED AS OF 12/31/09

** 6 MONTHS ACTUAL / 6 MONTHS BUDGET

