

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

Wednesday, April 20, 2011

6:30 p.m.

General Manager's Conference Room

1. To discuss Power Supply Strategy.
2. Executive Session

**Suggested Motion:**

Move that the Board go into Executive Session based on Chapter 164 Section 47D exemption from public records and open meeting requirements in certain instances and return to Regular Session.

3. Street Light Rates (Present new rate) - Attachment 1
4. Commercial C-Rate (Change in the Contract Demand On-Peak and Off-Peak rates) - Attachment 2
5. Net Metering Rate (Technical and rate guidelines for customer owned generation) - Attachment 3
6. Terms and Conditions (Possible change in re-connect charges) - Attachment 4
7. Annual Supply RFP
8. Green Choice Program - Next Phase - Attachment 5
9. Water Heater Rate Update
10. Motion to Adjourn



# Attachment 1

## Street Light Rates







## READING MUNICIPAL LIGHT DEPARTMENT

To: RMLD Board of Commissioners

Date: April 14, 2011

From: Vinnie Cameron

Subject: Proposed Street Light Rate

The Reading Municipal Light Department (RMLD) filed a rate increase in August, 2010 and received approval from the Massachusetts Department of Public Utilities (MDPU) for a rate increase that became effective on September 1, 2010. At this time, the RMLD decided to assess the Street Light Rate to see if there could be changes to its structure, which would more closely reflect the cost of service included in the FY11 Cost of Service Study (FY11 COSS).

The FY11 COSS showed that the allocated Cost of Service was \$246,083, which represents the allocated capital and operating costs of the street lights in the RMLD's service territory. According to the FY11 COSS, the existing street light revenues are expected to be \$619,877, which represents an over recovery of \$373,795.

Table 1 shows the Street Light Cost Components, which include the bracket, arm, fixture, photo cell, and bulb. The brackets only apply to the 400 Watt Mercury and 400 Watt High Pressure Sodium lights. The poles are charged separately.

Table 2 shows the Street Light Capital and Operating Costs, which includes the capital and operating costs allocated to each type of street light the RMLD provides to the four towns. Column 1 shows the type of street light the RMLD offers to the four towns. The Capital Costs of each street light represents the cost of the street light is shown in Column 2. The Annual Carrying Charge (8%), which represents the depreciation, discount rate, insurance, etc., is used to calculate the Annual Capital Cost of each street light. This Annual Capital Cost represents the amount per kWh the RMLD should recover annually to pay for the capital cost of each type of street light on the system.

Column 3 shows the Annual Capital Cost of the street light type and is calculated by multiplying the Total Capital Cost by the Annual Carrying Charge. Column 4 is the Annual Energy each of the street light types uses annually. Column 5 shows the Capital Cost per kWh, which is the Annual Capital Cost, divided by the Annual Energy.

The Number of Street Lights in the next column represents the amount of each type of street light installed within the four towns the RMLD serves. The Total kWh is the Number of Street Lights multiplied times the Annual Energy. The Total Capital Costs for each street light type is derived by multiplying the Annual Capital Cost times the Number of Street Lights.

The next set of columns is used to determine the maintenance cost for each street light type. The Maintenance Factor is a factor assigned to each street light type and represents an estimate of the activity the RMLD expends annually to maintain the street lights on the RMLD system. The next column is the Allocated Maintenance Costs for each street light type, which is calculated by applying the Maintenance Factor to the Budgeted Maintenance Costs of \$169,118 and Number of Street Lights. The total Allocated Maintenance Cost is \$169,181, which is .04% higher than the Budgeted Maintenance Costs shown at the top of the page. The Budgeted Maintenance Costs have been adjusted to account for depreciation expense component of the Street Light Rate that is in the Annual Carrying Charge. The Maintenance Cost per kWh is calculated by dividing the Allocated Maintenance Costs by the Total kWh.

The Annual Cost per Street Light is calculated by summing the Annual Capital Cost and the Allocated Maintenance Costs and dividing it by the Number of Street Lights. The Annual Cost per kWh is the Annual Cost per Street Light divided by the Annual Energy. The average Annual Cost per kWh is \$.0686.

The Annual Cost per Street Light is used to calculate the Street Light Rate and appears in the filed Street Light Rate.

There is an alternative rate structure that the RMLD could charge for its street lights. Chapter 164 of the Massachusetts General Laws, which largely govern the municipal electric utilities in Massachusetts, has made an exception for street light rates in Section 58, shown below.

Section 58. There shall be fixed schedules of prices for gas and electricity, which shall not be changed oftener than once in three months. Any change shall take effect on the first day of a month, and shall first be advertised in a newspaper, if any, published in the municipality. No price in said schedules shall, without the written consent of the department, be fixed at less than production cost as it may be defined from time to time by order of the department. Such schedules of prices shall be fixed to yield not more than eight per cent per annum on the cost of the plant, as it may be determined from time to time by order of the department, after the payment of all operating expenses, interest on the outstanding debt, the requirements of the serial debt or sinking fund established to meet said debt, and also depreciation of the plant reckoned as provided in section fifty-seven, and losses; but any losses exceeding three per cent of the investment in the plant may be charged in succeeding years at not more than three per cent per annum. The gas and electricity used by the municipality for any purpose except street lighting shall be charged for in accordance with the prices in the fixed schedules. The gas and electricity used by the municipality for street lighting shall be charged for at a cost to be determined as follows: the sum of all operating expenses, interest on the outstanding debt, the requirements of the serial debt or sinking fund established to meet said debt, and also depreciation of the plant reckoned as provided in section fifty-seven, and losses, shall be the dividend; the kilowatt hours sold including those supplied for street



lighting shall be the divisor, and the resulting quotient multiplied by the kilowatt hours supplied for street lighting shall be the cost to be charged to the municipality for street lighting. In lieu of the method of determining charges for electricity used by the municipality for street lighting, as set forth in the preceding sentence, electricity so used may be charged for at a cost in accordance with a street lighting schedule filed with and approved by the department.

Section 58 allows a municipal electric utility to base the street light rate on an average rate as an alternative to a cost of service rate. The average rate for street lights is the RMLD's average cost per kWh that is calculated by dividing the RMLD's annual operating expenses by the annual kWh sales. (See the bold area of the Section 58 above.)

Table 3 shows the calculation for the Average Street Light Rate, which is based on the FY11 Operating Budget. The law states that the costs for the street light rate should include the "sum of all operating expenses". Table 3 shows the Total Operating Expense minus the Fuel Expense because fuel is charged separately.

The Total Operating Expense reflects the FY11 Operating Budget minus the Purchased Power Fuel Expense.

Table 3  
Average Cost per kWh Street Light Cost

Operating Expense	\$83,555,091
Fuel Expense	(\$39,271,794)
Total Operating Expense	\$44,283,297
Total kWh Sales	683,056,320
Average Cost per kWh	\$.064831

The Total kWh Sales is from the revenue projection also included in the FY11 Cost of Service Study and the resulting Cost per kWh is \$.064831.

Table 4 shows the comparison of the proposed Cost of Service Street Light Rate and the Average Street Light Rate. The Existing Street Light Rate is what the RMLD presently has on file at the Massachusetts Department of Public Utilities (MDPU) and is in the RMLD's Street Light rate. The Proposed COSS Rate is taken from the Annual Cost per Street Light shown in Column 12 of Table 2. The Average Rate is the Annual Energy shown in Column 4 of Table 2 multiplied by \$.064831, which is the RMLD's Average Cost per kWh shown on Table 3.

Table 4  
Comparison of the Street Light Rates  
Cost of Service Rate versus the Average Rate

Light Type	Existing COSS Rate	Proposed COSS Rate	Average Rate
58 Watt Incandescent	\$24.09	\$50.83	\$15.04
95 Watt Incandescent	\$34.47	\$50.83	\$23.86
50 Watt HPS	\$60.69	\$27.50	\$15.82
100 Watt HPS	\$63.86	\$27.55	\$32.93
100 Watt Merc. Vapor	\$63.98	\$37.96	\$33.71
100 Watt Merc. Vapor U/G	\$92.30	\$37.96	\$33.71
175 Watt Mercury Vapor	\$100.93	\$38.28	\$55.75
250 Watt HPS Flood	\$109.48	\$50.66	\$79.61
400 Watt Merc. Flood	\$165.65	\$49.71	\$119.29
400 Watt HPS	\$165.52	\$49.76	\$118.51

Note: HPS - High Pressure Sodium  
U/G - Underground

The result shows that the Proposed COSS Rates, in most instances, are less than the existing rates. (The Existing COSS Rates were developed in 1985 and have been escalated in several rate filings since then. The back-up detail to the Street Light Rate from the 1985 COSS is not available.) Table 4 also shows that the Average Cost Rates are lower than the Existing COSS Rate and, in some instances, lower than the Proposed COSS Rates.

Table 5A is the Revenue Proof of the Existing Street Light Rate, which shows that the Revenue Requirement Class Total is \$246,083, which is also reflected in the FY11 Cost of Service Study. The Forecast Class Total using the Existing Street Light Rates is \$619,877 or an over recovery of \$373,795 against the Revenue Requirement Class Total.

Table 5B shows the Revenue Proof using the Proposed Cost of Service Street Light Rates, which results in Forecast Class Total revenues of \$259,834, which is lower than the Existing Street Light Forecast Class Total in Table 5A by \$619,877. The difference between the two rates is \$360,043, which is a negative impact on the RMLD's income. The Proposed Street Light Rate revenue is \$13,751 higher than the Revenue Requirement Class Total of \$246,083, however, the calculation of this rate more closely represents the Cost of Service of the street lights.

Table 5C shows the Revenue Proof for the Average Street Light Rate, which is \$245,709 and is \$374 lower than the Revenue Requirement Class Total. The Average Street Light



Rate would have an estimated negative affect on income of \$374,168, which would translate into savings for the four towns and the customers who have private street lights.

In summary, the Existing Street Light Rates over recover the Revenue Requirement Class Total by \$373,795. The Proposed Street Light Rate is based on the present capital cost of the street lights in the four towns and the maintenance costs in the FY11 Cost of Service Study, which results in an over recovery of \$13,751 as shown in Table 5B. The Average Cost Street Light Rate is based on the RMLD's average (non-fuel) cost of a kWh and is close to the Forecast Class Total revenues in the Cost of Service Study; however, it is not a fair representation of the Street Light Cost of Service.

The RMLD recommends the Proposed Cost of Service Street Light Rate, which as stated above, more closely reflects the cost of service rate and provides savings to customers on the street light rate.

Table 1

## Street Light Cost Components

	Bracket (\$)	Arm (\$)	Fixture (\$)	Photo Cell (\$)	Bulb (\$)	Total Cost
58 Watt Incandescent		\$42.98	\$40.00	\$4.23	\$2.23	\$89.44
92 Watt Incandescent		\$42.98	\$40.00	\$4.23	\$2.23	\$89.44
50 Watt HPS		\$42.98	\$75.69	\$4.23	\$7.92	\$130.82
100 Watt HPS		\$42.98	\$76.49	\$4.23	\$7.71	\$131.41
100 Watt Mercury Vapor		\$42.98	\$79.00	\$4.23	\$7.08	\$133.29
100 Watt Mercury Vapor U/G		\$42.98	\$79.00	\$4.23	\$7.08	\$133.29
175 Watt Mercury		\$42.98	\$84.00	\$4.23	\$6.05	\$137.26
250 Watt HPS		\$153.46	\$125.95	\$4.23	\$8.39	\$292.03
400 Watt Mercury	\$52.88		\$215.42	\$4.23	\$7.62	\$280.15
400 Watt HPS	\$52.88		\$215.42	\$4.23	\$8.28	\$280.81



Street Light Capital and Operating Costs

Annual Carrying Charge 8.00%			
Total Capital Cost	Annual Capital Cost	Annual Energy	Capital Cost per kWh
58 Watt Incandescent	\$89.44	232	\$0.0308
92 Watt Incandescent	\$89.44	368	\$0.0194
50 Watt HPS	\$130.82	244	\$0.0429
100 Watt HPS	\$131.41	508	\$0.0207
100 Watt Mercury Vapor	\$133.29	520	\$0.0205
100 Watt Mercury Vapor U/G	\$133.29	520	\$0.0205
175 Watt Mercury	\$137.26	860	\$0.0128
250 Watt HPS	\$292.03	1,228	\$0.0190
400 Watt Mercury	\$280.15	1,840	\$0.0122
400 Watt HPS	\$280.81	1,828	\$0.0123

Budgeted Maintenance Costs			
Total kWh	Total Capital Costs	Maintenance Factor	Allocated Maint. Costs
111,128	\$3,427	2.00	\$20,921.36
50,416	\$980	2.00	\$5,983.77
795,440	\$34,118	0.78	\$55,531.15
932,688	\$19,302	0.78	\$31,274.60
671,840	\$13,777	1.25	\$35,269.31
30,680	\$629	1.25	\$1,610.60
5,160	\$66	1.25	\$163.79
180,516	\$3,434	1.25	\$4,012.84
101,200	\$1,233	1.25	\$1,501.40
864,644	\$10,626	1.25	\$12,912.06
3,743,712	\$87,592		\$169,181

Maintenance Cost per kWh	Annual Cost per Street Light	Annual Cost per kWh
\$0.1883	\$50.83	\$0.2191
\$0.1187	\$50.83	\$0.1381
\$0.0698	\$27.50	\$0.1127
\$0.0335	\$27.55	\$0.0542
\$0.0525	\$37.96	\$0.0730
\$0.0317	\$38.28	\$0.0730
\$0.0222	\$50.66	\$0.0413
\$0.0148	\$49.71	\$0.0270
\$0.0149	\$49.76	\$0.0272
		\$0.0686

Table 5A  
Revenue Proof  
Existing Street Light Rate

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

Revenue Proof

Streetslights

	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	-	\$	\$	\$	-	-	
Demand:							
Total Demand	-	-	-	-	-	-	
Energy:							
Total Energy	3,747,728	-	-	-	3,747,728	-	
Public Street Lights	2,903,360	0.18	522,605	0.1872	2,903,360	543,509	
Private Street Lights	844,368	0.08	67,549	0.0872	844,368	73,629	
PPA	3,747,728	0.0079	29,723	0.00073	3,747,728	2,740	
Energy Conservation Charge							
Discounts	3,747,728	-	-	\$			
		0.1000	(61,988)	10%		(61,988)	
	Forecast Class Total	\$	\$ 557,890		Forecast Class Total	\$ 619,877	
	Rev. Req. Class Total	\$	\$ 246,083		Rev. Req. Class Total	\$ 246,083	
	Change in Rate Required (%)		-55.89%		Difference (\$)	(373,795)	



Proposed COSS Street Light Rate

Reading Municipal Light Department

Electric Cost of Service/Unbundling Study

Forecasted Test Year Ending June 30th, 2011

Revenue Proof

Streetslights

	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	-	-	\$ -		\$ -	-	\$ -
Demand:							
Total Demand	-	-	-		-	-	-
Energy:							
Total Energy	3,747,728	-	-		0.0686	3,747,728	257,094
Public Street Lights	2,903,360	0.18	522,605		-	2,903,360	-
Private Street Lights	844,368	0.08	67,549		-	844,368	-
PPA	3,747,728	0.0007	2,740		0.00073	3,747,728	2,740
Energy Conservation Charge	3,747,728	-	-		10%	-	(25,983)
Discounts		0.1000	(59,289)				259,834
	Forecast Class Total		\$ 533,604			Forecast Class Total	\$ 246,083
	Rev. Req. Class Total		\$ -			Rev. Req. Class Total	\$ 246,083
	Change in Rate Required (%)		-53.88%			Difference (\$)	(13,751)

Table 5C  
Revenue Proof  
Average Cost Street Light Rate

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

Revenue Proof Streetslights		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		-	-	\$ -	\$ -	-	-
Demand:							
Total Demand		-	-	-	-	-	-
Energy:							
Total Energy		3,747,728	-	-	0.0648	3,747,728	242,969
Public Street Lights		2,903,360	0.18	522,605	-	2,903,360	-
Private Street Lights		844,368	0.08	67,549	-	844,368	-
PPA		3,747,728	0.0079	29,723	\$ -	3,747,728	2,740
Energy Conservation Charge		3,747,728	-	-	0.00073	3,747,728	2,740
Discounts			0.1000	(61,988)	10%		(24,571)
		Forecast Class Total		\$ 557,890		Forecast Class Total	\$ 245,709
		Rev. Req. Class Total		\$ 246,083		Rev. Req. Class Total	\$ 246,083
		Change in Rate Required (%)		-55.89%		Difference (\$)	374

Attachment 2  
Commercial C-Rate





**Commercial Schedule C Rate**

**Designation:**

Commercial C Rate

**Available in:**

Reading, Lynnfield Center, North Reading, and Wilmington

**Applicable to:**

Service under this rate is available to industrial or commercial customers who take all their requirements under this rate. All electricity furnished under this rate will be metered through one service unless it is convenient for the Department to do otherwise.

**Notice:**

All customers taking electric service under the Commercial Schedule C Rate and/or the Industrial Time of Use Rate will be required to give the Department two (2) years prior written notice of its intention to take its energy requirements from other supplier and/or resource other than this Department while remaining on the Department's service territory.

**Character of service:**

AC 60 cycles: single phase or three phase.

**Customer Charge:**

\$5.97 per month.

**Firm Demand Charge:**

\$6.25 per Kilowatt for all demand usage.

**Energy Charge:**

\$.05190 per Kilowatt-hour for all Kilowatt-hours usage.

**Budget Billing:**

The customers under the C Rate may elect the Budget Billing program under which the customer is required to pay levelized amount to the Department each billing period during the calendar year. This rate is not available to C Rate Customers electing the Contract Demand Rate, or the Non Firm Demand Rate. The specifics of this program are outlined in the Department's General Terms and Conditions.

**Energy Conservation Charge:**

The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

**Rate Filed: June 1, 2011**

**Effective: On Billings on or After July 1, 2011**

**Filed By: Vincent F. Cameron Jr., General Manager**



**Commercial Schedule C Rate (cont'd)**

**Fuel Adjustment:**

The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

**Purchase Power Adjustment:**

The bill for service hereunder may be increased or decreased as provided by the Purchase Power Adjustment.

**Measurement of Billing Demand:**

The billing demand shall be the highest of the fifteen minute kilowatt demand established during the billing period, but not less than eighty percent of the maximum demand established during the preceding summer or sixty percent of the maximum demand established during the winter season.

**Definitions of Seasons:**

The summer season is defined as the months of June through September and the winter season is defined as the months of October through May.

**Farm Discount:**

Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional ten percent discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

**Non-Firm Demand:**

A Customer under this rate may designate any amount of load, in kilowatts, as Non-Firm. Any amount so designated shall be capable of being removed from service during any On-Peak hour as may be requested by the Department. A customer will be charged \$4.02 per kW-month for each kilowatt of demand designated as Non-Firm demand. A failure to remove load designated as Non-Firm load shall result in a charge of \$13.27 per kW of Non-Firm demand for that bill month.

The Department shall have the right to limit the requests for curtailment for Non-Firm load. The Department, at its option, may request separate metering for Non-Firm loads.

The energy and fuel portion of this Non-Firm Demand rate will be billed at the normal Commercial C rate levels.

A customer must contract to be on the Non-firm rate for a minimum of one year.

**Rate Filed: June 1, 2011**

**Effective: On Billings on or After July 1, 2011**

**Filed By: Vincent F. Cameron Jr., General Manager**

**Commercial Schedule C Rate (cont'd)**

**Optional Contract Demand:**

The customer may contract for a specific demand requirement on the Optional Contract Demand rate. The customer shall select a demand level, which will cover its highest annual peak. The cost of the Contract Demand rate is \$7.37 per kilowatts. The customer will be billed for that amount of kilowatts each month for the entire year. If in any month the customer exceeds the contract demand amount then, the contract demand will be billed at a rate of \$13.27 per kilowatt. The contract demand level will be re-established at the higher billing amount.

The energy and fuel portion of the Optional Contract Demand will be billed in the same manner as the Industrial Time of Use rate and is described below:

\$0.08448 per kilowatt-hour for all kilowatt-hours used between 12:00 Noon and 7:00 P.M., Monday through Friday, excluding holidays.

\$0.02535 per kilowatt-hour for all kilowatt-hours used between 7:00 P.M. and 1200 Noon, Monday through Friday and all hours Saturday, Sunday and holidays as listed in the General Terms and Conditions.

A customer must contract to be on the Contract Demand rate for a minimum of one year.

The Department may, at its own discretion, move a customer exceeding the contract demand level to the general Commercial C Rate.

**Customer Transformer Ownership:**

A customer requiring a minimal transformer capacity of over 2000 kW will be required to furnish its own transforming and protective equipment, including mat, vault, primary and secondary cables, conduits, etc., which must comply with the specifications of the Department. The following discounts apply when the above is complied with:

\$0.12 per kilowatt of demand when the service is taken at 2,400/4,160 volts.

\$0.25 per Kilowatt of demand when the service is taken at 13,800 volts.

\$0.375 per Kilowatt of demand when the service is taken at 34,500 volts.

**Rate Filed: June 1, 2011**

**Effective: On Billings on or After July 1, 2011**

**Filed By: Vincent F. Cameron Jr., General Manager**

**Commercial Schedule C Rate (cont'd)**

**Metering:**

The Department may, at its option, meter at the customer's utilization voltage or on the high side of the transformers through which the service is furnished.

In the latter case, or if the customer's utilization voltage requires no transformation, a discount of 1.8% will be applied to the bill exclusive of the fuel charge but in no case will such a discount be allowed if the metering voltage is less than 2,400 volts.

**Meter Reading and Billing:**

Bills under this schedule will be rendered monthly. A prompt payment discount of 10% will be allowed on the current bill, excluding fuel adjustment charges, only if the entire bill is paid-in-full by the discount due date.

**General Terms:**

Service hereunder is subject to the General Terms and Conditions which are incorporated herein and are a part of this rate schedule.

**Rate Filed: June 1, 2011**

**Effective: On Billings on or After July 1, 2011**

**Filed By: Vincent F. Cameron Jr., General Manager**

# Attachment 3

## Net Metering Rate







## READING MUNICIPAL LIGHT DEPARTMENT

To: RMLD Board of Commissioners

Date: April 13, 2011

From: Vinnie Cameron

Subject: Net Metering Rate

The Reading Municipal Light Department (RMLD) has customers that have installed generation such as solar and combined heat and power systems that assist customers in meeting their energy requirements. In doing so, these customers need to install an interconnection system that is required by the RMLD in order to correctly record kWh produced and ensure that the distribution system is not back fed in the event of an outage. These interconnection requirements are similar to what is required by the electric utility. In addition, the RMLD pays the Monthly Fuel Charge for kWhs a customer produces and are transmitted onto the RMLD's electric system.

Attached is the RMLD's Simplified Interconnection Application (SIA) and Service Agreement for Facilities with Inverter Capacity of 10 kW and Under (Residential), which is on the RMLD's Web Site and outlines the RMLD's requirements for interconnection of customer generation.

The RMLD would like to file the Simplified Interconnection Application (SIA); including its Terms and Conditions in order that prospective customer installing their own generation will understand it is a filed rate.

In addition, the RMLD will add to the filed rate that any kWh generated onto its system will be paid the Monthly Fuel Charge applicable at the time the energy was generated.

c: Jane Parenteau - RMLD  
Kevin Sullivan - RMLD  
Peter Price - RMLD  
Brian Smith - RMLD  
William Seldon - RMLD  
Jared Carpenter - RMLD  
Joe Bilicki - RMLD

**Simplified Interconnection Application (SIA) and Service Agreement  
for Facilities with Inverter Capacity of 10kW and under (Residential)**

**Contact Information**

Legal Name and address of Interconnecting Customer applicant

RMLD Customer (print): \_\_\_\_\_

Address of Interconnection Facility: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_

Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Alternative Contact Information (e.g., system installation contractor or coordinating company)**

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone (Daytime): \_\_\_\_\_ (Evening): (same) \_\_\_\_\_

Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Facility Information**

Electric Service Company: Reading Municipal Light Department (RMLD)

Account Number (required – on bill) \_\_\_\_\_ Meter Number (required – on bill) \_\_\_\_\_

Inverter Manufacturer: \_\_\_\_\_ Model Name & #: \_\_\_\_\_ Quantity Used: \_\_\_\_\_

Nameplate Rating: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA) \_\_\_\_\_ (AC Volts) Single \_\_\_\_\_ or Three \_\_\_\_\_ Phase

System Design Capacity: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA)

**Electrical Contractor: Name, address, phone # and contact name**

Prime Mover: Photovoltaic ☐ Fuel Cell ☐ IC Engine ☐ Other: \_\_\_\_\_

Energy Source: Solar ☐ Wind ☐ Hydro ☐ Natural Gas ☐ Other: \_\_\_\_\_

UL1741 Listed? Yes \_\_\_\_\_ No \_\_\_\_\_

Estimated Installation Date: \_\_\_\_\_ Estimated In-Service Date: \_\_\_\_\_

**Customer Signature**

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I agree to the **RMLD Terms and Conditions for Simplified Process Interconnections** on the following page:

Interconnecting Customer Signature \_\_\_\_\_ Date \_\_\_\_\_

**Please attach manufacturer's document showing UL1741 listing to this document and mail to above address.**

**Approval to Install Facility (For RMLD use only)**

Installation of the Facility is approved contingent upon the terms and conditions of this Agreement, and agreement to any system modifications, if required (Are system modifications required? Yes \_\_\_\_\_ No \_\_\_\_\_ To be Determined \_\_\_\_\_).

RMLD Signature: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

RMLD UA Number: \_\_\_\_\_ RMLD waives inspection/witness test? Yes \_\_\_\_\_ No \_\_\_\_\_

Reading Municipal Light Department (RMLD)  
230 Ash Street, P.O. Box 150  
Reading MA 01867-0250

Tel: 781-944-1340  
Fax: 781-944-7387  
www.rmlld.com

## CERTIFICATE OF COMPLETION

### Installation Information

Interconnecting Customer (Print): \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Location of Facility (if different from above): \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_  
Account # (required - on bill) \_\_\_\_\_ Meter # (required - on bill) \_\_\_\_\_

### Electrician or Electrical Installation Contractor:

Business Name: \_\_\_\_\_ Contact Name (Print) \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_  
License number: \_\_\_\_\_  
RMLD Date of Installation Approval: \_\_\_\_\_ Signature \_\_\_\_\_  
RMLD Utility Authorization Number: \_\_\_\_\_

### Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of

\_\_\_\_\_  
(City/County)

Signed (Local Electrical Wiring Inspector), \_\_\_\_\_

Name (printed): \_\_\_\_\_

Date: \_\_\_\_\_

As a condition of interconnection you are required to send by USPS mail or Fax a copy of this form along with a copy of the signed electrical permit to:

RMLD  
P.O. Box 150  
Reading MA 01867-0250

Received by RMLD \_\_\_\_\_  
Date & Initial

Attachment 2.  
Last edit 8/2009

### RMLD Terms and Conditions for Simplified Process Interconnections

1. **Construction of the Facility.** The interconnecting Customer may proceed to construct the Facility once the approval to install the Facility has been signed by the RMLD.
2. **Interconnection and Operation.** The interconnecting Customer may operate Facility and interconnect with the RMLD's system once the following has occurred:
  - 2.1. **Municipal Inspection.** Upon completing construction, the Interconnecting Customer will cause the Facility to be inspected or otherwise certified by the local electrical wiring inspector with jurisdiction.
  - 2.2. **Certificate of Completion.** The Interconnecting Customer returns the Certificate of Completion appearing as Attachment 2 of the Agreement to the RMLD, P.O. Box 125, Reading, MA 01867-0250.
  - 2.3. **Company has completed or waived the right to inspection.**
3. **RMLD Right to Inspection.** Within ten (10) business days after receipt of the Certificate of Completion, the RMLD may, upon reasonable notice, and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been appropriately installed, and that all electric connections have been made in accordance with the RMLD. The RMLD has the right to disconnect the Facility in the event of improper installation or failure to return Certificate of Completion.
4. **Safe Operations and Maintenance.** The interconnecting Customer shall be fully responsible to operate, maintain, and repair the Facility.
5. **Access.** The RMLD shall have access to the disconnect switch (if required) of the Facility at all times.
6. **Disconnection.** RMLD may temporarily disconnect the Facility to facilitate planned or emergency RMLD work.
7. **Metering and Billing.** All Facilities approved under this Agreement qualify for net metering, as approved by the RMLD from time to time, and the following is necessary to implement the net metering provisions.
  - 7.1. **Interconnecting Customer Provides Meter Sockets.** The Interconnecting Customer shall furnish and have installed, if not already in place, the necessary meter socket and wiring in accordance with accepted electrical standards. The Interconnecting Customer shall have installed a second meter socket and the necessary wiring between the output of the generation source and the customer's main electrical service. This meter socket shall be located outside in an approved location. The second meter socket will be provided by RMLD.
  - 7.2. **RMLD Installs Net Meter.** RMLD shall furnish and install a meter capable of net metering within ten (10) business days after receipt of the Certificate of Completion, or within 10 business days after the inspection if completed, if such meter is not already in place.
  - 7.3. **RMLD Installs Check Meter.** The RMLD will install a second meter to record the usage of the customer-generated energy. There will be no customer charge associated with this meter.
8. **Indemnification.** The Town of Reading, RMLD, and all of their respective agents and employees shall be afforded the maximum exemption of limitations of liability available under applicable laws and regulations arising on account of their actions or omissions relating directly or indirectly any provision of electrical service. Without limiting the generality of the foregoing, and except to the extent otherwise expressly provided in M.G.L. Chapter 258: Neither the Town of Reading, nor the RMLD, nor any of their respective agents or employees shall be liable to any person or agent: all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence of willful misconduct of the party seeking indemnification.
9. **Limitation of Liability.** Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omissions in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
10. **Termination.** This Agreement may be terminated under the following conditions.
  - 10.1. **By Interconnecting Customer.** The Interconnecting Customer may terminate this Agreement by providing written notice to RMLD.
  - 10.2. **By RMLD.** The RMLD may terminate this Agreement (1) if the Facility fails to operate for any consecutive 12-month period, or (2) in the event that the Facility impairs the operation of the electric distribution system or service to other customers or material impairs the local circuit and the Interconnecting Customer does not cure the impairment.
11. **Assignment/Transfer of Ownership of the Facility.** This Agreement shall survive the transfer of ownership of the Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the RMLD.
12. **Interconnection Rate.** These Terms and Conditions are pursuant to RMLD's Rate for the Interconnection of Customer-Owned Generating Facilities, as approved by the Department of Public Utilities and as the same may be amended from time to time ("Interconnection Rate"). All defined terms set forth in these Terms and Conditions are as defined in the Interconnection Rate available at the RMLD office or online at [www.rml.com](http://www.rml.com).

Attachment 4  
Terms and Conditions





**General Terms & Conditions  
(For All Classes of Service)**

These Terms and Conditions have been established to convey the conditions that the customer agrees to when requesting service from the Reading Municipal Light Department (Department). The benefits and obligations of these Terms and Conditions will commence on the day that the customer is connected to the Department's service.

1 a. All applications for new or restored electric service must be accurate, true, complete and signed. Applications can be made in person at the Department's office, by telephone, or over the internet at [www.rmld.com](http://www.rmld.com), and signed via fax, mail or in person. A minimum of five (5) days notice is required, in situations where no major construction of special equipment or materials is required. In major construction cases, the customer must meet with the Department's personnel to discuss and determine construction schedules.

b. Advance deposits will be required as security payment of future electric bills from residential customers, and commercial/industrial customers, who have not established a satisfactory credit rating as determined by the Department, and from rental or lease tenants, temporary services and commercial/industrial customers.

c. The commercial/industrial customer deposit calculation is equivalent to the estimated total of the two (2) highest months of billing within a twelve-month period.

d. The deposit payment can be in the form of cash, check, debit card, credit card, or a surety bond that is acceptable to the Department. The deposit, less any amount owed to the Department for electric service, will be refunded when service is discontinued or will be returned, upon request, after two (2) years of arrears free billing statements.

2 a. The supply of electric service is contingent upon the Department's ability to secure and retain the necessary locations for its poles, wires, conduits, cables, and other apparatus. All equipment furnished by the Department shall remain its property.

b. Beyond the point of connection to the Department's system, all wiring and other electrical equipment that is necessary in order to utilize the service shall be installed by the customer and shall comply with the Department's requirements and municipal authorities.

c. The characteristics of service available at each location will be determined by the Department and information relative thereto will be furnished upon request.

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**Effective: On Billings on or After September 1, 2010**

**Filed By: Vincent F. Cameron Jr., General Manager**

**General Terms & Conditions  
(For All Classes of Service)**

d. Any electrical work such as new construction, service upgrade, service repair, temporary service, or service relocation will require a Utility Authorization Number (UAN) from the Department prior to the commencement of work. All such work will require a UAN number and the approval of the appropriate local authorities prior to the Department making its connections.

3. The applicant shall make an aid-in-construction payment when the supply of service involves the use of investment, which in the judgment of the Department would not otherwise be warranted by the estimated revenue to be obtained.

4 a. Temporary single phase 120\240 Volt, 100 AMP, 3 wire service connections for building construction or reconstruction purposes or where a permanent electric service would not result will be subject to a \$275.00 service charge.

b. Any temporary service requirement in excess of Section 4a. will be estimated by the Department and paid-in-advance of construction.

c. Any temporary relocation of service drop conductors by the Department to accommodate building reconstruction that is not immediately connected to a new service entrance will be charged as a temporary service.

d. The relocation of service drop conductors performed by unauthorized personnel to accommodate building reconstruction is prohibited. Service drops found so relocated will be immediately disconnected if safety considerations, at the sole discretion of the Department, so warrant. Unauthorized relocations will be subject to financial penalties in addition to a temporary service fee.

5. a. Permanent overhead service attachments will be made without charge except where the Department determines one or more poles are required on private property. When required, the Department will furnish one pole and any additional poles, wires and labor shall be at the expense of the customer.

b. The customer must provide an attachment point at sufficient height on the structure to provide the required clearance in accordance with Massachusetts Electrical Code and local authorities. Poles necessary to provide height clearances not provided by the customer will be charged to the customer.

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**General Terms & Conditions  
(For All Classes of Service)**

6. Underground Services supplied from overhead systems will be installed and maintained at the customer's expense in accordance with the Department's approval and specification. A single underground service provided from a pole on a customer's property will not require a pullbox. Any underground service provided from a pole in the public way will require a pullbox provided by the Department. The pullbox will be installed by the customer within three feet of the front lot line along the service run. Only one set of underground service risers (electric, telephone, CATV, etc.) will be allowed on any one pole. The Department must be contacted for service arrangements.
7. Underground Distribution installations in new subdivisions will be in accordance with the Department specifications. Underground specifications will be provided to the developer or builder upon request. Two (2) copies of the preliminary plan maps of the proposed development must be submitted to the Department six months prior to the date that electric service is required. One month prior to the start of electric system construction one (1) reproducible reverse-read Mylar and a digital formatted file (if available) of the approved subdivision plan and profile must be submitted to the Department.
8. Services requiring transformers where pole mounting is not possible, the customer will be required to supply a pad location, primary and secondary conduits, and cables, etc. at the customers own expense. All materials used must meet the Department's specifications.
9. All meters will be furnished by the Department and shall be installed on meter sockets or troughs provided and wired by the customer. The Department's meter personnel shall designate meter locations and specifications. Residential meters will be located outside and easily accessible to the meter reader without having to enter a fenced in area.
10. All Facilities approved under RMLD Terms and Conditions for Simplified Process Interconnections, which can be obtain at the RMLD, qualify for net metering, as approved by the RMLD from time to time, and are necessary to implement the net metering provisions.
11. The Customer shall give the Department permission to enter their premises at all reasonable times for the purpose of installing, reading, inspecting, testing and keeping its equipment in repair. As well as for the discontinuance of service and the removal of any or all of its equipment used in connection with the supply of electricity.

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**Filed By:** Vincent F. Cameron Jr., General Manager



**General Terms & Conditions**  
**(For All Classes of Service)**

12. The Department will test single-phase meters free of charge, upon customers request, which have not been tested within a three-year period. However, if a customer requests an additional meter test within three years of the previous test, and the Department finds the meter to be correct according to Massachusetts General Laws (M.G.L.), Chapter 164, Section 120, then the customer requesting the test will be charged \$85.00 for the test. If the meter is found to be in error then the test will be free of charge.

13. No one, unless duly authorized by the Department is permitted to remove or inspect any meter or other appliance belonging to the Department. Customers may be disconnected if the meter has been tampered with or by-passed so as not to record all consumption. Such customers will be subject to fines and punishment under the M.G.L., Chapter 164, Sections 127 and 127A.

14. The customer of record shall be responsible for all damage to or loss of the Department's property located upon his or her premises unless occasioned by circumstances beyond the customer's control.

15. a. All meters shall be read and bills rendered on a monthly basis. At any time that the Department is unable to obtain a meter reading, the consumption will be estimated on the best information available.

b. A prompt payment discount of 10 percent will be allowed on the current bill, excluding the fuel adjustment charge, and only if the entire bill is paid-in-full by the discount due date. The Department offers several payment options via office visit, telephone, internet or conveniently location pay stations.

16. a. All bills shall be payable on a net basis upon receipt. If not paid within forty-five (45) days of date of bill, service will be disconnected after three (3) days written notice, and the following charges will be made for renewing the service when the bill is paid.

Meter Shut Off      \$85

Pole Shut Off      \$120

The above charges are calculated based on the Department's cost of service and in accordance with the Billing and Termination Procedures of the Massachusetts Department of Public Utilities C.M.R. 25, adopted October 4, 1984 in MDTE-1 63.

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**General Terms & Conditions  
(For All Classes of Service)**

b. Property owners on the Department's system are subject to the Massachusetts Municipal Lien Law, M.G.L., Chapter 164, Section 58B. This law allows municipal electric departments to attach a lien to properties if electric bills are not paid-in-full.

17. A \$20.00 fee will be charge to the customer's bill for each check returned to the Department.

18 a. Equalized monthly payments are offered to customers electing to be billed under the Budget Bill Program. Customers must sign up for the option for a period of one year.

b. The Budget Bill Program runs from December through November or June through May. A contingency will be added to the average twelve-month usage to account for any fluctuation in customer usage or increase in the fuel charge adjustment. Customers will be billed as normal with the "Balance Due" portion of the bill reflecting the running true-up balance. Budget Bill Program customers are subject to the terms of Section 15 b. Prompt Payment Discount.

c. At the end of the twelve-month period, the account will be trued-up. Any positive balance will be paid by the customer to the Department, or any credit balance, at the customer's choice, will be paid to the customer by the Department or credited to the customer's next billing.

d. Customers electing to be bill under the Budget Bill Program after September 1, 2010 will subject to automatic electric payment withdrawal. The payments can be automatically withdrawn using credit card, debit card, or checking account.

19. All customers taking electric service under the Commercial Schedule C Rate and/or the Industrial Time of Use Rate will be required to give the Department two (2) years prior written notice of its intention to take its energy requirements from other suppliers and/or resources other than this Department while remaining on the Department's service territory.

20. The customer shall give the Department a 90-day advance written notice of load additions or changes that would result in a 25% increase above its original load projections. This is to allow the Department to make changes necessary to accommodate these new loads and continue adequate service.

21. The Department reserves the right to install load-limiting devices arranged to disconnect the service in the premises if the rated capacity of the Department's service is exceeded.

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**General Terms & Conditions  
(For All Classes of Service)**

22. The Town of Reading, the Department, and all of their respective agents and employees shall be afforded the maximum exemption of limitations of liability available under applicable laws and regulations arising on account of their actions or omissions relating directly or indirectly any provision of electrical service. Without limiting the generality of the foregoing, and except to the extent otherwise expressly provided in M.G.L. Chapter 258:

Neither the Town of Reading, nor the Department, nor any of their respective agents or employees shall be liable to any person or agent:

a. For any failure by the Department to supply electric service or for any interruption in the supply of or delay in the restoration of such service.

b. For any damage to any person (including personal injury or death) or any damage to any property directly or indirectly, arising as a result of the electric service provided by the Department, the presence of the Department's apparatus or equipment, or any acts or omission of the Department.

c. For discontinuance of electric service to any customer who fails to comply with, or perform any of the customer's obligations under these Terms and Conditions, applicable laws and regulations, or other agreements with the Department.

d. For discontinuance of electrical service if any equipment or apparatus of any customer interferes with service provided by the Department or the delivery of service to other customers or interferes with the integrity of the Department's system.

e. For any variation, or interruption in electrical service including without limitation, any such variation or discontinuance because of abnormal or reduced voltage, emergency load reduction programs, rotation of the use of feeders, blackouts, or any causes beyond the reasonable control of the Department, including, but not limited to, accidents, weather conditions, animals, conditions of fuel supplies, war, civil commotion, labor difficulties, acts of customers, or any public authority.

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**General Terms & Conditions  
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23. The Department will discontinue its service on 24-hour notice and remove its property if the customer fails to comply with or perform any of the requirements or obligations of these terms and conditions. If equipment or apparatus owned by the customer interferes unduly with service to other customers of the Department, or is determined by the Department to pose a hazard to Department employees, or the general public, service will be discontinued as soon as practical.

24. Under the Time-of-Use Rate the holidays granted for off-peak are; New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Columbus Day, Veteran's Day and Christmas Day.

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Filed By: Vincent F. Cameron Jr., General Manager





Attachment 5  
Green Choice Program





## Energy Services Department

April 12, 2011

Memo To: Vincent Cameron

From: Energy Services

*With Sel  
J. D. Parrot*

Subject: Green Choice Program - Next Phase

*OK! For Power & Roto Cam.  
J. D. Parrot*

The Reading Municipal Light Department (RMLD) is in the process of revamping the Green Choice program. This program was developed prior to RMLD incorporating renewable energy projects into the power supply mix. RMLD is now purchasing Renewable Energy Certificates (RECs) from the Swift River hydro projects and will be purchasing RECs from the Concord Steam project. Since these projects are incorporated in the power supply mix they are being paid for by all rate payers, the Energy Services Division (ESD) is proposing that the RMLD offer an alternative renewable project to interested Green Choice rate payers as the next step (or phase) of the Green Choice program.

The RMLD developed the Green Choice rate to allow interested customers to support the continuation of renewable generators already in existence, and encourage the growth and use of renewable generated electricity. RMLD customers who choose to participate in the Green Choice program purchase 100 kWh blocks at \$3 per block. This is an extra monthly charge on the program participant's bill, annually amounting to \$36 per block bought. A customer may purchase any amount of 100 kWh blocks.

The program was initiated in 2005. There are approximately 250 customers participating in the program purchasing 540 blocks monthly. This equates to approximately 650 Renewable Energy Certificates annually. There is currently a balance of \$13,017 in the Green Choice fund (June 2010 through February 2011).

Currently, the RMLD purchases and retires Renewable Energy Certificates (RECs) with the money collected in the Green Choice program annually. At the end of the fiscal year the Department determines how many RECs to purchase based on the balance of money collected. The RECs are then purchased from a third party and retired.

Beginning in March, 2011 the Swift River Woronoco hydro project (one of three hydro projects the Department is purchasing energy and attributes from) will be providing enough RECs annually to offset the requirements of the Green Choice program. As stated above Green Choice participants annually generate the need to purchase approximately 650 RECs. The Woronoco hydro project will supply approximately 3,881 RECs annually. This exceeds the REC requirements of the Green Choice program by about six times.

ESD is studying the feasibility of offering an alternative project to replace the current Green Choice program. One possible alternative would be to offer current and new participants to

purchase energy blocks for a Department sponsored renewable project within RMLD's service territory. The project could be a qualifying solar project constructed on either an RMLD owned building (218 or 230 Ash Street), or a municipal building located somewhere within the service territory, whichever location is determined to be the most feasible location. This is just one alternative example.

Energy Services is looking for feedback on a specific direction to go with the Green Choice program. If it is decided internally to pursue a next phase to the program, ESD will compile a short list of proposed renewable projects along with estimated costs and a construction time frame for each within the first quarter of FY 2012.