RMLD Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS

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AGENDA
RMLD CITIZENS' ADVISORY BOARD (CAB)
Note: Joint meeting with RMLD Board of Commissioners on Item #2

THURSDAY, JANUARY 5, 2012
7:00 P.M.
at
READING MUNICIPAL LIGHT DEPARTMENT
CAFETERIA
230 ASH STREET
READING, MA 01867

1. Call Meeting to Order – A. Carakatsane, Chairman

2. Renewable Energy Certificates (RECs) (Attachments a.-d.) – V. Cameron, J. Parenteau
   a. Memo to V. Cameron from J. Parenteau and W. Seldon dated October 21, 2011, Subject: RECs
   b. Memo to RMLD Board from V. Cameron dated December 27, 2011, Subject: Discussion of RECs
   c. Memo to RMLD Board and CAB from R. Hahn dated December 28, 2011, RE: Renewable Energy Strategies
   d. E-mails to RMLD Board and A. Carakatsane from M.E. O'Neill dated December 28, 2011, Subject: Clarification on GM Memo to Board and CAB.

   Executive Session (If discussion involves such items as pricing and strategy)
   Suggested Motion:
   MOVE that the CAB 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.
   Note: Roll call vote required.

3. Return to Regular Session

4. Minutes of Meeting – October 24, 2011

5. Sustainable Energy Policy Update – V. Cameron, J. Parenteau

6. Net Metering Rate (Attachments) – V. Cameron, J. Parenteau
   a. Residential
   b. Commercial

7. CAB Rotation Schedule for RMLD Board Meetings (Attachment) – P. O'Leary

8. Other Items for Discussion - 2012 Legislative Rally (Attachment)

9. Schedule Next Meeting

10. Executive Session
    Suggested Motion
    MOVE that the CAB go into Executive Session based on Chapter 164, Section 47D exemption from public records and open meeting requirements in certain instances, to discuss power supply, renewable energy, and return to regular session for the sole purpose of adjournment.

11. Adjournment

This Agenda has been prepared in advance and does not necessarily include all matters, which may be taken up at this meeting.

Upcoming RMLD Board Meetings:
Wednesday, January 25, 2011 – Regular RMLD Board Meeting

#2

Renewable Energy Certificates

#2. a.

Memo to V. Cameron from J. Parenteau and W. Seldon
dated October 21, 2011

To: Vin Cameron

From: Jane Parenteau
Bill Seldon

Date: October 21, 2011

Subject: Renewable Energy Certificates (RECs)

The Reading Municipal Light Department (RMLD) entered into a Purchase Power Agreement (PPA) with Swift River Hydro for the output of four hydro projects including capacity, energy, Renewable Energy Certificates (RECs) and all other environmental attributes. In addition, RMLD has signed a PPA with Concord Steam, a biomass project which is sch duled to be operational in early 2013.

Swift River Hydro

Table 1 shows the projected monthly Mwh generation for each of the four projects that RMLD has negotiated a PPA: Woronoco, Turners Falls, Pepperell, and Indian River. Swift River currently has a PPA for the Collins project with NSTAR which expires in September, 2013.

Table 1
Projected Monthly Mwh

	Average Woronoco	Average Turners Falls	Average Pepperell[3]	2011 Indian River	2011-12 Total Energy Output	Average Collins	2015 Total Energy Output
January	993	139	685	307	2,124	581	2,704
February	898	169	688	263	2,018	515	2,533
March	1,367	418	972	440	3,197	707	3,903
April	1,503	392	957	793	3,645	703	4,348
May	1,267	231	811	634	2,944	665	3,609
June	750	13	529	329	1,621	442	2,063
July	460	247	308	154	1,168	271	1,439
August	387	244	264	129	1,024	258	1,282
September	364	0	233	127	723	215	937
October	521	68	410	207	1,206	313	1,519
November	839	91	566	379	1,875	440	2,314
December	1,001	264	700	467	2,433	561	2,993
Annual Output:	10,350	2,276	7,123	4,228	23,978	5,667	29,645
CT Class I RECs:	3,881 [1]	2,276 [4]	7,123 [5]	4,228 [6]	17,509	-	17,509
CT Class 2 RECs:	6,469 [1]	-	-	-	6,469	5,667 [10]	12,136
RI New RECs:	3,881 [2]	-	3,775 [6]	-	7,657	-	7,657
RI Existing RECs:	6,469 [2]	-	3,348 [8]	-	9,817	-	9,817
MA Class 1 RECs:	4,037 [3]	-	8,500 [7]	4,228 [6]	16,765	5,667 [11]	22,432
MA Class 2 RECs:	6,314 [3]	-	-	-	6,314	-	6,314

One REC is equivalent to 1,000 kWhs or 1 Mwh of generation. Based on the projected monthly generation, it is anticipated that the four projects would have an annual generation of 23,978 Mwhs. This would result in the RMLD receiving 23.978 RECs.
Investor Owned Utilities (IOUs) have a Renewable Portfolio Standard (RPS). Below is a summary of the RPS.

- Under the Class 1 Renewable Portfolio Standard, all retail electricity suppliers must provide a minimum percentage of kilowatt-hours (kWh) sales to end-use customers in Massachusetts from eligible renewable energy resources installed *after* December 31, 1997, according to the following schedule:

    - 5.0% of sales by 12/31/2010
    - 6.0% of sales by 12/31/2011
    - 7.0% of sales by 12/31/2012
    - 8.0% of sales by 12/31/2013
    - 9.0% of sales by 12/31/2014
    - 10.0% of sales by 12/31/2015
    - 11.0% of sales by 12/31/2016

Currently, Massachusetts municipals are exempt from the Renewable Portfolio Standard.

The current RECs that are attributable to the Swift River Hydro projects have a financial value.

Table 2 shows the projected four year market value of the anticipated RECs from Swift River.

Table 2
Market Value

	2011	2012	2013	2014
CT Class I RECs:	$ 418,903.39	$ 407,478.75	$ 407,478.75	$ 388,437.69
CT Class 2 RECs:	$ 2,186.20	$ 4,372.40	$ -	$ -
Annual Value	$ 421,089.59	$ 411,851.15	$ 407,478.75	$ 388,437.69
MA Class 1 RECs:	$ 494,563.50	$ 502,945.93	$ 494,563.50	$ 486,181.07
Annual Value	$ 494,563.50	$ 502,945.93	$ 494,563.50	$ 486,181.07

Concord Steam

In 2013, the RMLD anticipates that the Concord Steam Project should achieve Commercial Operation. Based on an annual plant production of 130,000 Mwhs and the RMLD receiving 33% of the output, the RMLD would have an additional 42,500 Mwhs with an equivalent of 42,500 RECs. The projected market value of NH Class 1 REC is $29.00/REC. This would result in an annual value of approximately $1.2 million.

The RMLD has several options available regarding RECs.

Potential Options:

Option 1: If the RMLD would like to refer to the output of the hydro projects as "renewable", then RMLD would need to retire the RECs from the projects. By doing so, the value of the RECs would be zero.

Option 2: Currently the RMLD does not have a RPS. The RMLD could set a policy where a portion of the RECs are sold and a portion could be retired. This would provide RMLD with additional funds that could be earmarked for other sustainable projects within the RMLD service territory (i.e., Solar on municipal buildings).

Option 3: The RMLD could market all the RECs until it has a RPS. The revenue that RMLD receives as a result of this could be used to lower the overall cost of the project. For Swift River, it is estimated that utilizing this option could reduce the overall cost of the project by approximately $20/Mwh.

Energy Services would like to work with the RMLD Board and CAB to determine the direction that would best serve the interest of the RMLD customers.

With the lack of an RPS, many municipalities are marketing the value of the RECs associated with their renewable resources. These systems include Ipswich, Princeton, Taunton and Templeton. Additionally, Holden, Wellesley, Middleborough, and Concord are currently selling their Solar RECs (SRECs).

We look forward to discussing this concept with you as well as both the RMLD and CAB Boards.

#2. b.

Memo to RMLD Board from V. Cameron
dated December 27, 2011,

READING MUNICIPAL LIGHT DEPARTMENT

To: RMLD Board Date: December 27, 2011

From: Vinnie Cameron

Subject: Discussion of Renewable Energy Certificates

Over the past six months, the Reading Municipal Light Department (RMLD) has been engaged in discussions with the Power & Rate Committee and the Citizens' Advisory Board (CAB) over the issue of selling or retiring the Renewable Energy Certificates (RECs) that the RMLD receives as a result of various RMLD Purchase Power Agreements (PPAs). The RMLD has been directed by the RMLD Board to purchase renewable energy (wind, solar, hydroelectric, biomass, etc.) at reasonable rates. Over the last year, the RMLD has signed two such contracts, one with Concord Steam, a biomass generator and the other with Swift River, LLC, an owner of several hydroelectric dams. The price of these two projects is very competitive and their effect on the RMLD's rate is insignificant. Attributes of these two projects also include RECs.

The intent of this memo is to inform the RMLD Board and the CAB as to the facts surrounding the REC issue.

What is a REC?

The REC, in its simplest form, is a representation that electricity that was generated from an eligible renewable energy resource. A renewable energy provider (such as a wind farm) is credited with one REC for every 1,000 kWh or 1 MWh of electricity it produces

What can you do with a REC?

A utility company may retire the RECs they receive from renewab e energy suppliers or they can sell the RECs into the REC market. There are different "Class" designations of RECs based on the mode of generation, location, and date of development.

What is the REC market?

REC markets have been established in order for owners of RECs to sell them to entities that require RECs. RECs can be traded directly from buyer to seller, however, marketers, brokers, or asset managers are found in the marketplace.

Renewable generation facilities will often sell their RECs to these entities who then resell them on the market at a later date.

There are also Solar RECs, which are associated with the output of solar energy installations. Currently, these RECs are worth $550 a megawatt-hour or $.55/kWh in Massachusetts. In 2012 and 2013 the Solar RECs decrease in worth gradually to an estimated $365 megawatt-hour or $.365/kWh in 2021. Solar RECs are purchased by Investor Owned Utilities (IOUs) as part of their RPS solar energy requirements.

What is a Renewable Portfolio Standard?

The Massachusetts Department of Energy Resources (MDOER) developed the Massachusetts Renewable Portfolio Standard (MRPS) to require IOUs to purchase certain amounts of Green Energy as a percentage of their overall electricity sales. In doing so, the Commonwealth of Massachusetts encouraged the development of renewable energy in Massachusetts and New England. The percentages of renewable energy required by the MRPS are shown below.

- 5.0% of sales by 12/31/2010
- 6.0% of sales by 12/31/2011
- 7.0% of sales by 12/31/2012
- 8.0% of sales by 12/31/2013
- 9.0% of sales by 12/31/2014
- 10.0% of sales by 12/31/2015
- 11.0% of sales by 12/31/2016
- 12.0% of sales by 12/31/2017
- 13.0% of sales by 12/31/2018
- 14.0% of sales by 12/31/2019
- 15.0% of sales by 12/31/2020

  and an additional 1% of sales each year thereafter.

Who needs to purchase RECs?

IOUs need to purchase RECs under the requirements of a MRPS outlined above. Other entities may purchase RECs in order to show their support for renewable energy development or to offset their carbon footprint.

How does the MRPS effect municipal electric utilities?

The municipal electric utilities in Massachusetts are exempt from the MRPS.

Does the RMLD have any interaction with the REC market in addition to the RECs they receive from the Swift River projects?
The RMLD has developed the Green Choice program, which offers customers the option to purchase RECs as part of their bill. The RMLD purchases RECs from the REC market in order to satisfy the requirements of the Green Choice Program. The RMLD could also use the RECs they receive from Swift River to satisfy the RECs needed for the Green Choice Program.

What is the RMLD's RECs worth?
As stated above, the RMLD has signed power supply agreements with two renewable energy suppliers. The RECs from the Swift River Project is worth about $494,000 annually, at the present REC market rate.

The RMLD will also receive RECs associated with the electrical output from the Concord Steam Plant. When the Concord Steam Project comes on line in 2013 the RECs could be worth approximately $1.6 million annually, based on normal operation of the plant and the present biomass REC market.

What is the relative worth of the RECs?
The RECs from Swift River have been forecast to have an annual worth of about $494,000 in 2012 and the RMLD has estimates its overall revenue requirement in 2012 to be $87,845,000. The Swift River RECs are approximately .56% of the RMLD annual revenues requirements.

With the addition of the Concord Steam RECs the total worth of the RMLD RECs, based on today's REC market, will be approximately $1.6 million, which could represent 1.8% of the RMLD revenue requirements in 2013.

For the average residential customer, the $494,000 of Swift River RECs equates to $.56 per month or $6.77 per year. In 2013, with the Concord Steam Plant coming on line, the total RMLD RECs may be worth approximately $1.6 million at present market rates. In 2013, RECs may equate to $1.82 per month or $21.94 per year for an average residential customer.

What do other municipal electric utilities do with the RECs they receive?
I conducted a survey of municipals in Massachusetts concerning whether they have renewable energy in their portfolio and if they do; what do they do with the RECs they receive. Hull, West Boylston, Concord, Middleboro, Ipswich, Holden, Paxton, Templeton, and Wellesley, all responded that they sell their RECs.

Groveland responded that they don't have renewable energy presently but were in favor of selling them.

What is the difference between RECs and the RGGI (Regional Greenhouse Gas Initiative) program?
The REC market was developed to encourage the development of the renewable energy industry. As stated above, the IOUs have to purchase RECs to satisfy requirements of the MRPS. The RGGI program was developed to allow generating plants to purchase emission allowances that offset their air emissions. Generators cannot offset their air emissions with RECs.

Are RECs related to the Massachusetts Green Communities Act?
The two programs are mutually exclusive.

How do the RMLD customers feel about the RMLD acquiring renewable energy?
The Customer Survey the RMLD performed in 2010 said that a majority of the RMLD customers were in favor of the RMLD acquiring renewable energy. However, the survey did not ask the customers if they were in favor of paying a higher price for renewable energy.

The Town of Reading considered becoming a Green Community a few years ago. A city or town must meet six prongs to become a Green Community under the Massachusetts Green Community Act and be charged the Massachusetts Renewable Energy Trust Charge of $.0025/kWh. At that time I met with the Town Managers of the four towns concerning this issue and they agreed that they did not want their constituents to pay higher costs due to Reading becoming a Green Community. The Town of Reading did not become a Green Community.

What can the RMLD do with the revenue if they sell the RECs?
A case can be made that any revenue from the sale of the RECs should be credited to the Fuel Charge since the RECs are purchased on $/kWh basis. However, the RMLD could set aside an amount of money in the Capital Budget, similar to the revenue received from the REC sale, for development of renewable energy projects in its service territory. In doing so, the customers would be getting some value for the RECs.

Does the RMLD have a Sustainable Energy Policy in place?
The RMLD General Manager, Staff, and Power & Rate Committee have been working on a Sustainable Energy Policy for the past several months. The RMLD wants to work cooperatively with the RMLD Board to establish a policy that represents views of the Board with respect to purchasing renewable energy and minimizing the ongoing cost of renewable energy to its customers.

If you have questions concerning this issue please call me at 781-942-6415.

#2. c.

Memo to RMLD Board and CAB from R. Hahn
dated December 28, 2011

To: RMLD Board of Commissioners ("RMLB")
RMLD Citizens Advisory Board ("CAB")

From: Dick Hahn

Date: December 28, 2011

RE: Renewable Energy Strategies

Over the last several weeks, considerable discussion has taken place regarding Renewable Energy Certificates ("RECs") and whether to sell RECs that the RMLD receives from it renewable energy purchases or whether to keep these RECs. During this debate, a claim has been made that a strategy of (a) entering into long-term contracts to buy the output of renewable energy projects including RECs now and (b) selling those RECs until such time as the RMLD is required to comply with Massachusetts' Renewable Portfolio Standards ("RPS") represents the preferred option for RMLD ratepayers. I have performed a detailed pro forma analysis and have concluded that such a strategy is not the preferred option. If the RMLD wishes to sell RECs now, and therefore not be renewable or green, the RMLD ratepayers would have been better off if the RMLD did not buy the output of renewable energy projects now, but rather wait until, if ever, the RMLD is required to comply with Massachusetts RPS. This memo describes the analysis that I performed.

The RMLD currently has long-term contracts with two renewable energy projects, Swift River and Concord Steam. The Swift River Project consists of several existing, small hydro-electric generators built many years ago located in Massachusetts, and is estimated to provide about 24,000 MWH per year. Concord Steam is a wood-fired cogeneration plant located in Concord, NH. When completed and placed in-service in 2013, RMLD's purchased share of the output of Concord Steam is expected to be about 42,500 MWH annually. The RMLD buys energy, capacity, and RECs from these two projects. Because the RMLD buys the RECs, it can claim that these projects provide renewable energy, consist with RMLB policy and direction given to RMLD staff.

Purchases from these projects cost significantly more than conventional power suppliers. This fact was known when the RMLB and the CAB unanimously voted to authorize the RMLD to execute these contracts. Figure 1 below compares the annual cost of the Swift River and Concord Steam project purchases to an equivalent purchase from conventional, non-renewable resources. Figure 1 also shows the cost of the Swift River and Concord Steam project purchases assuming the RMLD sells the RECs. As shown in Figure 1, if the RMLD keeps the RECs, it will legitimately have a portion of its power supply portfolio from renewable energy resources, albeit at a higher cost than if it has purchased from conventional resources. If the RECs are sold, the RMLD will not have any renewable energy resources in its portfolio but it will still pay considerably more than conventional power supplies. Thus, if the RECs are sold, the RMLD will have unnecessarily increased its power supply costs without any benefit.

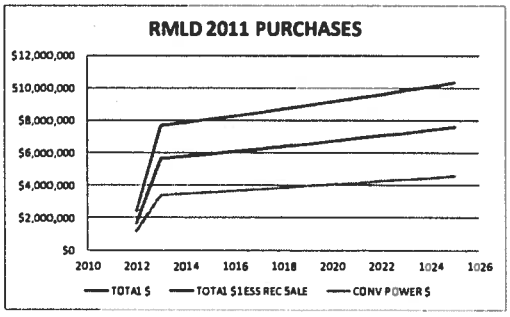
Figure 1

RMLD 2011 RENEWABLE PURCHASES VS CONVENTIONAL POWER SUPPLIES

Assuming no REC price increase due to RPS requirements for Massachusetts municipal systems

YEAR	SWIFT RIVER MWH	CONCORD STEAM MWH	TOTAL MWH	SWIFT RIVER $/MWH	CONCORD STEAM $/MWH	REC PRICE $/MWH	CONV POWER $/MWH	SWIFT RIVER $	CONCORD STEAM $	TOTAL $	REC SALE	TOTAL $ LESS REC SALE	CONV POWER $	DIFFERENCE
2012	24,000	0	24,000	$100.00	$120.00	$30.00	$50.00	$2,400,000	$0	$2,400,000	$720,000	$1,680,000	$1,200,000	$480,000
2013	24,000	42,500	66,500	$102.50	$123.00	$30.75	$51.25	$2,460,000	$5,227,500	$7,687,500	$2,044,875	$5,642,625	$3,408,125	$2,234,500
2014	24,000	42,500	66,500	$105.06	$126.08	$31.52	$52.53	$2,521,500	$5,358,188	$7,879,688	$2,095,997	$5,783,691	$3,493,328	$2,290,363
2015	24,000	42,500	66,500	$107.69	$129.23	$32.31	$53.84	$2,584,538	$5,492,142	$8,076,680	$2,148,397	$5,928,283	$3,580,661	$2,347,622
2016	24,000	42,500	66,500	$110.38	$132.46	$33.11	$55.19	$2,649,151	$5,629,446	$8,278,597	$2,202,107	$6,076,490	$3,670,178	$2,406,312
2017	24,000	42,500	66,500	$113.14	$135.77	$33.94	$56.57	$2,715,380	$5,770,182	$8,485,562	$2,257,159	$6,228,402	$3,761,932	$2,466,470
2018	24,000	42,500	66,500	$115.97	$139.16	$34.79	$57.98	$2,783,264	$5,914,436	$8,697,701	$2,313,588	$6,384,112	$3,855,981	$2,528,132
2019	24,000	42,500	66,500	$118.87	$142.64	$35.66	$59.43	$2,852,846	$6,062,297	$8,915,143	$2,371,428	$6,543,715	$3,952,380	$2,591,335
2020	24,000	42,500	66,500	$121.84	$146.21	$36.55	$60.92	$2,924,167	$6,213,855	$9,138,022	$2,430,714	$6,707,308	$4,051,190	$2,656,118
2021	24,000	42,500	66,500	$124.89	$149.86	$37.47	$62.44	$2,997,271	$6,369,201	$9,366,472	$2,491,482	$6,874,991	$4,152,469	$2,722,521
2022	24,000	42,500	66,500	$128.01	$153.61	$38.40	$64.00	$3,072,203	$6,528,431	$9,600,634	$2,553,769	$7,046,865	$4,256,281	$2,790,584
2023	24,000	42,500	66,500	$131.21	$157.45	$39.36	$65.60	$3,149,008	$6,691,642	$9,840,650	$2,617,613	$7,223,037	$4,362,688	$2,860,349
2024	24,000	42,500	66,500	$134.49	$161.39	$40.35	$67.24	$3,227,733	$6,858,933	$10,086,666	$2,683,053	$7,403,613	$4,471,755	$2,931,858
2025	24,000	42,500	66,500	$137.85	$165.42	$41.36	$68.93	$3,308,427	$7,030,406	$10,338,833	$2,750,130	$7,588,703	$4,583,549	$3,005,154
SUM	336,000	552,500	888,500					$39,645,487	$79,146,659	$118,792,146	$31,680,311	$87,111,835	$52,800,518	$34,311,317
NPV (2011$)								$29,446,852	$57,670,715	$87,117,567	$23,251,734	$63,865,832	$38,752,890	$25,112,942

escalation 2.50%
discount_rate 6.00%



The next step in the analysis is to examine what would happen if the RMLD (and other municipal electric systems in Massachusetts) were mandated to comply with a RPS. When the

RPS were imposed on the Massachusetts investor-owned utilities, advance notice was given, and the percentage of each utility's supply portfolio that must be from renewable energy resources began at a very low level (i.e., 1%) and was gradually increased over time (i.e., at 1% per year). I have assumed a similar approach for any RPS that might be mandated for Massachusetts municipal systems. Specifically, I have assumed that the RPS commences in 2015 at 1% and increases at 1% per year thereafter. Figure 2 below depicts the assumed RPS that would apply to the RMLD in this analysis.

Figure 2

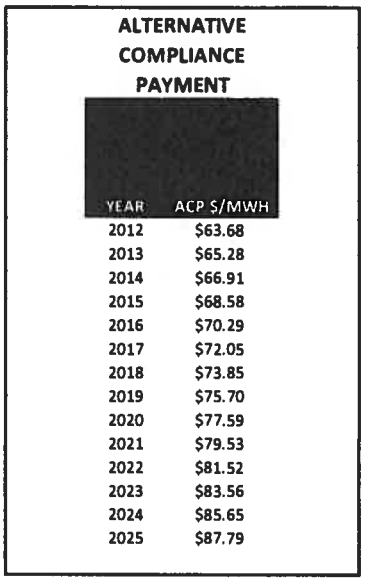
ASSUMED RMLD RPS

YEAR	RMLD MWH	% RPS	MWH RPS
2015	760,563	1.00%	7,606
2016	771,971	2.00%	15,439
2017	783,551	3.00%	23,507
2018	795,304	4.00%	31,812
2019	807,233	5.00%	40,362
2020	819,342	6.00%	49,161
2021	831,632	7.00%	58,214
2022	844,106	8.00%	67,529
2023	856,768	9.00%	77,109
2024	869,620	10.00%	86,962
2025	882,664	11.00%	97,093

Massachusetts RPS also contains a provision that caps the cost of compliance. Entities subject to a RPS can opt to pay an Alternative Compliance Payment ("ACP"), based upon a known rate per MWH. If REC prices, either those embodied in long-term renewable power contracts or market prices for RECs sold separately, exceed the ACP rate, utilities that are subject to the RPS can opt to make a payment to the Commonwealth of Massachusetts Clean Energy Center ("CEC") equal to the ACP rate multiplied by the number of RECs possessed that fall short of the RPS. Thus, the ACP serves as a cap on RPS compliance costs. Utilities will not be required to pay prices for renewable projects such as Cape Wind, which costs about $190 per MWH escalating at a high rate. Figure 3 below shows the ACPs assumed in this analysis. The 2011 ACP is set at $62.13 per MWH.[1] I have assumed that this payment will escalate at 2.5% per year.

[1] The 2011 ACP of $62.13 per MWH is for Massachusetts Class I RECs. The ACP for Class II RECs, such as hydro facilities that were in service prior to 1997, is $25.00 per MWH. For the purposes of this analysis, I have assumed that the Class I ACP applies to all RECs purchased by the RMLD.

Figure 3



To address the claim that RECs prices would dramatically increase when and if Massachusetts municipal systems become subject to mandatory RPS, I initially assumed that REC prices would increase by 50% in 2015, the first year of the assumed RMLD RPS. Under the assumptions described above, I determined the power supply costs for complying with a RPS for two scenarios. The first scenario uses the Swift River and Concord Steam contracts as the compliance strategy, with any available RECs being sold staring in 2012 and revenues from the sale of these RECs used to reduce power supply costs until they are needed for RPS compliance. To the extent that the Swift River / Concord Steam purchases do not provide sufficient RECs to comply with the RPS, additional RECs are purchased separately. Any surplus of RECs is assumed to be sold at the higher REC prices (i.e., plus 50% in this scenario). The second scenario assumes no renewable energy purchases, but complies with the RPS using a strategy of buying RECs as needed. Figure 4 below provides the results of this comparison over the 14 year study period from 2012 to 2025, which are also summarized as follows.

- Costs for Swift River / Concord Steam without REC sale: $118.8 million
- Costs for Swift River / Concord Steam without REC sale: $105.5 million
- Conventional power purchases plus REC purchases: $84.6 million
- Conventional power purchases; no REC purchases: $52.8 million

It's important to put these numbers in perspective. The RMLD total annual power supply costs are currently about $75 million. If this amount were to escalate at 2.5% per year (the same assumption made above), total power supply costs over the 2012 to 2015 period would be approximately $1,270 million. The compliance costs estimated here, while a large dollar amount, represent a small portion of RMLD's total power supply costs.

Figure 4

RMLD RPS COMPLIANCE COSTS

Assuming a 50% REC price increase due to RPS requirements for Massachusetts municipal systems

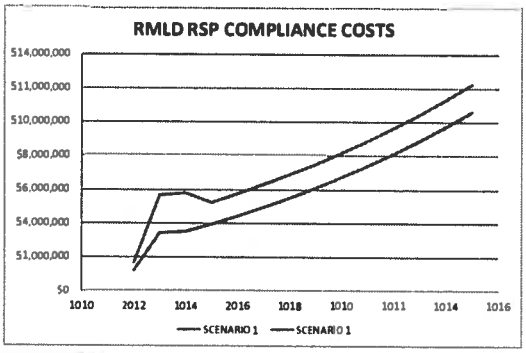
SCENARIO 1: BUY RENEWABLE STARTING IN 2012; SELL RECs UNTIL REQUIRED

YEAR	RPS MWH	MWH PURCHASES	PURCHASED $	RECs PURCHASED / (SOLD)	REC PRICE [1]	REC COST / (REVENUE)	NET COST
2012	0	24,000	$2,400,000	(24,000)	$30.00	(720,000)	$1,680,000
2013	0	66,500	$7,687,500	(66,500)	$30.75	(2,044,875)	$5,642,625
2014	0	66,500	$7,879,688	(66,500)	$31.52	(2,095,997)	$5,783,691
2015	7,606	66,500	$8,076,680	(58,894)	$48.46	(2,854,026)	$5,222,654
2016	15,439	66,500	$8,278,597	(51,061)	$49.67	(2,536,260)	$5,742,337
2017	23,507	66,500	$8,485,562	(42,993)	$50.91	(2,188,943)	$6,296,618
2018	31,812	66,500	$8,697,701	(34,688)	$52.19	(1,810,173)	$6,887,473
2019	40,362	66,500	$8,915,143	(26,138)	$53.49	(1,398,162)	$7,516,981
2020	49,161	66,500	$9,138,022	(17,339)	$54.83	(950,692)	$8,187,330
2021	58,214	66,500	$9,366,472	(8,286)	$56.20	(465,650)	$8,900,822
2022	67,529	66,500	$9,600,634	1,029	$57.60	59,246	$9,659,880
2023	77,109	66,500	$9,840,650	10,609	$59.04	626,404	$10,467,054
2024	86,962	66,500	$10,086,666	20,462	$60.52	1,238,357	$11,325,024
2025	97,093	66,500	$10,338,833	30,593	$62.03	1,897,777	$12,236,610
SUM	554,793	888,500	$118,792,146	(333,707)		($13,143,047)	$105,549,099
NPV (2011$)			$87,117,567			($11,810,838)	$75,306,728

SCENARIO 2: BUY CONVENTIONAL POWER AND RECs AS REQUIRED

YEAR	MWH PURCHASES	CONV POWER $	RECs PURCHASED	REC PURCHASE $	TOTAL COST
2012	24,000	$1,200,000	0	$0.00	$1,200,000
2013	66,500	$3,408,125	0	$0.00	$3,408,125
2014	66,500	$3,493,328	0	$0.00	$3,493,328
2015	66,500	$3,580,661	7,606	$368,569.18	$3,949,231
2016	66,500	$3,670,178	15,439	$766,900.33	$4,437,078
2017	66,500	$3,761,932	23,507	$1,196,795.90	$4,958,728
2018	66,500	$3,855,981	31,812	$1,660,155.38	$5,516,136
2019	66,500	$3,952,380	40,362	$2,158,980.19	$6,111,360
2020	66,500	$4,051,190	49,161	$2,695,378.82	$6,746,568
1021	66,500	$4,152,469	58,214	$3,271,572.19	$7,424,042
2022	66,500	$4,256,281	67,529	$3,889,899.34	$8,146,180
2023	66,500	$4,362,688	77,109	$4,552,823.28	$8,915,511
2024	66,500	$4,471,755	86,962	$5,262,937.24	$9,734,693
2025	66,500	$4,583,549	97,093	$6,022,971.16	$10,606,520
SUM	888,500	$52,800,518	554,793	$31,846,983	$84,647,501
NPV (2011$)		$38,752,890		$10,843,641	$59,596,532

[1] REC price with assumed price jump due to Mass municipal system being subject to RPS capped at ACP



This analysis clearly shows that buying the output of renewable projects now and selling the RECs until needed results in significantly higher costs than a strategy of buying conventional power supplies and buying RECs as needed.

To test the robustness of this conclusion, I analyzed other assumed increases in REC prices once Massachusetts' municipal electric systems become subject to a RPS. Figure 5 below provides a summary of the results. Assumed price increases in these sensitivity analyses ranged from 0% to 200%. In my opinion, such large prices are unlikely to occur because Massachusetts' municipal

electric systems sell less than 10% of the electricity state-wide. I also note that at price increases above 100%, the ACP serves to cap RPS compliance costs. So, while a higher assumed REC price increase does narrow the difference between the two strategies analyzed, the strategy of buying RECs now before they are needed" them and "banking always results in higher RPS compliance costs.

I conclude from this analysis that a strategy of buying renewable power now and selling the RECs until needed will result in higher costs to RMLD customers, and we will not have any true renewable energy in our power supply portfolio. If we want to truly have a renewable energy strategy, as endorsed by the RMLB, we should keep the RECs that the RMLD has purchased from Swift River and Concord Steam.

Figure 5

SUMMARY OF RMLD RPS COMPLIANCE COSTS

SCENARIO 1: BUY RENEWABLE STARTING IN 2012; SELL RECs UNTIL REQUIRED
SCENARIO 2: BUY CONVENTIONAL POWER AND RECs AS REQUIRED

	SUM		NPV (2011$)		% SAVINGS WITH SCENARIO 2	
REC PRICE JUMP	SCENARIO 1	SCENARIO 2	SCENARIO 1	SCENARIO 2	SUM	NPV
0.00%	$108,343,157	$74,031,840	$77,761,593	$52,648,651	46%	48%
25.00%	$106,946,128	$79,339,671	$76,534,161	$56,122,592	35%	36%
50.00%	$105,549,099	$84,647,501	$75,306,728	$59,596,532	25%	26%
75.00%	$104,152,070	$89,955,332	$74,079,296	$63,070,472	16%	17%
100.00%	$102,755,040	$95,263,162	$72,851,863	$66,544,412	8%	9%
125.00%	$102,068,959	$97,869,838	$72,249,071	$68,250,464	4%	6%
150.00%	$102,068,959	$97,869,838	$72,249,071	$68,250,464	4%	6%
175.00%	$102,068,959	$97,869,838	$72,249,071	$68,250,464	4%	6%
200.00%	$102,068,959	$97,869,838	$72,249,071	$68,250,464	4%	6%

SCENARIO 1 - BUYING AND BANKING RECs - IS ALWAYS MORE EXPENSIVE

#2. d.

E-mails to RMLD Board and A. Carakatsane from ME O'Neill dated December 28, 2011

Paula O'Leary

From: Vincent Cameron
Sent: Thursday, December 29, 2011 8:55 AM
To: Paula O'Leary
Subject: FW: Clarification on GM Memo to Board and CAB

From: MaryEllen O'Neill [mailto:maryellenoneill@hotmail.com]
Sent: Wednesday, December 28, 2011 1:07 PM
To: Richard Hahn; Phil Pacino; Gina Snyder; Bob Soli; Atty. Arthur J. Carakatsane
Cc: Vincent Cameron; Jane Parenteau
Subject: Clarification on GM Memo to Board and CAB

Yesterday the RMLD General Manager sent a memo entitled "Discussion of Renewable Energy Certificates" to the Board and the CAB. Certain points need to be clarified so that all the facts are before the Board and the CAB.

In the first paragraph, page one, the GM states "The RMLD has been directed by the RMLD Board to purchase renewable energy ..." The beginning of this sentence should be corrected to read "The RMLD **staff** has been directed by the RMLD Board to purchase renewable energy...." The "RMLD" as an entity is the staff and the Board, there is no "RMLD" that does not include the Board.

In the section "What can you do with a REC?" on page 1, there is no discussion, nor is there any discussion anywhere in the memo, of the consequences that result from selling RECs. If a utility company sells the RECs bundled with a particular energy purchase, the energy associated with that purchase can no longer be represented or reported anywhere to be green/renewable/sustainable (pick your adjective).

In the section "What do other municipal electric utilities do with the RECs they receive?" on page 3, it is stated "I conducted a survey of municipals in Massachusetts concerning whether they have renewable energy in their portfolio and if they do; what do they do with the RECs they receive. .....all responded that they sell their RECs." As noted previously, no claims to having renewable energy in their portfolio can be made by utilities, municipal or not, once they sell the associated RECs.

In the section "How do the RMLD customers feel about the RMLD acquiring renewable energy?" on page 4, it is stated "...the survey did not ask the customers if they were in favor of paying a higher price for renewable energy." This statement/implication is in direct contradiction to the General Manager's remark in the opening paragraph of the memo, in reference to the Swift River and Concord Steam projects, that "The price of these two projects is very competitive and their effect on the RMLD's rate is insignificant." Please note that this competitive price already includes the RECs.

In the paragraph "What can the RMLD do with the revenue if they sell the RECs?" on page 4, it is stated "A case can be made that any revenue from the sale of the RECs should be credited to the Fuel Charge ..." This is misleading because in response this question from a member of the Reading Board of Selectmen at a recent meeting, the General Manager stated that any revenue from the sale of RECs **would go** to the Fuel Charge.

In the final section "Does the RMLD have a Sustainable Energy Policy in place?" on page 5, the second sentence "The RMLD wants to work cooperatively with the RMLD Board to establish a policy ...." should be corrected to read "The RMLD **staff** wants to work cooperatively with the RMLD Board to establish a policy..." Once again, the "RMLD" is the staff and the Board, there is no separate "RMLD" that does not include the Board. It is also the responsibility and the prerogative of the Board to set the RMLD's policies.

Paula O'Leary

From: Vincent Cameron
Sent: Thursday, December 29, 2011 11:11 AM
To: Paula O'Leary
Cc: Jeanne Foti
Subject: FW: RMLD - excerpts on RECs/green power from Green-e, FTC, UCS, EPA, and Wikipedia

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From: MaryEllen O'Neill [mailto:maryellenoneill@hotmail.com]
Sent: Tuesday, December 27, 2011 2:18 PM
To: Richard Hahn; Phil Pacino; Gina Snyder; Bob Soli; Vincent Cameron; Atty. Arthur J. Carakatsane; Jane Parenteau
Cc: John Rogers
Subject: FW: RMLD - excerpts on RECs/green power from Green-e, FTC, UCS, EPA, and Wikipedia

John Rogers, Senior Energy Analyst with the Union of Concerned Scientists, sent me the excerpts and links below to help in understanding the REC issue further. John is also a North Reading resident.

The Center for Resource Solutions, John told me, certifies approximately 70% of the voluntary REC market. The excerpts are from the CRS website, the FTC's Green Guides, the Union of Concerned Scientists' website, and the EPA.

This is for information only.

Center for Resource Solutions (emphasis added): www.green-e.org/getcert_re_stan.shtml#standard

> Regarding double claims in materials published by a generator or other supplier providing renewable MWh to sellers of Green-e Energy Certified products, **counting electricity from which RECs have been sold as 'zero emissions' when reporting electricity sales constitutes a double claim on those RECs**. For example, if a utility sells RECs to another party and also counts the resulting null power as renewable when reporting electricity sales, this is a double claim resulting in RECs that are ineligible for use in a Green-e Energy Certified product. Likewise, there is a double claim if null power is disclosed as zero emissions for the purpose of informing electricity end users of the overall emissions from delivered electricity. This includes annual reports that display emissions from electricity supplied to end users. It is necessary to assign null power the emissions characteristics of system power for the purposes of reporting emissions linked to electricity sales.
>
> ...
>
> Such an interpretation of the requirements of the Green-e Energy National Standard and Code of Conduct are directly in line with the FTC Green Guides, which state on page 223, "If a marketer generates renewable electricity but sells renewable energy certificates for all of that electricity, **it would be deceptive for the marketer to represent, directly or by implication, that it uses renewable energy**."

FTC Green Guide (p. 223, emphasis added):

http://www.ftc.gov/os/fedreg/2010/october/101006greenguidesfrn.pdf

A company places solar panels on its store roof to generate power and advertises that its store is "100% solar-powered." The company, however, sells renewable energy certificates based on the renewable attributes of all the power it generates. Even if the company uses the electricity generated by the solar panels, **it has, by selling renewable energy certificates, transferred the right to characterize that electricity as renewable. The company's claim is therefore deceptive.** It also would be deceptive for this company to advertise that it "hosts a renewable power facility" because reasonable consumers likely would interpret this claim to mean that the company uses renewable energy.

Union of Concerned Scientists: http://www.ucsusa.org/clean_energy/what_you_can_do/buy-green-power.html

How Can You Tell If You're Buying Green Power?
When power flows from the generator to your house, electrons get mixed together on the wires. You can't specify which electrons you get, but you can make sure that your money goes to support clean, sustainable generators, which has the effect of making the whole system "greener". To do this, you will need to look closely at utility marketing claims and materials.

EPA (emphasis added): http://www.epa.gov/greenpower/gpmarket/rec.htm

How do RECs work?
All grid-tied renewable-based electricity generators produce two distinct products:

- Physical electricity
- RECs

At the point of generation, both product components can be sold together or separately, as a bundled or unbundled product. In either case, the renewable generator feeds the physical electricity onto the electricity grid, where it mixes with electricity from other generation sources. Since electrons from all generation sources are indistinguishable, it is impossible to track the physical electrons from a specific point of generation to a specific point of use.
As renewable generators produce electricity, they create one REC for every 1000 kilowatt-hours (or 1 megawatt-hour) of electricity placed on the grid. **If the physical electricity and the associated RECs are sold to separate buyers, the electricity is no longer considered "renewable" or "green." The REC product is what conveys the attributes and benefits of the renewable electricity, not the electricity itself.**
RECs serve the role of laying claim to and accounting for the associated attributes of renewable-based generation. The REC and the associated underlying physical electricity take separate pathways to the point of end use (see diagram). As renewable generators produce electricity, they have a positive impact, reducing the need for fossil fuel-based generation sources to meet consumer demand. **RECs embody these positive environmental impacts and convey these benefits to the REC owner.**

Wikipedia: http://en.wikipedia.org/wiki/Sustainable_energy

Sustainable energy is the provision of energy that meets the needs of the present without compromising the ability of future generations to meet their needs. Sustainable energy sources include all renewable energy sources, such as hydroelectricity, solar energy, wind energy, wave power, geothermal energy, bioenergy, and tidal power. It usually also includes technologies designed to improve energy efficiency.

From: John Rogers
Sent: Wednesday, December 21, 2011 3:24 PM
To: MaryEllen O'Neill

Subject: RE: RMLD

Great talking with you, MaryEllen. And thanks for the memo; that's very helpful to see. I will definitely see about attending on the 5th to weigh in. - John

John Rogers
Senior Energy Analyst
Co-Manager, Energy and Water Initiative
Union of Concerned Scientists
Two Brattle Square, Cambridge, MA 02238
Tel: 617-301-8055
jrogers@ucsusa.org

From: MaryEllen O'Neill [mailto:maryellenoneill@hotmail.com]
Sent: Wednesday, December 21, 2011 2:36 PM
To: John Rogers
Subject: RMLD

Hi John,

Thanks so much for talking with me this morning. Under separate cover, I will send you the memo on RECs that our energy services division (ESD) sent to Vinnie in October. This was the basis for the discussion at a CAB meeting in October and at the Board's Power and Rate Committee meeting in early December.

A good source of information on finances and on kilowatt hour sales by type, by town, etc. can be found on the RMLD website under financial statements. We do operate on a fiscal year, so the June 30, 2011 is a good beginning.

Thanks again. When the agenda for the January 5 meeting is released, I will forward it to you.

Mary Ellen

#3

Minutes of Meeting

CITIZENS' ADVISORY BOARD (CAB)
JOINT MEETING WITH RMLD BOARD of COMMISSIONERS POWER & RATE COMMITTEE
MEETING MINUTES
Regular Session

TIME:	7:00 P.M.
DATE:	Monday, October 24, 2011
PLACE:	Reading Municipal Light Department (RMLD) 230 Ash Street, Reading, MA, GM Conference Room
PRESENT:	CAB: A. Carakatsane, Chairman (Lynnfield), G. Hooper (Wilmington), T. Capobianco (Reading) RMLD Power and Rate Committee: R. Hahn, G. Snyder, R. Soli RMLD Staff: V. Cameron, P. O'Leary, J. Parenteau, W. Seldon
ABSENT:	J. Norton (North Reading), T. Ollila (Wilmington)

1. Call Meeting to Order – A. Carakatsane, Chairman
Chairman Carakatsane called the CAB meeting to order at 7:04 P.M.

Chairman Hahn called the RMLD Board of Commissioners' Power & Rate Committee meeting to order at 7:05 P.M.

2. The Retiring/Expiring of Renewable Energy Certificates (RECs)
Mr. Carakatsane explained that at the last CAB Meeting on October 4, a question was raised about what was happening with the Renewable Energy Certificates (RECs). He added that there was knowledge that the RECs are being let to expire and in the meantime, the Board as a whole has not considered the issue. It was a concern of the CAB, so this meeting was requested to discuss both sides of the issue.

Mr. Seldon wished to modify some comments made at the last meeting. He clarified that the RECs for the Green Choice Program were allowed to expire, because that is how the program was set up. The new RECs that the Department is getting with the Swift River Project are not expired, and are being banked in the RMLD's account.

Mr. Hahn stated that the Board has discussed the issue, but there is no unanimous consensus as to whether the RECs should be retired. The Board asked Energy Services to come in with options, and the Board allowed the RECs to be bought and expired under the Green Choice Program.

Ms. Parenteau added that there has been discussion at this Committee level to develop a sustainability policy and address what to do with RECs in the policy. The Committee has also discussed whether or not to utilize the Swift River RECs to satisfy the Green Choice RECs. A definitive answer has not arisen, but there has been discussion.

Mr. Hahn noted that RECs could be sold on a retroactive basis so no value has been lost by sitting on them.

Ms. Parenteau said that the whole purpose of Green Choice is that the RMLD would go out, purchase RECs, and retire them. Since then the RMLD found a purchase power agreement with Swift River, which is a whole new set of RECs. With the new set of RECs a discussion on what should the policy be related to the RECs and how to move forward is now a pertinent discussion.

Mr. Carakatsane asked how the RECs expire.

Ms. Parenteau passed out an informational page (from mass.gov), which gives a summary and an overview of what is an RPS (Renewable Portfolio Standard), how the RECs work, how does a REC originate, and who keeps track of a REC. It also notes that generation providers who are classified as renewables have the

ability to sell those RECs. She added that within the current contract with Swift River, Swift River generates the RECs, which go onto a GIS system.

Mr. Hahn explained that the GIS system maintains all the generator attributes. When a REC is generated, it is tracked on the GIS system.

Mr. Hooper asked if the Swift River REC would expire.

Ms. Parenteau responded that once the REC is banked, it is the RMLD's, and that it only has a value if someone wants to buy it. The RMLD has complete control over the REC, and it stays in our bank.

Ms. Snyder asked if the Green Choice RECs are retired annually.

Ms. Parenteau responded that the RECs are retired quarterly, and noted that there is a window of time that generators have to put the information into the system in terms of transferring the RECs. For example, from July through December, Quarter 1 RECs can be recorded.

Discussion ensued.

Mr. Capobianco noted that the RMLD is buying energy along with the RECs.

Mr. Hahn responded that was correct, and it goes into the RMLD's energy supply portfolio.

Mr. Carakatsane recalled that the basic idea behind the Green Choice Program was to raise money to invest in renewables.

Mr. Hahn stated the RECs were bought because the RMLD wanted to say that it had some renewable green power.

Mr. Soli asked how residential solar customers could get RECs.

Mr. Hahn explained that a customer would have to be a certain size to go into the GIS system, so a single rooftop solar panel would not be eligible. He added that there are developers who will install residential solar panels, and they will take the RECs and bundle them to be big enough to go into the GIS system.

Ms. Parenteau commented that there are also aggregators that will go up to individual solar customers and will start a contract with them to aggregate their solar to buy RECs. She noted that Jared Carpenter is looking into the possibility of aggregating some of the individual solar customers and working with a third party vendor who has the ability to do it.

Discussion ensued.

Mr. Carakatsane asked if a RPS policy had been developed.

Ms. Parenteau responded that Energy Services had a meeting with the Power and Rate Committee and presented an outline of a sustainability policy.

Mr. Carakatsane asked if an energy portfolio standard and having RECs go hand in hand.

Ms. Parenteau stated that municipal utilities are exempt at the present time.

Mr. Hahn noted that the Board of Commissioners has directed the General Manager and the employees to go find renewable projects, i.e., Concord Steam, Swift River Hydro, solar. Mr. Hahn believes the Board does not want to opt into an RPS, but would rather set their own policy, which is more complicated than it appears.

He added that the initial step was the Green Choice Program: buy the REC and see if there is customer interest; however, there was only tepid interest. He said that the Board must decide what percentage of the portfolio should be renewable taking into consideration that it is a policy issue, a rate issue, and a generation/supply issue.

Mr. Carakatsane asked what is done with the RECs, besides sell them and get cash back to possibly subsidize buying renewables.

Ms. Parenteau responded that if the RECs were sold, the RMLD would not be buying anything that is "green". She added that what makes this "green" is having the certificate attached to the megawatt hours and keeping those together.

Mr. Carakatsane asked if you could use them to buy more "green".

Mr. Seldon explained that one of the options (as listed in a memo attached to the agenda packet) is if all or a portion of the RECs are sold you can use the money for other sustainable projects. He commented that as long as the Board sets the criteria, the Energy Services Division (ESD) could do it.

Ms. Parenteau added that it is really a policy decision.

Mr. Hahn stated that if the RMLD wants to be called "green" then a piece of paper is needed that says it is "green".

Ms. Snyder said that it appears the power generation is completely separated from the "greenness" of it, so you can sell the "greenness".

Mr. Capobianco stated that all we are really talking about is whether or not we call ourselves "green". If we want to say we are "green", the RECs get retired; if we want to take the money and invest it in other renewable projects, then we have to say we are not green.

Mr. Seldon said that if you wanted to take it one step further, we could say that we are going to call so much of the power green and retire a portion of the RECs, and sell the others for investment.

Discussion ensued.

Ms. Parenteau stated in her opinion that it is very important, no matter what option the Board may decide, that it is communicated clearly that if the RECs are sold, that we do not call it "green".

Mr. Soli commented that controlling the peak is important, and whatever the RMLD does, it should be encouraging solar. He added that if it means the RECs should be sold to use that money to build solar, and encourage solar, then that is what is important to him. Saying that you're green or not is not so important to him, but protecting the environment by cutting down CO_2 is more important.

Mr. Hahn offered a different viewpoint. He agreed that controlling the peak load is important, but CO_2 comes from generation throughout the year and is just as damaging in January as in August. He added that solar only has a 16% capacity factor, wind 25%, water 30%, and hydro 30-60%. Per kW of capacity, hydro will avoid most greenhouse gas. He believes they are all important and would not exclude hydro and wind, and solar is the most expensive.

Mr. Carakatsane asked where is the Board and/or Committee in this discussion, policy or thoughts?

Mr. Hahn stated that at the last Committee meeting they had a lot of questions that they were trying to get answered. He believes it comes down to whether the RMLD wants to be called "green" or not, and how

much more above market will we pay? He said they have not come to a quick resolution on this, because it is not a simple solution.

Mr. Hooper said that in his opinion although we are talking about "green", it makes more sense to sell the RECs and invest in more renewable energy.

Mr. Capobianco's opinion was to sell the RECs and use that money to bridge the gap for more renewable energy at a more reasonable cost, and increase the amount of renewable energy within the portfolio. He agrees with Mr. Soli regarding solar panels, however, you don't get as much bang for the buck.

Mr. Hahn stated that if RMLD is not worried about its current portfolio being "green", then don't buy renewables, buy conventional power supply, and take that money that is saved and invest directly in the RMLD's service territory. Mr. Hahn (own opinion) does not believe the RMLD should buy renewable power, sell the RECs, and call itself "green".

Discussion ensued.

Mr. Cameron stated that he doesn't believe a project is dead forever with respect to "green". He believes that at a certain point in time you can stop selling the RECs and retire them. He added that the Department does not have an RPS yet, and thinks the legislature may in the future have municipals come under an RPS. When that happens, municipals will be scrambling. After some research, he found that those municipals that do have renewables are selling them. If the RMLD comes under an RPS, he would hope that the RMLD would have been proactive enough to have enough potentially green power in their portfolio so that if RMLD stops selling RECs, the RMLD would meet that portfolio standard. He believes that it is a question of philosophy, and agrees that Mr. Hahn is correct that if we sell the RECs, we cannot call ourselves "green". He feels that the Department should do a middle of road concept in acquiring green power....sell the RECs and relieve some of the cost. Mr. Cameron added that the RMLD should keep in mind that the RPS is now for the Investor Owned Utilities (IOUs), as the Department adds more potentially green power to the portfolio so that it can be there if and when a RPS is imposed. He does not disagree with Mr. Hahn, but wants to be conscious of the fact that the RMLD should be where it may need to be in the future with respect to an RPS.

Mr. Carakatsane commented that he sees Mr. Hahn's point, however, at the moment he is not against selling a portion of the RECs to try to recoup some of the expenses. He feels there is an obligation to the ratepayers to keep costs down.

Mr. Carakatsane explained that tonight was a gathering of information to discuss the philosophies of both sides. He said that perhaps after the Committee comes up with a draft, both the CAB and the Power & Rate Committee could meet jointly again.

Discussion ensued.

Mr. Soli had a question about the banking of RECs asking if the RECs have a shelf life.

Ms. Parenteau would get the information to Mr. Soli.

Discussion ensued.

Mr. Carakatsane said it sounds as though an annual discussion should take place on what to do with the RECs.

Ms. Parenteau would like to get direction from the Board and the CAB in the form of a policy.

Mr. Hahn said that ESD couldn't move forward until the Board and the CAB decide whether the RMLD is going to be "green" or not.

Ms. Snyder stated that in the conversations she has had with people from the energy office in Rhode Island, they were very interested in solar because of the issue of summer peaks. Ms. Snyder likes Option 2 with some of the RECs being sold and those funds used for municipal buildings getting solar.

Mr. Hahn would like to see the costs in a numerical analysis. If the Department did sell the RECs, how much money would we raise and would it make a difference? He stated that without some kind of numerical analysis, it is just guessing.

Mr. Capobianco stated that one of the reasons for holding on to the RECs is because we may be subject to an RPS in the future, and he wanted to know if he were correct.

Mr. Cameron said that if the RECS could be sold, and then if we do have a RPS apply to us, the Department would stop selling the RECs and then they would count as "green".

Mr. Hahn explained that the Department would buy RECs from Swift River and whatever RECs the RMLD gets in 2012 or 2013, the Department would sell. Then come 2015, the RMLD stops selling them. He said that doesn't mean that those RECs are banked all along the way, and added that RECs can't be sold and banked.

Mr. Capobianco said then why not sell them until the Department is forced to retain them.

Ms. Snyder and Mr. Hahn responded that the Department bought them to be "green".

Mr. Capobianco said they could be sold to subsidize the purchase of more green energy.

Mr. Hahn's question is how much money will be received if they are sold, and how much will the Department be able to do that is "green".

Mr. Carakatsane referred to Table 2 in the memo regarding market value.

Discussion ensued.

Mr. Carakatsane said that he encourages discussion by both Boards and the Committee on this issue, and for the Committee to perhaps develop a draft policy for review. He would welcome a financial analysis.

Mr. Soli commented that the options listed in the memo are good, and added that there should be a 2B. outlining what to do with the money.

Mr. Parenteau stated that ESD would provide more numbers or any other information the Boards would like.

Mr. Hahn noted that if the RMLD decides to sell RECs, he does not see how he could approve buying another Swift River. He feels RMLD would be taking money out of ratepayers' pockets and not be any "greener" than before.

Mr. Carakatsane asked if the Committee had anything on the table such as a meeting in the future on this issue.

Mr. Hahn stated that it will be brought up at their next meeting, and feels the issue should be decided quickly.

Ms. Snyder asked if the joint meeting of the Power and Rate and the Policy Committees was because of this issue.

Mr. Cameron responded that there were still some questions on the policy, so it was not ready to go to the Policy Committee. He feels this issue goes hand in hand with the policy. He said that the policy would have to go back to the Power and Rate Committee again for review, and keep the CAB apprised.

Mr. Hahn asked the CAB what option they liked.

Mr. Carakatsane responded that he likes Option 2, which would include a policy, perhaps a 2B, although he is concerned about not enough opportunity.

Mr. Hahn also wanted to know where those prices are going in the future. He added that the outlook of supply and demand is heavily in favor of supply, and if Cape Wind comes in the state will be awash with RECs. The RECs won't be worth much.

Mr. Carakatsane said he prefers a year-to-year approach, because what may make sense now may not make sense 18 months or two years from now.

Mr. Soli suggested having specific review dates and/or periods in the policy.

3. Adjournment
A motion was made at 8:15 P.M. by Mr. Hooper and seconded by Mr. Capobianco to adjourn the CAB meeting.
Motion carried unanimously 3:0:0.

A motion was made at 8:16 P.M. by Ms. Snyder and seconded by Mr. Soli to adjourn the RMLD Board of Commissioners Power & Rate Committee meeting.
Motion carried unanimously 3:0:0.

Respectfully submitted,

_____
Arthur Carakatsane, Chairman

/pmo
Minutes approved on: _____

#6

Net Metering Rate

a. Residential

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Residential Customer Owned Renewable Generation Under 20 kW

Available in:
Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:
Individual residential customers for all domestic uses. This rate and the Terms and Conditions contained therein govern certain renewable generation facilities located on a residential customer's premise, where the facility is owned or leased by the residential customer, located in the customer premise and used solely for the purpose of the customer's own consumption.

Rates and Billings:
During a billing period the customer will be billed the then applicable rate for all electricity used by the customer according to the RMLD billing meter.

If, during a billing period, the customer's facility feeds back excess electricity onto the RMLD system the rate credited to the customer for excess electricity fed into RMLD's distribution system shall be equal to the then applicable RMLD's Monthly Fuel Charge, which may be adjusted by the Standard Fuel Charge Clause, for the billing period in which the credit was generated.

The RMLD may impose additional Terms and Conditions, as it deems necessary, in its sole discretion, for the protection of its distribution system, service territory, or its customers.

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

Rate Filed:
Effective: On Billing on or After
Filed by: Vincent F. Cameron Jr, General Manager

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Attachment 1
Application for Residential Customer-Owned Generation Under 20 kW

Contact Information
Legal Name and address of Interconnecting Customer applicant
RMLD Customer (print): _____
Name and Title of Individual Filing Application:_____
Address of Interconnection Facility: _____
City: _____ State _____ Zip Code:_____
Telephone (Office): _____ (Cell): _____
Facsimile Number:_____ E-Mail Address: _____

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

Name: _____
Mailing Address: _____
City: _____ State:_____ Zip Code:_____
Telephone (Office): _____ (Cell): _____
Facsimile Number:_____ E-Mail Address: _____

Facility Information

RMLD Account Number (required – on bill)_____
Meter Number(s) (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 ☐ Qualifying Facility:_____
Energy Source:Solar ☐ Wind ☐ Hydro ☐ Natural Gas ☐ Other:
UL1741 Listed? Yes ___ No____

One line diagram attached? Yes___ No ____

Estimated Installation Date: _____Estimated In-Service Date: _____

Rate Filed:
Effective:
Filed by:

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Attachment 1
Application for Residential Customer-Owned Generation Under 20 kW

Customer Signature

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I have reviewed and agree to the RMLD's Tariff MDPU #___ and Terms and Conditions for Commercial Customer-Owned Generation Under 20 kW.

Interconnecting Customer Signature _____Date_____

Title:_____

Please attach manufacturer's document showing UL1741 listing to this document and mail to the following address.

Reading Municipal Light Department

PO Box 150

Reading, Massachusetts 01867-0250

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____

Rate Filed:
Effective:
Filed by:

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Attachment 2
Certificate of Completion for Residential Customer-Owned Generation Under 20 kW
Certificate of Completion

Installation Information
Interconnecting Customer (Print): _____
Title: _____
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: _____

Rate Filed:
Effective:
Filed by:

Town of Reading, Massachusetts
Municipal Light Department

MDPU #

Attachment 2
Certificate of Completion for Residential Customer-Owned Generation
Certificate of Completion

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:

Reading Municipal Light Department
P.O. BOX 150
READING MA 01867

Received by RMLD _____
Date & Initial

Rate Filed:
Effective:
Filed by:

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

RMLD Terms & Conditions for Residential Customer-Owned Generation Under 20 kW

This tariff and the terms and conditions contained herein govern generation facilities located on a residential customer's premises, where such facilities are owned or leased by the residential customer, located on the customer's premises, and used solely for the purpose of the customer's own consumption.

Availability: Net metering is available to generation facilities owned or leased by a residential customer, located on the residential customer's property where such customer currently receives service from RMLD, for the purpose of offsetting all or part of that customer's own electric power requirements and capable of producing no more than 20 KW from customer wned sources ("Facility"). The use of a Facility for providing service to a third party is strictly prohibited. Under no circumstance shall output from the Facility be provided or credited to any third party. The availability of net metering to a residential customer that owns or leases a Facility ("Customer") is subject to the terms and conditions contained in this tariff. RMLD's General Terms and Conditions shall also apply to service under this tariff and Terms and Conditions, where not inconsistent with any specific provision hereof. In its sole discretion, RMLD may limit the cumulative generating capacity of all Facilities in its service territory.

1. Construction of the Facility. The Customer may proceed to construct the Facility once the RMLD has received the completed Attachment 1 - Application for Residential Customer-Owned Generation Under 20 kW and said application has been approved by the RMLD. The Application shall be accompanied by a one-line diagram of the proposed Facility, and the application fee as determined by RMLD. The RMLD will not approve any such application if it determines that the Facility will have an adverse impact on RMLD's system or does not or will not comply with any of RMLD's Terms and Conditions. The Facility's system capacity is subject to RMLD inspection and approval. The Facility shall be designed, constructed and operated in a manner that causes it to meet or exceed all applicable safety and electrical standards, including but not limited to the Massachusetts Building Code, the Massachusetts Department of Public Utilities' regulations, the National Electric Code, the National Electrical Safety Code, Institute of Electronic, and Electrical Engineers (IEEE), United Laboratories (UL) and RMLD's General Terms and Conditions for Service. The Customer is responsible for all permits and regulatory approvals necessary for construction and operation of the Facility.

2. Interconnection and Operation. The Customer may operate Facility and interconnect with the RMLD's system only after the following has occurred:

2.1 Municipal Inspection. Upon completing construction, the Interconnecting Customer will cause the Facility to be inspected or otherwise certified and/or approved by the local wiring inspector.

2.2 Certificate of Completion. The Customer shall return the Certificate of Completion appearing as Attachment 2 – Certification of Completion for Residential Customer-Owned Generation Under 20 kW, to the RMLD, P.O. Box 150, Reading, MA 01867.

2.3 RMLD Right to Inspection. Within ten (10) business days after the receipt of the Certificate of Completion, the RMLD shall, upon reasonable notice, and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been properly installed, and that all electric connections have been made in accordance with the RMLD's requirements including these Terms and Conditions and RMLD's General Terms and Conditions. The RMLD has the right to disconnect the Facility in the event of improper installation or failure to return the Certificate of Completion to the RMLD.

2.4 Interconnection Metering/Wiring. The Customer shall furnish and have installed, if not already in place, the necessary meter socket and wiring in accordance with all applicable safety and electrical standards.

2. Payment of Any Upgrades. The Customer shall be responsible for paying RMLD for any upgrades to RMLD's system necessitated by the connection of the Facility to RMLD's system. The Customer is also responsible for equipment expenses including net meters necessary to accommodate the Facility as set forth herein.

3. Safe Operation and Maintenance. The Customer shall be solely responsible for constructing, operating, maintaining, and repairing the Facility in a safe manner. The RMLD may temporarily disconnect the Facility to facilitate planned or emergency RMLD work. In addition, RMLD may disconnect the Facility from its system at any time that RMLD determines, in its sole discretion, that the safety and reliability of RMLD's system may be compromised by the operation of the Facility. In the event that Facility damages RMLD's system, the Customer shall be solely responsible for all costs associated with the repair and/or replacement of damaged portion of RMLD's system and/or equipment.

4. Metering and Billing. All Facilities constructed, installed, inspected, operated and maintained in accordance with these Terms and Conditions qualify for net metering as follows:

Rate Filed:
Effective:
Filed by:

4.1 RMLD Installs Net Meter. RMLD shall furnish and install a meter capable of net metering within ten (10) business days after the inspection of the Facility set forth in Section 2.3.

5. Limitation of Liability, Indemnification and Insurance. RMLD shall not be liable to the Customer or any other person for any loss, injury, damage, casualty, fees or penalties, asserted on the basis of any theory, arising from, related to or caused by the construction, installation, operation,, maintenance or repair of the Facility, and associated equipment and wiring, except to the extent of its own gross negligence or willful misconduct, but only to the extent permitted by law. Neither by inspection nor non-rejection nor in any other way does RMLD give any warranty, expressed or implied as to the adequacy, safety or other characteristics of any equipment, wiring or devices, installed on the Customer's premises, including the Facility. The Customer shall indemnify and hold harmless RMLD, its board members, managers, employees, agents, consultants, attorneys and assigns from and against any and all losses, claims, damages, costs, demands, fines, judgments, penalties, payments and liabilities, together with any costs and expenses (including attorneys' fees) incurred in connection with, resulting from, relating to or arising out of the construction, operation, maintenance and repair of the Facility, including the Customer's failure to comply with these Terms and Conditions or any abnormality or failure in the operation of the Facility, or any adverse impact to RMLD's system or its other customers. The Customer shall maintain sufficient insurance to cover any damage to RMLD's system caused by the construction, operation, maintenance and repair the Facility and shall name RMLD as additional insured. The Customer shall provide RMLD with proof of satisfactory insurance upon request by RMLD.

6. Termination. Service may be terminated under the following conditions.

6.1 By Interconnecting Customer. The Customer may terminate service under this tariff by providing written notice to RMLD.

6.2 By RMLD. The RMLD may terminate service under this tariff (1) if the Facility fails to operate for any consecutive twelve month period or (2) in the event that the Facility impairs the operation of RMLD's electric distribution system or service to other customers or materially impairs the local circuit and the Customer does not cure the impairment at its sole expense.

7. Assignment/Transfer of Ownership of the Facility. In the event that a transfer of ownership of the Facility to a new Customer occurs, the new Customer must file Attachment 1 – Application for Residential Customer Owned Generation and the application must be approved by RMLD.

8. **Rates and Billing:**
During a billing period, if the customer uses more electricity than its premise feeds back into RMLD's system, then the customer will be billed based on the rate applicable to that customer's class of service under the applicable RMLD tariff.

If, during a billing period, the customer's Facility feeds excess electricity into the RMLD's distribution system the rate credited to the customer for excess energy fed into RMLD's distribution system shall be equal to the amount of kWh fed into the RMLD's distribution system multiplied by the then applicable RMLD's Standard Fuel Charge Clause.

RMLD may impose additional Terms and Conditions, as it deems necessary, in its sole discretion, for the protection of its distribution system, service territory, or its customers.

Rate Filed:
Effective:
Filed by:

#6

Net Metering Rate

b. Commercial

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Commercial/Industrial Customer-Owned Generation

Available in:
Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:
Individual commercial/industrial customers for all commercial uses. This rate and the Terms and Conditions contained therein govern certain renewable generation facilities located on a commercial/industrial customer's premise, where the facility is owned or leased by the commercial/industrial customer, located in the customer premise and used solely for the purpose of the customer's own consumption.

Rates and Billing:
During a billing period the customer will be billed the then applicable rate for all electricity delivered by the RMLD and used by the customer according to the RMLD's billing meter.

If, during a billing period, the customer's Facility feeds excess electricity into the RMLD's distribution system the rate credited to the customer for excess energy fed into RMLD's distribution system shall be equal to the amount of kWh fed into the RMLD's distribution system multiplied by the then applicable RMLD's Standard Fuel Charge Clause, for the billing period in which the credit was generated.

The RMLD may impose additional Terms and Conditions, as it deems necessary, in its sole discretion, for the protection of its distribution system, service territory, or its customers.

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

Rate Filed:
Effective: On Billing on or After
Filed by: Vincent F. Cameron Jr, General Manager

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Attachment 1
Application for Commercial Customer-Owned Generation

Contact Information
Legal Name and address of Interconnecting Customer applicant
RMLD Customer (print): _____
Name and Title of Individual Filing Application:_____
Address of Interconnection Facility: _____
City: _____ State _____ Zip Code:_____
Telephone (Office): _____ (Cell): _____
Facsimile Number:_____ E-Mail Address: _____

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

Name: _____
Mailing Address: _____
City: _____ State:_____ Zip Code:_____
Telephone (Office): _____ (Cell): _____
Facsimile Number:_____ E-Mail Address: _____

Facility Information

RMLD Account Number (required – on bill)_____
Meter Number(s) (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____

One line diagram attached? Yes___ No ____

Estimated Installation Date: _____ Estimated In-Service Date: _____

Rate Filed:
Effective:
Filed by:

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Attachment 1
Application for Commercial Customer-Owned Generation

Customer Signature
I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I have reviewed and agree to the RMLD's Tariff MDPU #___ and Terms and Conditions for Commercial Customer-Owned Generation

Interconnecting Customer Signature _____Date_____

Title:_____

Please attach manufacturer's document showing UL1741 listing to this document and mail to;

Reading Municipal Light Department

Attn: Engineering Department

230 Ash Street

Reading, MA 01867

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____

Rate Filed:
Effective:
Filed by:

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Attachment 2
Certificate of Completion for Commercial Customer-Owned Generation
Certificate of Completion

Installation Information
Interconnecting Customer (Print): _____
Title: _____
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: _____

Rate Filed:
Effective:
Filed by:
1209495_1

Town of Reading, Massachusetts **MDPU #**
Municipal Light Department

Attachment 2
Certificate of Completion for Commercial Customer-Owned Generation
Certificate of Completion

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

Rate Filed:
Effective:
Filed by:
1209495_1

RMLD Terms and Conditions for Commercial Customer-Owned Generation

This tariff and the terms and conditions contained herein govern certain renewable generation facilities located on a commercial customer's (*i.e.*, a customer currently receiving service from RMLD pursuant to one of RMLD's commercial or industrial tariffs) premises, where such facilities are owned or leased by the commercial customer, located on the customer's premises and used solely for the purpose of the customer's own consumption.

Availability: Net metering is available to generation facilities owned or leased by a commercial customer, located on the commercial customer's property where such customer currently receives service from RMLD, for the purpose of offsetting all or part of that customer's own electric power requirements from Customer-Owned Generation ("Facility"). The use of a Facility for providing service to a third party is strictly prohibited. Under no circumstance shall output from the Facility be provided or credited to any third party. The availability of net metering to a commercial customer that owns or leases a Facility ("Customer") is subject to the terms and conditions contained in this tariff. RMLD's General Terms and Conditions shall also apply to service under this tariff and Terms and Conditions, where not inconsistent with any specific provision hereof. In its sole discretion, RMLD may limit the cumulative generating capacity of all Facilities in its service territory.

1. Construction of the Facility. The Customer may proceed to construct the Facility once the RMLD has received the completed Attachment 1 - Application for Commercial Customer-Owned Generation and said application has been approved by the RMLD. The Application shall be accompanied by a one-line diagram of the proposed Facility, and the application fee as determined by RMLD. The RMLD will not approve any such application if it determines that the Facility will have an adverse impact on RMLD's system or does not or will not comply with any of RMLD's Terms and Conditions. The Facility's system capacity is subject to RMLD inspection and approval. The Facility shall be designed, constructed and operated in a manner that causes it to meet or exceed all applicable safety and electrical standards, including but not limited to the Massachusetts Building Code, the Massachusetts Department of Public Utilities' regulations, the National Electric Code, the National Electrical Safety Code, IEEE, UL and RMLD's General Terms and Conditions for Service. The Customer is responsible for all permits and regulatory approvals necessary for construction and operation of the Facility.

2. Interconnection and Operation. The Customer may operate Facility and interconnect with the RMLD's system only after the following has occurred:

2.1 Municipal Inspection. Upon completing construction, the Interconnecting Customer will cause the Facility to be inspected or otherwise certified and/or approved by the local wiring inspector.

2.2 Certificate of Completion. The Customer shall return the Certificate of Completion appearing as Attachment 2 – Certification of Completion for Commercial Customer-Owned Generation, to the RMLD, P.O. Box 150, Reading, MA 01867-0250.

2.3 RMLD Right to Inspection. Within ten (10) business days after the receipt of the Certificate of Completion, the RMLD shall, upon reasonable notice, and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been properly installed, and that all electric connections have been made in accordance with the RMLD's requirements including these Terms and Conditions and RMLD's General Terms and Conditions. The RMLD has the right to disconnect the Facility in the event of improper installation or failure to return the Certificate of Completion to the RMLD.

2.4 Interconnection Metering/Wiring. The Customer shall furnish and have installed, if not already in place, the necessary meter socket and wiring in accordance with all applicable safety and electrical standards

2.5 Payment of Any Upgrades. The Customer shall be responsible for paying RMLD for any upgrades to RMLD's system necessitated by the connection of the Facility to RMLD's system. The Customer is also responsible for equipment expenses including net meters necessary to accommodate the Facility as set forth herein.

3. Safe Operation and Maintenance. The Customer shall be solely responsible for constructing, operating, maintaining, and repairing the Facility in a safe manner. The RMLD may temporarily disconnect the Facility to facilitate planned or emergency RMLD work. In addition, RMLD may disconnect the Facility from its system at any time that RMLD determines, in its sole discretion, that the safety and reliability of RMLD's system may be compromised by the operation of the Facility. In the event that Facility damages RMLD's system, the Customer shall be solely responsible for all costs associated with the repair and/or replacement of damaged portion of RMLD's system and/or equipment.

4. Metering and Billing. All Facilities constructed, installed, inspected, operated and maintained in accordance with these Terms and Conditions qualify for net metering as follows:

Rate Filed:
Effective:
Filed by:

4.1 RMLD Installs Net Meter. RMLD shall furnish and install a meter capable of net metering within ten (10) business days after the inspection of the Facility set forth in Section 2.3, above, if such meter is not in place, at Customer's expense.

5. Limitation of Liability, Indemnification and Insurance. RMLD shall not be liable to the Customer or any other person for any loss, injury, damage, casualty, fees or penalties, asserted on the basis of any theory, arising from, related to or caused by the construction, installation, operation,, maintenance or repair of the Facility, and associated equipment and wiring, except to the extent of its own gross negligence or willful misconduct, but only to the extent permitted by law. Neither by inspection nor non-rejection nor in any other way does RMLD give any warranty, expressed or implied as to the adequacy, safety or other characteristics of any equipment, wiring or devices, installed on the Customer's premises, including the Facility. The Customer shall indemnify and hold harmless RMLD, its board members, managers, employees, agents, consultants, attorneys and assigns from and against any and all losses, claims, damages, costs, demands, fines, judgments, penalties, payments and liabilities, together with any costs and expenses (including attorneys' fees) incurred in connection with, resulting from, relating to or arising out of the construction, operation, maintenance and repair of the Facility, including the Customer's failure to comply with these Terms and Conditions or any abnormality or failure in the operation of the Facility, or any adverse impact to RMLD's system or its other customers. The Customer shall maintain sufficient insurance to cover any damage to RMLD's system caused by the construction, operation, maintenance and repair the Facility and shall name RMLD as additional insured. The Customer shall provide RMLD with proof of satisfactory insurance upon request by RMLD.

6. Termination. Service may be terminated under the following conditions.

6.1 By Interconnecting Customer. The Customer may terminate service under this tariff by providing written notice to RMLD.

6.2 By RMLD. The RMLD may terminate service under this tariff (1) if the Facility fails to operate for any consecutive twelve month period or (2) in the event that the Facility impairs the operation of RMLD's electric distribution system or service to other customers or materially impairs the local circuit and the Customer does not cure the impairment at its sole expense.

7. Assignment/Transfer of Ownership of the Facility. In the event that a transfer of ownership of the Facility to a new Customer occurs, the new Customer must file Attachment 1 – Application for Commercial Customer Owned Generation and the application has been approved by RMLD.

8. **Rates and Billing:**
During a billing period the customer will be billed the then applicable rate for all electricity delivered by the RMLD and used by the customer according to the RMLD's billing meter.

If, during a billing period, the customer's Facility feeds excess electricity into the RMLD's distribution system the rate credited to the customer for excess energy fed into RMLD's distribution system shall be equal to the amount of kWh fed into the RMLD's distribution system multiplied by the then applicable RMLD's Standard Fuel Charge Clause, for the billing period in which the credit was generated.

The RMLD may impose additional Terms and Conditions, as it deems necessary, in its sole discretion, for the protection of its distribution system, service territory, or its customers.

Rate Filed:
Effective:
Filed by:

#7

CAB Rotation Schedule

(for RMLD Board Meetings)

January 5, 2012

2012 CAB MEMBER ROTATION SCHEDULE

for

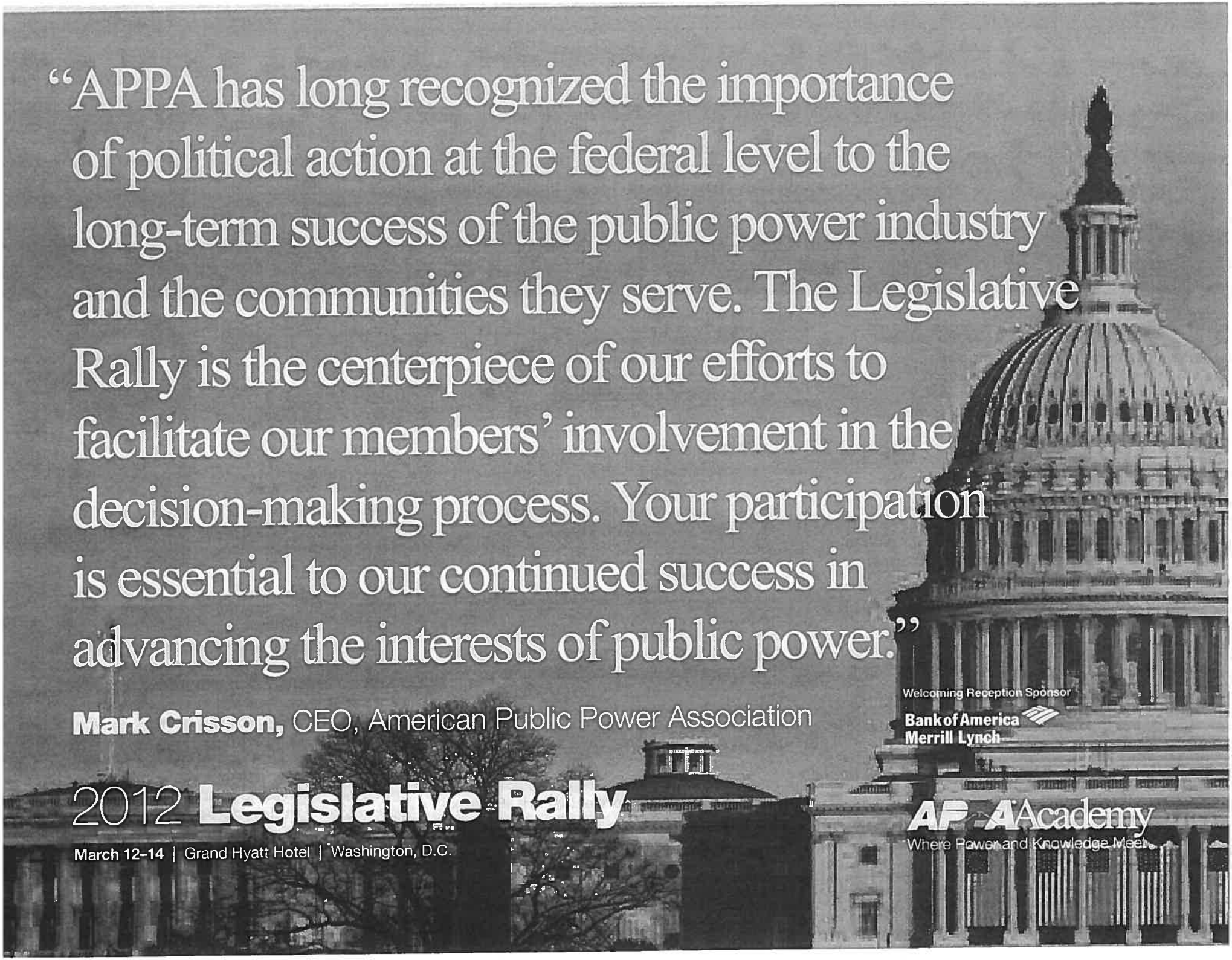
attendance at the RMLD Board Meetings (usually 4th Wednesday of the month)

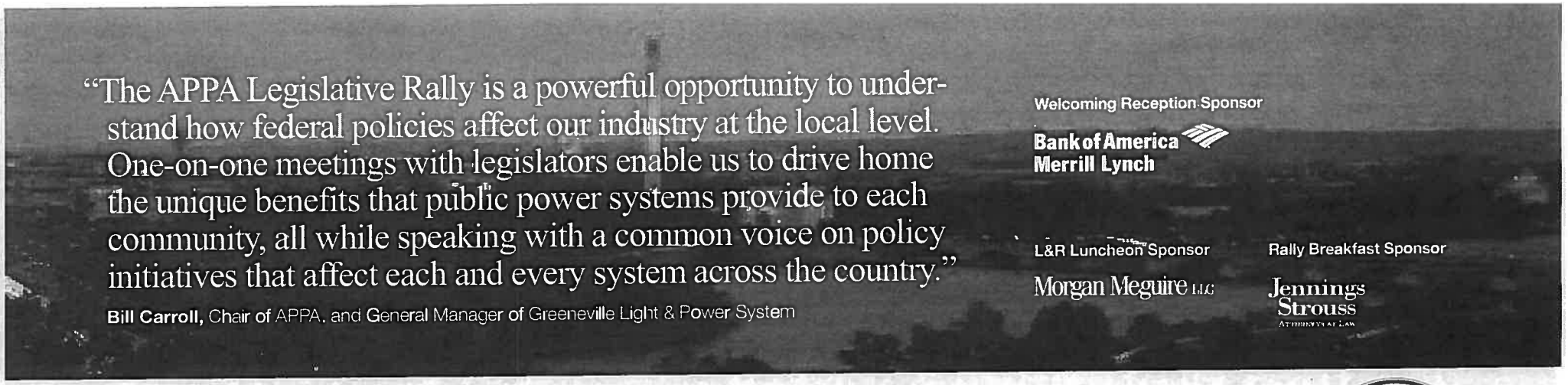
January 25, 2012	**July**
February	**August**
March	**September**
April	**October**
May	**November**
June	**December**

#8

Other Items for Discussion

2012 Legislative Rally


"APPA has long recognized the importance of political action at the federal level to the long-term success of the public power industry and the communities they serve. The Legislative Rally is the centerpiece of our efforts to facilitate our members' involvement in the decision-making process. Your participation is essential to our continued success in advancing the interests of public power."
Mark Crisson, CEO, American Public Power Association
Welcoming Reception Sponsor
Bank of America
Merrill Lynch
2012 Legislative Rally
March 12–14 | Grand Hyatt Hotel | Washington, D.C.
APPA Academy
Where Power and Knowledge Meet



"The APPA Legislative Rally is a powerful opportunity to understand how federal policies affect our industry at the local level. One-on-one meetings with legislators enable us to drive home the unique benefits that public power systems provide to each community, all while speaking with a common voice on policy initiatives that affect each and every system across the country."

Bill Carroll, Chair of APPA, and General Manager of Greeneville Light & Power System

Key federal policy issues that will be discussed at the Rally include:

- Maintaining tax-exempt financing for state and local governments, including public power utilities, in ongoing federal budget and tax reform negotiations;
- Maintaining cost-based rates for the federal Power Marketing Administrations in the ongoing federal budget negotiations;
- Streamlining and harmonizing the plethora of Environmental Protection Agency (EPA) regulations impacting public power generation in order to maintain a diverse portfolio of fuel options;
- Increasing oversight of the wholesale electricity markets and informing their design and operation to benefit consumers;
- Addressing cyber-security by ensuring that any legislation is built on the current NERC/FERC framework, recognizing the current cyber-security efforts that are underway, and enhancing communication between the federal government and the electric utility industry; and
- Expanding comparable incentives to public power utilities to help consumer-owned utilities build and own more renewable and clean energy projects should an energy tax package be considered by Congress in 2012.

APPA provides the resources, the connections, and the collective power to help public power communities have an impact in Washington, D.C.

Preliminary Program

Monday, March 12

Public power advocates gather at the Grand Hyatt Hotel for leadership meetings, pre-conference seminars, and the welcoming reception.

Tuesday, March 13

The Legislative and Resolutions (L&R) Committee meeting in the morning will review APPA's federal legislative agenda followed by a discussion of new proposed policies, and finally adoption of these policies. This is followed by the L&R Committee luncheon, with a keynote speaker who will focus on the issues of the day and political situation in our nation's capital. In the afternoon, attendees will meet with their congressional delegations on Capitol Hill and attend policy briefings on specific issues hosted by APPA at the Grand Hyatt Hotel. In the evening, PowerPAC contributors enjoy a reception to thank them for their help with APPA's political action committee.

Wednesday, March 14

Following the Legislative Rally breakfast, public power advocates travel to Capitol Hill for meetings with their congressional delegations.

About the APPA Academy

The 2012 APPA Legislative Rally is part of the APPA Academy, public power's complete resource for professional education. In addition, participants in a Pre-Rally Seminar can earn continuing education units. Through a variety of delivery methods, the APPA Academy helps electric utility employees stay abreast of rapidly moving industry technologies and regulatory requirements while providing an opportunity for them to meet their yearly training goals and certification requirements in formats and prices ranges that suit their needs.

For full details on the APPA Academy and its offerings, please visit www.APPAAcademy.org.

Highlights

Meet Your Representatives on Capitol Hill

As a public power expert, this is your opportunity to educate your Senators and Representatives on what is happening at your utility. This is a job that only you can do!

Legislative & Resolutions Committee

Be a part of the discussion and help us decide APPA's policy positions on key issues that are important to public power and hear from a keynote speaker at the luncheon about the state of play in Congress.

Legislative Rally Breakfast

This always-popular breakfast meeting is your chance to hear the latest happenings from political prognosticators or Members of Congress. APPA's Government Relations team will present our legislative policies and priorities in a fun and humorous manner.

Pre-Rally Seminars

Overview of Federal Budget Process: Budgets, Appropriations, Deficits and Taxes

Monday, March 12, 2011—8:30AM–12:00PM

Congress has been focused on the deficit and the federal budget process for much of the last year. Learn about the budget process, how it's supposed to work, and what really happens. Gain insight into how taxes and incentives factor into the overall process.

Speakers: *TBD*

Understanding the Practical Implications Of the New EPA Regulations

Monday, March 12, 2011—1:30PM–5:00PM

Come learn about the potential technical, operational and financial implications resulting from the variety of EPA regulations expected between 2012 and 2019.

Speakers: Theresa Pugh, *Director, Environmental Services, and* ***Alex Hofmann,*** *Senior Energy & Environmental Services Engineer, American Public Power Association, Washington, D.C.*

More About the L&R Luncheon

Reserve a table at the Tuesday luncheon and ensure that your attendees and guests get the most value possible out of this annual event. Benefits of reserved tables:

- Preferential seating in the banquet hall.
- Three additional tickets to the luncheon (individual tickets cost $55.00).
- Signage and advance notice of table location to ensure that attendees and invited guests are seated together.
- Greater visibility for guests who may be trying to locate you.

Cost

APPA Members	$300*
Non-members	$600*

Please note the number of tables you would like to reserve on the registration form and return it to APPA.

APPA maintains the right to designate any APPA meeting or session as open only to APPA regular Members (public power systems, rural electric cooperatives, joint action agencies, state/regional associations).

*Counsel has advised that under House and Senate ethics rules, only APPA may extend invitations to House or Senate Members or staff to attend this event. Individual members of APPA are not permitted to extend invitations. Violations of these rules may result in criminal liability.

**The APPA Rally is not open to investor-owned utilities or other privately-owned energy companies.

Make Your Views Known on Capitol Hill

We need to ensure that Congress hears the voice of the public power community! This is your opportunity to influence policy makers who can make a difference. As a public power advocate, you are in the best position to talk to Congress about the direct impact of federal action at the local level. Our coordinated outreach efforts are strengthened because you represent not only your public power community, but also 46 million other Americans the benefit from being served by public power.

Target Audience

Public power professionals who want to get involved and advocate on behalf of their communities and the industry.

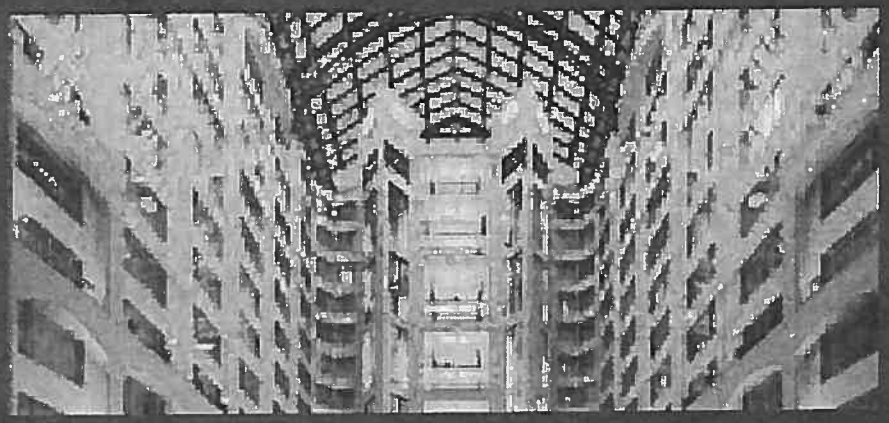
Hotel Accommodations/Reservations And Important Notice about Cancellations

The 2012 Legislative Rally will be held from March 12-14, at the Grand Hyatt Washington, 1000 H Street, NW, Washington, D.C., 20001. To ensure the APPA discounted room rate of $299 per night (single/double, excluding D.C. taxes of 14.5%), please call the reservations center at 1-888/421-1442 after **November 1, 2011,** when the APPA sleeping room block will be open to receive reservations. When making a reservation, please request the APPA Legislative Conference.

Hotel Reservation Policy: Very Important, Please Read

The cut-off date to receive the group rate for the Legislative Rally is February 10. After February 10, 2011, you may be charge a higher rate based on availability. APPA will not be able to make any adjustments to your rate after February 10, 2011. **All reservations require a non-refundable room deposit equal to one night's stay plus applicable taxes that will be charged to your credit card at the time your reservation is made. If reservations are cancelled or changed within seven days of arrival the credit card will be charged a total of two nights (one night in addition to the first night's deposit). Please keep in mind that cancelled reservations that are not resold may become a financial liability for APPA, so please make your reservations thoughtfully.** Check in time is 3:00 p.m. and check out is 12:00 p.m. Please contact the APPA meeting services department at 202-467-2938 if you need additional assistance with housing.

More about the Grand Hyatt Washington



Location, Location, Location! The Grand Hyatt Washington is located in the fastest growing part of downtown Washington, D.C.: Penn Quarter, which is in close proximity to 100+ restaurants and bars. The hotel is the ideal spot to explore all that our nation's capital has to offer and is within walking distance or Metro stops away from several local attractions including the National Mall, Smithsonian Museums, the White House, the U.S. Capitol, historic monuments, the Verizon Center and Gallery Place shopping and entertainment complex.

Travel
Travel arrangements and costs are the responsibility of the meeting participants. APPA will not reimburse for changes in travel expenditures regardless of the cause, including the cancellation of a course, meeting or workshop.

Cancellations/ NoShows/Refunds/ Substitutions
Registrants who cancel in writing **on or before March 5, 2012,** are entitled to a refund of their registration fee, minus a $50 cancellation fee. Registrants who cancel after March 5, will not receive a refund. However, we will accept attendee substitutions for the 2012 APPA Legislative Rally only. **Registrants and no-shows who do not cancel on or before March 5, are responsible for the full registration fee and are not entitled to a refund of their registration fee.** Cancellations must be made in writing and mailed, faxed, or e-mailed to:

Janaya Ramdat
Meetings Coordinator,
American Public Power Association
1875 Connecticut Ave., NW, Suite 1200
Washington, D.C. 20009-5715
fax: 202/495-7484
e-mail:JRamdat@PublicPower.org.

Photographs
By registering for this meeting, I authorize the American Public Power Association (APPA) to photograph me at this event and use such photographs in APPA marketing pieces (both electronic and print). I understand that I will not be paid for giving this consent.

2012 APPA Legislative Rally Registration Form

March 12–14, 2012 | Grand Hyatt Washington
Washington, D.C.

Attendee Information (Please print clearly. Reproduce form for additional registrants. We cannot accept registration via telephone.)

Name _____ Title _____

Organization _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

E-mail _____

Emergency Contact _____ Phone _____ E-mail _____

☐ Check here if you have a disability and may require special accommodations

Registration Please check the appropriate box:

☐ **Legislative Rally**–ID 3801

Online, Faxed or Mailed Registration

☐ APPA Member	$245
☐ Nonmember	$490

Half-Day Pre-Rally Seminars

☐ Overview of Federal Budget Process: Budgets, Appropriations, Deficits and Taxes (8:30 a.m.–Noon)–ID 3869

☐ Understanding the Practical Implications of New EPA Regulations (1:30–5 p.m.)–ID 3870

Payment Received On/Before 2/17

☐ APPA Member	$275
☐ Nonmember	$550

Payment Received After 2/17

☐ APPA Member	$325
☐ Nonmember	$600

Program Contact: Joy Ditto at JDitto@PublicPower.org, 202/467-2954; Joe Nipper at JNipper@PublicPower.org, 202/467-2931

Hotel Contact: Monique McCaw at MMcCaw@PubliPower.org, 202/467-2938
Reservations: 1-888-421-1442, mention APPA Legislative Rally
APPA Room Block Opens on November 1, 2011

L&R Luncheon Table Contact: Forrest Sholars at FSholars@PublicPower.org, 202/467-2959

Please check box below if you plan to attend the following events, which are included in your registration:

Monday, March 12

☐ Welcoming Reception, 5:30 p.m.–ID 3804

Tuesday, March 13

☐ Legislative & Resolutions Committee Meeting, 9:00 a.m.–ID 3805

☐ Legislative & Resolutions Committee Luncheon, Noon–ID 3806

☐ I would like to purchase_____ additional luncheon ticket(s) at $55.00 per person–ID 3807

Wednesday, March 14

☐ Legislative Breakfast and Rally 7:30 a.m.–ID 3808

L&R Luncheon Table Reservations

Table Reservations–ID 3809

_____
Number of Table(s)

☐ APPA Member	$300 per table
☐ Nonmember	$600 per table

Benefits of reserved tables:

- Preferential seating in the banquet hall
- Three additional tickets to the luncheon
- Signage and advance notice of table location

_____
Organization Name for Table Signage

Confirmations/Name Badges

Please send my confirmation via ☐ Mail or ☐ E-mail to:

_____

Pick up registration materials and badges at the APPA registration desk at the Grand Hyatt Washington.

Payment Method

All fees are payable in U.S. currency. Nonmembers are required to include payment or provide credit card information when registering.

☐ Enclosed is my check made payable to: American Public Power Association

☐ Bill me (members only) Purchase Order# (optional) _____

☐ Wire/ACH Payments contact: Katrina Reynolds-Taylor, 202/467-2962

☐ Please charge the following:
☐ MasterCard ☐ VISA ☐ American Express ☐ Discover

Name as It Appears on Card _____ Name of Attendee _____

Credit Card Number _____ Expiration Date _____

$ Amount to Charge to Card _____ Cardholder Signature _____

Mail completed form and full payment to our bank lock box:
American Public Power Association • P.O. Box 418617 • Boston, MA 02241-8617

Register online at www.PublicPower.org/LegislativeRally

Registration Questions: 202/467-2941 • Fax: 202/495-7484