

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6958

Petition and tariff filing of Green Mountain)
Power Corporation re: proposed rate design)
changes to take effect January 1, 2005)

PREFILED TESTIMONY OF
WILLIAM STEINHURST
ON BEHALF OF
THE CONSERVATION LAW FOUNDATION

August 31, 2004

Summary: Dr. Steinhurst's testimony reviews several concerns regarding Green Mountain Power's proposed commercial and industrial tariff designs and recommends changes that should be made to the proposed rate design.

1 Prefiled Testimony
2 of
3 William Steinhurst
4
5

6 Q. Please state your name and occupation.

7 A. My name is William Steinhurst, and I am Senior Consultant with Synapse Energy
8 Economics (Synapse). My business address is 45 State Street, #394, Montpelier,
9 Vermont 05602
10

11 Q. On whose behalf did you prepare this prefiled testimony?

12 A: I prepared this testimony on behalf of the Conservation Law Foundation (CLF).
13 On behalf of AARP, I have also prepared separate and independent prefiled testimony on
14 related but distinct issues in this proceeding. However, a few of the issues I raise in my
15 testimony on behalf of AARP are also of concern to CLF. I point out those cross over
16 issues below.
17

18 Q. Have you testified previously before this Board?

19 A: Yes, I have testified before the Vermont Public Service Board in numerous
20 proceedings. A resume, including a list of dockets in which I have testified, is attached to
21 this testimony as Exh. CLF/WS-1.
22

23 Q. Please summarize your testimony.

24 A. On March 26, 2004, Green Mountain Power (GMP, the Company) filed testimony
25 by witnesses James Brown and David Martin, along with spreadsheets reflecting a Fully
26 Allocated Class Cost of Service Study (FACCSS) and proposed tariffs and tariff riders,
27 many of them new. On July 2, 2004, the Company filed revised testimony and exhibits. I
28 have reviewed those revised materials and have identified a number of tariff design

1 choices for the commercial and industrial classes that are inappropriate. In the rest of my
2 testimony I will explain these concerns and how those inappropriate methodologies and
3 rate design choices should be corrected. I recommend that the Board require GMP to
4 implement those changes in new tariffs and to make a compliance filing reflecting them
5 before implementing any rate design changes.

6
7 **Concerns with GMP's Fully Allocated Class Cost of Service Study**

8 Q. Do you have any concerns about GMP's proposed FACCSS?

9 A. Yes, but they are not the subject of this testimony. My concerns about the
10 FACCSS are discussed in my prefiled testimony on behalf of AARP in this proceeding,
11 and I do not address those concerns in this prefiled testimony for CLF.

12
13 **Concerns with GMP's Tariff Designs**

14 Q. What is the nature and purpose of public utility tariff design?

15 A. Once cost allocation has ensured fair division of costs among customers in
16 customer classes in a manner that can yield the appropriate total revenue, tariff designs
17 should be practical, unambiguous, stable over time, without undue discrimination, and
18 provide efficient price signals.

19
20 Q. What is the first concern you have with GMP's tariff designs on behalf of CLF?

21 A. I am concerned that GMP's proposed new tariff design for on-peak energy
22 charges in Rate 63 and the Transmission Service rate are an inappropriate choice, both
23 for the expressed reasons given by GMP and on their merits. In these two tariffs, GMP
24 proposes to charge a lower rate for energy during the on-peak hours once a given
25 customer has consumed a certain amount of on-peak energy. The discounted rate
26 commences once the customer has consumed enough on-peak energy in a given month to
27 achieve a 65% load factor for the on-peak hours of that month. Any energy consumed in

1 excess of that amount will be billed a reduced rate, 0.7 cents/kWh lower.
2

3 Q. How does GMP justify that discounted rate?

4 A. GMP calls this new feature an "efficiency block" and states that it will encourage
5 customers to "increase the customer's load factor by controlling maximum on-peak
6 demand and therefore to increase the efficiency of energy usage." Brown pft. at 5. The
7 size of the discount is 0.7 cents/kWh, which I am told by the Company allows GMP to
8 recover the market price of ICAP in the initial portion of the on-peak usage and that this
9 makes the rate design change revenue neutral. GMP Witness Brown, informal discovery
10 communication, 8/3/2004.
11

12 Q. Do you agree?

13 A. No, I do not. I appreciate GMP's effort to make this change revenue neutral, but
14 fail to see how this tariff design encourages efficiency. I also doubt that it would, in
15 practice, control maximum on-peak demand.

16 First of all, even if it were effective as proposed, this tariff design addresses peak
17 load, not total energy use. More importantly, it is hard to imagine a customer who would
18 understand and implement the logic necessary for this new tariff design to lead to any
19 meaningful reduction in peak demand. Such a hypothetical customer would need to argue
20 as follows: "If I can anticipate and reduce my maximum load during the on-peak hours of
21 a month, I can make the discounted rate apply to a slightly larger portion of my on-peak
22 energy use." That might seem to be a useful incentive, but unfortunately, the customer
23 will need to enforce the same self-discipline in every on-peak hour for the entire month
24 to achieve the desired result. Much more likely, is that a customer would see that a peak
25 demand had been set for the on-peak hours at some level during the month so far and
26 simply see this provision as a discount for greater energy use during the rest of the
27 month.

1 In effect, then, this "efficiency block" is simply a promotional rate—a slightly
2 complicated form of quantity discount—that should not be allowed. In fact, if promoting
3 efficiency is the goal, it would make more sense to charge a higher energy rate for on-
4 peak consumption over a certain number of kWh. If peak reduction is the goal, it would
5 make more sense to apply the dollars to be collected from the initial on-peak block as an
6 adder to the on-peak demand Investment Charge, which in this proposal is actually cut
7 from \$13.25 to \$12.52 per kW-month on Rate 63 and from \$13.17 per kW-month to
8 \$7.09 per kW-month on the Transmission Service Rate.

9 The above changes are ill-advised in that they alter clear signals to get off peak
10 and instead send customers a mixed message. The new design is (1) much more
11 complicated, which interferes with efficient signal, and (2) is premised on an apparent
12 desire to have a high load factor on peak, a goal for which there is no apparent
13 justification. What's important is to get consumption *off* peak. The appropriate and tried
14 method of doing so is to send signals to large customers via demand charges; this design
15 reverses that practice. Rochester Electric's residential demand rate for large customers is
16 an example of a successful tariff design targeting peak load reductions.

17 I recommend that the Board reject the "efficiency block" design and direct the
18 Company to file tariffs that eliminate the on-peak Investment Charge reductions.

19
20 Q. Do you have another concern about the proposed design of Rate 63 and the Transmission
21 Service Rate?

22 | A. Yes. A new feature of these rates is the option for a customer-specific minimum
23 charge. This may be a good thing if used for seasonal or intermittent loads.
24 Unfortunately, neither we nor the customers can tell when or how it would be applied, to
25 whom it would be applied, or in what amounts it would be applied. The charge could be
26 applied counter-productively if it is used to discourage co-generators in an arbitrary
27 manner or in a manner that leaves potential co-generators unable to know in advance

1 what charges they would face. The proposed tariff provision is also vague. In my
2 experience with tariff design in Vermont I do not recall ever seeing a tariff with such
3 ambiguity as to how, to whom and when the proposed rate would apply or what the
4 amount of the charge would be. The Company also has failed to explain why such a
5 change is warranted. It is inappropriate to alter a tariff in a way that is not justified and
6 does not provide notice of the charge with enough particularity that the customer (and
7 regulators) will know what it is.¹

Formatted: Font: Italic

8 I recommend the Board reject this provision.
9

10 Q. Do you have any concerns with the various "riders" proposed in this proceeding by the
11 Company?

12 A. Yes. There are several new riders dealing with various approaches to load control
13 or interruption of large commercial loads for system reliability or market price reasons.
14 All of them make the basic error of trying to purchase load reductions from customers by
15 tinkering with rate. Instead, the Company should pursue these aims by entering into two
16 separate transactions—one where the customer buys electricity from the Company, and
17 one where the customer sells a service to the utility. Payment for that service should be
18 provided in the form of a (refundable) bill credit. To get the size of such credits right, the
19 Company merely needs to assess the supply side resource being avoided, a routine
20 computation. However, accurately translating that value into a change in a multi-part rate
21 structure is cumbersome and inaccurate compared to offering a specific credit based on
22 that avoided cost computation. There needs to be clear and reliable connections between
23 the change in the monetary transaction between the Company and the customer, the

¹ A charge which is not stated with specificity in the tariff cannot be deemed to be understandable, one of the standard criteria for rate structures. Bonbright, *Principles of Public Utility Rates*, Columbia U.P., 1961, at 291. A charge which is not warranted in the sense that it has not been supported by a cost study underlain by reasonable and necessary expenses should not be considered just and reasonable as required by Vermont law. 30 V.S.A. Sec. 218(a).

1 savings that would result, and the credit the customer would receive.

2 I recommend the Board require the Company to redesign all of the proposed
3 Riders by explicitly calculating the value of the avoided resource and offering a credit
4 reflecting that value.

5
6 Q. Do you have any concerns about the elimination of Interruptible Rate 02 for Controlled
7 Water Heating?

8 A. Yes. The Company explains that the ripple control equipment utilized in
9 delivering this rate is obsolete and hard to maintain. As one who watched this program at
10 its inception in (I believe) the mid-1980s, I am not surprised that the technology is
11 obsolete and that replacement parts are difficult to obtain. In fact, the rate has been closed
12 since at least Nov. 15, 1999.

13 With that said, residential water heater load control continues to have the
14 potential to benefit the Company and its ratepayers now. I recommend that the Board
15 require the Company to identify and analyze currently available and about to be
16 commercialized technologies for controlled interruption of small loads, both residential
17 and commercial, provide a report to the Board and the Parties in this proceeding with
18 work papers detailing the results of its analysis, and propose to the Board (with notice to
19 the Parties in this proceeding) a new program or programs, including tariffs as needed, to
20 obtain those load control resources that are cost effective under the usual Vermont
21 standards, i.e., the Societal Test as defined by the Board in its Orders in Docket 5270.
22 The Board should require that these tasks be performed by a date certain no later than
23 February 1, 2005, so that it would be possible to have such a program in place for the
24 summer period in 2005,

25
26 Q. Are any of the issues you raised in your prefiled testimony on behalf of AARP of concern
27 to CLF?

1 A. Yes. The proposed increases in the residential monthly customer charge is of
2 concern to CLF. In particular, CLF is concerned that this change dilutes the customer's
3 incentive to conserve energy. I recommend, again, that the Board reject this change.

4

5 Q. Does that complete your testimony at this time?

6 A. Yes.