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COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENERGY AND TELECOMMUNICATIONS

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ELECTRIC RESTRUCTURING PLAN OF  
CAMBRIDGE ELECTRIC LIGHT COMPANY  
COMMONWEALTH ELECTRIC COMPANY AND  
CANAL ELECTRIC COMPANY

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D.P.U./D.T.E 97-111

**Direct Testimony of  
Timothy Woolf**

**On Behalf of  
The Cape and Islands Self-Reliance Corporation**

January 21, 1998

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Exhibit TW-1: Resume of Timothy Woolf

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. What is your name, position and business address?**

3 A. My name is Timothy Woolf. I am a Senior Associate at Synapse Energy  
4 Economics, Inc, 22 Crescent Street, Cambridge, MA 02138.

5 **Q. Please describe Synapse Energy Economics.**

6 A. Synapse Energy Economics is a consulting firm specializing in electricity industry  
7 restructuring, regulation and planning.

8 **Q. Please describe your experience in the area of electric utility restructuring,  
9 regulation and planning.**

10 A. My experience is summarized in my resume, which is attached as Exhibit TW-1.  
11 Electric power system planning has been a major focus of my professional  
12 activities for the past sixteen years. In my current position at Synapse, I have  
13 been primarily responsible for investigating consumer and environmental  
14 protection issues related to the restructuring of the electric industry.

15 **Q. Please describe your professional experience before beginning your current  
16 position at Synapse Energy Economics.**

17 A. Before joining Synapse Energy Economics, I was the Manager of the Electricity  
18 Program at Tellus Institute, a consulting firm in Boston, Massachusetts. In that  
19 capacity I managed a staff that provided research, testimony, reports and  
20 regulatory support to state energy offices, regulatory commissions, consumer  
21 advocates and environmental organizations in the US. Prior to working for Tellus  
22 Institute, I was employed as the Research Director of the Association for the  
23 Conservation of Energy in London, England. In that position, I was responsible  
24 for researching and promoting least-cost utility planning regulations and energy  
25 efficiency programs in the United Kingdom and in Europe. Prior to that, I was a  
26 Staff Economist at the Massachusetts Department of Public Utilities, where my  
27 responsibilities included drafting the state's integrated resource planning  
28 regulations, researching and developing demand-side management policies,  
29 evaluating utility demand-side management programs, and reviewing electric

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1 utility rate cases. In 1993 I earned a Masters in Business Administration from  
2 Boston University.

3 **Q. On whose behalf are you testifying in this case?**

4 A. I am testifying on behalf of the Cape and Islands Self Reliance Corporation.

5 **Q. Have you testified previously in this docket?**

6 A. No, I have not.

7 **Q. What is the purpose of your testimony.**

8 A. The purpose of my testimony is to review the energy efficiency and renewable  
9 resource programs contained in Commonwealth Electric Company's  
10 (COM/Electric or the Company) restructuring plan, and to discuss the extent to  
11 which these programs comply with the requirements of the Massachusetts  
12 restructuring law. My testimony focuses on the role that municipal governments  
13 can play in implementing DSM programs through funds raised by the energy  
14 efficiency charge.

15 **Q. How is your testimony organized?**

16 A. My testimony is organized as follows:

17 Section I. Introduction and Qualifications;

18 Section II. Summary of Conclusions and Recommendations;

19 Section III. Delivering DSM Through Municipal Governments;

20 Section IV. Energy Efficiency Programs in COM/Electric's Restructuring Plan;

21 Section V. DSM Cost-Effectiveness in a Restructured Electricity Industry;

22 Section VI. The Process for Disbursing Energy Efficiency Funds;

23 Section VII. Renewable Resources.

## 24 **II. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS**

25 **Q. Please summarize your primary conclusions and recommendations.**

26 A. My primary conclusions and recommendations are summarized as follows:

27 1. COM/Electric's restructuring plan does not fully comply with the  
28 requirements of the Massachusetts restructuring law, because it contains  
29 provisions that are anti-competitive and not in the public interest. The

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1 Company's proposed restructuring plan does not contain sufficient  
2 information to determine whether the proposed DSM programs are likely to  
3 be cost-effective or to be obtained using sufficiently competitive procurement  
4 practices. For these reasons, I recommend that the Department reject the  
5 Company's proposed restructuring plan.

6 2. The Company is currently preparing a five-year energy efficiency plan, to be  
7 filed with the Department in two phases, by January 30 (Phase I) and by  
8 April 1 (Phase II). The Department should not approve COM/Electric's  
9 restructuring plan until it has had an opportunity to thoroughly review the  
10 Company's forthcoming energy efficiency plan. If the Department decides to  
11 give initial approval to COM/Electric's restructuring plan, it should segregate  
12 the energy efficient provisions of that plan, and not approve of those  
13 provisions until it has had an opportunity to review the five-year energy  
14 efficiency plan.

15 3. Municipal governments have a much greater interest than electric companies  
16 in achieving energy efficiency savings, and do not face the conflicting  
17 financial incentives that electric companies face. Municipal governments are  
18 therefore much more likely to implement successful, effective DSM  
19 programs.

20 4. Municipal governments are entitled to funds raised by the mandatory energy  
21 efficiency charge. The Department should clarify that qualifying municipal  
22 governments will be able to receive and expend all of the energy efficiency  
23 funds that are collected from all of the electricity customers within their  
24 boundaries.

25 5. The Department should notify COM/Electric that its five-year energy  
26 efficiency plan should contain a detailed description of how it will disburse  
27 the funds collected from customers through the energy efficiency charge. The  
28 description should indicate how the Company plans to set aside funds to  
29 allocate to qualified municipal governments. The description should also

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1 indicate how the Company will prevent self-dealing and will disburse the  
2 funds using the most competitive process practicable.

3 6. The Department should clarify the standard that will be used to determine  
4 whether municipal DSM programs are cost-effective. In general, the  
5 Department should provide municipal governments with greater discretion in  
6 evaluating DSM cost-effectiveness than has been provided to electric utilities  
7 in the past, because municipal governments are more accountable to  
8 ratepayers. The standard should allow municipal governments to (a) measure  
9 DSM cost-effectiveness by using the customer's electricity price as the  
10 avoided cost, (b) account for the employment and economic benefits of the  
11 energy efficiency savings, and (c) account for the environmental benefits of  
12 the energy efficiency savings.

13 7. COM/Electric's restructuring plan contains two rate proposals (rate G-1 and  
14 rate CEC-1) that contain terms that are likely to pose inappropriate barriers to  
15 customers wishing to generate their own electricity through the installation of  
16 cogeneration equipment, renewable energy technologies or fuel cells. The  
17 Department should not approve of the Company's proposed rates G-1 and  
18 CEC-1, until the Company removes the terms that create these barriers.

### 19 **III. DELIVERING DSM THROUGH MUNICIPAL GOVERNMENTS**

20 **Q. Why is the Cape and Islands Self-Reliance Corporation concerned about the**  
21 **Company's energy efficiency plan at this time?**

22 A. The Massachusetts restructuring law confirms the authority of municipalities, or  
23 groups of municipalities, to aggregate the electrical load of interested customers  
24 within their boundaries, and to broker and contract for energy services for those  
25 customers (G.L.c.164, §134(a)). In addition, the law allows municipal  
26 governments to develop an energy plan that describes how they will implement  
27 DSM and renewable energy programs. Once the energy plan is adopted by town  
28 meeting, and certified by the Department as being consistent with state energy  
29 goals, the municipality may receive and expend monies from the funds raised  
30 through a mandatory energy efficiency charge (hereinafter referred to as the

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1 energy efficiency funds) and may apply to the Massachusetts Renewable Energy  
2 Trust Fund (G.L.c.164, §134(b)).

3 It is my understanding that many towns on Cape Cod are planning to act as load  
4 aggregators for the interested customers within their boundaries, and are  
5 developing energy plans describing how they will implement DSM and renewable  
6 resources. The municipalities on Cape Cod intend to receive financing for these  
7 initiatives from the energy efficiency fund, and to apply for financing from the  
8 Massachusetts Renewable Energy Trust Fund.

9 **Q. What is the main advantage of implementing energy efficiency programs  
10 through municipal governments, as opposed to through electric companies?**

11 A. In general, municipal governments are likely to be more effective than electric  
12 companies in implementing energy efficiency programs because they have a  
13 much greater interest in achieving efficiency savings. This greater interest can  
14 have significant implications for the types and quality of energy efficiency  
15 programs that are implemented through the energy efficiency funds.

16 **Q. Please explain why municipal governments are so interested in energy  
17 efficiency programs.**

18 A. Municipal governments are interested in energy efficiency because of the many  
19 benefits that efficiency offers to their citizens and business. As the Department  
20 has noted, these benefits include lower electricity bills, improved electricity  
21 services, enhanced customer choice, and reduced environmental impacts of  
22 electricity services (MA DPU 96-100, at 183). Reducing electricity bills offers  
23 the additional economic benefits of increasing economic activity and increasing  
24 the number of local jobs. All of these benefits are of both short-term and long-  
25 term significance to municipal governments.

26 **Q. Are electric companies also interested in the benefits of energy efficiency?**

27 Energy efficiency can work directly against the financial interests of electric  
28 companies. In a restructured electricity industry, when electric companies have  
29 divested their generation services, the remaining company will focus their  
30 activities on transmitting and distributing electricity. These electric companies  
31 will continue to be for-profit entities, with the primary goal of selling

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1 transmission and distribution services. Energy efficiency programs will work  
2 directly against these goals by reducing T&D kWh sales, thereby reducing  
3 revenues and profits.

4 (Some energy efficiency programs can be in a distribution company's interest, by  
5 providing an opportunity to avoid new T&D investments, reduce maintenance  
6 costs, improve power quality and reduce line losses. However, the distribution  
7 company will always face the conflicting incentive created by the loss of sales  
8 from energy efficiency programs. Unless regulators play a significant role in  
9 providing electric companies with regulatory and financial incentives to pursue  
10 these types of efficiency measures, it is likely that the companies will be more  
11 concerned about the negative financial implications than the potential cost-  
12 reduction benefits of DSM programs.)

13 Experience with utility-run energy efficiency programs in Massachusetts and  
14 other states demonstrates that in order for electric utilities to be interested in  
15 achieving energy efficiency savings, they need to receive a significant amount of  
16 encouragement from regulators -- including Integrated Resource Management  
17 requirements, pre-approval of program costs and designs, the recovery of lost  
18 base revenues, and even the promise of a financial bonus or the threat of a  
19 financial penalty. Municipal governments, on the other hand, need no such  
20 regulatory encouragement, because they have a significant self-interest in  
21 achieving efficiency savings, with none of the financial disincentives. At a time  
22 when the electricity industry is moving away from regulation and toward a more  
23 competitive, open market, it is appropriate for DSM implementation efforts to  
24 rely increasingly upon those entities that do not require regulatory support for  
25 success.

26 **Q. Are there other reasons why municipal governments are likely to be more**  
27 **effective in delivering DSM programs than electric companies?**

28 A. Yes, there are seven additional reasons why municipal governments are likely to  
29 be more effective in delivering DSM programs than electric companies.

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- 1           • Municipal governments can use the customer’s electricity price as an avoided  
2           cost in determining the amount of DSM that is cost-effective.
- 3           • Municipal governments can account for the employment and economic  
4           development benefits of energy efficiency savings in determining the amount  
5           of DSM that is cost-effective.
- 6           • Municipal governments can account for the environmental benefits of energy  
7           efficiency savings in determining the amount of DSM that is cost-effective.
- 8           • Municipal governments do not require recovery of lost base revenues resulting  
9           from the efficiency savings.
- 10          • Municipal governments can implement cost-effective “fuel-switching”  
11          efficiency programs.
- 12          • Municipal governments can implement DSM programs targeted to municipal  
13          facilities, in order to reduce their own electricity costs -- thereby freeing up  
14          monies that can be used for other municipal programs or to reduce local tax  
15          burdens.
- 16          • Municipal governments may have better relationships with electricity  
17          customers through community-based programs and activities. Municipal  
18          governments may also be more in touch with electric customers’ energy  
19          efficiency needs and interests, through town meetings and elected  
20          representatives.

21   **Q.   Please explain why municipal governments can use the electricity price to**  
22   **represent avoided cost in determining whether a DSM program is cost-**  
23   **effective.**

24   A.   A municipal government’s primary goal (albeit not the only important goal) in  
25   implementing energy efficiency programs is to reduce the electricity bills of the  
26   residents, businesses and industries within its boundaries. From this perspective,  
27   the “avoided cost” of a DSM program is equal to the amount that the customer’s  
28   bill is reduced by the energy efficiency measures -- i.e., the customer’s electricity  
29   price times the amount of energy saved. Therefore, in evaluating DSM programs  
30   to be delivered by municipal governments, the avoided cost should be the

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1 customer's electricity price -- as opposed to the sum of avoided generation,  
2 transmission and distribution costs as has been done in the past. This approach is  
3 consistent with how electricity customers would evaluate DSM programs in an  
4 unregulated, fully competitive market for energy efficiency services.

5 Under current conditions, electricity prices are higher than utility avoided costs.  
6 Therefore, municipal governments using electricity price as avoided cost would  
7 be able to identify a larger amount of cost-effective energy efficiency savings than  
8 if they were using the measure of avoided costs conventionally used by utilities.

9 **Q. Please summarize the employment and economic benefits of energy efficiency**  
10 **programs.**

11 A. Energy efficiency programs can improve local economic development in a  
12 number of ways. Reducing the electricity bills of businesses and industries  
13 reduces their expenses and increases their net income, making the company more  
14 competitive and allowing it lower prices or to invest the freed-up money in  
15 additional labor or initiatives to expand the business. Reducing the electricity  
16 bills of residential customers will increase their disposable income, allowing them  
17 to spend more money in the economy. This increased spending will also have a  
18 multiplier effect, where the companies receiving the increased business will  
19 increase their own spending. In addition, energy efficiency investments are  
20 generally spent on businesses in the local economy -- e.g., contractors, plumbers,  
21 architects, construction companies, appliance distributors. Investments in oil, gas  
22 and nuclear fuels, on the other hand are exported to other regions of the US, and  
23 even to other regions of the world. Furthermore, investments in energy efficiency  
24 measures tend to create more jobs per dollar spent than investments in  
25 conventional power supply, because energy conservation activities are simply  
26 more labor intensive.

27 **Q. Please explain why municipal governments can account for the employment**  
28 **and economic benefits when determining the amount of DSM that is cost-**  
29 **effective.**

30 A. Unlike electric companies, municipal governments have a direct and significant  
31 interest in creating jobs and promoting economic development in their regions. In  
32 fact, economic development is frequently one of the primary goals of municipal

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1 governments. Energy efficiency initiatives represent another tool in the portfolio  
2 of options available to municipal governments to promote employment and  
3 economic development. It is appropriate that municipal governments consider the  
4 employment and economic benefits of DSM programs, because that is one of the  
5 reasons that they would be implementing the DSM.

6 In addition, municipal governments are directly accountable to the electricity  
7 ratepayers within their boundaries through elected representatives, town meetings,  
8 city councils, and other public forums. Therefore, they are more likely than  
9 electric companies to pursue the employment and economic development benefits  
10 of DSM to the extent that is in the ratepayers' best interest. This accountability is  
11 a fundamental difference between municipal governments and electric companies,  
12 and it dictates that the Department provide municipalities with greater scope  
13 flexibility in evaluating DSM resources than it has provided electric companies in  
14 the past.

15 **Q. Please explain why municipal governments can account for environmental**  
16 **benefits when determining the amount of DSM that is cost-effective.**

17 A. Municipal governments are also interested in the health and well-being of their  
18 citizens, and the quality of the environment in which they live. They are directly  
19 interested in the environmental benefits provided by energy efficiency savings.  
20 Consequently, it is appropriate that municipal governments consider the  
21 environmental benefits of energy efficiency savings when evaluating whether a  
22 DSM program is cost-effective. Again, municipal governments are directly  
23 accountable to the electricity ratepayers within their boundaries, and therefore are  
24 likely to pursue the environmental benefits of DSM to an extent that is in line  
25 with ratepayers' interests.

26 **Q. Please explain the advantage of municipal governments not having to recover**  
27 **lost base revenues resulting from energy efficiency savings.**

28 A. In the past, electric companies have been allowed to recover the lost base  
29 revenues that occur as a result of energy efficiency savings. These lost base  
30 revenues reduce the amount of funding that is available for energy efficiency  
31 programs. The Company's draft Phase I five-year energy efficiency plan

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1           apparently sets aside a significant portion of the energy efficiency funds to be  
2           used to recover lost base revenues (COM/Electric Five-Year Energy Efficiency  
3           Plan, 1/9/98). Municipal governments, on the other hand, do not have to collect  
4           lost base revenues from customers and therefore have more funding available for  
5           implementing DSM programs.

6       **Q.    Please explain the advantage of municipal governments implementing “fuel-  
7           switching” efficiency programs.**

8       A.    In many cases it may be cost effective for a customer to reduce electricity demand  
9           by switching from an electric end-use measure to an oil or gas end-use measure.  
10           One example of fuel-switching is when customers replace their electric space  
11           heating equipment with natural gas heating equipment. This type of fuel-  
12           switching DSM may be particularly important on Cape Cod where there are over  
13           20,000 homes that are heated with electric space heat and electricity prices are  
14           especially high.

15           However, in the past electric companies have been very reluctant to implement  
16           fuel-switching DSM programs because they reduce electricity sales and potential  
17           profits. In a restructured electricity industry, distribution companies will continue  
18           to be reluctant to implement fuel-switching DSM programs, because they reduce  
19           T&D sales and potential profits. Municipal governments, on the other hand, do  
20           not face any financial disincentives from fuel-switching programs and will have  
21           an interest in all such programs that are cost-effective.

22       **IV. ENERGY EFFICIENCY PROGRAMS IN THE RESTRUCTURING PLAN**

23       **Q.    Please summarize the provisions of the Massachusetts restructuring law that  
24           pertain to electric companies’ responsibilities in implementing energy  
25           efficiency programs.**

26       A.    The law authorizes and directs the Department to require a mandatory charge per  
27           kilowatt-hour for all electricity consumers of the commonwealth to fund energy  
28           efficiency programs, including but not limited to DSM programs (G.L.c.25, §19).  
29           The law requires that “in authorizing such programs the [D]epartment shall ensure  
30           that they are delivered in a cost-effective manner utilizing competitive

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1 procurement processes to the fullest extent practicable” (Id.). The law also  
2 requires each electric company to file a restructuring plan that describes, among  
3 other things, the company’s proposed programs and recovery mechanisms to  
4 promote energy conservation and demand-side management (G.L.c.164,  
5 §193.1A(a)).

6 **Q. Please describe the energy efficiency programs contained in the**  
7 **COM/Electric restructuring plan.**

8 A. The COM/Electric restructuring plan explains that the Company is currently in  
9 the process of developing a five-year energy efficiency plan. The Company is  
10 soliciting input for this plan from a number of stakeholders through a  
11 “collaborative” process, and proposes to submit the five-year energy efficiency  
12 plan to the Department by March 1, 1998. (Since filing its restructuring plan the  
13 Company has proposed instead to file the five-year energy efficiency plan in two  
14 phases, on January 30 and on April 1). Since the energy efficiency plan is still  
15 being developed, there is very little information provided in the current  
16 restructuring plan regarding the Company’s DSM programs.

17 The restructuring plan notes that the five-year energy efficiency plan will describe  
18 incremental programs and activities that will be undertaken in each market sector,  
19 and will define annual spending targets based on money available through the  
20 energy efficiency fund. The five-year energy efficiency plan will also describe  
21 the competitive procurement processes that will be used in implementing the  
22 DSM programs.

23 The restructuring plan lists some of the current DSM programs that the Company  
24 will continue to implement under the GreenSaver IRM Program. The plan notes  
25 that approximately \$12 million is already committed to these programs over the  
26 next five years. The plan then lists a set of DSM programs that it will consider for  
27 funding from the remaining available revenues in the energy efficiency fund.

28 **Q. Does the restructuring plan contain sufficient information for the**  
29 **Department to approve the energy efficiency programs at this time?**

30 A. No, it does not. The restructuring plan does not contain any information about  
31 program design, program delivery, program costs, energy savings, or capacity

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1 savings. Consequently, it is not possible for the Department to determine at this  
2 time whether the programs will be delivered in a cost-effective manner, as  
3 required by the restructuring law. The restructuring plan notes that the  
4 forthcoming five-year energy efficiency plan will describe the competitive  
5 procurement processes that the Company will pursue to implement the programs,  
6 but says nothing further about the nature or design of such procurement processes.  
7 Consequently, it is not possible for the Department to determine whether the  
8 DSM programs will be implemented with competitive procurement processes to  
9 the fullest extent practicable, as required by the restructuring law.

10 **Q. How do you recommend the Department treat the energy efficiency**  
11 **programs portion of COM/Electric’s restructuring plan?**

12 A. I recommend that the Department not approve COM/Electric’s restructuring plan  
13 at this time, on the grounds that there is insufficient detail regarding the energy  
14 efficiency programs. The Department should not approve COM/Electric’s  
15 restructuring plan until it has had an opportunity to thoroughly review the  
16 Company’s forthcoming five-year energy efficiency plan. If the Department  
17 decides to give initial approval to COM/Electric’s restructuring plan, it should  
18 segregate the energy efficient provisions of that plan, and not approve of those  
19 provisions until it has had an opportunity to review the five-year energy efficiency  
20 plan.

21 **V. DSM COST-EFFECTIVENESS IN A RESTRUCTURED INDUSTRY**

22 **Q. Why is it so important that the Company provide greater details regarding**  
23 **whether its DSM programs will be delivered in a cost-effective manner?**

24 A. The Department has a long-standing policy that ratepayer money used to fund  
25 energy efficiency programs be spent cost-effectively. The recent restructuring  
26 law simply reiterates and emphasizes that policy. The new energy efficiency  
27 charge will generate roughly \$9 to \$11 million dollars per year for the next five  
28 years from Commonwealth Electric’ customers (COM/Electric response to  
29 discovery request CSR-1-12). This amount is roughly two to three times higher  
30 than Commonwealth Electric Company’s annual DSM budgets over the past six  
31 years (COM/Electric response to discovery request SCR-1-14). With such a large

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1 amount of ratepayer money at stake, it is particularly important that the funds are  
2 invested cost-effectively, and in a fashion that maximizes the energy efficiency  
3 savings and benefits available.

4 **Q. Does electricity industry restructuring raise issues regarding the standards**  
5 **used in the past to measure DSM cost-effectiveness?**

6 A. Yes. The restructuring of the electricity industry requires that electric companies  
7 and the Department reconsider the criteria and the tests that have been used in the  
8 past to determine whether a DSM program is cost-effective. In the past, DSM  
9 programs were considered to represent a resource to the vertically integrated  
10 electric utility, and therefore, cost-effectiveness was measured on the basis of  
11 whether the cost of the resource was less than the benefits of the resource. In a  
12 restructured electricity industry, the benefits of a DSM program are experienced  
13 differently by different parties. Generation companies no longer have an interest  
14 in avoiding capacity and energy costs through DSM resources (except maybe as a  
15 service that they may choose to provide to some customers). Electric companies  
16 providing transmission and distribution (T&D) services may enjoy the avoided  
17 T&D costs of DSM programs, but these are likely to represent a small portion of  
18 the total benefits of DSM programs. Electricity customers, on the other hand, still  
19 experience the full benefits of DSM in terms of lower electricity bills.  
20 Furthermore, DSM programs that focus on market transformation may provide  
21 efficiency benefits to electricity customers beyond those that participate in a  
22 particular utility-run DSM program.

23 **Q. Should the Department clarify what qualifies as a cost-effective energy**  
24 **efficiency program in a restructured electricity industry?**

25 A. Yes, it is very important that the Department clarify what qualifies as a cost-  
26 effective energy efficiency program in a restructured electricity industry. Without  
27 such a clarification, electric companies may apply inconsistent standards in  
28 designing their programs, important efficiency opportunities could be overlooked,  
29 or valuable energy efficiency funds could be misspent.

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1 **Q. What are some of the important concerns that the Department should**  
2 **consider when updating the DSM cost-effectiveness standards?**

3 A. First, it is important that any DSM cost-effectiveness test account for the avoided  
4 costs associated with generation of electricity. Even though the energy efficiency  
5 charge is collected through, and might be administered by, T&D companies, the  
6 cost-effectiveness standard should not be based on avoided T&D costs alone. The  
7 ratepayers that contribute to the fund will enjoy the benefits of avoiding  
8 generation as well as T&D costs, and therefore the DSM programs should be  
9 designed to account for those generation benefits.

10 Second, the restructuring law clearly encourages the implementation of market  
11 transformation DSM programs (G.L.c.25A, §11G). Any revision to the standard  
12 for defining cost-effective DSM should account for the unique measurement and  
13 cost issues raised by market transformation programs.

14 **Q. Are there DSM cost-effectiveness issues that are unique to municipal**  
15 **governments?**

16 A. Yes. There are three issues that are unique to municipal governments' DSM cost-  
17 effectiveness standards, as described above in Section III. First, municipal  
18 governments are primarily interested in reducing electricity costs, and therefore  
19 should be allowed to use customer price as the avoided cost of energy efficiency  
20 savings. Second, municipal governments have a direct interest in the employment  
21 and economic development benefits of energy efficiency, and therefore should be  
22 allowed to account for these benefits in their DSM cost-effectiveness standard.  
23 Third, municipal governments have an interest in the environmental benefits of  
24 energy efficiency, and therefore should be allowed to account for these benefits in  
25 their DSM cost-effectiveness standard.

26 **Q. How should the Department address these DSM cost-effectiveness issues that**  
27 **are unique to municipal governments?**

28 A. I recommend that the Department clarify that municipal governments will have  
29 some discretion and flexibility in determining the extent to which DSM programs  
30 within their boundaries are cost effective. Municipal governments, if they so  
31 choose, should be allowed to use electricity price to represent the avoided cost of  
32 DSM, and should be allowed to account for the employment, economic

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1 development and environmental benefits of DSM programs. Each municipal  
2 government (or group of municipal governments acting as a single aggregator)  
3 should describe in their energy plans how they account for these factors in  
4 designing and evaluating their proposed DSM programs. The energy plans would  
5 have to be approved by citizens at the local level. The Department would then  
6 review each municipal government’s energy plan to ensure that the DSM cost-  
7 effectiveness approach used is consistent with state energy goals.

8 **VI. THE PROCESS FOR DISBURSING ENERGY EFFICIENCY FUNDS**

9 **Q. Why is it so important that the Company provide greater details regarding**  
10 **the competitive procurement processes used to implement its DSM**  
11 **programs?**

12 A. The processes used to implement the Company’s DSM programs could  
13 significantly affect who has access to the energy efficiency fund, and how the  
14 fund is used. As mentioned above, many towns on Cape Cod are planning to  
15 receive a portion of the energy efficiency fund. It is essential that the competitive  
16 procurement process used to disburse the energy efficiency funds be flexible  
17 enough to allow municipalities to receive and expend the funds -- and to be given  
18 fair access to the funds over time.

19 **Q. What does the restructuring law say about who should administer the energy**  
20 **efficiency fund?**

21 A. The law is not entirely clear as to who should administer the funds raised through  
22 the energy efficiency charge. The law authorizes and directs the Department to  
23 require the energy efficiency charge be applied to all consumers of the  
24 commonwealth (G.L.c.25, §19). The law also directs the Department to authorize  
25 the programs to “ensure that they are delivered in a cost-effective manner utilizing  
26 competitive procurement processes to the fullest extent practicable” (G.L.c.25,  
27 §19).

28 In addition, the law authorizes the Division of Energy Resources (DOER) to  
29 “oversee and coordinate rate-payer-funded energy efficiency programs” in order  
30 to achieve certain goals (G.L.c.25A, §11G). The law also requires the DOER to

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1           conduct a public hearing process, within one year of the enactment of the law, to  
2           “investigate the role of the division in the oversight and statewide coordination of  
3           energy efficiency programs” (G.L.c.25A, §11G). The law does not indicate how  
4           the energy efficiency funds should be administered in the meantime, nor does it  
5           mention the role of electric companies in administering DSM programs.

6           **Q.    How should the funds raised by energy efficiency charge be administered?**

7           A.    I believe that the energy efficiency funds should be administered by an entity that  
8           (a) does not have any direct financial interest in how the funds are spent, and  
9           (b) has an interest in promoting the statewide energy efficiency goals. The DOER  
10          certainly meets these two criteria. Other public, non-profit, or even private  
11          entities meeting these criteria could also be chosen or established to administer  
12          the energy efficiency funds. However, electric companies do not meet these  
13          criteria and therefore are not good candidates for administering the funds.

14          **Q.    Why are electric companies not good candidates for administering the funds  
15          raised by the energy efficiency charge?**

16          A.    Electric companies have a direct financial interest in the implementation of DSM  
17          programs, and might therefore bias the way that the energy efficiency funds are  
18          spent. This financial interest arises from two factors. First, as described above,  
19          DSM programs can work directly against the financial interests of electric  
20          distribution companies by reducing T&D sales and thereby lowering revenues and  
21          profits. Consequently, electric companies might not be as effective as a neutral,  
22          independent entity in designing and implementing DSM programs. The existence  
23          of this conflicting financial incentive on electric companies increases the  
24          regulatory burden on the Department of overseeing electric company DSM  
25          activities.

26          Second, many electric companies are affiliated with an energy service company  
27          through a parent holding company. These unregulated energy service companies  
28          are likely to compete for a portion of the energy efficiency funds. If electric  
29          companies administer the energy efficiency funds, then there is a significant risk  
30          of “self-dealing” between a company and its sister subsidiary. This sort of self-

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1 dealing would clearly represent an abuse of market power that is in direct conflict  
2 with the Massachusetts restructuring law.

3 **Q. Is there a risk of this sort of self-dealing in COM/Electric’s service territory?**

4 A. Yes, there is such a risk. Commonwealth Energy System, the parent company of  
5 COM/Electric, recently established a subsidiary called COM/Energy Enterprises,  
6 Inc. The initial focus of this subsidiary will be the “ acquisition, development  
7 and/or management of electric, heating, and cooling systems for individual or  
8 groups of institutional, commercial and industrial customers” (Commonwealth  
9 Energy System 1996 Annual Report). It is possible that COM/Energy Enterprises  
10 will seek to deliver some of the energy efficiency programs being offered by  
11 COM/Electric through the energy efficiency fund.

12 **Q. Are municipal governments good candidates for administering the funds  
13 raised by the energy efficiency charge?**

14 A. Yes, they are. As described above, there are many reasons why municipal  
15 governments have a strong interest in implementing successful, effective DSM  
16 programs. They do not have any conflicting financial incentives, and they enjoy  
17 the many benefits of DSM programs -- reduced electricity bills, improved  
18 electricity services, increased economic activity and reduced environmental  
19 impacts.

20 Furthermore, municipal governments are directly accountable to electricity  
21 ratepayers, through town meetings, elected representatives, city councils, and  
22 other forums. Municipal governments’ operations are more transparent to  
23 citizens, and they function under full public review and requests for disclosure of  
24 information. Municipal governments will be required to have their energy plans,  
25 including DSM program activities, approved at the local level. Consequently,  
26 municipal governments are more likely than electric companies to implement  
27 DSM programs that are consistent with electricity customers’ needs.

28 **Q. What role do you recommend that municipal governments play in  
29 administering the funds raised by the energy efficiency charge?**

30 A. The restructuring law requires that qualifying municipal governments be allocated  
31 all of the energy efficiency funds that are raised from the electricity customers in

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1 their geographic boundaries. These municipal governments will therefore have  
2 the responsibility for administering those energy efficiency funds and delivering  
3 DSM programs to those customers. In order to qualify for these funds, the  
4 municipal agency will be required to develop a plan to aggregate all interested  
5 customers within their boundaries, and develop an energy plan detailing the  
6 energy efficiency programs to be implemented. The energy plan would have to  
7 be reviewed and approved by the Department as being consistent with the  
8 commonwealth's overall energy goals.

9 **Q. Are there certain issues to consider in allowing municipalities to receive a**  
10 **portion of the energy efficiency funds?**

11 A. Yes, there are three factors to consider in allowing municipalities to receive  
12 energy efficiency funds. The first is the fact that municipalities have not had  
13 sufficient time to respond to the recent restructuring law, and to take the steps  
14 necessary to receive DSM funding. Municipalities are required to develop an  
15 energy plan for the municipality, have the plan approved at the local level, and  
16 then have the plan approved by the Department. While many towns on Cape Cod  
17 have taken some of these measures, it is unlikely that they will all be ready for the  
18 Company's first competitive procurement process. Therefore, it is essential that  
19 the Company's procurement process does not commit to spending the DSM funds  
20 for particular programs or for particular vendors for too long a period of time.  
21 The DSM procurement process must either set aside sufficient funding for  
22 municipalities to obtain in the future, or be flexible enough that municipalities can  
23 receive DSM funding in the near-future without being locked-out of the process.

24 **Q. What is the second factor to consider in allowing municipalities to receive a**  
25 **portion of the energy efficiency funds?**

26 A. Some municipalities may wish to utilize energy efficiency funding to design and  
27 implement their own DSM programs. Municipalities may have different priorities  
28 and interests for DSM programs than electric companies. Consequently, they  
29 may seek to promote different efficiency technologies and measures, they may  
30 seek to target different customer segments, and they may seek different methods  
31 or different contractors for delivering the energy efficiency programs. Therefore,

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1 it is important that the Company does not limit the use of the DSM funds to  
2 programs that are designed in advance by the Company.

3 **Q. What is the third factor to consider in allowing municipalities to receive a**  
4 **portion of the energy efficiency funds?**

5 A. In many cases, municipalities may wish to take the responsibility for  
6 administering and implementing a DSM program designed by the Company. In  
7 particular, a municipality may wish to hire and oversee their own contractors for  
8 delivering and installing energy efficiency measures and technologies. A  
9 municipality may wish to apply different criteria in selecting a contractor through  
10 a competitive procurement process. Therefore, it is important that the process  
11 used to disburse the energy efficiency funds allows for municipalities to be able to  
12 take over the responsibility for implementing a Company-designed DSM program  
13 within its geographic area. If the program is already underway, and is already  
14 utilizing contractors to deliver the energy efficiency measures, then there should  
15 be enough flexibility in the system to allow municipalities to take control of the  
16 program, oversee the contractors hired, and eventually bid out for new contractors  
17 if so desired.

18 **Q. Has COM/Electric accounted for these three factors in its restructuring**  
19 **plan?**

20 A. No. The Company's restructuring plan does not mention these factors, or even  
21 recognize that municipal governments are likely to play an important role in  
22 implementing DSM programs. In response to a discovery request in this docket,  
23 the Company noted that it has not yet "developed specific contract provisions for  
24 a possible transition for DSM services to being provided by entities other than  
25 those contracted for by the Companies" (Com/Electric response to information  
26 request CSR-1-7).

27 In its draft five-year efficiency plan, made available to the members of the  
28 collaborative, the Company makes a proposal for spending the first two years of  
29 energy efficiency funds (March 1988 through the end of 1999). The Company  
30 proposes to spend all of the funds on existing programs and new programs  
31 designed through the collaborative (COM/Electric draft Five-Year Energy

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1 Efficiency Plan, 1/9/98). There apparently is no money set aside for municipal  
2 governments to receive, and there is no room in the budgets left for any entity to  
3 implement DSM programs that have not been designed by the Company. The  
4 Company's draft five-year efficiency plan appears to not include any opportunity  
5 for municipal governments to receive a portion of the energy efficiency funds.

6 **Q. What do you recommend that the Department do at this time with regard to**  
7 **COM/Electric's plan to disburse the energy efficiency funds?**

8 A. I recommend that the Department require COM/Electric to include in its  
9 forthcoming energy efficiency plan a detailed proposal for how to disburse the  
10 funds raised by the energy efficiency charge. The proposal should include the  
11 following elements:

- 12 • A discussion of how the Company will set aside funding to be allocated to  
13 qualifying municipal governments to implement DSM programs.
- 14 • A detailed discussion of the process used to solicit, evaluate and select  
15 competitive proposals for using the energy efficiency fund to implement DSM  
16 resources. The discussion should describe the selection process and the  
17 criteria that will be used to choose between competing proposals.
- 18 • A description of all the measures that the Company will take to prevent self-  
19 dealing, or other potential abuses of market power, in disbursing the energy  
20 efficiency funds.
- 21 • A discussion of how COM/Electric will solicit, evaluate and select  
22 competitive proposals for DSM program designs other than those proposed by  
23 the Company in its five-year energy efficiency plan.
- 24 • A discussion of all the provisions that would allow qualifying municipal  
25 governments to accept responsibility for implementing within their borders  
26 programs that have been previously implemented by the Company. For  
27 example, the Company could establish a practice of maintaining short-term  
28 contracts (e.g., one year or less) with energy service vendors, thereby allowing  
29 the opportunity for municipal governments to take over responsibility for  
30 those contracts when they roll over. Another option would be for contracts

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1 with vendors to include clear termination, release or transition provisions that  
2 allow for the contract to change hands from the Company to a municipal  
3 government.

- 4 • A discussion of the DSM cost-effectiveness standard, and how that standard  
5 would be used to evaluate proposed DSM initiatives. Ideally, the standard  
6 would reflect any decisions by the Department to revise the definition of DSM  
7 cost effectiveness in a restructured electricity industry.
- 8 • A discussion of any other factors unique to municipal governments that might  
9 be considered in the disbursement of the energy efficiency funds. For  
10 example, proposals for initiatives to coordinate utility DSM activities with  
11 those of municipal governments.

12 Before approving the Company's five-year energy efficiency plan, the  
13 Department should review all these elements of the Company's proposal and  
14 ensure that the plan complies with the provisions and spirit of the restructuring  
15 law, utilizes competitive procurement practices to the greatest extent practicable,  
16 minimizes the potential for abuse of market power, and is in the public interest.

## 17 VII. RENEWABLE RESOURCES

### 18 Q. How does the COM/Electric restructuring plan treat renewable resources?

19 A. The Massachusetts restructuring law authorizes and directs the Department to  
20 establish a mandatory charge per kilowatt-hour for all electricity consumers, to  
21 collect funds to support the development and promotion of renewable resources.  
22 The Massachusetts Technology Park Corporation will administer Massachusetts  
23 Renewable Energy Trust Fund. The COM/Electric restructuring plan simply  
24 notes that the Company will collect the mandatory renewable charge and remit the  
25 funds to the Massachusetts Technology Park Corporation.

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1 **Q. Do you have any concerns regarding renewable resources in the Company’s**  
2 **restructuring plan that you would like to bring to the Department’s**  
3 **attention?**

4 A. Yes. There are two conditions imposed in the Company’s proposed rates that  
5 might limit the ability of electricity customers to install on-site renewable  
6 resources or cogeneration systems. The first condition is the Customer Exit  
7 Charge (CEC), rate CEC-1. This charge is intended to collect the appropriate  
8 amount of stranded costs from those electricity customers that significantly reduce  
9 their load by installing on-site generation or cogeneration equipment (Direct  
10 testimony of Henry C. Lamontagne, 1/16/1998). The CEC charge is an “exit  
11 charge,” as allowed by the restructuring law (G.L.c.164, §1G(g)).

12 However, the restructuring law explicitly states that customers installing certain  
13 cogeneration equipment, renewable energy technologies or fuel cells should not  
14 be subject to such an exit charge. The law states that:

15 a customer that reduces purchases of electricity through the operation  
16 of, or purchases from, on-site generation or cogeneration equipment,  
17 shall not be subject to an exit charge if (i) such customer provided less  
18 than or equal to 10 per cent of the annual gross revenues collected by  
19 its previous service provider in the year prior to the customer leaving  
20 the system after the retail date established in this bill... or (ii) the  
21 customer reduces purchases through the operation of, or purchases  
22 from, on site renewable energy technologies, fuel cells, or  
23 cogeneration equipment with a combined heat and power system  
24 efficiency of at least 50 per cent, based upon the higher heating value  
25 of the fuel used in the system; or (iii) the customer reduces purchases  
26 through the operation of, or purchases from, an on site generation or  
27 cogeneration facility of 60 kilowatts or less which is eligible for net  
28 metering. (G.L.c.164, §1G(g), emphasis added).

29 **Q. What do you recommend the Department do with regard to the Company’s**  
30 **proposed CEC rate?**

31 A. I recommend that the Department not approve of the Company’s proposed CEC  
32 rate. The Company should be required to modify the terms and conditions of the  
33 rate explicitly to exclude customers that install cogeneration equipment,  
34 renewable energy technologies or fuel cells, according to the provisions of the  
35 Massachusetts restructuring law.

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1 **Q. What is the second condition in the Company’s proposed rates that might**  
2 **limit the ability of electricity customers to install on-site renewable resources**  
3 **or cogeneration systems?**

4 A. The Company’s proposed General rate (G-1) includes a term that that might pose  
5 a barrier to some customers wishing to install cogeneration equipment or  
6 renewable energy technologies. The terms of the G-1 rate requires that:

7 Customers served under this rate must provide the Company with two  
8 years’ prior written notice before installing or allowing to be installed  
9 for its use a non-emergency generator with a nameplate capacity  
10 greater than that in place on the Customer’s location as of May 1, 1995  
11 (M.D.P.U. No. 344, page 5).

12 This notification period places an unnecessary burden on customers who wish to  
13 install cogeneration equipment or renewable energy technologies; some customers  
14 may wish to install such equipment is less than two years.

15 The section in the Massachusetts restructuring law, referred to above, that  
16 discusses exit charges for customers that install cogeneration equipment  
17 renewable technologies or fuel cells states that “the utility shall not require more  
18 than six months notice of the customer's plans to install said equipment”  
19 (G.L.c.164, §1G(g)). A six-month notification period would also be appropriate  
20 for customers on the G-1 rate wishing to install on-site generation equipment.  
21 There is no reason to impose more onerous terms on the G-1 rate than those that  
22 are imposed by the CEC-1 rate.

23 **Q. What do you recommend the Department do with regard to the Company’s**  
24 **proposed G-1 rate?**

25 A. I recommend that the Department not approve the Company’s proposed G-1 rate.  
26 The Company should be required to modify the terms of the rate explicitly to  
27 require no more than six months prior notice for customers that wish to install on-  
28 site generation equipment.

29 **Q. Does this conclude your testimony?**

30 A. Yes, it does.