

BEFORE THE  
STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

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In the Matter of  
Consolidated Edison  
Case 07-S-0315  
February 2008

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Prepared Testimony of  
Energy Efficiency Panel:

Marco L. Padula  
Utility Supervisor  
Office of Electric, Gas and  
Water  
New York State  
Department of Public Service  
Three Empire State Plaza  
Albany, New York 12223-1350

Stacey Harwood  
Policy Analyst  
Energy Efficiency and the  
Environment  
State of New York  
Department of Public Service  
Three Empire State Plaza  
Albany, New York 12223-1350

1 Q. Please state your name, employer, and business  
2 address.

3 A. Marco L. Padula. I am employed by the New York  
4 State Department of Public Service (Department).  
5 My business address is Three Empire State Plaza,  
6 Albany, New York 12223-1350.

7 Q. Mr. Padula have you already discussed your  
8 educational background, professional and  
9 testimonial experience, and responsibilities?

10 A. Yes, that information is included in my  
11 individual testimony in this proceeding.

12 Q. Please state your name, employer, and business  
13 address.

14 A. Stacey Harwood. I am employed by the New York  
15 State Department of Public Service (Department),  
16 Office of Energy Efficiency and the Environment.  
17 My business address is 90 Church Street, New  
18 York, NY 10007.

1 Q. Ms. Harwood, what is your position in the  
2 Department?

3 A. I am a Policy Analyst in the Office of Energy  
4 Efficiency and the Environment.

5 Q. Please describe your educational background and  
6 experience.

7 A. I received a Bachelor of Arts degree in  
8 political science from the University at Albany  
9 in 1980 and in 1984 I earned a Graduate  
10 Certificate in Regulatory Economics, also from  
11 the University at Albany, with additional  
12 graduate level coursework in survey research  
13 design. In 1996, I completed a Masters of Fine  
14 Arts in Writing and Literature from Bennington  
15 College. I have also studied web design and  
16 management. I joined the Department in 1982 as a  
17 consumer advocate in the Office of Consumer  
18 Services. Since then, I have held several  
19 positions throughout the agency. In 1998 I  
20 relocated from Albany to New York City to be  
21 Special Assistant to the New York City-based  
22 Commissioners. While working for the

1           Commissioners, I participated in the Staff  
2           investigations into the power outages of  
3           Washington Heights and Queens in July 1999 and  
4           July 2006, respectively. In 2007, I joined the  
5           Office of Energy Efficiency and the Environment.

6   Q.    Have you previously testified before the New  
7           York State Public Service Commission?

8   A.    Yes.

9   Q.    What is the purpose of your testimony in this  
10          proceeding?

11   A.    The purpose of our testimony is to address Con  
12          Edison's proposals to administer three new  
13          programs: (1) a steam energy efficiency program,  
14          (2) a condensate heat recovery program, and (3)  
15          a steam demand reduction program. Programs 1  
16          and 2, above, are designed to reduce annual  
17          steam consumption by approximately 284,000 Mlb  
18          per year in the year following rate year 3;  
19          program 3 is designed to obtain 36 Mlb/hr of  
20          demand reduction in rate years 2 and 3. These  
21          programs were described in the testimony of Con  
22          Edison witness Patrick Wheeler.

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2 Q. Will you refer to, or otherwise rely upon, any  
3 information produced during the discovery phase  
4 of this proceeding in your testimony?

5 A. Yes. We will refer to, and have relied upon,  
6 several responses to Staff Information Requests.  
7 They are attached as Exhibit\_\_\_\_(EEP-1).

8 Q. What is your overall view of these proposed new  
9 programs?

10 A. Our overall view is that the Company should be  
11 commended for its proposals and for expressing a  
12 commitment to promoting steam energy efficiency  
13 and demand reduction. However, the programs as  
14 designed by the Company fall short in that they  
15 lack the planning and detail that would improve  
16 their likelihood of success. The Company has not  
17 demonstrated an understanding of the market  
18 potential for steam energy efficiency measures  
19 and how they could fit into an overall least-  
20 cost planning strategy that in the long run  
21 could mitigate the need for additional steam  
22 system capacity and infrastructure. The Company

1 does not appear to know how best to approach its  
2 steam customers with the energy efficiency  
3 information it has. Finally, the Company's  
4 proposed programs do not include strategies to  
5 conduct reliable and comprehensive efficiency  
6 program evaluations.

7 Q. What are your recommendations?

8 A. We recommend that the Company use the first six  
9 months of Rate Year 1 to conduct a collaborative  
10 effort with Staff, NYSERDA, and other  
11 stakeholders to develop more fully realized  
12 plans. During this time, the Company should  
13 continue to promote steam energy efficiency via  
14 the outlets it currently uses (e-mail, seminars,  
15 one-on-one meetings with customers). As part of  
16 the six month program development process, the  
17 Company should systematically follow-up with the  
18 30 customers whose facilities it audited during  
19 the 2006/2007 winter heating season and continue  
20 to monitor and evaluate the experience of the  
21 two condensate reuse customers with which it has  
22 agreements. The Company should report its

1 findings when it files its action plan.

2 Q. Please describe the Company's current efforts to  
3 promote steam energy efficiency.

4 A. One outcome of Case 05-S-1376 was the *Steam Use*  
5 *Efficiency and Demand Reduction Best Practices*  
6 *Report*, completed December 2007. The Company  
7 based its findings on Company sponsored audits  
8 of 30 customers, chosen for their load factors  
9 or consumption levels. The findings contained in  
10 the Report include recommendations for how  
11 customers could reduce overall steam consumption  
12 and reduce demand. The Company has posted this  
13 report on its website and alerted customers to  
14 its availability by e-mail and letters.  
15 Additionally, as Company witness Wheeler states  
16 in response to DPS-119, the Company's Steam  
17 Business Development group intends to distribute  
18 the report "to interested parties at various  
19 meetings, conferences, and seminars."

20 The Company holds seminars at its learning  
21 center during which steam efficiency is part of  
22 an agenda that includes steam safety and

1 maintenance. In addition, the Company maintains  
2 pages in the steam section of its website with  
3 tips to conserve steam and to reduce on-peak  
4 steam demand.

5 Q. Have customers shown interest in steam energy  
6 conservation?

7 A. It is difficult to tell based on the information  
8 available from the Company. Company witness  
9 Wheeler states in response to DPS-72, that  
10 during 2007, a total of 84 customers attended  
11 the eight steam efficiency seminars mentioned  
12 above. Also, in response to DPS-69, Company  
13 witness Wheeler states that the web page on  
14 which the Company posts information about steam  
15 conservation experienced an average of 65 visits  
16 per-month during 11 months of calendar year 2007  
17 (July 2007 is excluded from this calculation  
18 because, as explained by the Company in response  
19 to IR DPS-190, the 485 page hits during that  
20 month are attributed to increased interest in  
21 steam as a result of the July steam main  
22 rupture). The page with information about

1           reducing on-peak demand was visited roughly 30  
2           times per month during calendar year 2007. The  
3           website gives customers the opportunity to  
4           subscribe to receive news alerts, some of which  
5           include information about steam efficiency and  
6           demand reduction. In response to DPS-191,  
7           Company witness Wheeler states that no customers  
8           have subscribed. It appears that few of the  
9           Company's 1,800 steam customers have taken  
10          advantage of the website as an information  
11          source.

12    Q.    What are your observations of the proposed steam  
13          energy efficiency program?

14    A.    The Company hopes to achieve a 220,000 Mlb per  
15          year reduction in steam consumption in the year  
16          following its proposed rate year 3, or 2012. It  
17          plans to achieve this reduction by providing  
18          financial incentives to customers who insulate  
19          pipes and valves, test and replace steam traps,  
20          repair steam leaks, and adopt other "approved"  
21          energy efficiency measures.

22                    In order to take advantage of this program,

1 customers would have to hire a contractor to  
2 audit their premises and recommend site-specific  
3 efficiency measures along with estimates of  
4 installation costs and likely consumption  
5 savings. The Company would review the audit  
6 recommendations and confirm its findings with  
7 its own inspection of the customer's facility.  
8 Once installation of the efficiency measures is  
9 complete, the Company will conduct another  
10 inspection to ensure that the customer and  
11 contractor have performed the agreed upon scope  
12 of work. In order to qualify for an incentive  
13 payment, the efficiency measure would have to  
14 pass a Total Resource Cost Test. Incentives are  
15 capped at \$80,000 per site. The Company  
16 estimates that 60 sites will participate.

17 Q. What are the problems with this proposal?

18 A. First, in order to participate, customers will  
19 have to be highly motivated to hire an auditor  
20 and make all of the necessary arrangements for  
21 the audit and the pre-and post-installation  
22 inspections. The Company does not have a plan

1 to assist customers in finding an auditor, as  
2 indicated by Company witness Wheeler's response  
3 to IR DPS-67.

4 Second, the Company does not have a clearly  
5 defined list of "approved" efficiency measures,  
6 nor does it have a strategy to distinguish those  
7 that the customer might be planning to install  
8 on his own (such as those less than a one year  
9 payback period) from those that, but for the  
10 incentive, the customer would not otherwise  
11 install.

12 Third, the Company has not determined if the  
13 Total Resource Cost Test (TRC) will be applied  
14 on a per-measure basis, or whether all of the  
15 measures installed at a site combined will have  
16 to pass the TRC.

17 Fourth, the Company witness Wheeler states  
18 in response to DPS-67, that the Company does not  
19 have a time-frame within which it intends to  
20 enroll the targeted 60 sites in the program.  
21 Such a schedule, with milestones, will enable  
22 the Company to evaluate its marketing strategy

1 and make course-corrections if necessary.

2 Fifth, the Company has not taken full  
3 advantage of the learning opportunity posed by  
4 the 30 customer audits it conducted as a result  
5 of Case 05-S-1376. While the Company has shared  
6 the audit results with the audited customers, it  
7 has not followed up with them to find out which  
8 of the audit recommendations they have followed  
9 and why. Although the 30 customers do not  
10 comprise a representative sample of steam  
11 customers, their experience could inform future  
12 marketing efforts.

13 Sixth, the Company has not included a  
14 rigorous strategy to evaluate the program.  
15 Without a formal program evaluation to quantify  
16 program effectiveness, it is difficult, if not  
17 impossible, to determine if the program is cost-  
18 effective and if it is being properly  
19 administered. Any evaluation approach should  
20 compare the gross savings of a program to the  
21 energy savings actually attributable to the  
22 program after adjusting for factors such as

1 measurement error, measure installation quality,  
2 user behavior, (e.g., "snapback" such as lowering  
3 the AC temperature because of the lower  
4 operating costs of new energy efficient  
5 equipment) and the energy related actions program  
6 participants would have taken absent the  
7 program (e.g., free ridership).

8 Seventh, the target annual steam  
9 consumption savings of 220,000 Mlb may not be  
10 appropriate. The Company states in its response  
11 to New York City IR NYC-73, that the 220,000 Mlb  
12 target was calculated using estimated  
13 consumption savings from 9 of the 30 audited  
14 sites mentioned. The experience of these  
15 particular customer sites may not be replicable  
16 and they may understate the potential savings. A  
17 savings target should be estimated with more of  
18 an understanding of the total customer base.

19 Finally, there are no consequences to the  
20 Company if it fails to achieve its target  
21 enrollment. While it is true, as the Company  
22 states in response to IR DPS-171, that the

1 Company would earn a lower incentive than it  
2 could otherwise earn, it would still be rewarded  
3 for underperforming when it had invested in  
4 program development and marketing that failed.

5 Q. What are your observations of the proposed  
6 condensate heat recovery program?

7 A. With this program, the Company hopes to reduce  
8 steam consumption by roughly 64,000 Mlb per year  
9 in the year following rate year 3. It will  
10 enroll the estimated 40 SC-2 and SC-3  
11 participating sites using a Request for Proposal  
12 (RFP) process whereby customers would submit  
13 proposals for new or additional heat exchangers  
14 to recover heat from condensate for domestic  
15 water preheating, fresh air preheating, and/or  
16 circulating hot water preheating. The Company  
17 would evaluate the proposals, inspect the  
18 customer sites, execute an agreement with the  
19 customer and upon completion of the  
20 installation, pay the customer the lowest of  
21 either 50% of total contractor invoices, \$60,000  
22 (the facilitates cap), or a product of \$41/Mlb and

1 the annual Mlb saved.

2 Q. What are the problems with this proposal?

3 A. There are several, similar to those with the  
4 energy efficiency program described above.

5 The Company proposes to use an RFP process  
6 to enroll customers. The Company states in  
7 response to DPS-118 that the RFP would be posted  
8 on the Company website, distributed by e-mail  
9 and at conferences and meetings. As noted  
10 above, unless there is an event like the steam  
11 main rupture of last year, the Company website  
12 receives little traffic, and is not a proven or  
13 effective way to reach steam customers. While  
14 we have not measured the effectiveness of the  
15 Company's e-mail strategy, e-mail is generally a  
16 passive tool, necessitating the recipient to  
17 take most of the action. We support the  
18 Company's plan to use its Steam Business  
19 Development staff to market the program,  
20 however, the Company has not demonstrated how  
21 the marketing of this program would be  
22 integrated into its overall SBD efforts.

1           As with the steam energy efficiency  
2           program, the Company has not established a time  
3           frame within which it will enroll the 40  
4           estimated sites. A time frame is necessary for  
5           the Company to track its success and make course  
6           corrections as needed. Further, the Company's  
7           estimate of the number of sites seems to be  
8           flawed: In response to DPS-118, the Company  
9           states that for the purposes of estimating the  
10          steam savings target, it assumes that 15% of 50%  
11          of its SC2 and SC3 customers will agree to  
12          participate. In response to DPS-119, the Company  
13          states that it has roughly 290 SC-2 and SC-3  
14          accounts); 15% of half of these equals roughly  
15          20 accounts, not the 40 that the Company hopes  
16          to attract.

17                 Meanwhile, the Company has only recently  
18          embarked on a project to "determine how steam  
19          condensate reuse could be used by customers." It  
20          has agreements with two customers whereby it has  
21          installed sensors at their locations and is  
22          gathering data to quantify water and steam

1 savings. The Company states in DPS-70, however,  
2 that the findings will not be available until  
3 March 2009. These findings could inform the  
4 Company's marketing strategy going forward.

5 Finally, the Company has not included a  
6 rigorous strategy to evaluate the program.  
7 Without a formal program evaluation to quantify  
8 program effectiveness, it is difficult, if not  
9 impossible, to determine if the program is cost-  
10 effective and being properly administered. Any  
11 evaluation approach should compare the gross  
12 savings of a program to the energy savings  
13 actually attributable to the program after  
14 adjusting for factors such as measurement error,  
15 measure installation quality, user behavior,  
16 (e.g., "snapback" such as lowering the AC  
17 temperature because of the lower operating costs  
18 of new energy efficient equipment) and the energy  
19 related actions program participants would have  
20 taken absent the program (e.g., free ridership).

21 Q. What are your recommendations for these two  
22 programs?

1 A. We recommend that the Commission withhold  
2 support for the implementation of these programs  
3 at this time. However, we strongly support  
4 steam energy efficiency programs generally and  
5 for that reason propose that the Commission  
6 require the Company to initiate a collaborative  
7 process that would enable it to develop more  
8 fully realized proposals. The proposals should  
9 be developed during the first six months of Rate  
10 Year 1 and in collaboration with Staff, NYSERDA,  
11 and other interested parties. The outcome of  
12 the collaborative should be a detailed action  
13 plan that will address all of the concerns  
14 raised above as well as others that may surface  
15 during the collaborative process. The action  
16 plan should be filed with the Commission for its  
17 review and approval.

18 Q. Do you have any additional observations about  
19 steam energy efficiency incentives?

20 A. Yes, the parties to the collaborative described  
21 above should agree on incentives that conform to  
22 industry norms, have a rational basis, and are

1 structured to achieve the program goals.

2 Q. Does the Company filing include a proposal for  
3 cost recovery related to the proposed steam  
4 energy efficiency programs?

5 A. Yes, Company witness Wheeler, starting on page  
6 21 of his testimony, proposes that all program  
7 costs including incentives to customers and the  
8 Company should be recovered through the steam  
9 fuel adjustment clause (FAC). As detailed in  
10 Exhibit\_\_(PW-2E), those costs are estimated to  
11 be approximately \$400,000 in the first rate  
12 year. Those costs are projected to grow  
13 significantly to \$2.6 million and \$9.6 million  
14 respectively for each of the Company's proposed  
15 subsequent rate years.

16 Q. Do you agree with these proposed charges and the  
17 recovery mechanism?

18 A. No. Since we are recommending the Company  
19 develop a detailed action plan before the  
20 Commission approves its steam energy efficiency  
21 program, we do not support the estimated costs  
22 at this time. In addition, the FAC is not the

1 appropriate rate recovery mechanism for these  
2 costs. We recommend that the company be  
3 allowed recovery of \$50,000 in base rates to  
4 cover program development and administration  
5 costs during the rate year. When and if the  
6 Commission approves a more comprehensive energy  
7 efficiency program, it can at that time also  
8 approve an appropriate cost recovery mechanism.

9 Q. What are your observations about the Company's  
10 proposed steam demand reduction incentive  
11 program?

12 A. The steam demand reduction incentive program  
13 would be available to the Company's demand  
14 billing customers only. As demand billing was  
15 introduced only recently -- in December 2007 --  
16 the Company does not have enough experience to  
17 know if customers need financial incentives to  
18 implement additional demand reduction  
19 strategies. Given that, by definition, demand  
20 billing sends a price signal to those customers  
21 who change their usage behavior, there may not  
22 be a need for additional measures. It is too

1 soon to tell.

2 As part of its proposal, the Company would  
3 give customers information about Storage of  
4 Thermal Energy in Existing Mechanical systems  
5 (STEEMs), a technology which the Company  
6 believes holds promise. It has tested the  
7 technology at two sites. According to Company  
8 witness Wheeler, "[A]number of customers have  
9 expressed interest in implementing STEEMs to  
10 reduce their on-peak demand," suggesting that  
11 customers may not need financial incentives in  
12 addition to those inherent in demand billing.

13 Q. Do you have a specific recommendation related to  
14 demand billing?

15 A. Yes. The Commission should require that the  
16 Company submit a proposal to expand the  
17 applicability of demand billing beyond the  
18 current requirement of those customers with  
19 average annual usage exceeding 22,000 Mlbs and /  
20 or to increase the amount of fixed costs  
21 collected through demand charges. This report  
22 should identify the extent of the Company's

1 current and planned installation of demand  
2 meters on customer accounts beyond those of the  
3 current required customer accounts. In  
4 addition, a proposed implementation schedule to  
5 expand the applicability and/or to increase the  
6 amount of costs collected through demand charges  
7 should be included.

8 The expansion of demand billing will  
9 provide additional customers with a direct  
10 incentive to reduce usage. In addition, as  
11 originally intended, demand billing should  
12 reduce the Company's winter peak load thereby  
13 reducing or eliminating the need to build  
14 additional production plant in the future.

15 Q. Does this conclude your testimony?

16 A. Yes, it does.

17