

BEFORE THE NEW YORK PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service.

Case 13-E-0030

Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Gas Service.

Case 13-G-0031

Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Steam Service.

Case 13-S-0032

DIRECT TESTIMONY AND EXHIBITS

of

NANCY BROCKWAY

on behalf of

PUBLIC UTILITY LAW PROJECT OF NEW YORK, INC.

May 31, 2013

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1 **INTRODUCTION**

2

3 **Q. Please state your name and business address.**

4 A. My name is Nancy Brockway. My business address is 10 Allen Street, Boston, MA.

5

6 **Q. On whose behalf are you testifying in this docket?**

7 A. I am testifying on behalf of the Public Utility Law Project of New York, Inc.

8

9 **Q. Please briefly describe your qualifications and experience.**

10 A. Since 1983, my professional focus has been the energy and utility industries, with  
11 particular attention to the role of regulation in the protection of consumers and the  
12 environment. I was a Commissioner appointed to the New Hampshire Public Utilities  
13 Commission, serving from 1998 to 2003. Earlier, I was for several years a hearing  
14 officer and advisor to the Maine Public Utilities Commission and then to the  
15 Massachusetts Department of Public Utilities, where I served two years as General  
16 Counsel of the commission. I began my career as a staff attorney with the Legal Aid  
17 Society of New York, where I represented low-income clients in the Brooklyn borough  
18 on a range of issues, including access to affordable utility service. Before joining the  
19 Maine Commission staff, I provided legal services to students, children, the elderly and  
20 others. For seven years, after leaving the Massachusetts Department of Public Utilities, I  
21 was an expert witness before regulatory commissions on consumer and low-income  
22 utility issues, with the National Consumer Law Center. Since leaving the New  
23 Hampshire Commission, I have been a consultant on regulatory utility issues to  
24 regulatory commissions, ratepayer advocates, low-income energy groups, and others. I  
25 also spent several months serving as the Director of Multi-Utility Research and Analysis

1 with the National Regulatory Research Institute. While at NRRI, I researched and wrote  
2 a key objective study of the impact of advanced metering structure and related pricing  
3 options on residential consumers. I have spoken at national forums on a variety of issues,  
4 offering the consumer perspective. My resume with selected publications and my list of  
5 testimonies is attached as Exhibit NB-1.

6 **Q. Have you previously testified before this Commission?**

7 A. Yes. I presented oral testimony to the Commission on low-income issues in an  
8 examination of telecommunications policy issues.

9 **Q. Have you testified on utility matters before other commissions?**

10 A. Yes. I have filed testimony in over 60 proceedings. I have appeared before 27 state,  
11 federal or provincial regulatory commissions.

12 **Q. What is the purpose of your testimony today?**

13 A. I have been asked to review the Company's performance with regards to the following  
14 topics: (a) affordability of electric and gas service, (b) use of service interruption as a bill  
15 collection tool, (c) low-income rates, (d) energy efficiency for low-income customers,  
16 including program design, fairness in allocation of funding, and opportunities for  
17 conversion from oil to gas, (e) price volatility, price transparency, and relative costs of  
18 ESCO and default services, particularly for low-income customers, (f) fairness and  
19 efficacy of reliability performance measures, the Revenue Decoupling Mechanism  
20 (RDM), and storm cost deferral practices with regards to service interruptions and  
21 outages, (g) rights of submetered multifamily building tenants to ascertain whether price  
22 caps and Commission orders limiting charges for submetered service are being followed,  
23 and (h) prudence of smart metering initiatives.

1   **Q.   Please summarize your conclusions.**

2   A.   First, with regard to the affordability of electric service, rates charged by a Con Edison  
3       electric and gas are too high and too volatile for many low-income families. Second,  
4       with regard to the use of service interruption as a collection tool, the Company relies too  
5       much on this practice and not enough on better practices for engaging with payment-  
6       troubled customers who lack the resources to pay in full and on time. Third, steps should  
7       be taken to expand the reach and effectiveness of the low-income affordability program.  
8       Until a comprehensive low-income affordability program is in place, low-income rates  
9       should be frozen at no higher than their present levels. Fourth, with regard both to storm-  
10      related outages and to service interruption for bill collection purposes, there are no  
11      performance metrics for outages longer than 24 hours, the RDM unfairly shields the  
12      Company from financial consequences when meters do not run during outages and  
13      deliberate service interruptions, all major storm costs are deferred for later recovery from  
14      customers, and the risk of such outages and interruptions is unreasonably shifted to the  
15      customers, without an effective tool for ensuring that service outages and interruptions  
16      and their ensuing direct costs and indirect costs to society are prevented or minimized.  
17      Revenue decoupling mechanisms should be realigned to discourage the interruption of  
18      service and foster the safe provision of continuous service. Fifth, with regard to energy  
19      efficiency, low-income customers do not receive sufficient value as program participants  
20      for the system benefit payments they make, and more effective efficiency programs  
21      should be offered to such customers. Sixth, with regard to the relative costs of ESCO  
22      supply service and default service provided by Con Edison, ESCOs have not fulfilled the  
23      promises of competition, in that their rates are often higher than Commission-approved

1 default rates for Con Edison default service, thus exposing many low-income customers  
2 to hardship, threats of service interruption, and actual disconnection. ESCOs also often  
3 have confusing and potentially misleading advertising and terms and conditions and  
4 provide lower quality customer service. Con Edison's promotion of ESCO service and  
5 collection of excessive charges for ESCO service on Commission-regulated bills should  
6 be curtailed until and unless these deficiencies are corrected. Con Edison should provide  
7 a comparison on the bills it issues for ESCO receivables with the charges a customer  
8 would pay for Con Edison's bundled service. Seventh, further steps need to be taken by  
9 Con Edison to enhance price transparency in a variety of situations by making readily  
10 available online the ability to calculate online what a Con Edison bill would be during a  
11 hypothetical period. This service would be similar, if not identical, to the useful service  
12 made available to tenants in submetered multi-family premises which enables them to  
13 check whether rates charged by their landlords are consistent with Commission orders  
14 that reference Con Edison charges, which change monthly and are not ascertainable in a  
15 convenient and transparent manner. It would also be of benefit to promote the  
16 availability of such information to tenants and customers sharing apartments who  
17 sometimes need to estimate and apportion partial month bills, to people considering  
18 relocation to the Con Edison service territory who want to know what to budget for  
19 utilities, and to parties in real estate transactions who want to apportion utility bills  
20 accurately at closings. Finally, with respect to smart metering initiatives, the Company  
21 has taken the prudent course of continuing to examine the pros and cons of a variety of  
22 approaches, while monitoring the progress of other major utilities in this new and  
23 potentially risky field.

1           **A.       MANY CANNOT AFFORD CON EDISON'S PROPOSED RATE INCREASES**

2  
3 **Q.     How much does Con Edison propose to raise electric rates for residential customers**  
4 **in this case?**

5 A.     Con Edison proposes to increase overall electric rates for customers taking service under  
6 Service Class 1 by 3.33% on average, assuming no changes in supply costs, purchased  
7 power working capital costs, or gross receipts taxes. Electric Rate Panel, pp. 14-15 and  
8 Exhibit ERP 1, Schedule 7. Within the ordinary residential rate (Schedule 1), the  
9 Company proposes electric delivery rate increases that produce total bill increases around  
10 range of 9% for the smallest usage customers, and as low as 2% for residential customers  
11 using thousands of kilowatthours per month. Exhibit ERP 1, Schedule 5.

12 **Q.     How much does Con Edison propose to raise low-income residential electric rates in**  
13 **this case?**

14 A.     Electric rates for low-income customers will increase at a higher rate than for non-low-  
15 income customers, despite the low-income customer charge offset. As shown on Exhibit  
16 ERP-1, Schedule 5, Tables 3 and 4, low-income customers would see total bill increases  
17 as high as 18.6% for the very lowest use customers, again assuming constant supply costs  
18 and no change to purchased power working capital or gross receipts taxes. Customers  
19 who are not served in the low-income program would pay a customer charge of \$17.14  
20 per month. The Company proposes to raise the low-income customer charge by 20%, to  
21 \$8.64. As with non-low-income customers, low-income customers would also see the  
22 electric energy delivery charge increase by more than half a penny per kWh, or roughly  
23 6%. Exhibit ERP-1, Schedule 3.

24 **Q.     How much would Con Edison's requested rate increases burden a low-income**  
25 **household's budget?**

1 A. Under proposed rates, a family of three with income at the Federal Poverty Level (FPL),  
2 using a low amount of electricity in the summer and winter (300 kWh per month) would  
3 have to spend 5% of its income just for electricity. The same usage by a customer with  
4 the median income would only be 2% of that household's income, or less than half the  
5 burden on the budget. Similarly, a customer with household income at the FPL with high  
6 summer and winter kWh non-heating usage (1500 kWh/month) would face bills that  
7 would take as much as 22% of the household income. By contrast, the high-usage family  
8 at median income would only pay 8% of household income, or one-third the electricity  
9 burden of those with incomes below the FPL. On top of higher electricity costs, Con  
10 Edison gas customers would be paying higher bills, as well. Their total energy burdens  
11 will be multiples of the burdens on median income households. With income inequality  
12 rising in recent years, these burden differences have become more stark.

13  
14 **Q. Are the burdens of energy costs affordable for low-income customers in the Edison**  
15 **service area?**

16 A. No. The lack of affordable service is manifested in part by the large number of  
17 customers who are behind in their payments, who are threatened with service interruption  
18 as a bill collection measure, and whose service is interrupted. Over the last two years,  
19 Con Edison disconnected residential customers more than 165,000 times. On average,  
20 over 7,000 customers lost their service in any given month.<sup>1</sup>

21 **Q. Please summarize your analysis of the likely impacts of Con Edison's proposed**  
22 **electricity bill increases on its low-income customers.**

23 A. Increases in the amounts and of the types proposed by Con Edison will render electric

---

<sup>1</sup> This monthly average excludes the results from July 2012, because a strike in July that month depressed the number of outages in that month.



1 service increasingly unaffordable for many New York households. To the extent such  
2 customers are unable to pay in full and on time, and Con Edison continues its reliance on  
3 disconnection as a collection tool, many of these families will endure hardship, threats of  
4 service interruption, and some will go without power. I discuss the consequences of  
5 electricity disconnections in more detail below.

6 **Q. Please describe the impact on residential bills of the Company's proposed natural**  
7 **gas rate increase.**

8 A. The Company proposes rate increases that it figures would mean average residential bills  
9 will increase by 2.9%. Exhibit GRP-2, Table 1. Non-heating gas customers ["cooking  
10 customers"] using about 8 therms per month (*id.*, Table 4), would see an increase of  
11 2.23%. *Id.*, Table 3. SC 1 customers who use natural gas for heating, and use about 130  
12 therms per month on average (*id.*, Table 4), would see an increase of about 0.8 percent.  
13 *Id.*, Table 3. As in the electric rate case, the gas bill increases would burden low-use  
14 customers the most. Low-use cooking customers, using half the average cooking  
15 customer amount, would see bill increases of 2.86%, or one third again over the average  
16 bill increase. *Id.* By contrast, residential heating customer with high usage, 200 therms  
17 or more, would actually get a bill decrease under Con Edison's proposal. *Id.*

18 **Q. Please describe the Company's proposed increase to low-income gas bills.**

19 A. Low-income non-heating gas customers ["cooking customers"] whose charges are  
20 reduced under the Con Edison Low Income Program, and using about 8 therms per  
21 month, would see an increase of 3.24% under the Company's assumptions. *Id.*, Table.  
22 Low-income customers who use natural gas for heating would see an increase of about  
23 0.2 percent according to the Company if they use 130 therms per month on average. *Id.*,

1 Table 3. As in the electric rate case, the gas bill increases would burden low-use  
2 customers the most. Low-income customers using half the average non-heating amount,<sup>2</sup>  
3 or 4 therms, are forecast to see bill increases of 4.23%, or almost twice the residential  
4 average percentage increase. *Id.*

5 **Q. How would you characterize the proposed percent increases in gas bills for low-**  
6 **income and non-low-income customers?**

7 A. The Company's proposed rates would make matters worse rather than better for low-  
8 income customers. The bill increases are regressive because they would place a higher  
9 relative burden on low-income gas customers than on non-low-income residential gas  
10 customers, make it more difficult to pay bills for necessities, and reduce the ability of  
11 customers to make discretionary purchases. The Company's bill impact estimates may  
12 understate actual impacts because benign assumptions about supply costs may not be  
13 realized, and continuation of the Company's unpredictable, volatile pricing practices may  
14 expose vulnerable customers to additional unexpected burdens.

15  
16 **B. REDUCE THE USE OF DISCONNECTION AS COLLECTION TOOL**

17  
18 **Q. Please describe Con Edison's use of disconnection as a credit and collections tool.**

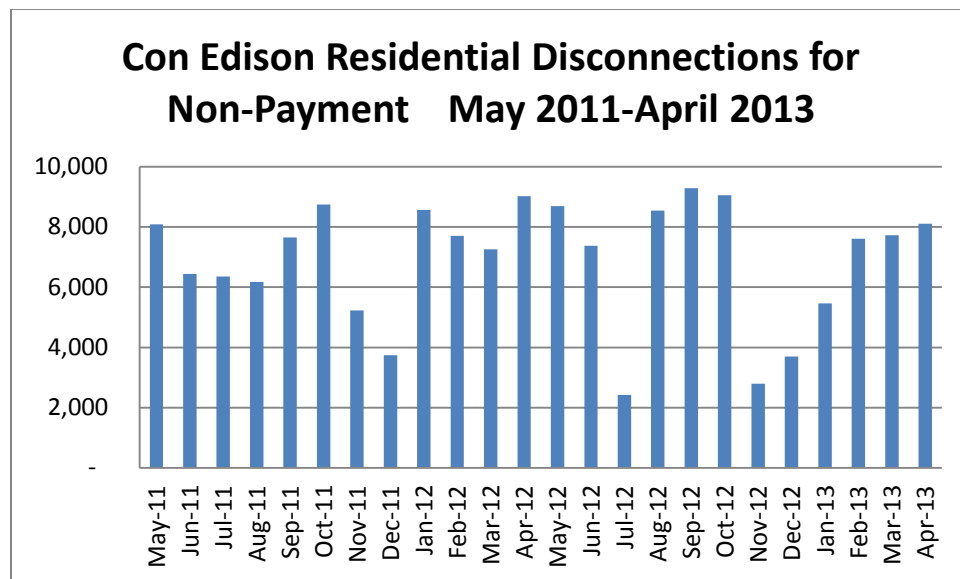
19 A. Con Edison makes frequent use of service interruption and the threat of disconnection in  
20 an effort to incent payment by customers in default. The pattern of such practices  
21 through 2010 was outlined in *New York's Utility Termination Storm - The Quiet*  
22 *Blackout*, issued by AARP in 2011. This report is attached to my testimony as Exhibit  
23 NB-2. Since then, additional information has been provided by Con Edison in response

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<sup>2</sup> Low-income heating customers using 200 therms or more would see no change in their bills, under the Company's assumptions.. *Id.*

1 to Commission directives that bring these data further up to date. Figure 1, below,  
 2 summarizes Con Edison's monthly disconnection of residential customers for non-  
 3 payment, as shown in its collection activity reports to the PSC for the period May 2012  
 4 through April 2003.<sup>3</sup>

5 Figure 1



7  
8  
9 **Q. What are the consequences for low-income families and for society at large of**  
 10 **unaffordable gas and electric rates?**

11 A. Under present rates and present collection practices, in a typical month more than  
 12 200,000 households, many of them low-income families, are threatened with interruption  
 13 of service because they are behind in payment of their bills. Customers are caught  
 14 between unaffordable utility bills and intolerable consequences. Con Edison uses  
 15 disconnection as a threat to induce bill payment, and follows through on that threat in

<sup>3</sup> Note that a strike in the summer of 2012 likely led to the reduced disconnection activity recorded for July of that year.

1 many situations where its low-income customers are unable to pay the bill in full and on  
2 time. In the most recent 24 month period for which data is available, Con Edison cut off  
3 service to more than 165,000 customers. Approximately 130,000 of terminated accounts  
4 were restored. As a result, households without the means to make full and timely  
5 payments may go without electricity for hours and often for days.

6 **Q. What are some of the unacceptable consequences of disconnection of families who**  
7 **fall behind in utility bill payments?**

8 A. In the non-heating months, disconnection means lack of hot water for bathing and  
9 cleaning, spoilage of refrigerated food and the inability to store perishable food or  
10 medicines, inability to have hot meals and fresh food, lack of light for studying, inability  
11 to use electrically-power health and medical equipment, interruption of  
12 telecommunications, and similar hardships. Elderly customers or families with infants  
13 can be exposed to dangerous heat stroke during hot weather when disconnection  
14 interrupts air conditioners and fans. In heating months, consequences can be more  
15 immediately dangerous. Even customers with non-utility heating sources typically  
16 require electricity to run circulation pumps or otherwise operate their heating equipment.  
17 Further, the occasional death of a customer from hypothermia, or fire caused by resort to  
18 less safe alternatives to utility service, such as space heaters or candles, **highlights** the  
19 dire effects of disconnection.

20 **Q. Can you provide the Commission with examples of some of the dire effects of**  
21 **disconnection?**

22 A. Yes. In 2005, a child in New York died in a fire started by a candle the family had been  
23 using for light since power had been shut off by Con Edison. According to a news report,  
24 electricity to the apartment had been cut off at 1:45 p.m. on the day of the fire. Two hours

1 later, the customer appeared at a local Con Edison branch and paid \$700 - almost half the  
2 outstanding bill. The Company said it would reinstate power within 24 hours. Tragically,  
3 it was not in time – the fatal fire broke out that same evening.

4 In a 2003 Syracuse, N.Y. incident, a fire broke out in a second-floor bedroom of a  
5 home where a mother and her three children had been using candles to light their home  
6 since the power had been shut off earlier in the month. They escaped unharmed. A  
7 Niagara Mohawk spokesman said company officials had had a phone conversation with  
8 the customer to discuss the bill, but no arrangement for reconnection had been achieved.

9 An August, 2006, candles left burning overnight in a Rochester home without  
10 electricity caused a fire. The homeowner had been laid off, and as a result had been  
11 unable to keep up with bills. She spent the summer without electricity.

12 **Q. Are there similar examples from other states?**

13 A. Yes. In 2005, after state laws were changed to make utility terminations easier, four  
14 Pennsylvania residents without electricity died in a candle fire. The director of the  
15 Pennsylvania Commission's Bureau of Consumer Services said what was missing in the  
16 new law was the old requirement that the utility, Penelec, go to the house 48 hours before  
17 shut-off. That requirement had meant that a utility employee had to personally notify the  
18 customer and to leave notice tacked to the door if no one was home. As things turned out,  
19 the failure to perform a “last knock,” and the customer’s ignorance of the right to ask for  
20 a medical deferral from shut-off because of chronic-health problems, both contributed to  
21 the tragedy.

22 In 2007, a woman in Indiana died when the utility cut off her electricity, cutting

1 off her life support.<sup>4</sup> A utility in Pennsylvania agreed to pay a \$45,000 fine in connection  
2 with the death of a man whose power had been shut off for two months before his death.<sup>5</sup>  
3 A New Hampshire utility was absolved by the public utilities commission of  
4 responsibility for the death of a woman who lost her life support when the utility shut off  
5 her electricity,<sup>6</sup> but the incident prompted an outcry in the state about disconnection  
6 policies. In 2010, an 86-year old Michigan man died, apparently from hypothermia  
7 caused by sleeping in his automobile in 16-degree weather when his power had been shut  
8 off that day, over his delinquency in paying a bill less than \$300.<sup>7</sup>

9 **Q. How do these cases relate to Con Edison's rate increase request in these cases?**

10 A. In all these cases, service was shut off as the utility's response to non-payment of past  
11 bills. In some cases the utility was within its legal rights to shut off the power. The  
12 examples nonetheless illustrate how a lack of safe utility service can lead to life-  
13 threatening emergency situations.<sup>8</sup> They also point to the choices the utility has when  
14 dealing with a customer who is behind on his bills. Disconnection, though it may be  
15 legal, is not required, is highly discretionary, and as I will discuss, is often  
16 counterproductive.

17 **Q. What are other consequences for families facing disconnection for non-payment?**

18 A. A recent study published by the non-profit Center for Financial Services Innovation  
19 revealed that over one-third of so-called "small-dollar credit" loans are taken out to pay

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[http://articles.southbendtribune.com/2007-01-26/news/26767343\\_1\\_ipl-utility-worker-medical-devices](http://articles.southbendtribune.com/2007-01-26/news/26767343_1_ipl-utility-worker-medical-devices).

<sup>5</sup> [http://articles.mcall.com/2013-04-04/business/mc-puc-fines-ppl-20130404\\_1\\_puc-ppl-electric-utilities-pennsylvania-public-utility-commission](http://articles.mcall.com/2013-04-04/business/mc-puc-fines-ppl-20130404_1_puc-ppl-electric-utilities-pennsylvania-public-utility-commission).

<sup>6</sup> <http://www.insurancejournal.com/news/east/2010/12/14/115642.htm>.

<sup>7</sup> [http://www.mlive.com/news/flint/index.ssf/2012/02/temperature\\_outside\\_the\\_night.html](http://www.mlive.com/news/flint/index.ssf/2012/02/temperature_outside_the_night.html).

<sup>8</sup> See PULP Network Blog, Candle Fires: A Symptom of "Rolling Blackouts" Affecting Low-Income Households, available at <http://pulpnetwork.blogspot.com/2006/09/candle-fires-symptom-of-rolling.html>.

1 utility bills. See [A Complex Portrait: An Examination Of Small-Dollar Credit](#)  
2 [Consumers, CFSI](#), August, 2012.

3 The survey also asked respondents to indicate why they used a small loan,  
4 and paying utility bills was No. 1 on the list at 36 percent. Rounding out  
5 the top three were using the loan for living expenses (34 percent) and rent  
6 (18 percent).  
7

8 Juan Rodriguez and Aundraya Ruse, [Who is using small-dollar loans and why?](#), Yahoo  
9 Finance, Sept. 11, 2012. Small-dollar credit loans include such vehicles as payday loans,  
10 pawn loans, direct deposit advance loans, auto-title loans, and non-bank installment  
11 loans. They are often the only form of credit available to families in low-income  
12 neighborhoods. These cash advance shops are notorious for high interest rates and hard-  
13 sell promotions, often with the result that the customer is pulled into a vicious cycle of  
14 repeated borrowings and mounting indebtedness. Thus, in an effort to avert the disaster  
15 of a utility service termination, a low-income customer may make a dangerous pact with  
16 a small-dollar credit lender.

17 **Q. How do these adverse consequences for low-income families impact society at large?**

18 A. Families without electricity often have medical and social problems that spill over to  
19 affect society at large. Society must accommodate the external costs of service  
20 interruptions for bill collection purposes, more loss of property, greater payments for  
21 medical care of indigent persons, higher fire-fighting costs, poor academic results and  
22 related problems for youth in the neighborhoods, and similar spill-over effects from a  
23 utility's decision to attempt collection by threatening and using disconnection. Also,  
24 families who get caught up in small-dollar credit loans to avert the catastrophe of  
25 disconnection may pay large amounts to bottom-feeding creditors, funds that leave the

1 neighborhood, and do not produce goods or services for the household, further  
2 impoverishing the neighborhood.

3 **Q. What is the policy of the State of New York concerning customers' access to**  
4 **affordable energy?**

5 A. New York's legislature, in the Home Energy Fair Practices Act, declares that it is "the  
6 policy of this state that the continued provision of all or any part of such gas, electric and  
7 steam service to all residential customers without unreasonable qualifications or lengthy  
8 delays is necessary for the preservation of the health and general welfare and is in the  
9 public interest." PSL §30. The legislature's concern about continuity of service is  
10 understandable given the high social costs of disconnections, and the severe  
11 consequences to people who go without power, even in good weather and for seemingly  
12 short times.

13 **Q. How can a utility incent timely and full payment behavior from low-income**  
14 **customers without threatening and using disconnection?**

15 A. There are many tools available to a utility to optimize the payment patterns of its low-  
16 income customers. Indeed, the success of these alternative tools requires the utility to  
17 lower its use of disconnection and the threat of service interruption, as I will explain  
18 further below.

19 **Q. What is the theory behind use of disconnection as a tool to incent timely and full**  
20 **payments?**

21 A. The threat and use of disconnection depends on the assumption that the payment-troubled  
22 household has the funds to pay in full and on time, and is holding back payment of the  
23 utility bill in favor of other personal priorities. Threatening disconnection and making  
24 good on disconnection address the moral hazard that a customer will simply refuse to pay



1 in full and on time without such drastic consequences.

2 **Q. Do the assumptions behind the use of disconnection as a collection tool hold true for**  
3 **all customers in default?**

4 A. No. In fact, research conducted by the credit and collections arm of Wisconsin Public  
5 Service<sup>9</sup> suggests that only a small minority of defaulting customers can pay in full and  
6 on time, and require the threat of disconnection to induce payment. For the majority of  
7 customers in default, the effective funds available to the family are not sufficient to cover  
8 basic household needs. [That is in fact the definition of poverty: insufficient funds for  
9 basic household needs.] Threatened disconnection overlooks opportunities for mutually  
10 beneficial arrangements between low-income customers and the utility, and turns the  
11 relationship into an adversarial one. It does and can do little to incent payment where the  
12 funds do not exist, and thus often ends in a disrupted customer-utility relationship, a  
13 household without utility service, further pressures on the family's neighborhood, and  
14 uncollectible bills. The insights from the WPSC research have since fostered a number  
15 of innovations in low-income credit and collections by utilities, including reduced low-  
16 income rates, early identification programs and arrearage management programs.

17 **Q. Please describe the Wisconsin Public Service Company credit and collections**  
18 **research.**

19 A. Wisconsin Public Service Company (WPSC) is a gas and electric utility. WPSC serves  
20 433,000 electric customers and 314,000 natural gas customers in northeastern Wisconsin  
21 and an adjacent portion of Michigan's Upper Peninsula.

22 <http://www.integrystgroup.com/investor/financialfactsheet.pdf> New consumer

23 protections rules, energy price increases and annual winter moratoriums introduced in the

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<sup>9</sup> Ron Grosse, *Win-Win Alternatives for Credit and Collections*, revised and updated with Nancy Brockway, 2008, attached as Exhibit NB-2.

1 last quarter of the 20<sup>th</sup> century placed a great deal of social and economic pressure on  
2 utility credit and collection practices. As a result utilities in the state of Wisconsin were  
3 not certain how to cope with what they assumed would be rising arrearages and mounting  
4 losses. This experience prompted the Company to undertake what was then a unique  
5 effort to reduce the number of disconnections and at the same time produce good  
6 business results by limiting losses and arrears. "If we could not disconnect customers for  
7 nonpayment at certain times, we did not know how we could control losses and incent  
8 payment." *Win-Win rev.*, at p.2.

9 **Q. Why did WPSC decide to find out the reasons its customers did or did not pay their**  
10 **bills in full?**

11 A. In addressing the challenge to reduce punitive approach to credit and collections, it  
12 occurred to some people at WPSC that they did not actually know why customers did not  
13 pay their bills. "It had been widely assumed that people didn't pay because they were  
14 playing games with the bill collector. It did not seem reasonable to us that substantial  
15 numbers of customers might not be adequately prepared to respond to the collection  
16 demands put on them." *Id.* To explore this premise, the Company conducted a "lifestyle  
17 survey" of residential utility customers in the city of Green Bay.

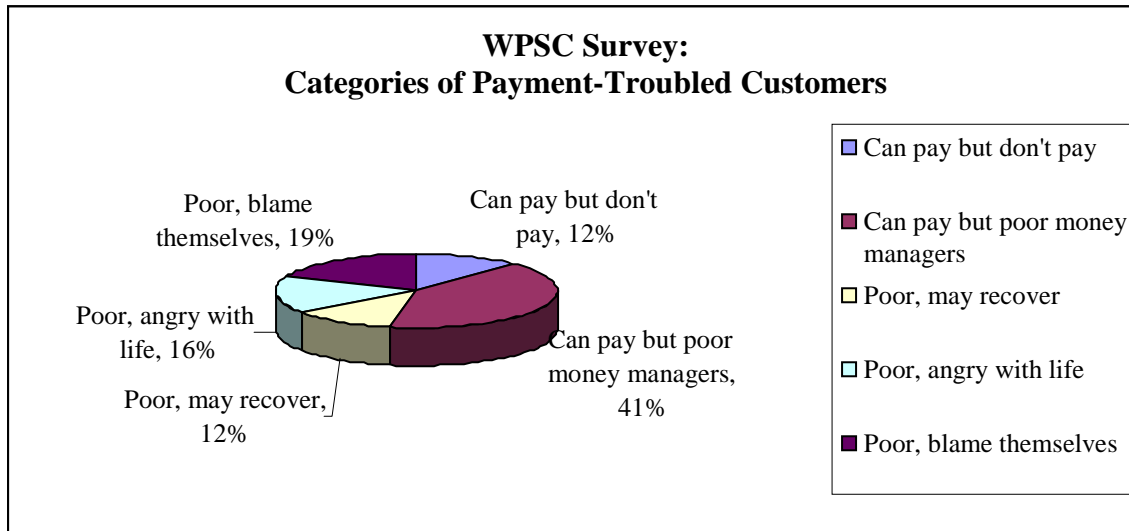
18 **Q. What did the WPSC research reveal about reasons for customer non-payment?**

19 A. The WPSC research found that the subject population naturally gravitated into five major  
20 clusters or categories with similar characteristics, as follows:

- 21 • 12 percent have money, know exactly what they are doing, and will pay if faced  
22 with disconnection.
- 23 • 41 percent may have enough money but tend to lack money management skills to  
24 make it go as far as it needs to.
- 25 • 12 percent are in transition--either going into or coming out of poverty.

- 16 percent are poor, lack enough resources to pay their bills, and are angry.
- 19 percent are poor and blame themselves for their situation

*Id.* The breakdown looks like the following in a pie chart, Figure 2:



**Q. These are not the typical subcategories for analyzing utility non-payment. What was the benefit of the insights these breakouts supplied?**

**A.** Two major insights emerged from the breakdown of clusters of defaulting customers.

First, as noted above, only 12% of customers in default knew exactly what they were doing, had the funds, and would pay up if faced with disconnection. Second, the reasons for non-payment among the other four groups of customers all suggested that disconnection threats and disconnections were the least effective tools for incenting payment from such customers:<sup>10</sup>

Recall the assumptions prior to the research that most customers: (a) had money, (b) knew exactly what they were doing, and (d) could pay. In fact, only 12 percent of our non-paying customers fell into that category. These customers paid almost

<sup>10</sup> As Grosse, the former WPSC credit and collections manager, and author of the study explains, utilities that rely primarily on disconnection are firms that only have a hammer, and then tend to define every payment problem as a nail. *Id.*, at 17.

1 immediately when presented with a disconnect notice. A disconnect notice was  
2 effective for this 12% of our late and non-paying customers.

3 *The remaining 88 percent did not fit our preconceived picture.* They had very  
4 limited or no resources to respond to disconnection demands. Further, 19 percent  
5 saw themselves as helpless to cope with the situation; they blamed themselves.  
6 The operational implications of these findings were extremely important.

7 *Id.*, p. 4 (emphasis supplied).

8  
9 **Q. This research was done some time ago, in a mid-Western city. Why should Con**  
10 **Edison or the New York Public Service Commission pay attention to the findings?**

11 A. The exact percentage breakdown of Con Edison payment-troubled customers into the five  
12 groups identified in the research will not be exactly the same as that found by the WPSC  
13 survey. Based on my 30 plus years of experience in the field, however, I can say with  
14 confidence that any utility customers in default likely can be separated into these  
15 categories: a small percentage who game the system, a moderate percentage who need  
16 help in managing their budgets, and a large portion who do not have the funds to pay the  
17 bills, and respond to this reality in different ways. Note that these categories are quite  
18 different from the modern set of 30 or more customer segments used to segregate  
19 customers for business purposes. Aside from recognizing income limitations, the WPSC  
20 categories do not relate primarily to socio-economic status or political or societal  
21 attitudes, and do not try to break down customer groups into the narrowest categories  
22 possible with modern data sources and technology. Rather, they go right to the nub of the  
23 non-payment problem each group is experiencing, and how such customers relate to the  
24 utility.

25 **Q. How will Con Edison benefit from understanding these general categories of**  
26 **customers in default, and addressing each group with respect for its unique**  
27 **qualities?**

28 A. Addressing the particular issues facing customers in each of the clusters who cannot

1 respond meaningfully to the disconnection tool will not only help Con Edison customers  
2 at risk of losing utility service, but will help Con Edison strengthen its connections to its  
3 customers, and the payment patterns of those with insufficient income (or without the  
4 ability to manage their income properly).

5 **Q. Does Con Edison know the extent to which its payment-troubled customers are low-**  
6 **income and have trouble paying bills for this reason?**

7 A. No. See Response to PULP Set 1, Question 38. Con Edison does not break out its  
8 collection statistics based on customer income. It does not track the number of field  
9 collection visits that are to low-income customer households, or even to residential  
10 customers. It does not track the number of residential customers disconnected for non-  
11 payment separately from the number of commercial customers disconnected. It does not  
12 track the numbers of customers who have been disconnected more than once in the last  
13 year for non-payment. Further, Con Edison does not have a forecast for disposable  
14 income by income strata. Response to PULP 1, Question 67.

15 **Q. Does Con Edison know how long its customers remain without service after being**  
16 **disconnected for non-payment?**

17 A. No. Its collections data only shows that fewer customers get reconnected after non-  
18 payment each month than are disconnected for non-payment. Con Edison does not track  
19 the number of hours customers are without service after disconnection for non-payment.  
20 Response to PULP 1, Question 38.

21 **Q. In general terms, what do you recommend as a change in Con Edison's use of**  
22 **disconnection to incent payment?**

23 A. The best way to ensure low-income customers pay their bills in full and on time is to  
24 make them affordable. Con Edison can promote affordability by keeping its own costs

1 down (e.g. austerity), and by offering an affordable rate to qualified customers, as  
2 discussed below. Also, more active engagement with their low-income customers  
3 through such vehicles as comprehensive arrearage management programs can improve  
4 low-income customers' payment patterns, creating an incentive to pay in full and on time  
5 without resorting to punitive disconnection threats. One way to reorient the corporate  
6 attitudes towards the value of disconnections as a credit and collections tool would be for  
7 Con Edison to adopt a goal of reducing disconnections over time, while maintaining at  
8 least existing payment patterns. With such a goal in mind, the firm and its employees  
9 will take a fresh approach to the problem of non-payment, rather than relying on a crude  
10 tool that exposes families to mortal risk, but in fact does not work to induce payment in  
11 many situations.

12 **C. HOLD LOW-INCOME CUSTOMERS HARMLESS, PENDING DESIGN OF**  
13 **COMPREHENSIVE LOW-INCOME AFFORDABILITY PROGRAM**

14  
15 **Q. Does Edison propose to offer a low-income program for its electricity customers?**

16 A. Yes. The Company is proposing to continue at least through the rate year (2014) the  
17 low-income program offered under Section K of the Joint Proposal approved by the  
18 Commission in Case 09-E-0428. As described by the Electric Customer Operations  
19 Panel, the low-income program would consist of the following elements from Section K:

- 20 1. An \$8.50 offset against the customer charge for qualifying customers.  
21 2. Customer enrollment commitments and  
22 3. One-time partial waiver of reconnection fee.  
23

24 **Q. Does Edison propose to expand its electricity low-income affordability efforts in this**  
25 **docket?**

26 A. No. Edison proposes to make some changes in the program, but proposes no additional

1 measures to address the needs of low-income customers for rate reductions in the rate-  
2 effective year as it did under the last three-year rate plan. As described by the Electric  
3 Rate Panel, Con Edison proposes the following low-income program changes:

4 With respect to the low-income program: (a) SC 1 rate provisions have been  
5 amended (Leaf 388) to allow for continuation of the low-income customer charge  
6 discount for the period January 1, 2014 through December 31, 2014, at an annual  
7 reduction level of \$38.25 million...; (b) General Rule 15.2 of P.S.C. No. 10 –  
8 Electricity (Leaf 119) has been revised to restore the level of the waiver of  
9 reconnection charges to the full amount of the charge and to establish a “once per  
10 account” waiver limitation for customers enrolled in the low-income program at  
11 any time during the period April 1, 2010, through December 31, 2014, up to a  
12 target amount of \$500,000...; and (c) the “Food Stamps” program, one of the  
13 programs that qualify a customer to participate in the low-income program (Leaf  
14 388), has been changed to “Supplemental Nutrition Assistance Program,” to  
15 reflect the change to the program’s name pursuant to Chapter 41 of the Laws of  
16 2012.  
17

18 Electric Rate Panel pp. 59 line 18 to 60 line 18.

19 **Q. How much does Con Edison propose to reduce rates to its electric low-income**  
20 **customers?**

21 A. Con Edison does not propose to reduce rates for its electric low-income customers.

22 Rather, it proposes to fix the total dollars available for electric low-income rate reduction  
23 at the level approved in the last three-year rate proceeding, and use it to continue the  
24 present offset against the customer charge for qualifying customers, through 2014.

25 Electric Rate Panel, pp. 59-60. The Company also proposes to offer its limited  
26 reconnection fee waiver to customers, up to an annual budget amount. *Id.*, p. 60.

27 **Q. Turning to natural gas, does Con Edison offer a rate reduction to its low-income gas**  
28 **customers?**

29 A. Yes.

30 **Q. Please describe Edison’s current natural gas low-income rates.**

1 A. Con Edison offers a small offset against the monthly minimum charge for low-income  
2 gas customers, and a one-time reconnection fee waiver in the event they are disconnected  
3 for non-payment. The program was approved in Case 09-G-0795. To qualify, customers  
4 must be receiving assistance under one or more enumerated means-tested programs.  
5 Currently, non-heating customers in the program receive an offset of \$1.50 on the  
6 monthly minimum charge, and heating customers pay a reduced rate of \$0.3833 per  
7 therm for usage in the 4-to-90 therm block.

8 **Q. Does the Company propose to continue low-income rate reductions for gas**  
9 **customers?**

10 A. Yes. Con Edison proposes to continue offering a reduced minimum charge to qualifying  
11 low-income gas customers, a reduced therm rate for low-use low-income gas heating  
12 customers, and a reconnection fee waiver to eligible participants in the low-income  
13 program. Gas Customer Operations Panel Testimony, p. 48.

14 **Q. Does the Company plan to expand its low-income gas customer program or reduce**  
15 **low-income rates?**

16 A. No. In fact, the Company proposes to lessen the rate reduction now provided to  
17 participating low-income customers. Under the gas rate proposal, the minimum charge  
18 reduction (relative to the non-low-income minimum charge rate for SC 1 customers)  
19 would be cut from \$1.50 down to \$1.25 per month, and the rate reduction for low-income  
20 heating customers would be cut from \$0.3833 down to \$0.3143 per therm,. At the same  
21 time, the Company proposes to raise the underlying rates against which these reductions  
22 would be taken. Thus, the Company proposes to raise rates for gas customers, and at the  
23 same time reduce the level of low-income protection. *Id.*, p. 51. Low-income customers'  
24 bills would rise accordingly, and become that much less affordable, even to participants.



1 **Q. Does the Company propose other limitations on the gas program for low-income**  
2 **customers?**

3 A. Yes. As in the case of the rate reduction for low-income electricity customers, the  
4 Company proposes to extend the waiver component only to customers who did not  
5 benefit from the waiver during the rate plan period that commenced April 1, 2010. The  
6 Company states that it will grant additional waivers on a case-by-case basis for good  
7 cause shown, provided the revenue impact of the waiver program does not exceed the  
8 target amount. Gas Customer Operations Panel testimony, p. 49. Also, receipt of  
9 Medicaid (means-tested medical benefits) would no longer be accepted as proof of low-  
10 income for new applicants. *Id.* at 51.

11 **Q. Why does Con Edison propose to reduce rate reductions for its low-income gas**  
12 **customers?**

13 A. As it proposes for its low-income electric customers, Con Edison proposes to limit its gas  
14 low-income benefits such that they can be provided under a hard cap on the total amount  
15 of rate reductions. In the program for low-income electricity customers, Con Edison has  
16 proposed to cap the amount of rate reductions at the same dollar amount as in the past.  
17 The Company does not forecast any greater number of electric customer participants  
18 (despite the effect on affordability of the rate increases it seeks in this docket), and it does  
19 not propose to change the electric assistance cap in 2014. On the gas side, however, Con  
20 Edison expects a small increase in low-income SC 1 participants, and a significant  
21 increase in low-income SC 3 participants, just as a result of updating applicant lists with  
22 the social service agencies under whose programs customers establish their income-  
23 eligibility for the rate reduction. About 600 new cooking customers (on top of the  
24 145,000 contemplated by the program) have been identified as qualifying for

1 participation. Over 3000 new heating customers have been identified who are eligible for  
2 the rate reductions. Gas Customer Operations Panel, p. 50. To accommodate this small  
3 number of additional participants, while maintaining a hard limit on total rate reductions  
4 that is no greater than the level in the current three-year rate plan, the Company has  
5 proposed to reduce per-participant benefits. *Id.*, pp. 50-51.

6 **Q. Are Con Edison's low-income rates affordable at the levels in effect before the**  
7 **current rate increase proposal?**

8 A. Not for many low-income customers. The Low Income Reports filed by Con Edison in  
9 compliance with Section K of the Joint Proposal approved in the last rate plan show that  
10 on the electric side, almost 150,000 participants were in arrears, with an average  
11 arrearage of \$532. Thus, for many participants, even present rates are not within range of  
12 strained family budgets. Con Edison does not break out arrears by gas versus electric, or  
13 low-income and non-low-income, so it is not possible to get a precise estimate of  
14 unaffordability on the gas side. There is no reason to think that gas prices are affordable  
15 for all low-income customers, even after application of the low-income program rate  
16 offsets.

17 **Q. What are the hard dollar caps Con Edison proposes for the electric and gas low-**  
18 **income affordability assistance?**

19 A. Con Edison proposes to retain in this three-year rate plan the same hard caps approved in  
20 the last three-year rate plan, limiting the total amount of rate reductions provided for its  
21 electric and gas low-income customers. Con Edison thus proposes a bill affordability  
22 program of no more than \$38.5 million per year for low-income electricity customers and  
23 \$500,000 in waived reconnection fees. Electric Rate Panel, pp. 59-60. In the case of the  
24 low-income program for gas customers, Edison proposes to limit rate affordability

1 reductions to a total of \$6.4 million, and reconnection fee waivers to \$75,000. Gas  
2 Customer Operations Panel, pp. 49-50. In both the gas and electric cases, Con Edison  
3 proposes to continue the cost allocation to all classes approved in the last rate case,<sup>11</sup>  
4 which provided for reconciliation of over-recoveries and under-recoveries through the  
5 Revenue Decoupling Mechanism.

6  
7 **Q. What is the Company's understanding of the impact of its proposed rate increases**  
8 **on the affordability of its gas and electric service?**

9 A. As noted above, Con Edison has made no analysis of the impact of its proposed rate  
10 increases on the disposable income of its low-income customers, Response to PULP Set  
11 2, Question 65, nor regarding the burden its rates will impose on its low-income  
12 customers. Response to PULP Set 2, Question 66.

13 **Q. What do you propose regarding the hard caps on benefits (and participation)**  
14 **contained in the Company's low-income affordability proposal?**

15 A. I propose that the hard caps be eliminated, and that instead, low-income affordability  
16 assistance and participation levels be estimated by the extent of need for such assistance.

17 **Q. What do you propose to strengthen the affordability of Con Edison's rates for its**  
18 **low-income customers?**

19 A. For the purposes of this rate case, I propose that Con Edison freeze the low-income  
20 participants' rates at the level in effect before this rate increase. Below, I set out those  
21 rates.

22 **Q. How long should such rates remain in place?**

23 A. I recommend that the rates for low-income customers be kept in place until Con Edison  
24 has prepared a thorough evaluation of the extent to which electricity and gas prices are

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<sup>11</sup> Order Establishing Three-Year Rate Plan, Case 09-E-0428, p. 18, note 24.

1 unaffordable for its low-income customers. At that point, Con Edison can make a  
 2 proposal for a prospective change to the rates. The Commission will be able to review  
 3 the likely impact of Con Edison's proposed low-income rates on participants and non-  
 4 participants alike.

**PULP Proposed Electric Delivery Rates - Low Income**

	<i>Winter</i>		<i>Summer</i>
<i>First 250 kWh</i>	8.894	<i>cents/kWh</i>	8.894
<i>kWh&gt;250</i>	8.894	<i>cents/kWh</i>	10.224
<i>Customer</i>	\$ 7.26	<i>\$/customer/mo</i>	\$ 7.26

*Plus miscellaneous charges and supply costs.*

**PULP Proposed Gas Delivery Rates - Low Income**

	First 3 therms	\$	17.10
	Over 3 therms, cents per therm	\$	91.58
	Minimum charge	\$	17.10

*Plus miscellaneous charges and supply costs.*

Source: Exh. GRP-2, table 2, page 1  
 Exh. ERP-1, Schedule 3, table 2

5

6 **Q. Are there other steps Con Edison can take to improve the affordability of its**  
 7 **services to low-income customers?**

8 A. Yes. Con Edison should determine why customers who receive benefits under the Home  
 9 Energy Assistance Program (HEAP) continue to be disconnected for non-payment. Not  
 10 only should Con Edison waive reconnection fees in all such cases, Con Edison should  
 11 develop procedures to address credit and collection issues in these situations without  
 12 resorting to actual disconnection. In cases involving heat, Emergency HEAP may be

1 available to forestall termination. Also, customers who receive Regular HEAP have low  
2 incomes and may be eligible for utility assistance under state programs. Disallowing  
3 reconnection charges for HEAP customers could encourage the Company to provide  
4 services to assist these customers in accessing assistance rather than terminating their  
5 service. In addition, instead of eliminating Medicaid eligibility from its gas program, it  
6 should add Medicaid eligibility to its electric program.

7  
8 **D. CON EDISON MUST FOSTER FAIRNESS AND TRANSPARENCY IN ESCO**  
9 **PRICES, TERMS AND CONDITIONS**

10  
11 **Q. Does Con Edison support the efforts of competitive energy suppliers (ESCOs) to sell**  
12 **power to its customers?**

13 A. Yes. Con Edison also collects ESCO charges for supply service on its bills to residential  
14 customers.

15 **Q. How many Con Edison residential customers presently take service from a**  
16 **competitive supplier?**

17 A. About 740,000 Con Edison residential electricity customers take service from an ESCO.  
18 Response to PULP Set 1, Question 23.. This represents roughly one quarter of Con  
19 Edison's electricity customers. A slightly lower percentage, 21% of residential gas  
20 customers, take competitive gas service. *Id.*

21 **Q. How does Con Edison promote competitive sourcing of power?**

22 A. Con Edison makes information available to customers about the opportunities to shop for  
23 competitive supply. For example, the Company has a page on its web site called "Power  
24 Your Way," [http://www.Con Edison.com/customercentral/energyrespower.asp](http://www.ConEdison.com/customercentral/energyrespower.asp), which  
25 answers customer questions about shopping for power. Con Edison advertises potential

1 savings from ESCOs service in its “PowerMove” program, at  
 2 [http://www.poweryourway.com/powermove\\_residential.asp](http://www.poweryourway.com/powermove_residential.asp), promoting a 7% discount  
 3 (on the supply part of the bill). Con Edison also assists ESCOs in serving customers by  
 4 offering a Purchase of Receivables program, which includes billing and payment  
 5 processing (BPP) service (billing, printing, and mailing customer bills, and accepting and  
 6 processing customer payments. Response to PULP Set 1, Question 15. Over 95% of  
 7 customers taking ESCO service receive their bills from and make their payments to Con  
 8 Edison, Response to PULP Set 1, Question 24, indicating that Con Edison billing and  
 9 payment processing services are highly valued by ESCOs, who sell their receivables to  
 10 Con Edison at a discount.

11 **Q. Does Con Edison receive adequate payment for its BPP services and other ESCO**  
 12 **promotional services?**

13 A. No. In each of the last three years, Con Edison’s revenues from ESCOs were well below  
 14 its costs, as shown in the response to PULP Set 1, Question 13:

	2010	2011	2012
Costs incurred by Con Edison	\$2,056,694.99	\$2,671,274.16	\$3,088,231.30
Revenue from ESCOs	\$1,802,585.83	\$2,265,879.77	\$2,413,142.26

16 **Q. Have ESCOs brought customers the lower rates and higher service quality to**  
 17 **customers that are the reason for introducing competition to the supply function?**

18 A. No. A comparison of ESCO prices to bundled service prices in the Niagara Mohawk  
 19 service territory, presented to the Commission in case numbers 12-E-0201 and 12-G-  
 20 0202, Response to PULP IR-107, showed that customers taking service from ESCOs  
 21 routinely pay significantly more than they would if they took bundled service. Given the  
 22 magnitude of the discrepancies, it is likely that a similar result obtains in the Con Edison  
 23 service territory. The Commission’s web site reports that two of five (unnamed) ESCOs  
 24

1 are the causes of high levels of complaints to the Public Service Commission, and none  
2 has zero complaints.

3 **Q. Has Con Edison tried to estimate the extent to which ESCO service for its delivery**  
4 **customers is more expensive than bundled supply service?**

5 A. No. In Response to PULP Set 1, Question 22, the Company states that it has not  
6 conducted an analysis as to the bill impacts for low-income customers of switching to  
7 ESCO supply. In response to PULP Set 1, Question 18, the Company states that it has  
8 no way of knowing whether the rate of uncollectibles would be greater or smaller had its  
9 ESCO-supplied customers taken bundled service from the Company. The Company has  
10 twice submitted price information to the Commission, but has declined to conduct its own  
11 analysis to understand how ESCO service has affected its customers. Response to PULP  
12 Set 1, Question 22.

13 **Q. Can Con Edison help to protect its customers from unreasonable ESCO policies and**  
14 **rates?**

15 A. Yes. Con Edison should not reflexively support every ESCO's efforts to gain customers  
16 in New York. Indeed, until the ESCO industry has corrected its deficiencies and  
17 demonstrated its value to residential customers, Con Edison should end its PowerMove  
18 program and not promote subscription to ESCO services, but rather leave that  
19 responsibility and expense on the shoulders of the ESCO industry. In addition, Con  
20 Edison should provide its customers taking service from ESCOs with on-the-bill  
21 comparisons of the charges under the ESCO arrangement, and what the customer would  
22 have paid on the non-ESCO rate.

23 **Q. How can the ESCO industry demonstrate that it is providing value to its New York**  
24 **customers?**

1 A. Through tracking of ESCO prices and a comparison of those prices to default service  
2 prices, and through comparing ESCO representations regarding price benefits to actual  
3 pricing experiences, it would be possible to determine whether ESCOs as an industry are  
4 providing the better prices and superior service or value they claim to provide.

5 **Q. What role should Con Edison play in making this information available to**  
6 **customers?**

7 A. If Con Edison is going promote and facilitate ESCO supply services to its customers, it  
8 should keep track of the promises made to its customers and the reality of prices and  
9 services experienced by them. It should not promote services for suppliers whose  
10 promises of better service and lower prices are proven false by experience. Con Edison  
11 should also conduct a regular survey of customers switching back to full Con Edison  
12 service after taking ESCO service to determine their reasons for leaving competitive  
13 service, and provide that information to the Public Service Commission.

14

15 **E. NEEDED: BETTER LOW INCOME EFFICIENCY OFFERINGS**

16

17 **Q. Please describe Con Edison's residential energy efficiency programs, and its low-**  
18 **income energy efficiency programs.**

19 A. On its web pages, <http://www.coned.com/energyefficiency/residential.asp>, Con Edison  
20 highlights its residential energy efficiency program:

- 21 • Rebates of up to \$1000 to replace old cooling or heating systems.
- 22 • Rebates of up to \$600 towards duct sealing.
- 23 • A \$50 payment for allowing Con Edison to remove an old refrigerator.
- 24 • A home energy audit at the cost of \$50.
- 25 • A free smart thermostat to allow the customer to remotely control their central air  
26 conditioning.
- 27 • A \$25 rebate on a new high-efficiency room air conditioner.
- 28 • Targeted demand-side management programs for eligible customers.
- 29



1 The web site also provides a link to NYSERDA, which operates the On Bill Financing  
2 program. <http://www.nyserda.ny.gov/About/On-Bill-Recovery-Financing-Program.aspx>.

3 **Q. Which of these residential efficiency programs now offered by Con Edison can low-**  
4 **income customers participate in?**

5 A. As a practical matter, low-income customers cannot participate in any significant  
6 numbers in any of the programs offered by Con Edison.

7 **Q. There are no legal barriers to low-income participation in residential energy**  
8 **efficiency programs. So how do you conclude these programs are not available to**  
9 **low-income customers?**

10 A. There are real life barriers that keep low-income customers from taking advantage of  
11 most energy efficiency programs, at least as presently designed. Each of these programs  
12 has been designed to overcome one or more of the market imperfections that discourage  
13 consumers from buying and installing energy efficiency measures that could save them  
14 money, such as high upfront costs or lack of convenient access to reasonably-priced  
15 financing. None addresses the full set of barriers facing low-income consumers.

16 **Q. What market barriers does an efficiency program need to overcome to enable**  
17 **participation by low-income customers?**

18 A. To enable low-income customers to participate in energy efficiency programs, and to  
19 motivate them to do so, a low-income program needs to address all these issues:

- 20 • Lack of disposable funds to pay upfront costs.
- 21 • Lack of disposable funds to pay remainder of upfront costs after rebates are  
22 applied.
- 23 • Lack of confidence that measures will work as advertised, and low ability to  
24 absorb the risk of non-performance.
- 25 • Lack of assurance that the customer will enjoy the benefits of the efficiency  
26 savings long enough to pay for the customer's costs in the transaction.
- 27 • Split landlord-tenant incentives.
- 28 • Lack of access to reasonable financing.
- 29 • Inability to take on additional debt.
- 30

1 **Q. New York has pursued innovative techniques for expanding access to energy**  
2 **efficiency, such as the On Bill Financing program recently instituted. Won't such**  
3 **initiatives open the door to low-income participation in energy efficiency?**

4 A. Not as currently designed. The Power New York Act of 2011 (L. 2011, c. 388) aims to  
5 overcome some of the important barriers that prevent customers from raising money to  
6 pay for cost-effective energy efficiency. On Bill Financing as presently offered will  
7 allow a homeowner to obtain a loan she might otherwise not qualify for, to transfer the  
8 balance of the loan to the next owner upon the sale of the home, and to have the  
9 simplicity of repayment over time on the electric bill. However, these features are  
10 insufficient to address the entire package of market barriers that face low-income  
11 customers, and for this reason, while it is a meritorious program and may prove to be  
12 efficacious for homeowners above the poverty line in a position to take on performance  
13 risks, payback risks, and debt, Power New York's On Bill Financing will probably be  
14 unable to attract, or to serve, many low-income customers.

15 **Q. What is Con Edison doing, if anything, to ensure that low-income customers receive**  
16 **direct energy efficiency benefits in proportion to their payments for efficiency**  
17 **programs?**

18 A. Con Edison does not have any energy efficiency programs directed to specifically to low-  
19 income customers and does not track the extent to which low-income customers take  
20 advantage of the Company's residential energy efficiency programs. The Company has  
21 no reports or analyses regarding the benefits received by low-income customers  
22 participating in Con Edison's energy efficiency programs compared with their  
23 contribution to the costs of such programs through the System Benefits Charge.

24 Response to PULP Set 1, Question 50.

1 **Q. How does the availability of efficiency services to low-income customers, paid for by**  
2 **the System Benefits Charge, relate to the rates proposed in this rate case?**

3 A. Affordability can be approached in a number of ways, and one of them is to assist  
4 customers to make their usage more efficient, so that they may have adequate comfort  
5 and functionality while using less energy and thus enjoying lower bills.

6 **Q. How could Con Edison overcome the full set of market barriers to low-income**  
7 **energy efficiency, and give low-income customers an efficiency offer they will not**  
8 **refuse?**

9 A. There are in principle only two ways to address *all* the market barriers to low-income  
10 energy efficiency. One is the so-called Direct Install method, whereby the utility funds  
11 the installation of qualifying measures in low-income customers' homes at no cost to the  
12 customer (or the landlord, where the customer is a tenant). This is the primary approach  
13 used by utilities and other efficiency providers across the country. Under such an  
14 approach, the customer faces no upfront costs, and has no need for financing or  
15 indebtedness. Direct Install also removes the financial risks to the customer of the  
16 transaction: that the measure will not deliver savings as promised, that the measure will  
17 take longer to pay off than the time the customer remains in the premises, and that the  
18 customer will have to go into debt to pay her share of the costs of the measure. Direct  
19 Install is often offered through a respected community organization, with Weatherization  
20 Assistance Program funds from the U.S. Department of Energy.

21 **Q. What is the other DSM program design that can be effective in reaching low-income**  
22 **customers?**

23 A. The other approach is a market structure that blends on-bill financing with strong  
24 protections for participating customers from the financial risks of acquiring the measures.  
25 These include such elements as limiting program coverage to selected measures that can

1 be fully paid for within a reasonable period of time, while still giving the participant a  
2 significant portion of the savings each month; arranging the monthly participant payment  
3 to be low enough that the customer enjoys immediate savings, and will pay no more than  
4 she saves over the life of the measure; relieving the customer of the obligation to  
5 continue paying for the measure once he vacates the premises and no longer receives the  
6 benefits of the measure (that is, having the obligation to pay the customer share for the  
7 measure run with the meter, not with the customer); vetting and certifying measures and  
8 installers to assure quality; and charging for the customer portion of the cost on the utility  
9 bill. This Pay As You Save<sup>tm</sup> approach directly addresses all the market barriers that  
10 prevent low-income customers from having measures installed that are intended to save  
11 them money over the life of the measure.

12 **Q. Why do you say that Direct Install and PAYS<sup>tm</sup> are the only two programs that can**  
13 **provide energy efficiency benefits to most low income customers?**

14 A. As noted, both programs overcome the entire set of barriers to participation. One calls  
15 for the utility (or other third party) payment for the entire cost of the installations, while  
16 the other allows for customers to share in the costs over time, but removes the risks of  
17 doing so. Other programs leave one or more barriers intact. For example, rebates are not  
18 useful for customers who cannot afford the remaining upfront payment. Rebates and  
19 similar dollar incentives also leave the customer with the risks of non-performance, split  
20 incentives, and uncertainty about tenure at the premises. On bill financing can address  
21 the upfront cost problem, but it is limited to homeowners, and it does not remove the risk  
22 of measure non-performance, nor the split incentive between tenants and landlords, nor  
23 the inability and prudent unwillingness of the low-income customer to take on additional

1 debt.

2 **Q. Given the fact that low-income customers contribute to the funding of Con Edison's**  
3 **energy efficiency program, but do not have a meaningful opportunity to participate**  
4 **in these programs, what do you recommend?**

5 A. I recommend that Con Edison be required to identify the proportion of low-income  
6 customers participating in its residential energy efficiency program, and develop one or  
7 more programs that will overcome the entire set of market barriers, and provide a fair and  
8 realistic opportunity to participate. Con Edison should not be relieved of the obligation  
9 to provide equitable access to direct efficiency benefits just because it has made no  
10 efforts to understand how to achieve that result.

11

12 **F. RDM SHOULD BE REFORMED TO PROMOTE FAIR AND EFFECTIVE**  
13 **HANDLING OF OUTAGE COSTS/RISKS**

14

15 **Q. Does Con Edison recover the profits lost when it terminates service to electricity**  
16 **customers or such customers experience outages?**

17 A. Yes. The Revenue Decoupling Mechanism (RDM) in effect under the last three year rate  
18 plan makes the Company whole for the loss of all sales, regardless of reason.

19 **Q. What effect does the RDM have on Con Edison's incentive to reduce disconnections**  
20 **and outages?**

21 A. The RDM relaxes the incentive Con Edison would otherwise experience to reduce the  
22 amount of disconnections and outages. System cost savings from customer service  
23 interruptions to get payment are retained by the Company, costs of termination and  
24 reconnection are shifted to the customer in arrears, and revenues lost while the meters of  
25 disconnected customers are not spinning are made up from all customers through the  
26 RDM.

1 **Q. Does Con Edison agree that RDM reduces its incentive to reduce the extent of**  
2 **disconnections and outages?**

3 A. No. According to Con Edison, it is not aware of the source of the proposition that a  
4 decoupling mechanism such as the one it enjoys reduces the incentive to reduce outages,  
5 and further states that there are other incentives in place for it to maintain or improve  
6 reliability, including the application of the Public Service Law itself, and the risk of  
7 revenue adjustments associated with failure to meet Commission-established  
8 performance metrics. Response to PULP Set 1, Question 31.

9 **Q. Has the Commission endeavored to encourage outage reductions, despite relaxation**  
10 **of outage-prevention incentive created by the RDM?**

11 A. Yes. The Commission has established outage performance metrics, and provided a  
12 sanctions process to incent Con Edison to meet these standards.

13 **Q. Please describe the regulatory process intended to incent Con Edison to meet**  
14 **minimal outage performance standards notwithstanding the adverse effect of the**  
15 **RDM on Con Edison's incentive to reduce outages.**

16 A. Under the Joint Proposal adopted in 2009 to set the rates for the most recent three-year  
17 rate period, Con Edison is subject to a "Reliability Performance Mechanism" or RDM.  
18 The RDM contains 8 performance metrics. The Company must report its performance  
19 under these metrics each calendar year in an Annual Performance Report.

20 **Q. What are the 8 areas of performance metrics under the Reliability Performance**  
21 **Mechanism?**

22 A. The RDM has metrics covering the following areas of utility performance:

- 23 • Threshold Standards, consisting of measures of service outage frequency (SAIFI),  
24 and duration (CAIDI), with different standards for application to the radial  
25 portions of the Con Edison distribution system and to the networked distribution  
26 system.
- 27 • A Major Outage metric.
- 28 • A Program Standard for repairs to damaged poles.

- 1           • A Program Standard for the removal of shunts.
- 2           • A Program Standard regarding repairs to street lights and traffic signals.
- 3           • A Program Standard for the replacemenet of over-duty circuit breakers.
- 4           • A Remote Monitoring System metric.
- 5           • A Restoration Performance metric.
- 6

7       **Q.    Is the outage performance regulatory scheme sufficient to prevent unnecessary**  
8       **outages, or compensate customers for outage-related losses?**

9       A.    Not as presently structured.

10      **Q.    In what ways is the present outage performance regulatory scheme inadequate?**

11      A.    As the outage performance scheme is presently designed, the Company has no incentive  
12           to minimize outages caused by its intentional disconnection of customers; the  
13           performance standards for unintended outages in the distribution system (from storms  
14           and other causes) do not address outages longer than 24 hours and are not strong enough;  
15           the sanctions for outages do not address or measure preventive measures such as tree  
16           trimming and weak pole replacement, exempt those due to major storms, are insufficient  
17           to incent better performance, and take too long to provide effective signals to Con Edison  
18           to improve its outage performance; and all incremental major storm damage costs are  
19           deferred for future recovery from customers. Risk of outages is thus shifted to  
20           consumers, who are not in a position to manage such risks

21      **Q.    Why should Con Edison maintain responsibility for outage prevention?**

22      A.    As noted, an inadequate outage performance regulatory scheme unfairly shifts outage  
23           responsibility to customers, who are not in a position to minimize the risk. They cannot  
24           prevent storm damage and similar impacts on reliability, and many who are disconnected  
25           under present credit and collections practices cannot avert disconnection because they are  
26           simply without funds to pay in full and on time. The Company is in a better position to

1 manage the risks of both deliberate outages and unintended outages. Customers do not  
2 build, maintain or operate the distribution system. They do not control budgets for  
3 hardening and storm-proofing the system. They do not control outage restoration  
4 practices. They do not have the same information and tools as the Company does to  
5 estimate the likelihood and extent of an outage, and take steps to minimize losses.

6 Customers do not determine when and how often to disconnect a household as a credit  
7 and collections tool, and many who are threatened with disconnection have no practical  
8 way to meet the terms for continued service demanded by the utility. Finally, it is the  
9 Company that has the ability to effectuate the statutory policies favoring continuity of  
10 residential service.

11 **Q. What do you recommend the Commission do in this rate case to reform the outage**  
12 **performance regulation scheme now in place for Con Edison?**

13 A. Improvements need to be made in the overall assignment of risk which is now  
14 disproportionately put on ratepayers. As it now stands, the utility can cut expenses on  
15 maintenance and prevention work and enhance profits by lowering costs, even though its  
16 revenues are fixed in an RDM. Dollars saved on tree trimming and weak pole  
17 replacement or relocation go straight to the bottom line.

18 **Q. How do you recommend realigning the incentives between the utility and the**  
19 **customers regarding managing outages?**

20 A. The Revenue Decoupling Mechanism should be reformed, so that the Company is not  
21 held harmless when customers suffer outages. The RDM needs to be modified so that the  
22 company is not paid as if it was providing service when it is not. The same holds true for  
23 deliberate outages caused by termination for bill collection purposes – the RDM, *ceteris*  
24 *paribus*, trues up revenues no matter how many and how long customers are shut off, and



1 no matter the reason. This provides an incentive for the Company to use termination as a  
2 bill collection tool, where others would be as or more effective as discussed above.

3 **Q. Please describe other specific areas where the Revenue Decoupling Mechanism and**  
4 **outage consequences need to be realigned.**

5 A. When lines are out of service due to fallen trees, limbs and poles, there is no counting of  
6 the outage if it is longer than 24 hours. When large numbers of customers are out of  
7 service for an extended period of time, revenues lost by the stopping of the meters is  
8 made up, *ceteris paribus*, through RDM adjustments. Then, all costs of the outage are  
9 deferred for later 100% recovery from customers, after secular storm aid is used. There  
10 are no quantified budgets and standards for identification and replacement or relocation  
11 of weak poles, for tree trimming, and for similar maintenance work needed to prevent or  
12 reduce storm damage. When trees, limbs, and poles fall, taking out lines in a storm, there  
13 need to be after-incident reviews to examine the conditions prior to the failure, and to  
14 examine whether timely trimming of trees or replacement or relocation of poles and lines  
15 would have avoided an outage. The Commission should explore adoption of the  
16 emerging standards of IEEE for major event days, so that significant service outages,  
17 now exempt from the SAIFI and SAIDI standards, have consequences that stimulate the  
18 Company to perform better. The Commission should also establish specific standards for  
19 tree-trimming schedules and other maintenance schedules (i.e. a standards-based  
20 approach to maintenance tasks), rather than rely on a performance-based standard that  
21 does not measure critical factors and has not incented better performance.

22 **Q. The Commission has opened a docket to explore certain outage performance**  
23 **regulation issues. Case 13-M-0061 - In the Matter of Customer Outage Credit**  
24 **Policies and Other Consumer Protection Policies Relating to Prolonged Electric or**  
25 **Natural Gas Service Outages. What is the Commission considering in that case?**

1 A. Case 13-M-0061 focuses on whether the Commission should formally adopt a policy  
2 requiring utilities to offer waivers of certain tariff charges automatically in the future  
3 when customers experience outages lasting at least three days. The Commission has  
4 asked for comments on the idea of removing from the Revenue Decoupling Mechanism  
5 targets the volumetric portion of revenues not collected from customers during such  
6 extended outages. The Commission is also considering whether it should further direct  
7 utilities to modify their ‘business as usual’ collection and termination practices during  
8 such times. One proposal would have utilities suspend all collection-related activities  
9 such as terminations of service for non-payment, and assessments of late payment  
10 charges (but not including suspending issuance of service termination notices) for a set  
11 period of time after a major storm outage. Another would require such a suspension  
12 during an extended outage, and for an additional number of days afterwards, equal to the  
13 duration of the outage.

14 **Q. Why should the Commission not defer all consideration of the RDM and its**  
15 **incentive not to reduce outages to Case 13-M-0061?**

16 A. Case 13-M-0061 relates only to reducing charges after service is off for three days. Thus,  
17 it does not address many of the outage concerns I raise here. In addition, there is no  
18 timetable for decision and the generic case will not set performance criteria for  
19 preventing outages. Further, utility parties have filed comments recommending that the  
20 subject be handled in rate plans. It is the rate plan which establishes the actual terms and  
21 conditions of Con Edison’s service. Con Edison and the other Joint Utilities filing  
22 comments together in response to the Commission’s notice in Case 13-M-0061 expressly  
23 state that “modifications to any one aspect of the RDM, or the RDM as a whole, should

1           only be made in the context of a utility base rate case.” Joint Utilities Initial Comments,  
2           at 4.

3   **Q.    What do you recommend in this rate case?**

4    A.    I recommend that any Revenue Decoupling Mechanism approved in this rate case be  
5           adjusted to remove as a revenue target the revenues forgone by Consolidated Edison as  
6           the result of any outage except a customer’s voluntary termination of service.

7           **G.    NEEDED: BETTER TENANT ACCESS TO SUBMETERING PRICING**  
8           **INFORMATION**

9  
10 **Q.    Has the Commission taken steps to try to protect tenants whose landlords pay the**  
11 **utility bill and then submeter each apartment?**

12 Yes.   The Commission makes its complaint adjudication system available to hear and decide  
13 complaints of submetered tenants regarding overcharges, HEFPA violations, and other  
14 matters. In all submetering orders, and consistent with Section 75 of the Public Service  
15 Law, which creates a defense against collection of charges greater than those approved by  
16 order of the Commission, the Commission forbids landlords from charging prices higher  
17 than the Con Edison tariffed charges for direct residential service plus a small charge for  
18 billing and collection costs. However, due to lack of transparency and lack of easy access  
19 to information needed to calculate what a Con Edison bill would be for a given amount of  
20 service over a given period of time, tenants have been basically defenseless against  
21 overcharging landlords. For example, it took years for tenants in just one building to  
22 obtain a Commission answer to whether they were overcharged.<sup>12</sup> PULP has long sought  
23 the creation of a bill calculator available online to aid in the protection of customers Con

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<sup>12</sup> See PSC Warns Landlords to Follow Submetering Orders Allowing Sale of Electric Service to Residential Tenants, <http://pulpnetwork.blogspot.com/2013/04/psc-warns-landlords-to-follow.html>.

1 Edison avoids serving individually and in the effectuation of Commission orders  
2 allowing submetering.

3 **Q. Con Edison has recently added a submetering bill calculator. Does this step solve**  
4 **the bill calculation problems facing submetered customers?**

5 A. No. First, I should say that I consider myself reasonably computer-literate, but on  
6 Thursday, May 23, 2013, I spent a half hour searching around the link I had been  
7 forwarded, and did not find the bill calculator. Most customers who are submetered  
8 would never find the calculator using normal methods of looking through a web site. For  
9 example, I put “submeter” in the search function, and got back links to a number of  
10 proceedings before the PSC. If there was a link to the calculator, it was buried in later  
11 pages. I was finally able to find it using a suggestion from the answer to a data request,  
12 not readily available to customers. Even then, it was not clear where the submeter could  
13 be found. The drop-down menu for the customer center does not include a submetering  
14 calculation link. The visitor is evidently expected to read the “news” squibs (in a light  
15 blue ink) in order to locate a link to the calculator. I only thought to do so because I had  
16 been assured the calculator was there, and did not want it said that I had left any stone  
17 unturned in my search for it.

18 **Q. Should more be done to assure and enforce the rights of submetered customers?**

19 A. Yes. In addition to assuring that Con Edison fixes the problems with finding its  
20 calculator on the web page, the Commission should require Con Edison to provide access  
21 to the bills of submetering landlords to submetered tenants or tenant representatives. As  
22 noted above, Commission orders bar landlords from marking up the price of electric  
23 service that they pay for service registered at their master meter (other than an

1 administrative charge for billing), and the orders forbid any charges from exceeding those  
2 that Con Edison would charge its direct service customers. The online Con Edison bill  
3 calculator will aid in determining whether the price cap has been exceeded, but it would  
4 not detect situations where the landlord marks up his charges up to the Con Edison rate  
5 beyond what would be permitted to cover reasonable administrative charges. I  
6 understand that there is no known instance in which the Commission has monitored  
7 whether its anti-markup orders have been violated where the markup is less than the Con  
8 Edison charges would be. Tenant rent adjustments after submetering give lower rent  
9 reductions to submetered tenants than to tenants converted to direct Con Edison service  
10 on the assumption that submetered bills will normally be less. Accordingly, the tariffs  
11 applicable to submeterers should include provisions for tenant access to the landlord's  
12 bills so that they, the real party ultimately responsible to pay for the service, can ascertain  
13 whether wrongful markups are being made.

14 **Q. Do you have other recommendations to help tenants ensure their rights under**  
15 **Commission orders are being observed?**

16 A. Yes. The Commission should also require Con Edison to perform tests of accuracy on  
17 submeters at the request of a submetered tenant. Currently, other than the  
18 Commission, which has minimal resources for this purpose, there is no competent entity  
19 designated by the Commission to test the accuracy of submeters used in the redistribution  
20 or resale of Con Edison service. Also, the Company should provide information at its  
21 website providing information regarding submetering, the role of the Commission in  
22 deciding complaints regarding submetered service, and links to the Commission.

1           **H.       A BRIGHT SPOT: CON EDISON IS NOT RUSHING TOO FAST INTO AMI**

2  
3           **Q.       What are Con Edison’s plan for advanced metering and its associated**  
4           **infrastructure?**

5           A.       Con Edison has an ongoing pilot to explore these new technologies, in Long Island City.  
6           In its Response to PULP Set 1, Question 46, Con Edison states that at this time “Con  
7           Edison does not have a formal project associated with advanced metering infrastructure  
8           (AMI) deployment.” The Company goes on to state that it “is evaluating various options  
9           to determine the most cost-effective way to undertake a limited AMI pilot to demonstrate  
10          outage management benefits.” Con Edison has not established a timeline on the  
11          development and implementation of such a pilot. *Id.*

12          **Q.       Should Con Edison accelerate its implementation of AMI at this time?**

13          A.       No. Con Edison is taking the prudent course of observing the development of the  
14          technology and AMI operations, while concentrating research and development efforts on  
15          the so-called “grid-facing” potential benefits of a digitized grid, rather than rushing to  
16          implement dynamic pricing and similar customer-facing programs enabled by smart  
17          metering.

18          **Q.       Why is it prudent for Con Edison to take a measured path towards implementing**  
19          **AMI?**

20          A.       It is by no means certain that the promises of smart metering will be fulfilled. There are  
21          several open issues that smart metering proponents still must address. These include,  
22          without limitation, the actual voluntary customer adoption rate of dynamic or TOU  
23          pricing, the actual extent of demand response, the failure so far to demonstrate  
24          measurable energy savings, the introduction of new cyber security risks, the introduction  
25          of new privacy risks, and the need to show that customer responses to demand

1 management prices and technologies will persist over time.

2 **Q. How can Con Edison resolve these open issues, without its own investments in smart**  
3 **metering?**

4 A. In the past five years, largely with the help of stimulus funding, a number of utilities  
5 across the country have implemented various smart grid and smart metering  
6 demonstration and pilot projects. Some, as in California, Maryland, Pennsylvania and  
7 Arizona, are deploying AMI system-wide. At least one major utility, Pacific Gas &  
8 Electric, already offers critical peak pricing as a regular part of its tariffs to its customers  
9 with smart meters. Critical peak rebates and other forms of dynamic pricing are offered  
10 in a number of pilots. Some of the pilots have been evaluated, and PG&E reports  
11 annually on its critical peak pricing experience. The Department of Energy is in the  
12 process of evaluating the results of the initiatives it helped to fund with stimulus moneys.  
13 So far, because of the nature and scope of the pilots and tariff offerings, there remains  
14 insufficient information to predict confidently the voluntary take rate of AMI-enabled  
15 rates and technologies, the associated demand and energy response of customers, and the  
16 persistence of such responses.

17 **Q. Are there reasons to doubt the persistence and reach of customer response to AMI-**  
18 **facilitated tariffs?**

19 A. Yes. First, recall that in the days of energy price spikes in the 1970's, commissions  
20 across the country pushed their electric utilities to implement voluntary TOU rates.  
21 Initial subscription was healthy, but over time interest faded, and now only a small  
22 minority of residential customers take advantage of voluntary TOU rates. For example,  
23 Con Edison has about 2,170,000 customers on its flat residential electric rate, and only  
24 about 2,200 customers (or less than 1 percent) on its voluntary residential TOU rate.

1 Exhibit ERP-1, Schedule 7. It may be argued that critical peak pricing (and critical peak  
2 rebates) will be easier for customers to adapt to, because the high peak prices will affect a  
3 much smaller number of hours in the year, and might be easier to tolerate or avoid than  
4 day-long peak periods for most weekdays of the year. But notwithstanding this feature,  
5 the voluntary PG&E SmartRate<sup>tm</sup> critical peak pricing tariff is taken by less than 1% of  
6 customers with smart meters, even several years after its introduction. *PG&E Smart Grid*  
7 *Annual Report, 2012*, p. 3.

8 **Q. Is there a particular reason to question the cost-effectiveness of smart metering in**  
9 **the Con Edison service area?**

10 A. Yes. Business cases that support smart metering investments have relied heavily on the  
11 operational savings derived from replacing meter readers with digital communication of  
12 meter readings from the smart meters. This savings is largely unavailable to Con Edison,  
13 however, because it for many years has had an automated meter reading program. The  
14 incremental costs of smart metering are large, but in Con Edison's case, operational  
15 benefits will be small. This reality in turn will put pressure on the resource savings  
16 estimated to result from customer demand response in order to justify the heavy AMI  
17 investment costs. The uncertainty of these savings estimates thus looms larger in the  
18 Company's cost-benefit analysis of implementing AMI.

19 **Q. Are there other reasons it is prudent not to rush into AMI investments?**

20 A. Yes. Smart metering investments today could crowd out potentially more effective and  
21 proven demand-side management programs and tools. Advanced metering infrastructure  
22 introduces much greater cyber security risk for a utility, as a result of the proliferation of  
23 entry points into the utility's IT systems. Such breaches are a low-frequency risk, but



1 they cannot be ignored given the potentially catastrophic consequences and the recent  
2 uptick in identified attacks on American infrastructure. The creation and storage of  
3 hourly usage data poses a risk to customer privacy, as such granular data can be used to  
4 develop a picture of the activities of a household based on meter reading information  
5 alone. Further, the technology of AMI is rapidly evolving, and a utility that waits to  
6 review the experience of early adopters will have the benefit of these improvements  
7 without needing to retrofit or replace parts of its systems.

8 **Q. Are you saying that Con Edison should not explore the possible implementation of**  
9 **smart metering?**

10 A. No. I do say that taken together, the risks, costs and uncertainties of smart metering  
11 likely outweigh the risk of lost opportunities from taking a deliberate and prudent  
12 approach to the technology. But the costs of the technology are coming down, the  
13 applications are expanding, and the experience of utilities that have gone ahead under  
14 conditions of great uncertainty will provide valuable information to help Con Edison  
15 develop its AMI investment strategy. For these reasons, I agree that Con Edison should  
16 continue to evaluate the risks and benefits of AMI technology, before developing a plan  
17 for AMI investments.

18  
19  
20 **Q. Does this conclude your testimony?**

21 A. Yes.