

Narragansett Electric Company
d/b/a National Grid

Docket No. 4770

ON BEHALF OF THE
DIVISION OF PUBLIC UTILITIES AND CARRIERS

April 6, 2018

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1 **Q. PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD.**

2 A. My name is Roger Colton. My business address is 34 Warwick Road, Belmont, MA
3 02478.

4
5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?**

6 A. I am a principal in the firm of Fisher Sheehan & Colton, Public Finance and General
7 Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to
8 a variety of federal and state agencies, consumer organizations and public utilities on rate
9 and customer service issues involving telephone, water/sewer, natural gas and electric
10 utilities.

11
12 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

13 A. I am testifying on behalf of the Rhode Island Division of Public Utilities and Carriers
14 ("DPUC").

15
16 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.**

17 A. I work primarily on low-income utility issues. This involves regulatory work on rate and
18 customer service issues, as well as research into low-income usage, payment patterns,
19 and affordability programs. At present, I am working on various projects in the states of
20 Rhode Island, Connecticut, Maryland, Pennsylvania, Michigan, Wisconsin, Illinois and
21 Iowa, as well as in the Canadian province of British Columbia. My clients include state
22 agencies (*e.g.*, Pennsylvania Office of Consumer Advocate, Maryland Office of People's
23 Counsel, Iowa Department of Human Rights), federal agencies (*e.g.*, the U.S. Department

1 of Health and Human Services), community-based organizations (*e.g.*, Energy Outreach
2 Colorado, Natural Resources Defense Council, Advocacy Centre Tenants Ontario), and
3 private utilities (*e.g.*, Unitil Corporation d/b/a Fitchburg Gas and Electric Company,
4 Entergy Services, Xcel Energy d/b/a Public Service Company of Colorado). In addition
5 to state- and utility-specific work, I engage in national work throughout the United States.
6 For example, in 2011, I worked with the U.S. Department of Health and Human Services
7 (the federal LIHEAP office) to advance the review and utilization of the Home Energy
8 Insecurity Scale as an outcomes measurement tool for LIHEAP. In 2007, I was part of a
9 team that performed a multi-sponsor public/private national study of low-income energy
10 assistance programs. In 2016, I was part of a team that engaged in a study for the Water
11 Research Foundation on how to reach “hard to reach” customers. A brief description of
12 my professional background is provided in Appendix A.

13
14 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

15 A. After receiving my undergraduate degree in 1975 from Iowa State University, I obtained
16 further training in both law and economics. I received my law degree in 1981 from the
17 University of Florida. I received my Master’s Degree in Regulatory Economics from the
18 MacGregor School in 1993.

19
20 **Q. HAVE YOU EVER PUBLISHED ON PUBLIC UTILITY REGULATORY**
21 **ISSUES?**

22 A. Yes. I have published three books and more than 80 articles in scholarly and trade
23 journals, primarily on low-income utility and housing issues. I have published an equal

1 number of technical reports for various clients on energy, water, telecommunications and
2 other associated low-income utility issues. A list of my publications is included in
3 Appendix A.
4

5 **Q. HAVE YOU EVER TESTIFIED BEFORE THIS OR OTHER UTILITY**
6 **COMMISSIONS?**

7 A. I have not previously testified before the Rhode Island Public Utilities Commission
8 (“RIPUC” or “Commission”). I have testified in regulatory proceedings in more than 35
9 states and four Canadian provinces on a wide range of utility issues. A list of the
10 proceedings in which I have testified is provided in Appendix A.
11

12 **Q. PLEASE EXPLAIN THE PURPOSE OF YOUR DIRECT TESTIMONY.**

13 A. The purpose of my Direct Testimony is as follows.

- 14 ➤ First, I examine reasonableness of National Grid’s proposed A60 discount for
15 low-income customers;
- 16 ➤ Second, I review the disproportionately adverse impact of National Grid’s
17 proposed increase in its residential customer charge on low use, low-income
18 customers.
19

20 **Q. PLEASE SUMMARIZE YOUR ULTIMATE CONCLUSIONS.**

21 A. Based on the data and discussion I present throughout my testimony, I reach the
22 following conclusions:

- National Grid's proposal to move to a total bill discount rather than a combination of a waived customer charge and discount off the distribution bill component should be approved for its A60 discount;
- National Grid's A60 discount should be increased from 15% to 25%;
- National Grid should supplement its A60 discount with an Adder of 5% for customers entering the A60 program through prescribed programs.
- National Grid's residential customer charge should remain at the level at which the residential customer charge is currently set.

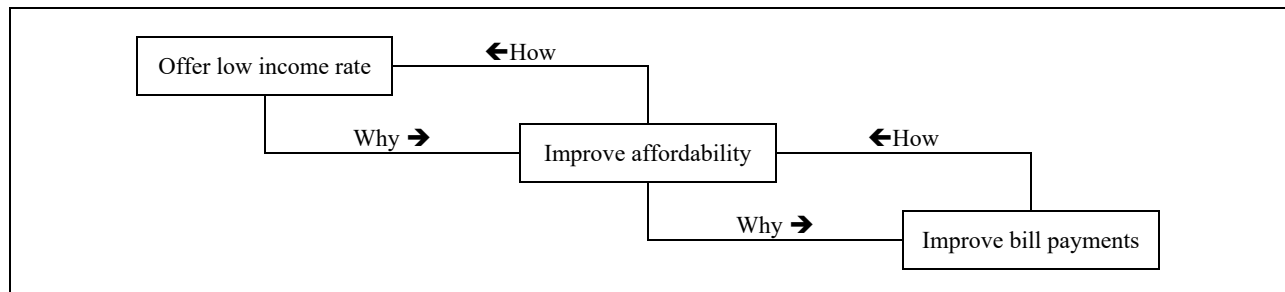
Part 1. An Outcomes Review of the Existing National Grid Low-Income Discount.

Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I consider the purpose for offering a discounted rate to low-income utility customers. I next review the available data on the collections and payment performance given National Grid's existing low-income discount to assess whether it is reasonably advancing that objective. I finally consider whether there are identifiable shortcomings in National Grid's existing low-income discount that can reasonably be found to contribute to the failure of National Grid to achieve the programmatic objective of the A60 discount.

Q. PLEASE EXPLAIN THE PURPOSE OF OFFERING A DISCOUNTED UTILITY RATE TO LOW-INCOME CUSTOMERS.

A. The purpose of a low-income discount is to improve the affordability of utility service to income-eligible customers who would face unaffordable bills in the absence of the discount. In noting that “affordability” is the objective, it is important to remember that pursuing affordability, and thus offering a low-income discount, is a means to an end, not an end unto itself. The outcome which stakeholders seek to achieve through a more affordable utility rate is the ability of income-challenged customers to take utility service under sustainable conditions. The rationale for a low-income rate is set forth in the decision-model set forth in the figure below. As you move “down” the model, you answer the question “why.” As you move “up” the model, you answer the question “how.” Thus, why do offer a low-income rate”? To improve affordability. Why do you seek to improve affordability? To Improve bill payments.



The discount being offered to low-income customers, in other words, is not simply a distribution of financial benefits to the poor because they are poor. Instead, a discounted rate is a mechanism through which a utility, in effect, seeks to purchase an increase in the ability of low-income customers to consume their utility service while making consistent, timely payments for that service with a minimum of collection intervention.

A. National Grid's Existing A60 Discount Does Not Provide Low-Income Customers an Effective Opportunity to Avoid Arrearages.

Q. HAVE YOU HAD OCCASION TO REVIEW THE EXTENT TO WHICH, IF AT ALL, THE DISCOUNT CURRENTLY BEING OFFERED BY NATIONAL GRID ACHIEVES ITS PROGRAMMATIC OBJECTIVE?

A. Yes. Based on the data and analysis I present below, I find that National Grid's existing low-income discount fails to accomplish the purposes for which a discount is offered in the first instance. Throughout my testimony, I consider 27-months of data, October 2015 through December 2017. I begin my analysis with October data to allow me to examine two complete winter heating seasons.¹

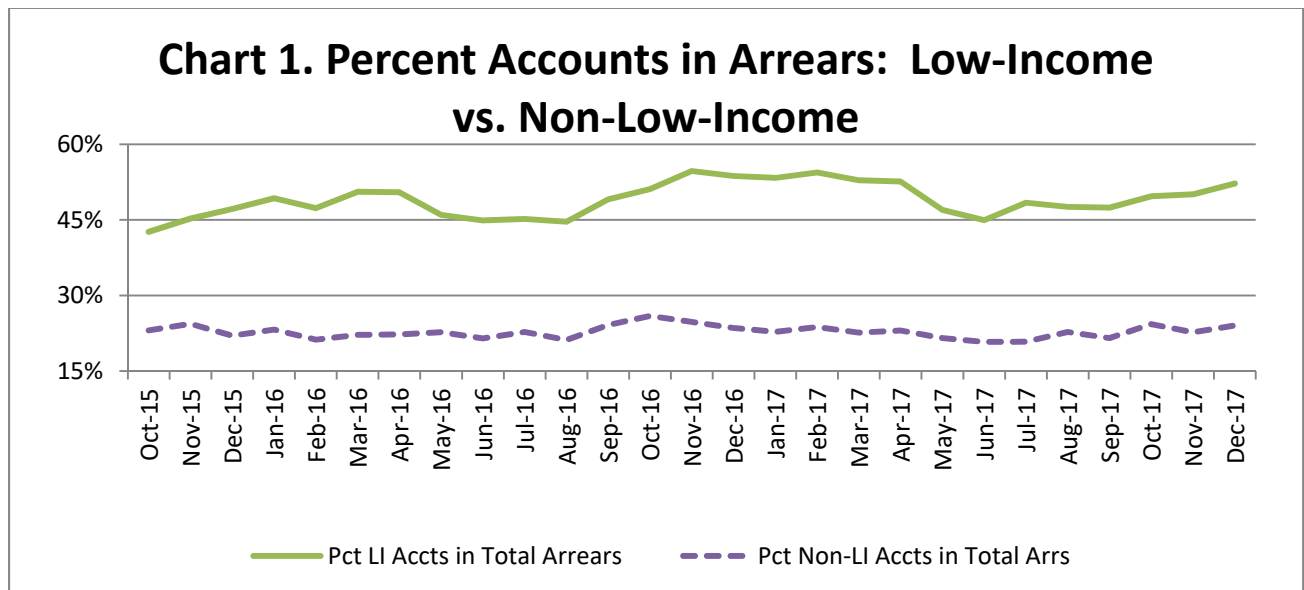
Q. PLEASE EXPLAIN THE FIRST PERFORMANCE METRIC YOU HAVE EXAMINED.

A. A review of the incidence of National Grid's low-income arrears shows substantial continuing payment problems on the part of customers receiving the Company's low-income discount.² The "incidence" of arrears measures how frequently low-income arrears occur. There are two perspectives from which I have considered the incidence of arrears: (1) the incidence of the total dollars that are in arrears; and (2) the incidence of the total accounts in arrears.

¹ If I examined data limited to the calendar years of 2016 and 2017, I would not have two complete winter heating seasons (the only complete season being October 2016 through March 2017). The beginning of the 2015/2016 winter heating season would be missing, while the end of the 2017/2018 winter heating season would be missing.

² Throughout my discussion, I have been aware of the court litigation in Rhode Island civil proceeding Bennett v. Ahern, Civil Action PC-15-4214. That proceeding does not substantively affect my analysis and conclusions herein. On the one hand, that litigation was focused on medical certificates, not collections generally. In addition, the primary contentions between the plaintiffs and National Grid appear to have been resolved by a consent decree entered April 26, 2016. The resolution of that proceeding, in other words, pre-dates the bulk of the data that I discuss throughout my testimony.

I first look at accounts in arrears. This examination of accounts in arrears does not distinguish between how far in arrears a customer is. A customer who owes \$10 is counted the same as a customer who owes \$100. The question presented involves a determination of how many customers haven't paid their bills (called the "incidence" of arrears). Chart 1 reveals that the proportion of low-income accounts in arrears (i.e., who had some amount of unpaid balance from a previous bill) consistently exceeds 45%, and is trending noticeably upwards. Chart 1 also reveals that the percentage of low-income accounts in arrears is more than two times greater than the percentage of non-low-income accounts in arrears.³

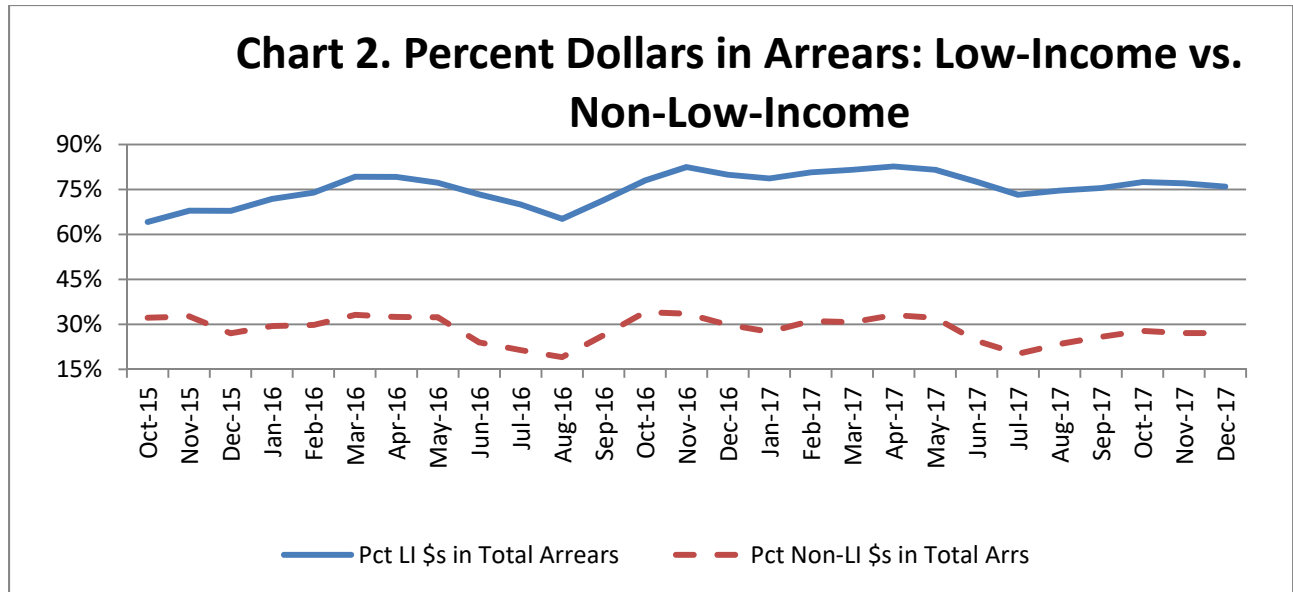


In contrast to the percentage of accounts in arrears is an examination of the percentage of dollars that are in arrears. When a utility bills \$100, it not only expects payment of that

³ I examine percentages to ensure that I account for the underlying number of accounts and the size of the underlying bills. For example, the fact that the *number* of dollars in arrears (or number of accounts in arrears) increased is less meaningful if the reason for the increase is simply because there are more customers and thus more total dollars billed. Using a percentage helps factor that out.

1 \$100, but expects that payment to be made before it issues its next bill. If it doesn't
2 receive payment, the next bill will include not only the bill for that month's current
3 service, but also include the unpaid balance from prior months. Chart 2 below examines
4 the percentage of total billings each month that are overdue from a prior month. If the
5 percentage in Chart 2 is 50% in a particular month, for example, that means that half of
6 the total dollars billed in that month were dollars that had been billed in a previous month
7 but not paid by their due date.

8
9 What stands out in Chart 2 is the fact that the percentage of billings in each month that
10 are comprised of arrears (i.e., unpaid balances from a prior month) is substantially higher
11 for low-income customers than for non-low-income customers. The percentage of low-
12 income billings comprised of arrears has exceeded 75% since October 2016. In each
13 month, in other words, for every \$100 appearing on a National Grid bill to a low-income
14 customer, \$75 has also appeared on a previous bill but gone unpaid. In contrast, the non-
15 low-income billings comprised of arrears consistently falls below 30%. In each month,
16 in other words, more than two times the proportion of dollars billed to low-income
17 customers are unpaid balances from a prior month than the proportion for non-low-
18 income customers. Low-income customers are less likely to receive their bill for current
19 service and pay that bill in the month in which it is due.



Q. IS THERE OTHER CAUSE FOR CONCERN REGARDING LOW-INCOME ARREARAGES?

A. Yes. It is not simply *total* arrears that shows a high and increasing trend for low-income customers, it is the percentage of total arrears that constitute *long-term* arrears as well. When bills go unpaid, utilities track the “age” of those arrearages. A customer who simply misses a payment, and then makes that payment up the next month, would be reflected in an “aging bucket” listed as “1 – 30 day” arrears. In contrast, a person who has missed eight payments would be listed in the bucket of “240-day” arrears; 10 payments in the bucket of “300-day arrears”; 12 or more payments in the bucket of 360+-day arrears; and so forth. The older an unpaid balance becomes, the more concern it presents from the perspective of a utility asking “are we ever going to collect this?”

1 Chart 3 and Chart 4 show that the percentage of total arrears that are comprised of long-
2 term arrears is high and increasing as well. I again distinguish between the number of
3 accounts in arrears and the number of dollars of arrears. Both charts use a similar ratio.

4 ➤ Chart 3 examines dollars. The numerator includes the dollars of arrears appearing on
5 bills in each individual month; the denominator is the total dollars in bills (arrears
6 plus bills for current service)

7 ➤ Chart 4 examines numbers of accounts. The numerator includes all accounts that have
8 some unpaid balance (i.e., an arrearage) appearing on the bill in each month. The
9 denominator includes all accounts receiving a bill in that month

10 I define “long-term arrears” in two different ways: (1) arrears that 240 or more days old
11 and (2) arrears that are 360 or more days old.

12
13 From the perspective of dollars (Chart 3), I find that while the percentage of low-income
14 arrears that are comprised of arrears 360 or more days past-due began at somewhat more
15 than 10% in October 2015, that percentage had increased to nearly 30% by December
16 2017. The percentage of billed dollars that are comprised of arrears 240 or more days
17 past-due began at less than 30% in October 2015 and increased to more than 40% by
18 December 2017. In contrast, non-low-income long-term arrearages show neither the
19 same magnitude nor the same upward trend.

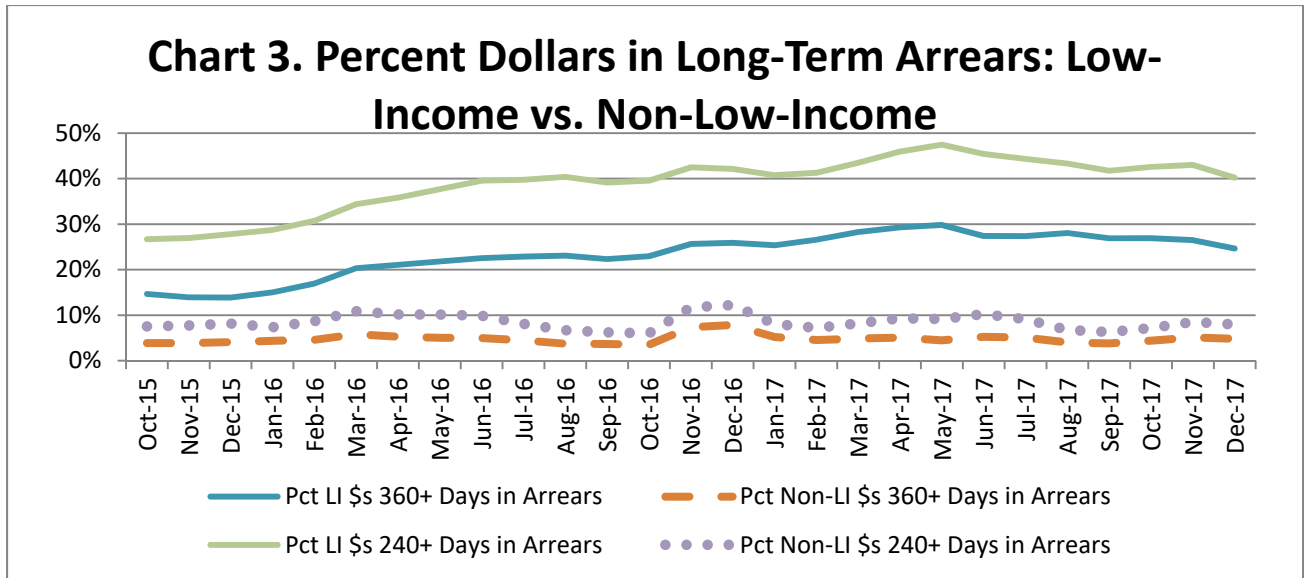
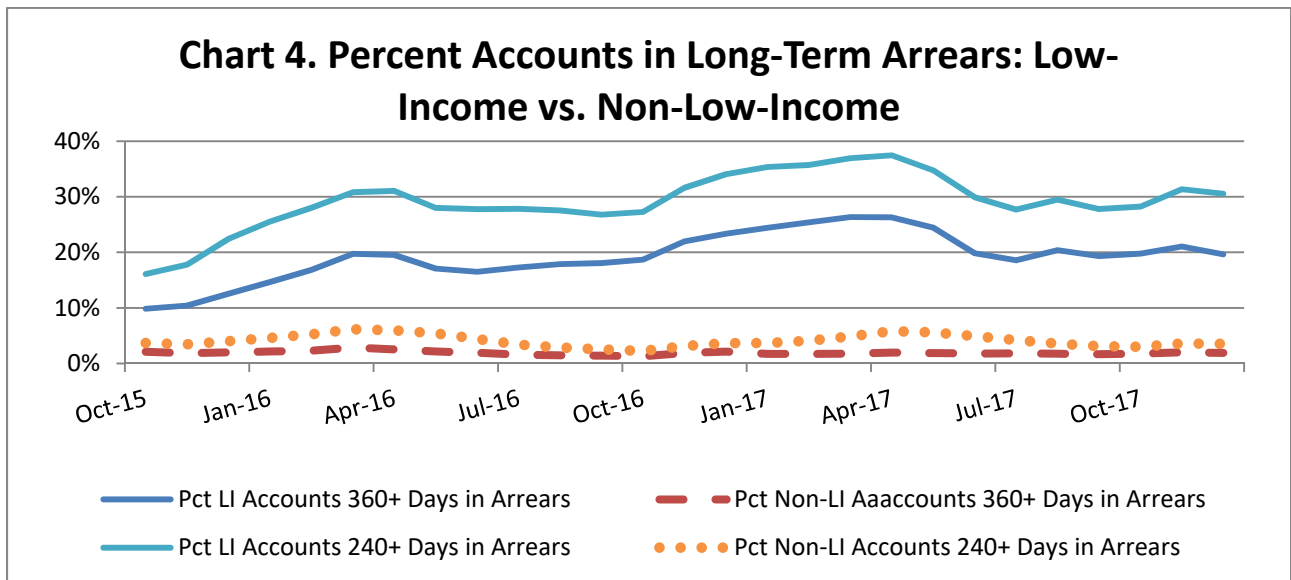


Chart 4 reveals the same pattern for low-income accounts in arrears as compared to non-low-income accounts in arrears. Not only is the proportion of low-income accounts in long-term arrears high and getting higher over time, but the corresponding proportion of non-low-income accounts in long-term arrears is reasonably low and remaining flat.



In sum, the discussion above shows that low-income customers have a higher *incidence* of arrears. “Incidence” shows that a higher proportion of low-income customers (than non-low-income customers) are in arrears. The incidence of arrears does not distinguish

1 between the level of an unpaid balance. Someone who owes \$100 is counted the same as
2 someone who owes \$1,500; they both constitute “one account in arrears.” The higher
3 incidence is seen in both the number of dollar of arrears and the number of accounts in
4 arrears.

5
6 **Q. PLEASE EXPLAIN YOUR REVIEW OF THE DEPTH OF ARREARS.**

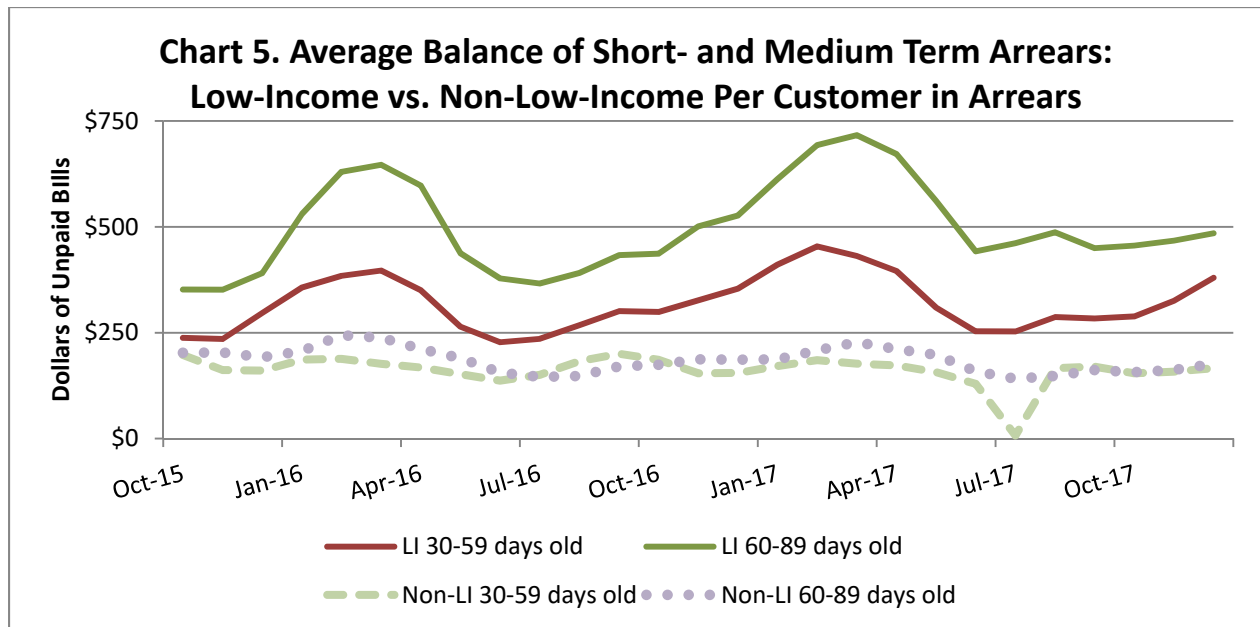
7 A. The “depth” of arrears considers how much money a customer owes the Company in
8 unpaid bills. A customer with an arrearage of \$500 is deeper in arrears than a customer
9 who is \$100 in arrears. Having many customers with high arrears is of more concern than
10 having many customers with small arrears. Accordingly, Charts 5 and 6 below examine
11 the average dollars of arrears per account within differing aging buckets. The Charts
12 compare the average arrears of low-income customers in each month to the average
13 arrears of non-low-income customers.

14
15 Chart 5 presents the average arrears for shorter-term (arrears that are 30-59 days old) and
16 medium-term (arrears that are 60-89 days old) balances.⁴ National Grid’s data shows that
17 while the average non-low-income customer in arrears owes the Company a balance of
18 less than \$250 for both age buckets (30-59 days, 60-89 days), the average low-income
19 customer has a balance that is noticeably higher (and increasing). Low-income
20 customers that have unpaid balances 60 – 89 days old are carrying unpaid bills of \$500 or
21 more. To illustrate the difference:

⁴ Accounts that have unpaid balances that are only 1 – 30 days old present less risk to those concerned with whether a customer may ultimately pay his or her bills. These short-term arrearages represent unpaid balances that someone is likely to retire with no undue risk to the utility. I thus set them aside for my analysis herein.

- The October 2015 low-income balance for an unpaid bill 60 – 89 days old (\$351.84) was roughly 1.5x higher than the non-low-income balance for the equivalent age (\$202.74).
- In December 2017, the average unpaid balance for low-income accounts 60 -89 days in arrears (\$484.80) 2.75x higher than the average balance for non-low-income accounts of the same age (\$176.45).

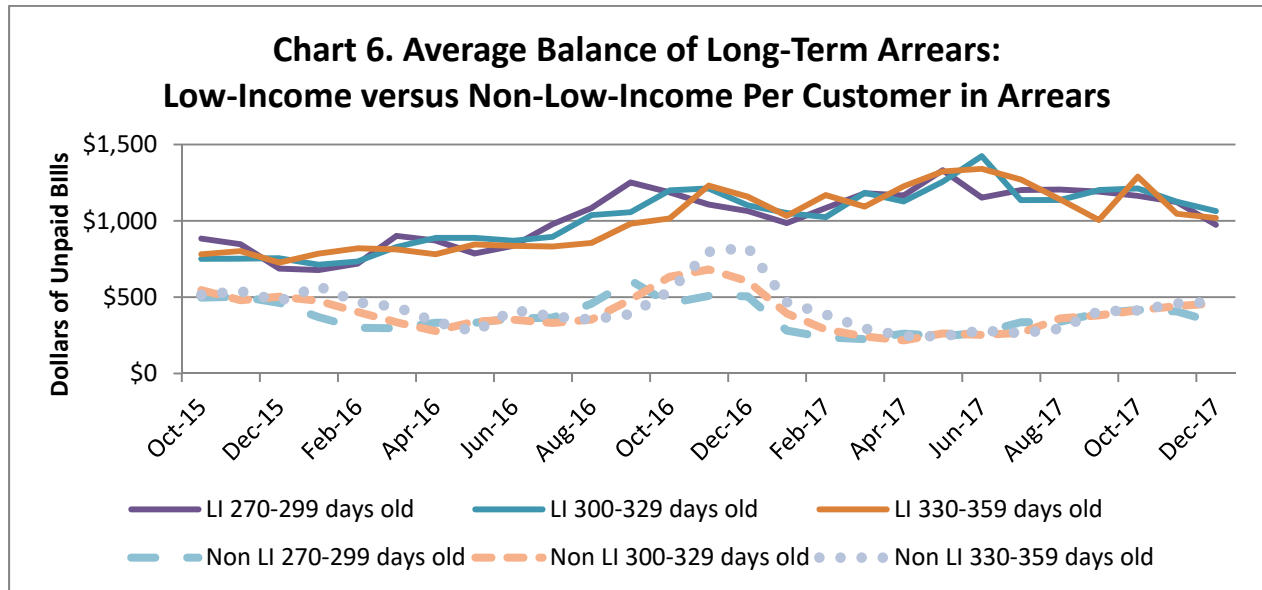
When this data is considered along with the data I previously discussed, it is evident that not only are more low-income customers in arrears, but they have larger arrears as well.



Q. DO YOU FIND THE SAME PATTERNS FOR LONGER-TERM UNPAID BALANCES?

A. Yes. Indeed, not only are the differences in dollar levels between low-income and non-low-income customers much bigger for longer-term arrears, but the upward trend in the average unpaid balance for National Grid's low-income customers is more pronounced as well. The data is presented in Chart 6 below. Unpaid balances for low-income accounts in

1 arrears exceed \$1,000 for all three aging groups of 270 days to 359 days in 2017. In
2 contrast, the unpaid balance for non-low-income arrearages in 2017 does not exceed \$500
3 for any of these three aging groups.



4
5
6 **Q. WHAT DO YOU CONCLUDE FROM THE DATA PRESENTED ABOVE?**

7 A. Remember that I began noting that the purpose of a low-income discount (such as the
8 A60 rate) is to help low-income customers make sustainable bill payments. I conclude
9 that the existing National Grid A60 discount does not provide low-income customers an
10 effective opportunity to achieve that objective. Low-income customers have not only a
11 high incidence and depth of arrears in the short-, medium- and long-term, but both their
12 incidence and depth of arrears are increasing as well. This nonpayment is occurring
13 despite National Grid's offer of its A60 low-income discount.

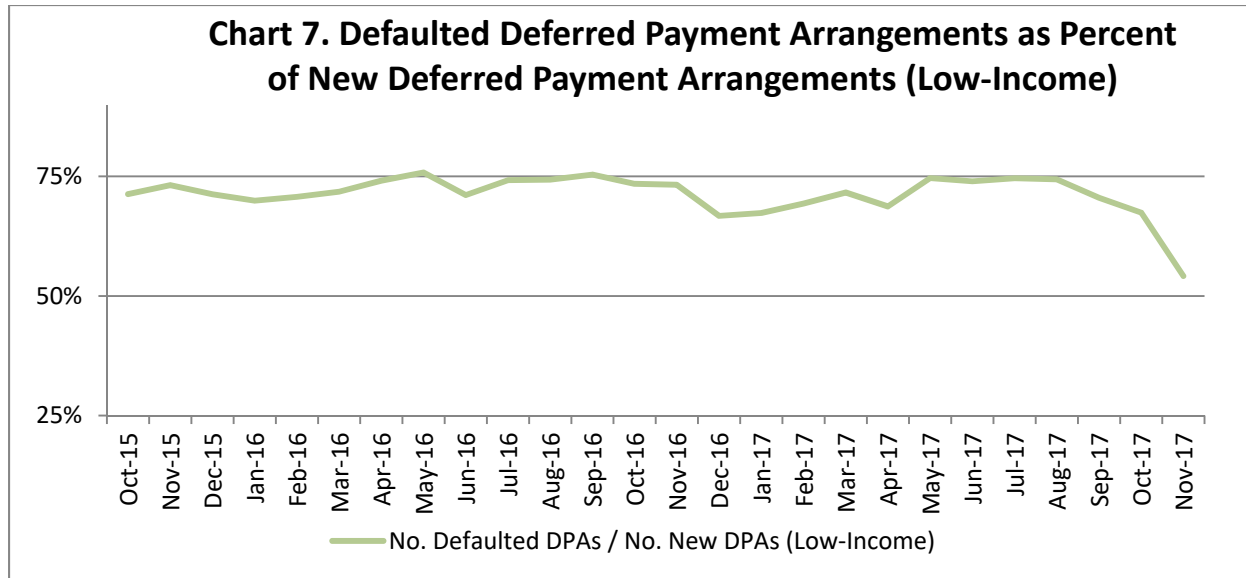
**B. National Grid's Existing A60 Discount Does Not Provide Low-Income Customers
an Effective Opportunity to Retire Arrears Once Incurred.**

**Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR
TESTIMONY.**

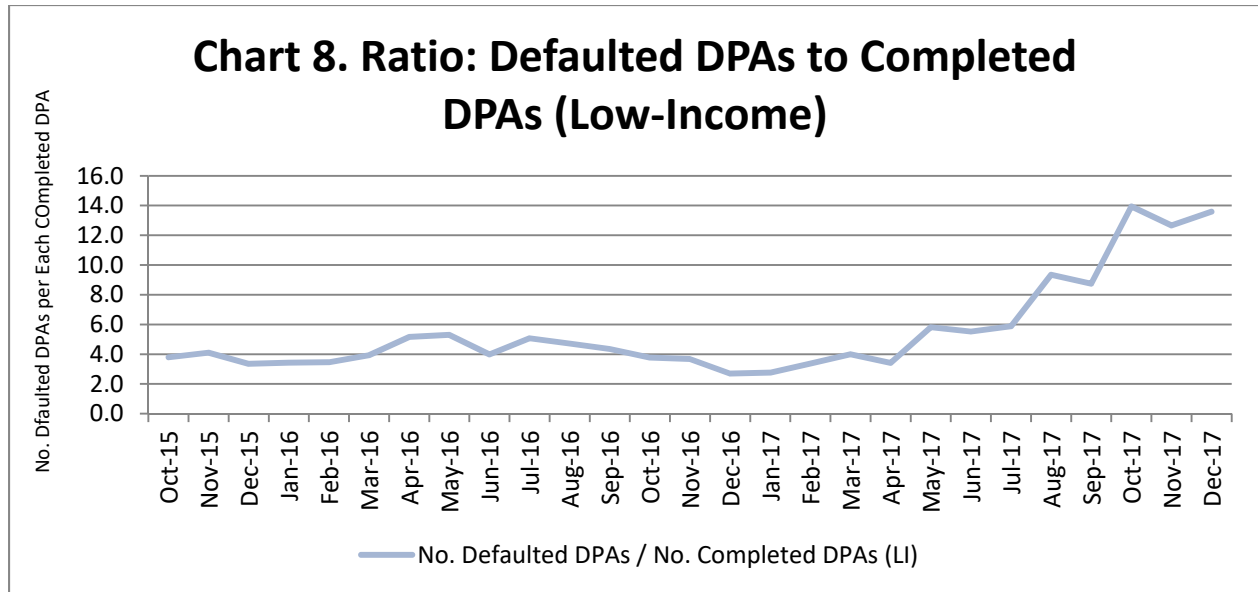
A. In this section of my testimony, I consider the extent to which National Grid's low-income discounts provide low-income customers with the opportunity to retire arrears successfully through a Deferred Payment Arrangement ("DPA") even once those arrearages are incurred. A DPA is an agreement between National Grid and a customer in arrears where the customer agrees to pay his or her arrears over time. If the customer fails to make those payments, the DPA ends in "default."

Chart 7 presents the percentage of low-income DPAs that end in default. In Chart 7, the number of low-income DPAs that default in any given month is placed in the numerator. The total number of DPAs is placed in the denominator. Chart 7 shows that not simply a majority, but an overwhelming majority, of low-income DPAs end in default. As can be seen in Chart 7, over the 27-month study period, low-income payment plans result in a default roughly 75% of the time.⁵ The data shows that when low-income customers of National Grid incur an unpaid balance in Rhode Island, the discount offered to such National Grid low-income customers is insufficient to allow these customers to be able to reasonably retire their arrears over time through a DPA.

⁵ In the final few months shown on the Chart, the percentage declines. This occurs not because more DPAs were being completed, but rather because insufficient time had elapsed since the DPAs were begun to have a result (successfully completed, defaulted) to have occurred one way or the other.



When many DPAs default, that further implies that few DPAs are successfully completed (i.e., the customer entering into the DPA pays all of his or her past-due bills). A defaulted DPA represents a customer that fails to make his or her payments and thus fails to retire their arrears. A completed DPA is when a customer succeeds in completely paying off the balance that was made subject to the DPA. Given the high rate of DPA defaults for National Grid's low-income customers, it is not surprising that the ratio of defaulted payment plans to completed payment plans for low-income customers is high and sharply increasing. For the months October 2015 through April 2017, defaulted low-income DPAs out-numbered completed low-income DPAs by a ratio of roughly 4-to-1. Beginning in May 2017, the ratio of defaulted DPAs to completed DPAs increased to 6-to-1. In recent months, defaulted DPAs were outpacing completed DPAs by more than 12-to-1.

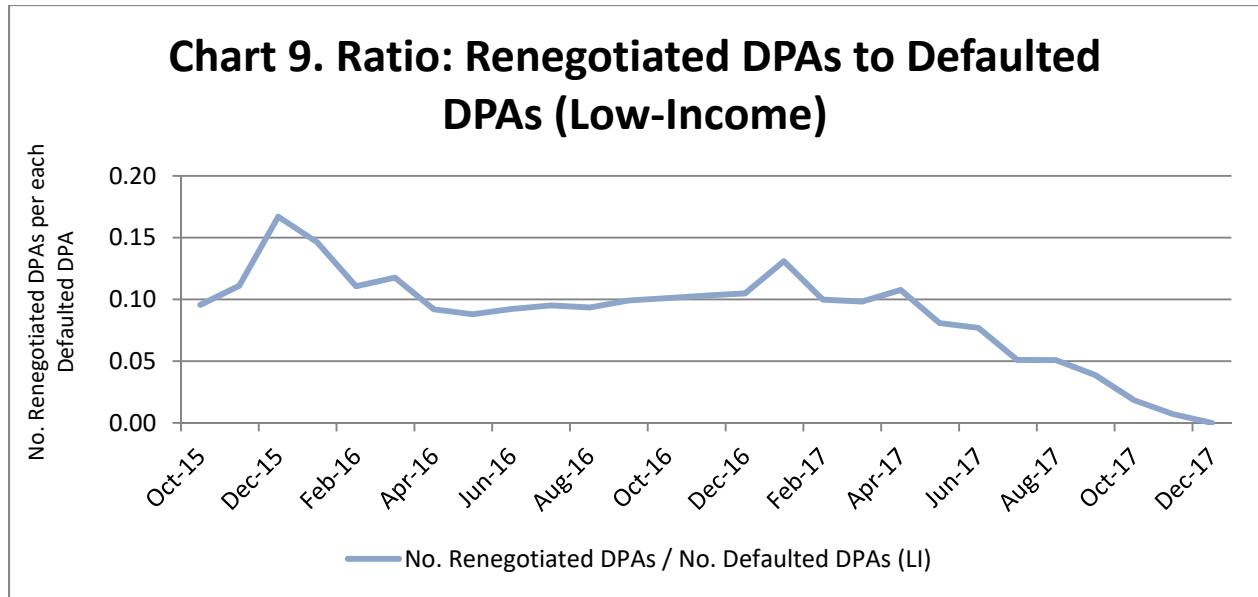


Q. DO YOU HAVE ANY FINAL OBSERVATION ABOUT THE ABILITY OF LOW-INCOME NATIONAL GRID CUSTOMERS TO USE DPAS TO RETIRE UNPAID BALANCES?

A. Yes. A renegotiated DPA gives a customer a second chance to retire arrears through a DPA. A customer may enter into a renegotiated payment plan if the customer finds that he or she agreed to payments that were simply not affordable over time. Customers may also renegotiate payment plans if they encounter changes in their circumstances that make a previously agreed upon DPA unreasonable given their changed circumstances. Chart 9 below shows that once low-income customers default on a DPA, few of those customers obtain a second chance to retire their unpaid balances through a renegotiated plan. Chart 9 below examines the ratio of renegotiated DPAs to defaulted DPAs. The number of renegotiated DPAs is placed in the numerator while the number of defaulted DPAs is placed in the denominator. A ratio of 1.0 would mean that there is one renegotiated DPA for every one defaulted DPA. A ratio of 0.2 means that there is one renegotiated DPA for every five defaulted DPAs ($1 / 5 = 0.20$).

1
2 Chart 9 shows that despite a brief increase (up to 0.15 in late 2015) in the percentage of
3 defaulted low-income DPAs that were renegotiated (i.e., somewhat less than one
4 renegotiated plan for every six defaults), the proportion of DPAs that were renegotiated
5 after default hovered around 10% for the months February 2016 through April 2017 (one
6 renegotiated DPA for every 10 defaults). Starting in May 2017, however, and continuing
7 through the end of the year, the proportion of low-income DPAs that were renegotiated
8 subsequent to a default sharply declined below even that 10% level.

9
10 As one can see, in other words, once a low-income payment plan has defaulted, there is
11 little opportunity for the low-income customer to seek to retire his or her unpaid balance
12 through a renegotiated DPA. In May 2017, there was one renegotiated plan for every
13 twelve defaults (ratio of 0.08), while by August 2017, there was roughly one renegotiated
14 DPA for every 20 defaults (ratio of 0.05), and by September 2017, there was roughly one
15 renegotiated plan for every 25 defaults (ratio of 0.04). It is clear, in other words, that
16 low-income customers are not getting second chances to retire their arrears over time
17 once they have defaulted on a DPA.



Q. IN REACHING YOUR CONCLUSIONS ABOVE, DOES THE ONGOING OPERATION OF NATIONAL GRID’S ARREARAGE MANAGEMENT PROGRAM AFFECT ANY PART OF YOUR ANALYSIS?

A. I am aware, of course, of the Arrearage Management Program (“AMP”) operated by National Grid. The results of the program that I have reviewed to date tend to support rather than to detract from the conclusions I reach above. My review of the National Grid Arrearage Management Report which National Grid filed through February 2018 (Docket 4290) indicates that even taking arrearages out of the equation of affordability, low-income customers are not successfully completing their arrearage plans by making their current bill payments. Limiting my comments to electric customers, for example, I note that:

- In January 2018, there were 1,975 active AMP electric customers. While there were 55 customers who had successfully completed their AMP, there were 1,060 who had been removed from the AMP due to payment defaults

1 and an additional 241 who had been removed from the program due to having
2 had their AMP plans cancelled.

3 ➤ In February 2018, there were 1,791 active AMP electric customers. While
4 there were 14 customers who had successfully completed their AMP, there
5 were 140 who had been removed from the program due to payment defaults,
6 and an additional 41 who had been removed from the program due to
7 cancelling their AMP plan.

8 My conclusion, when one considers this data along with the remaining data I have
9 discussed throughout my testimony thus far, is that National Grid's underlying bills for
10 current service have not been reduced to an affordable, sustainably payable, level.

11
12 **C. National Grid's Existing A60 Discount does not Provide Low-Income Customers a**
13 **Meaningful Opportunity to Avoid the Loss of Service Due to Nonpayment.**

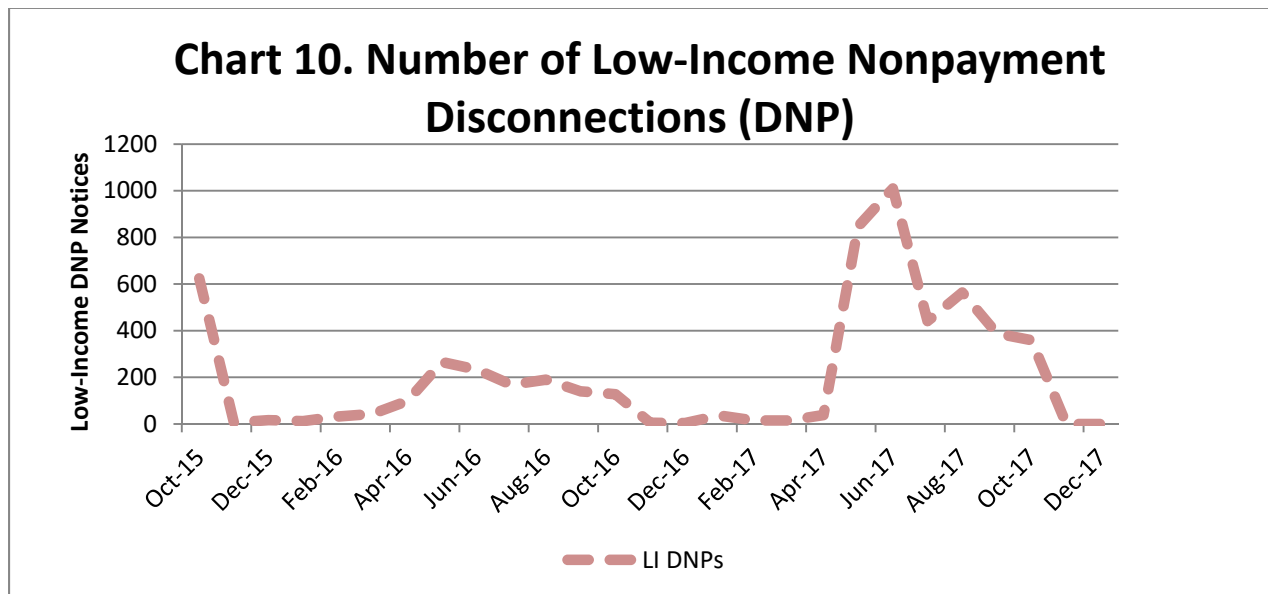
14
15 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
16 **TESTIMONY.**

17 A. In this section of my testimony, I examine the implications of the findings above when
18 measured by the objective of allowing National Grid to bill its low-income revenue with
19 a lessened need to engage in activities in order to collect that billed revenue. I further
20 examine the extent to which National Grid's low-income discount allows income-eligible
21 customers to avoid the loss of service due to disconnections for nonpayment.

22
23 Chart 10 shows that National Grid has experienced a substantial increase in the absolute
24 number of low-income accounts disconnected for nonpayment in 2017 compared to the
25 corresponding months in 2016. National Grid:

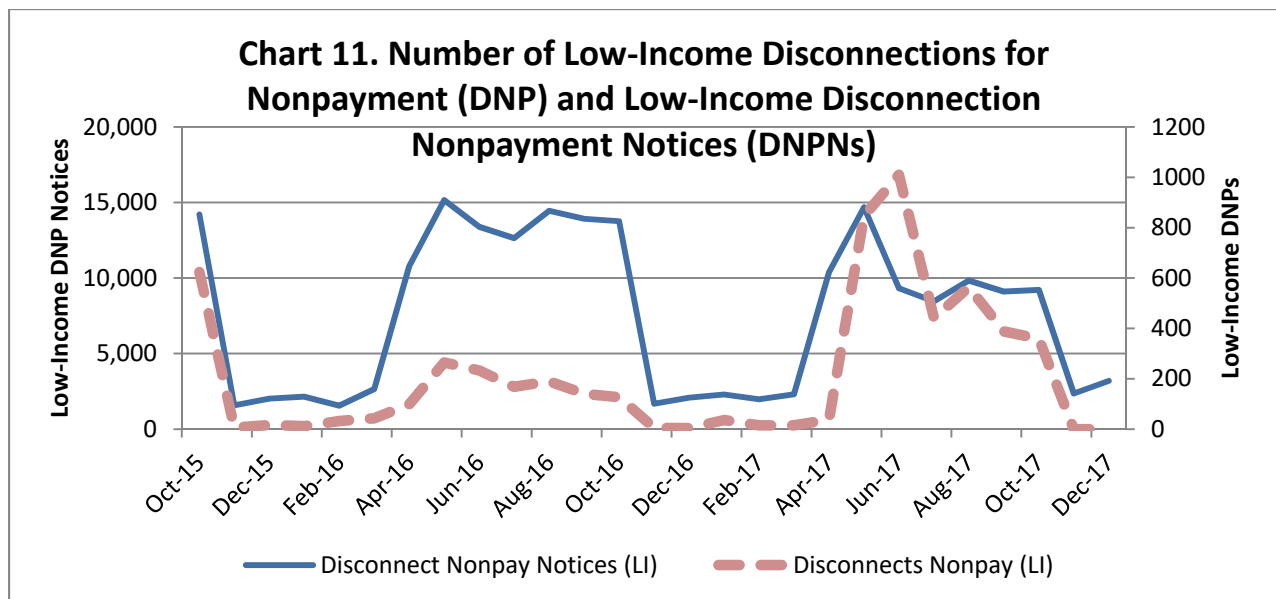
- Disconnected 265 low-income accounts for nonpayment in May 2016, but disconnected 847 low-income accounts in May 2017.
- Disconnected 233 low-income accounts for nonpayment in June 2016, but disconnected 1,010 low-income accounts in June 2017.
- Disconnected 168 low-income accounts for nonpayment in July 2016, but disconnected 441 low-income accounts in Jul 2017.

Even as late as October, while National Grid disconnected 127 low-income accounts for nonpayment in 2016, it disconnected 359 low-income accounts in October 2017. The data supports the conclusion that National Grid's discount is not providing effective protections against the loss of service due to nonpayment disconnections.



The need to rely on an increase in both the incidence and intensity of collections indicates that low-income customers do not have the capacity to respond to their nonpayment in order to avoid the loss of service. Chart 11, for example, overlays the number of disconnect notices that National Grid issued to its low-income customers on top of the number of actual service disconnections for nonpayment I discussed above. What we see

1 is that while National Grid issued fewer disconnect notices to its low-income customers
2 in 2017 than it did in 2016, the Company's low-income customers receiving those
3 disconnect notices did not have the capacity to respond to those notices in order to avoid
4 the actual disconnection of service. Instead, National Grid was forced to further respond
5 to the ongoing nonpayment through the actual disconnection of service. The grant of the
6 low-income discount, in other words, was insufficient to bring bills to a sustainably
7 payable level for low-income customers.

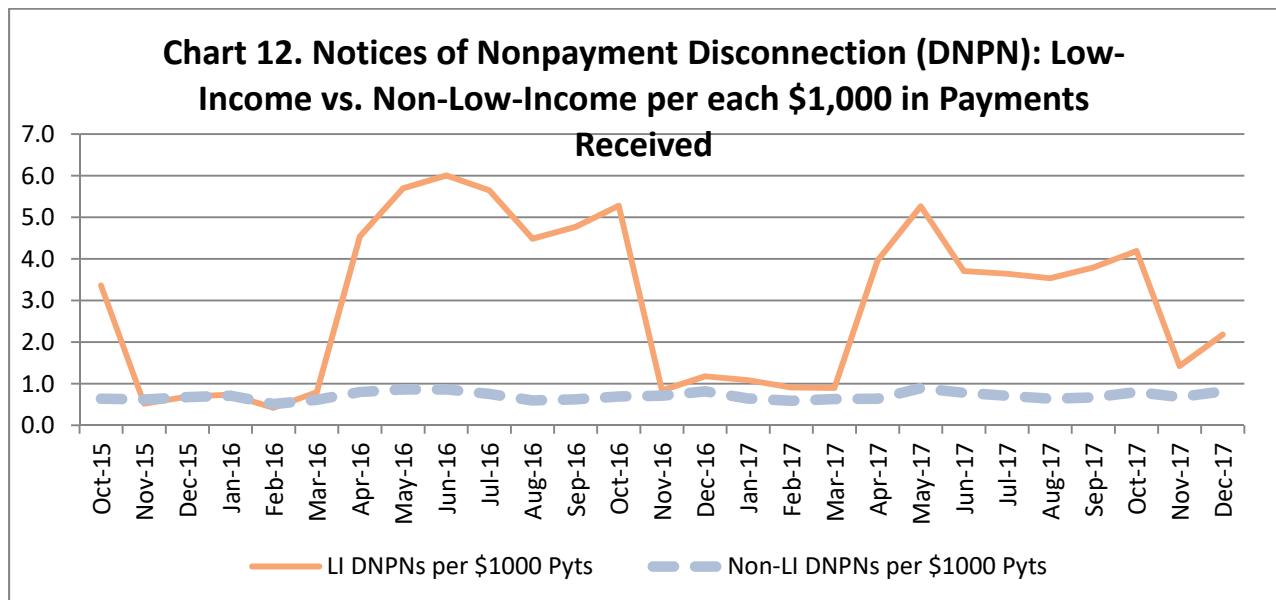


8
9 **Q. IS THIS INCREASED COLLECTION ACTIVITY DIRECTED PRIMARY**
10 **TOWARD LOW-INCOME CUSTOMERS?**

11 A. Yes. The need for increased collection efforts caused by the inability of low-income
12 customers to pay is demonstrated in Chart 12. Chart 12 compares the rate at which
13 National Grid issues disconnect notices to its low-income customers relative to the rate at
14 which the Company issues disconnect notices to its non-low-income customers for each
15 \$1,000 payments the Company actually receives. The difference lies in the customers,
16 not in the Company's procedures by which it responds to those customers. By indexing

the number of disconnect notices to the payments actually received, it is possible to compare the level of effort required to generate those payments for low-income and non-low-income customers.

When low-income customers have an inability to pay, the Company needs to exert greater effort to translate billings into payments. That level of effort can be measured. The higher level of effort for low-income customers is consistently evident for National Grid. National Grid never issues more than one disconnect notice for every \$1,000 of non-low-income payments it receives. In contrast, except in the cold weather month, when disconnections are limited by policy, the Company issued more than three disconnect notices for each \$1,000 it actually receives in low-income payments in 2017. In 2016, the Company was issuing between five and six disconnect notices for each \$1,000 in payments it received.



The importance of Chart 12 lies not in the year-over-year comparisons of the level of collection effort that National Grid has needed to exert in order to generate each \$1,000

1 of payments. The collection activities directed toward non-low-income customers for
2 each \$1,000 payments received appears to have remained reasonably constant over the 27
3 month period. Indeed, National Grid appears to have issued fewer disconnect notices to
4 low-income customers for every \$1,000 it received in 2017. That means, of course,
5 either that low-income customer payments remained constant and National Grid issued
6 fewer disconnect notices, or that National Grid issued more disconnect notices but
7 customers made even more payments in response to those notices. The importance of
8 Chart 12 instead lies in the comparison between the level of collection effort directed
9 toward low-income customers and the level of collection effort directed toward non-low-
10 income customers. Chart 12 shows that despite the A60 discount, the Company still has
11 to work much harder to collect its low-income bills.

12
13 **Q. PLEASE SUMMARIZE WHAT YOU FIND BASED ON THE INFORMATION**
14 **YOU DISCUSS ABOVE.**

15 A. I began with the premise that offering a discount to low-income customers is not an end
16 unto itself. As a public utility, National Grid does not distribute benefits to low-income
17 customers simply because they are poor. Instead, offering a bill discount to low-income
18 customers is a means to an end. The objective (or purpose) of offering a low-income
19 discount is for the low-income customer to receive a sustainably payable bill. My
20 reference to a “sustainably payable bill” means that when a low-income customer
21 receives his or her bill for utility service, that customer will have the capacity to pay the
22 bill in a complete and timely fashion, on a regular basis, without the need for the utility to
23 engage in frequent or intense collection efforts to generate that payment.

1
2 What I find based on the discussion above is that the existing A60 discount offered by
3 National Grid is insufficient to generate the outcomes of the discount. The incidence and
4 depth of arrearages for low-income customers remains not merely noticeably higher than
5 non-low-income customers, but substantially higher. Moreover, once they get behind in
6 bill payments, the ability of low-income customers to retire arrears by entering into, and
7 successfully completing, deferred payment arrangements is insubstantial. The inability of
8 low-income customers to retain service by avoiding the disconnection of service for
9 nonpayment is high and increasing. Overall, the Company is working harder and harder
10 to collect less and less from its low-income customers. All of these findings occur
11 notwithstanding the existence of National Grid's existing A60 low-income discount
12 program.

13
14 **Part 2. A Program Review of the Existing National Grid Low-Income Discount.**

15
16 **Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR**
17 **TESTIMONY.**

18 A. In this section of my testimony, I consider whether the failure to achieve the outcomes
19 sought through a low-income utility bill discount can be attributed to the structure of
20 National Grid's existing program. In addition, I consider whether National Grid's
21 proposal to adopt a "total bill" discount offers a partial response to the Company's
22 existing inability to achieve program objectives. Finally, I offer recommendations on
23 how National Grid can / should improve the offer of bill affordability assistance.

Q. PLEASE EXPLAIN WHY NATIONAL GRID’S EXISTING LOW-INCOME DISCOUNT IS INSUFFICIENT TO ACHIEVE THE PROGRAMMATIC OBJECTIVES OF A LOW-INCOME AFFORDABILITY PROGRAM.

A. The primary reason I find that National Grid’s existing low-income discount is insufficient to achieve the programmatic objectives of the discount is that the existing discount is insufficient to generate affordable bills to support sustainable bill payment. I find, in other words, that the average annual bill rendered to low-income customers is unaffordable even after receiving the existing A60 discount. In considering what bills are “affordable,” I rely on the concept of “energy burden.” The term “energy burden” is a term-of-art that refers to energy bills (electric bills in this instance) as a percentage of income. To illustrate, a household with an annual income of \$8,000 and a bill of \$2,000 would have an energy burden of 25% ($\$2,000 / \$8,000 = 0.25$). If that same household had a bill of \$800, the household would have an energy burden of 10% ($\$800 / \$8,000 = 0.10$).

An affordable electric burden (non-heating) is an electric bill that does not exceed three percent (3%) of income. That affordable burden has an empirical basis. An affordable total home energy burden is commonly accepted⁶ as being set at 6%.⁷ That total home

⁶ A six percent (6%) burden for total home energy is frequently used to demarcate an affordable home energy burden. See, e.g., Maryland Office of Home Energy Programs (OHEP), “Supplemental Targeted Energy Program (STEP): Program Overview,” at 8 (“Based on feedback from the Policy Reform Advisory Group, stakeholders, and industry experts, an energy burden in excess of 6% is considered unaffordable”). See also, Case No. 8903 DHR Office of Home Energy FY 2018 Operations Programs Plan Report, filed June 9, 2017, p. 23, referring to 6% budget; DHR report to legislature on Office of Home Energy Programs, December 1, 2016, pp.7-8, plans on energy assistance, (citing my paper Fisher Sheehan and Colton, “Home Energy Affordability Gap,” and stating that DHR has determined an energy budget in excess of 6% of household income is considered unaffordable). In addition, pursuant to Illinois statute (305 ILCS 20/18), 6% defines the total percentage of income burden that makes a combined gas and electric bill affordable. See also, Proceeding on Motion of the Commission to Assess Certain

1 energy burden is generally divided between space heating and electricity on a 50%/50%
2 basis, resulting in an affordable electric burden of 3% of income.

3
4 Given this affordable bill burden, it is possible to examine the level of National Grid
5 bills, after applying the low-income discount, to determine what level of income would
6 be required to have the discounted bills be affordable. Those necessary income levels
7 can then be compared to incomes reasonably expected for low-income households in the
8 National Grid service territory. Rather than using hypothetical bills, I have relied on
9 actual bills for 12-month and three month periods as reported by National Grid.⁸

10
11 Table 1 shows the minimum annual incomes needed to make actual National Grid A-60
12 bills for 2015/2016 and 2016/2017 affordable at 3% of income.⁹ I derive these incomes
13 by dividing the annual bill to low-income National Grid customers by 0.03. Given an
14 affordable burden of 3%, for example, an annual bill of \$600 would be affordable to any

Aspects of the Residential and Small Non-Residential Retail Energy Markets in New York State, Case 12-M-0476, Order Adopting a Prohibition on Service to Low-Income Customers by Energy Service Companies, at 5, issued December 15, 2016 (“the Commission recently renewed its commitment to assist financially vulnerable customers struggling to pay their energy bills. In a May 20, 2016 Order, the Commission expanded low-income assistance programs by creating a target to limit the energy burden (i.e., the percent of annual income spent on energy) to no more than 6% for low-income households. (citing, Case 14-M-0565, Energy Affordability for Low Income Utility Customers, Order Adopting Low Income Program Modifications and Directing Utility Filings (issued May 20, 016). The State of New Jersey has adopted 6% as its demarcation of an affordable home energy bill. See, APPRISE, Inc. (April 2006). Impact Evaluation and Concurrent Process Evaluation of the New Jersey Universal Service Fund, at 6 – 7 (USF program design elements: “Energy Burden: [participants] have electric or natural gas bills exceeding a 3 percent energy burden threshold for each utility (or 6 percent for customers who use electric heat.”)

⁷ The 6% is a calculated figure. It is based on the premise that utility costs should not exceed 20% of shelter costs. Moreover, it is based on the premise that total shelter costs should not exceed 30% of income. 20% of 30% yields a 6% affordable utility burden.

⁸ The advantage of using a three-month bill, and comparing that to a three-month burden, is that I can examine three years of data. The use of a full twelve months of data, while preferable, excludes any analysis based on the three months of October through December 2017.

⁹ Adding the three-month comparisons shows that results would not substantively change in the third year.

customer with an income of at least \$20,000 ($\$600 / 0.03 = \$20,000$). Table 1 shows that for the annual bill that would have been received by A60 customers in the twelve months ending September 2016 (\$1,094.88), a customer would have needed an income of \$36,496 to maintain an affordable burden of 3% ($\$36,494 \times 0.03 = \$1,094.85$).¹⁰ Given a 3% affordability standard, the bill for the twelve months ending September 2017 (\$1,002.44) would have been affordable for anyone with an income of at least \$33,415 ($\$33,415 \times 0.03 = \$1,002.45$).

Table 1. Minimum Incomes Needed for Actual A-60 National Grid Bills to be Affordable at 3% of Income.

Billing Period	A	B	C	D	E	F
	Annual Bill ¹¹	Affordable Burden	Annual Income Needed for Affordability (A / B)	Oct-Dec Bill ¹²	Affordable Burden ¹³	Annual Income Needed for Affordability (D / E)
Oct-2015 – Sep- 2016	\$1,094.88	0.03	\$36,496	\$265.52	0.0075	\$35,403
Oct-2016 – Sep-2017	\$1,002.44	0.03	\$33,415	\$232.99	0.0075	\$31,065
Oct-2017 – Dec-2017	xxx	0.03	xxx	\$280.57	0.0075	\$37,409

Given these results regarding what incomes would be needed to have an affordable bill for actual A60 discounted rates, the question which flows from Table 1 is how these incomes compare to actual incomes that are experienced by low-income households in Rhode Island. Table 2 begins to respond to that question. Table 2 compares the income needed to achieve bill affordability using National Grid's existing A-60 rate discount (as shown in Table 1) to differing levels of the Federal Poverty Level. If the required incomes derived in Table 1 routinely exceed those incomes that Rhode Island's low-

¹⁰ As I explain elsewhere, I use a period of October through September to keep complete heating seasons together.

¹¹ DIV-14-52

¹² DIV-14-52.

¹³ Affordability for October-December bill standing alone is defined as 0.75% of income ($3\% / 4$).

income residents experience, National Grid's bills continue to be unaffordable
irrespective of receiving the A60 discount.

Table 2 shows that households with four (or fewer) persons, living with incomes at or below 150% of Poverty, would have had insufficient income to have experienced affordable National Grid bills in 2016 even after receiving the A60 discount. Even with an income equal to 150% of Poverty Level, a four-person household's income of \$36,450 is less than that needed to make the discounted National Grid bill affordable. Similarly, in 2017, households with three (or fewer) persons would have experienced an unaffordable National Grid bill notwithstanding the A60 discount. A four-person household (with an annual income of \$36,900) would have somewhat exceeded that income required to make National Grid bills affordable given the A60 discount (\$33,415). Incomes at increments of Poverty at or below 100% of Federal Poverty Level come nowhere close to allowing a National Grid bill, even with the A60 discount, to be affordable.

Table 2. Income Needed for Actual A-60 National Grid Bills to be Affordable
Compared to Incomes at Differing Levels of Federal Poverty Level

HH Size	Income Required for A60 Affordability	Incomes at Increments of Federal Poverty Level (2016)				Income Required for A60 Affordability	Incomes at Increments of Federal Poverty Level (2017)			
		50%	75%	100%	150%		50%	75%	100%	150%
1	\$36,496	\$5,940	\$8,910	\$11,880	\$17,820	\$33,415	\$6,030	\$9,045	\$12,060	\$18,090
2	\$36,496	\$8,010	\$12,015	\$16,020	\$24,030	\$33,415	\$8,120	\$12,180	\$16,240	\$24,360
3	\$36,496	\$10,080	\$15,120	\$20,160	\$30,240	\$33,415	\$10,210	\$15,315	\$20,420	\$30,630
4	\$36,496	\$12,150	\$18,225	\$24,300	\$36,450	\$33,415	\$12,300	\$18,450	\$24,600	\$36,900

1 There is, however, one major shortcoming in Table 2 above. The Table looks at the
2 income at the top of each income range presented. The incomes in Table 2, in other
3 words, are at 50% of Poverty; at 100% of Poverty; at 150% of Poverty. Very few
4 households live precisely at the top of each income range. To correct that shortcoming,
5 and to present an even more realistic assessment of affordability after receiving the A60
6 discount, Table 3 compares actual average income for Rhode Island residents at differing
7 Poverty Levels (in 2016) to that income that would have been required to have the
8 average A60 discounted bill be affordable at 3% of income. The “income shortfalls”
9 presented in Table 3 are not the income that would be required for bills to be affordable.
10 Instead, these “shortfalls” represent the additional income that would have been required
11 above and beyond those average incomes actually experienced in 2016¹⁴ to make
12 National Grid’s A60 bill affordable. For households with income at or below 150% of
13 Poverty Level, National Grid’s electric bills even after applying the A-60 rate discount,
14 National Grid’s bill consistently exceed bills that would be affordable at 3% of income.¹⁵

¹⁴ The average income by Poverty Level range can be obtained through the U.S. Census Bureau’s Current Population Survey (“CPS”) “Table Maker” on-line data base.

¹⁵ Moreover, as can be seen in Table 3, there are not simply a few people living at the lower income levels. The incidence of Rhode Island’s population living at these Poverty Level ranges is considerable.

Table 3. National Grid Affordability Shortfall at A-60 Rates and Mean National Grid A60 Bill.					
Income range ¹⁶	No. Persons ¹⁷	Average Income ¹⁸	Average A60 Discounted Bill ¹⁹	Income Needed for Bill to be Affordable (3%)	Income Shortfall ²⁰
0-50% FPL	43,716	\$17,301	\$1,094.88	\$36,496	\$19,195
50-75% FPL	23,987	\$20,650	\$1,094.88	\$36,496	\$15,846
75-100% FPL	51,681	\$24,089	\$1,094.88	\$36,496	\$12,407
100-125% FPL	40,984	\$39,714	\$1,094.88	\$36,496	(\$3,128) ²¹
125-150% FPL	37,791	\$32,217	\$1,094.88	\$36,496	\$4,279

1
2 It is important to understand that the unaffordability of National Grid bills is not caused
3 by customers who have high, or wasteful, levels of consumption. Table 4 shows that
4 even bills that are at 50% of the National Grid average A60 bill would be unaffordable
5 for households at or below 50% of Poverty Level, and would be barely affordable at 50 -
6 75% of Poverty Level. Even at lower consumption levels (with correspondingly lower
7 bills), in other words, affordability is not achieved at the existing National Grid A60
8 discount.

¹⁶ In this evaluation of Federal Poverty Level ranges, the top number is exclusive while the bottom number is inclusive. Accordingly, for example, 0-50% means zero to less than 50%; 50-75% means 50% to less than 75%.

¹⁷ The number of “persons” in the “persons in poverty universe” excludes unrelated individuals under age 15.

¹⁸ Average income for Federal Poverty Level obtained from Current Population Survey Table Creator, U.S. Census Bureau for 2016. 2017 data is not yet available.

¹⁹ DIV-14-52. Since the most recent income data available is 2016 data, the bill for October 2015 through September 2016 is used for this calculation rather than the more recent bill.

²⁰ Income need to have National Grid A60 bill be affordable at 3% burden minus actual average income at the designated Poverty Level range.

²¹ I do not have an explanation for the anomalously high income reported by the CPS for households with income between 100% and 125% of income in 2016.

Table 4. Income Needed for Affordability at Different Levels of Mean National Grid A-60 Bills

Percent of Mean Bill	Annual Bill ²²	Income Needed to be Affordable
50%	\$605.40	\$20,180
75%	\$899.40	\$29,980
100%	\$1,190.88	\$39,696
Median	\$921.96	\$30,732

Q. HAVE YOU ENGAGED IN ANY FINAL ASSESSMENT OF THE AFFORDABILITY, OR LACK THEREOF, OF BILLS AT NATIONAL GRID'S EXISTING A60 RATES?

A. Yes. Since the Federal Poverty Level is a uniform national figure, applied irrespective of the state in which a household resides,²³ even more insight can be obtained by examining Census data for one low-income population in Rhode Island. The population I examine includes those households receiving Food Stamp benefits.²⁴ The Food Stamp program is one of the programs participation in which qualifies a National Grid customer to receive the Company's A60 discount. I examine data for the state as a whole as well as for each county. I calculate the bill burdens that the average A60 National Grid bill would impose. These burdens can be compared to the affordable burden of 3% of income.

²² DIV-14-50 (Monthly A16 bill – Monthly A60 discount) x 12 months = annual discounted bill. Income needed to achieve affordability is annual bill / 3% bill burden.

²³ Different Poverty Levels are calculated for Hawaii and Alaska.

²⁴ The Food Stamp program is now known as the Supplemental Nutrition Assistance Program (SNAP).

Table 5. A60 Bill Burdens for Food Stamp Recipients (for State and for each RI County)			
A	B	C	D
	Average Income (Food Stamp Recipient) (2016) ²⁵	Avg 2016 Bill with A60 Discount	Bill Burden (Col. C / Col. B)
Rhode Island	\$17,012	\$1,190.88	7.0%
Kent County	\$23,451	\$1,190.88	5.1%
Newport County	\$22,905	\$1,190.88	5.2%
Providence County	\$15,797	\$1,190.88	7.5%
Washington County	\$14,268	\$1,190.88	8.3%

As can be seen, the A60 discount does not succeed in reducing National Grid bills to an affordable level for Rhode Island's Food Stamp recipient population. For the State as a whole, Food Stamp recipients would bear an electric burden of 7.0%, more than twice the affordable level. Food Stamp recipients in Washington County would experience the highest electricity burdens (8.3%). Even in the two most affordable Rhode Island counties (Kent, Newport), the bill burden experienced by Food Stamp recipients at the average income of those recipients in those counties is nearly 75% higher than that burden which is affordable ($.052 / .03 = 1.733$).

Q. PLEASE EXPLAIN WHY YOU ENGAGE IN THIS EXTENDED DOCUMENTATION OF AFFORDABILITY AND WHAT CONCLUSIONS YOU REACH.

A. I began the discussion in Part 1 of my testimony with the proposition that the purpose of providing the A60 discount is not simply to distribute financial benefits to poor people because they are poor. Rather, the objective of providing a low-income discount is to

²⁵ American Community Survey (2016 1-year data). Table B22008.

1 provide a sustainably payable bill to low-income customers. Moreover, in Part 1 of my
2 testimony, I document that that objective of providing a sustainably payable bill to
3 National Grid's low-income customers is not being achieved. In my testimony above, I
4 began the examination of why that objective of providing a sustainably payable bill has
5 not been achieved. I found that, even with the A60 discount provided by National Grid,
6 the Company's discounted bills to low-income customers are substantially unaffordable.
7 When affordability is measured by bill burdens, and setting an affordable electricity non-
8 heating bill equal to 3% of income, I documented that National Grid's A60 bills are
9 routinely, if not generally, unaffordable notwithstanding the existing 15% A60 discount.
10 The shortfall between discounted A60 bills and bills that would be affordable at 3% of
11 income is substantial. The number of households that would continue to fail to receive an
12 unaffordable bill is substantial as well. Based on this discussion, I find that it is not
13 surprising that National Grid has failed to achieve the programmatic objective of
14 providing a sustainably payable bill to its low-income customers with its existing A60
15 discount.

16
17 **Q. PLEASE EXPLAIN WHY YOU ADDRESS ONLY ELECTRIC BILLS IN YOUR**
18 **TESTIMONY.**

19 A. National Grid offers more assistance to its natural gas customers than it does to its
20 electric customers. The bill affordability issues would thus appear to be less. In reaching
21 this conclusion, I do not consider the level of LIHEAP which customers receive. Under
22 federal law, utilities such as National Grid, and state agencies such as the Commission,

1 are barred from considering the receipt of LIHEAP as “income or resources” for any
2 purpose.²⁶

3
4 **Q. PLEASE EXPLAIN THE RELATIONSHIP BETWEEN UNAFFORDABLE**
5 **ENERGY BURDENS AND BILL PAYMENT PROBLEMS.**

6 A. I assert above that one reason that National Grid continues to face the substantial bill
7 payment problems that I document is because the existing A60 discount is insufficient to
8 provide an affordable bill, notwithstanding the discount. My discussion below will
9 further document the relationship between those unaffordable burdens and the lack of
10 sustainable bill payment.

11
12 An extensive body of research finds that the unaffordability of energy, and the problems
13 resulting from that unaffordability, are issues specifically associated with energy burdens
14 as they relate to low-income status, and are not simply associated with the poverty status
15 of low-income households. For example, APPRISE, Inc., one of the leading home
16 energy affordability analysts in the nation, undertook perhaps the most comprehensive
17 study to date which examines the relationship between home energy burdens and
18 payment difficulties.²⁷ In its study of home energy insecurity, APPRISE defined a “high
19 burden” for “residential energy” (i.e., including heating/cooling and non-heating/cooling)

²⁶ Pursuant to federal statute, the receipt of LIHEAP cannot be counted as “income or resources” for any program. (42 USC §8624(f)(1) (2017)) Moreover, the LIHEAP statute provides that “no household receiving assistance under this title will be treated adversely because of such assistance under applicable provisions of State law or public regulatory requirements.” (42 USC §8624(b)(7)(c) (2017)). SNAP has similar statutory language. 7 U.S.C. §2017(b) (2017).

²⁷ Apprise Inc. (Feb. 2010). LIHEAP Special Study of the 2005 Residential Energy Consumption Survey, Dimensions of Energy Insecurity for Low Income Households, Final Report, prepared for the U.S. Department of Health and Human Services, Administration for Children and Families, Office of Community Services, Division of Energy Assistance. This office is frequently known as the federal “LIHEAP office.”

1 as one that exceeds 10.9% of income; a “moderate” burden as one that exceeds 6.5% of
2 income (but is less than 10.9% of income), and a “low” burden as one that is less than
3 6.5% of income. APPRISE defined a “high burden” for “home energy” (i.e.,
4 heating/cooling standing alone) as exceeding 4.3% of income; a “moderate burden” as
5 one exceeding 2.6% of income (but less than 4.3%), and a “low” burden as one that is
6 less than 2.6% of income. Under the APPRISE definitions, therefore, non-heating
7 electricity on a stand-alone basis would represent a “high” burden if it exceeded 6.6% of
8 income, a “moderate” burden if it exceeded 3.9% of income (but less than 6.6%), and a
9 “low” burden if it was less than 3.9% of income. While not identical to the burdens I use
10 herein, the APPRISE definitions of burdens are comparable to what I use.

11
12 APPRISE found a direct link between bill burdens and the types of utility bill payment
13 difficulties I document for National Grid. Table 6 below shows the relationship found by
14 APPRISE.²⁸ The Table shows the percentage of households unable to pay for gas, or
15 unable to pay for electric service, by whether the household has a high, medium or low
16 bill burden. Remember, as explained above, “residential energy” is a term-of-art
17 referring to all household energy used in a home. “Home energy” is limited to energy
18 used for heating and cooling. These distinctions are the same distinctions used in the
19 federal LIHEAP program. Since the APPRISE study was for the federal LIHEAP office,
20 the study did not consider non-heating and non-cooling energy bills standing alone. By
21 federal statute, LIHEAP is directed toward home heating and/or cooling bills.

²⁸ APPRISE, page 33, Table III-16.

Table 6. Heat Interruption: Inability to Use the Main Source of Heat in the Past 12 Months by Energy Burden, 2005							
	Residential Energy Burden (total energy)				Home Energy Burden (home heating and/or cooling)		
	High	Moderate	Low		High	Moderate	Low
Unable to pay for electric service	6.7%	3.3%	3.7%		4.8%	4.2%	4.9%
Unable to pay for gas service	6.4%	3.2%	2.0%		6.3%	2.3%	1.8%

APPRISE documents that customers who were unable to use their primary heating source either due to their inability to pay for electric service or due to their inability to pay for natural gas service had bills which fell into the “high” energy burden range. More than twice the number of customers who lost their home heating due to their inability to pay for electric / gas service had higher burdens rather than low (or even moderate) burdens. While 6.7% of customers with “high” energy burdens were unable to pay for their electricity, only 3.7% of customers with “low” burdens were. While 6.4% of customers with “high” energy burdens were unable to pay for gas service, only 2.0% of customers with “low” burdens were.

Moreover, Table 7 below shows the relationship between higher energy burdens and either the receipt of a “threat” to disconnect electricity or home heating or the actual disconnection of electricity or home heating “due to not having enough money for the energy bill during the past year.”²⁹ As APPRISE reports, persons who have “high” residential energy burdens are from two to four times more likely either to have had service disconnected or discontinued, or to have received a notice or threat of

²⁹ APPRISE, page 35, Table III-19.

disconnection or discontinuance in either “almost every month” or “some months” than customers with low burdens.

In Table 7, in other words, while 4.0% of households with a “high” energy burden received, in “almost every month,” a notice or threat to disconnect or discontinue electricity or home heating fuel due to not having enough money to pay the energy bill during the year, only 1.0% of households with a “low” energy burden did. While 74.8% of households with a “high” energy burden “never” received such a threat, 84.1% of persons with a “low” energy burden never did.

Table 7. Financial Dimensions of Energy Insecurity in the Past 12 Months by Energy Burden, 2005								
		Residential Energy Burden (total household energy)				Home Energy Burden (heating and/or cooling)		
		High	Moderate	Low		High	Moderate	Low
Received Notice or Threat to Disconnect or Discontinue Electricity or Home Heating Fuel Due to Not Having Enough Money for Energy Bill During the Past Year	Almost every month	4.0%	2.8%	1.0%		3.7%	2.7%	1.6%
	Some Months	11.2%	8.3%	6.1%		9.7%	8.8%	7.4%
	1 or 2 Months	10.0%	9.7%	8.7%		8.8%	8.0%	11.4%
	Never/No	74.8%	79.2%	84.1%		77.9%	80.6%	79.7%

Q. IS THE CONCLUSION THAT PAYMENT DIFFICULTIES ARE ASSOCIATED WITH HIGH ENERGY BURDENS SUPPORTED BY OTHER SPECIFIC EMPIRICAL STUDIES?

A. Yes. The 2006 evaluation of the New Jersey Universal Service Fund (USF) left little question but that energy unaffordability problems were a function of energy burdens rather than simply a function of income and/or poverty. The New Jersey data is set forth

1 in Table 8 below. The New Jersey USF evaluation expressly found that increasing the
2 percentage of income burdens charged to USF participants had an adverse impact on the
3 ability of USF participants to maintain payment compliance under the program. As the
4 evaluation noted, “more than 80% of households with a [net energy burden] below 3
5 percent covered 100 percent or more of their annual bill.”³⁰ Less than 60 percent of
6 households with a [net energy burden] at or above 8 percent covered 100 percent of their
7 annual bill.”³¹ Indeed, while 25.6% of the participants with net energy burdens exceeding
8 8% of income paid between 50% and 90% of their bill, only 6.0% of households with
9 energy burdens of between 2% and 3% had coverage rates that low.

Table 8. Distribution of Effective Coverage Rate by Net Energy Burden New Jersey Universal Service Fund (USF)				
Net Energy Burden	Payment Coverage Rate			
	<50%	50% - <90%	90% - <100%	100% or more
Less than 2%	0.0%	2.7%	5.3%	92.0%
2% - 3%	0.0%	6.0%	11.5%	82.5%
3% - 4%	0.0%	10.0%	13.2%	76.9%
4% - 6%	0.0%	11.6%	16.6%	71.6%
6% - 8%	0.4%	16.6%	17.4%	65.5%
Over 8%	1.0%	25.6%	16.1%	57.4%

10 The New Jersey USF evaluation documents quite clearly that as percentage of income
11 payment responsibilities increase, payment compliance decreases. Recognizing that high
12 energy burdens are directly related to nonpayment, not only are the poor (and declining)
13 payment and collection outcomes for National Grid (Rhode Island) examined above
14

³⁰ One can see this conclusion in Table 8. 82.5% with burdens of 2% - 3% paid 100% or more of their bill, while 92.0% with burdens of less than 2% did so.

³¹ You can see this in Table 8. Only 57.4% of customers with a burden exceeding 8% paid 100% or more of their bills.

1 explained, but an appropriate regulatory and industry response to such problems is
2 identified.

3
4 **Q. WHAT DO YOU CONCLUDE?**

5 A. I have documented the payment difficulties that continue for National Grid's low-income
6 customers notwithstanding the A60 discount that National Grid currently offers. I have
7 further documented the fact that National Grid's electric bills remain unaffordable
8 notwithstanding the A60 discount that National Grid currently offers. In this section of
9 my testimony, I found that those first two sets of conclusions are inter-related. I conclude
10 that the reason why National Grid's low-income customers continue to experience
11 payment difficulties is because they continue to face unaffordable bills. These three sets
12 of conclusions, in turn, will be used in my discussion of National Grid's proposals to
13 improve its A60 discount. I will also assess additional modifications that should be made
14 to allow the program to achieve the objectives of an affordable bill initiative.

15
16 **Part 3. A Review of Modifications to National Grid's A60 Low-Income Discount.**

17
18 **Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR**
19 **TESTIMONY.**

20 A. In this section of my testimony, I assess the reasonableness of National Grid's proposal to
21 move to a total bill discount for the A60 rate. In addition, I examine the reasonableness
22 of expanding the A60 discount from 15% to 25%.

A. The Move to a Total Bill Discount.

**Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF NATIONAL GRID'S
PROPOSAL TO MOVE TO A TOTAL BILL DISCOUNT.**

A. Under National Grid's existing A60 discount, the utility provides a price break limited to certain elements of a low-income customer's bill. The Company waives the customer charge and applies a percentage discount to the distribution charge of the bill. What the Company proposes to do in the future is to modify the existing approach. Instead, the Company is proposing to apply an across-the-board discount to the total customer bill once that total bill is calculated. Moving to a total bill discount is reasonable and should be approved.

**Q. PLEASE EXPLAIN WHY THE EXISTING APPROACH PRESENTS
AFFORDABILITY PROBLEMS.**

A. The problem with the existing mechanism is that, while customers with lower usage receive a higher percentage discount, the percentage discount decreases as usage increases. The reason why this occurs is because the waiver of the customer charge becomes a smaller and smaller portion of a customer's total bill as consumption increases. The impact can be seen in Table 9 below by comparing the existing A60 discounts at differing percentages of National Grid's average residential bill. While at 50% of mean (i.e., average) consumption, the A60 discount would be 15.1% (under the existing structure); at mean usage, the discount is only 11.4%. At 125% of mean, the discount is only 10.6%.

Table 9. Percentage A60 Discounts at Existing A60 Structure
Given Different Low-Income Consumption Levels³²

	Current Delivery of Low Income Discount				
A60 mean residential usage	540	540	540	540	n/a
Percentage of mean usage	50%	75%	100%	125%	Median
kWh deliveries	270	405	540	675	416
Total Rate A16 bill	\$59.45	\$85.75	\$112.04	\$138.33	\$87.89
Total Rate A-60 bill	\$50.45	\$74.85	\$99.26	\$123.65	\$76.83
Bill reduction from discount	(\$9.00)	(\$10.90)	(\$12.78)	(\$14.68)	(\$11.06)
Pct reduction	-15.1%	-12.7%	-11.4%	-10.6%	-12.6%

Q. WHY IS THIS A PROBLEM?

A. This result poses a problem from the perspective of wanting to achieve affordability (and to generate the sustainable bill payment outcomes that are associated with delivering an affordable bill). Under the existing structure of delivering the A60 discount, as bills become less affordable (by becoming bigger and bigger), the percentage discount delivered to low-income customers become smaller and smaller. The Company ends up delivering less and less assistance to those very customers who need an increasing amount of assistance.

Q. IS THE PROBLEM SIMPLY THE FAILURE TO DELIVER ASSISTANCE TO CUSTOMERS WHO DO NOT CONSERVE ENERGY AND THUS USE HIGHER AMOUNTS OF ELECTRICITY?

A. No. Electricity usage increases based on a variety of very normal factors that affect households. Under National Grid's existing A60 discount structure:

³² DIV-14-50.

- A household having higher usage because they have been able to purchase a single-family home would receive a lower discount;
- A household having somewhat higher energy consumption because they have more members in their household would receive a lower discount; and
- A household living in a somewhat larger home would receive a lower discount.³³

Table 10 presents the basis for these observations. Table 10 shows electric consumption in the “Northeast,” of which Rhode Island is a part, by various housing and household characteristics. Taken from the most recently available U.S. Department of Energy’s Residential Energy Consumption Survey (“RECS”), the Table examines electricity usage (in kWh) by housing type, by household size, and by housing size (in square feet). Table 10 shows, for example, that electricity use increases as household sizes become larger (1-person usage is 5,031 kWh vs. 3-person usage at 9,164 kWh vs. 5-person usage at 11,445 kWh). The Table demonstrates further that electricity consumption increases as housing size (in square feet) increases (e.g., house of fewer than 500 square feet has consumption of 3,161 kWh vs. house of 1,500 to 1,999 square feet has consumption of 8,581 kWh vs. house of 3,500 to 3,999 square feet has consumption of 12,161 kWh). Finally, single family homes have greater usage than multi-family homes. Single family detached homes (10,133 kWh) have greater consumption than single-family attached homes (8,451 kWh).

³³ I do not mean to say that these factors are exclusive. A person may live in a somewhat larger home because they are a family with three children (household size of five) and thus have higher electricity usage.

Table 10. Electricity Consumption by Selected Characteristics
(RECS 2009) (Table CE2.2)

Housing Type	kWh Use	Household Size	kWh Use	Housing Size (SF)	kWh Use
Single-Family	9,892	1 Person	5,031	Fewer than 500	3,161
Single-Family Detached	10,133	2 Persons	8,069	500 to 999	4,963
Single-Family Attached	8,451	3 Persons	9,164	1,000 to 1,499	7,002
Multi-Family	5,013	4 Persons	10,336	1,500 to 1,999	8,581
Apartments in 2-4 Unit Buildings	5,736	5 Persons	11,445	2,000 to 2,499	8,657
Apartments in 5 or More Unit Buildings	4,504	6 or More Persons	12,525	2,500 to 2,999	9,487
Mobile Homes	8,769			3,000 to 3,499	10,233
				3,500 to 3,999	12,161
				4,000 or More	12,191

My point here is not to define the exclusive factors that affect the expected level of electricity consumption. Rather, my conclusion is that under National Grid's existing A60 discount, a household may receive a lower discount simply because they may be older (and thus a homeowner rather than a renter); simply because they are a younger family with children (and thus have a larger household size); or for other reasons having nothing whatsoever to do with whether the household is energy conservative or not.

Q. DO VARIATIONS IN ENERGY CONSUMPTION OCCUR FOR REASONS OTHER THAN THE HOUSING AND/OR HOUSEHOLD CHARACTERISTICS OF A LOW-INCOME CUSTOMER?

A. Yes. Electricity consumption for National Grid's low-income households naturally varies from month to month over the course of each year. Because of this normal monthly variation, households will receive a lower discount in higher usage months and higher discounts in lower usage months. This is precisely the opposite of what would be delivered if the discount was more closely tied to affordability.

1 The existing A60 discount will vary from month to month based on a combination of
2 changes in consumption and rates. Schedule RDC-1 shows the data. For example, note
3 that August 2016 and September 2016 had the two highest levels of average consumption
4 in 2016 (722 kWh and 647 kWh respectively), and yet offered the two lowest percentage
5 discounts of any months during 2016 (11.4% and 11.8% respectively). Similarly,
6 December 2017 had the highest average monthly bill of any month in 2017 (\$115.09) and
7 yet also had the lowest percentage discount of any months during 2017 (11.2%). Note
8 that:

9 ➤ January 2017, with an average bill of \$114.22, had a lower percentage discount
10 (12.1%) than either May 2017 (average bill of \$75.33 / percentage discount of
11 14.8%) or June 2017 (average bill of \$81.49 / percentage discount of 14.4%).

12 ➤ In 2016, the two months with the lowest average bills (May 2016: \$78.42;
13 November: \$82.25) nonetheless had the two highest percentage discounts (14.0%
14 and 13.9% respectively).

15 The changes in discounts on a month-to-month basis are based on a combination of
16 changes in rates and changes in usage. (see also, DIV-14-49, assessing impacts of A60
17 discount based on changes in usage, changes in rates, and a combination of changed
18 usage and rates).

19
20 The existing A60 discount would also vary from year-to-year based on the extent to
21 which, if at all, National Grid's supply rates increase or decrease. Schedule RDC-2
22 shows the A60 discount at different consumption levels for the years 2013 through 2017.
23 By presenting different usage levels for each year, I can hold consumption constant over

the years so that the differences reflected in the column showing percentage discounts are reflective of movement in the underlying rates rather than a change in consumption.

Table 11 presents an excerpt of that data from Schedule RDC-2. The excerpted data is for usage levels of 500 kWh and 600 kWh (which bracket the average A60 usage of 540 kWh).

Table 11. Excerpted A60 Percentage Discounts by Selected Usage Levels (2013 through 2017)					
	2013	2014	2015	2016	2017
500 kWh	17.2%	15.3%	13.4%	14.2%	14.3%
600 kWh	16.0%	14.2%	12.4%	13.2%	13.3%

Table 11 shows not only that the percentage discount varies by year based on the underlying rates, but shows also how the existing mechanism for delivering the A60 discount has deteriorated as the years have progressed and the underlying rates have increased. While the percentage discount in 2014 was less than the discount in 2013, the percentage discount in each year 2015 – 2017 was less than the percentage discount in 2014.

Q. PLEASE DESCRIBE THE INCREASED BENEFITS TO LOW-INCOME CUSTOMERS ARISING FROM THE ADOPTION OF A TOTAL BILL DISCOUNT.

A. The increase in benefits arising solely from the adoption of a total bill discount obviously varies based upon the level of consumption for a low-income household. Assuming that the discount is 15%, as proposed by National Grid—I propose a deeper discount in the next section of my testimony—the increased benefits arising from a move to a total bill

discount range from the nearly non-existent to somewhat more substantial. In fact, at lowest consumption levels, a move to a total bill discount (while leaving the discount at 15%) will actually represent a loss of benefits to low-income customers. Table 12 below shows the change in benefits that would have been experienced based on different usage levels had a 15% total bill discount been in effect for 2017.

Table 12. Difference in Discounts: Existing A60 Structure vs. Total 15% Bill Discount					
Monthly Usage	Total A16 Bill	Proposed by National Grid		Total Bill 15% Discount (\$s)	Difference
		Existing A60 Discount	Existing A60 Pct Discount		
150	\$32.58	\$7.15	28.1%	\$4.89	(\$2.26)
300	\$58.74	\$9.10	18.3%	\$8.81	(\$0.29)
400	\$76.18	\$10.41	15.8%	\$11.43	\$1.02
500	\$93.61	\$11.70	14.3%	\$14.04	\$2.35
600	\$111.04	\$13.00	13.3%	\$16.66	\$3.65
700	\$128.48	\$14.30	12.5%	\$19.27	\$4.97
1200	\$215.67	\$20.80	10.7%	\$32.35	\$11.55
2000	\$355.16	\$31.19	9.6%	\$53.27	\$22.08

Q. WHAT DO YOU RECOMMEND?

A. Given that adoption of a total bill discount would improve affordability to higher usage customers without substantially increasing the overall costs of the A60 program, without endorsing adoption of 15% as an appropriate percentage discount, I recommend approval of the Company's proposal to move to a total bill discount structure of delivering low-income bill affordability benefits.

B. Increasing the Depth of the National Grid A60 Discount.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I explain why I recommend that National Grid adopt a discount that is deeper than 15%. I recommend that National Grid offer a 25% discount. Moreover, I explain why, given National Grid's unique circumstances, I recommend approval—at least for the time-being-- of an across-the-board discount rather than adopting either a tiered discount or a percentage of income program.

Q. HAS NATIONAL GRID PREPARED ANY ASSESSMENT OF THE IMPACT OF ITS PROPOSED 15% TOTAL BILL DISCOUNT ON THE AFFORDABILITY OF BILLS TO LOW-INCOME CUSTOMERS?

A. No. The Company concedes quite frankly that “the Company does not have any written analyses or evaluations that assess or otherwise discuss the affordability of low income electric bills receiving the discount on Rate A-60 under Narragansett Electric’s proposed 15 percent total bill discount. The Public Utilities Commission has made a public policy decision that it is appropriate to provide such utility bill assistance to electric customers on Rate A-60, and that such assistance is needed to assist customers in being able to afford this necessary service.” (DIV-14-76). For the reasons set forth in its discovery response, National Grid said “the Company did not believe an assessment or discussion of the affordability of low-income bills was needed. Therefore, the Company did not prepare such an assessment.” (DIV-14-76).

1 The Company's response to the Division's question misses the point, however. The
2 question posed is not whether National Grid should offer bill affordability assistance.
3 The question is whether the Company is offering sufficient assistance for such assistance
4 to have an effective impact on achieving program objectives. As I have documented
5 throughout my testimony, the Company's existing and proposed depth of discount is
6 insufficient to achieve those objectives. In contrast, the Company not only cannot say
7 that the 15% is sufficient, the Company has never even considered what depth of
8 discount would be necessary to serve the programmatic objectives of improving the
9 sustainability of bill payment.

10
11 **Q. PLEASE EXPLAIN YOUR METHODOLOGY FOR ASSESSING**
12 **ALTERNATIVE DISCOUNT LEVELS.**

13 A. When one works with an across-the-board flat discount, whether it is 15% or 25% or
14 some other percentage, it is impossible to achieve affordability at all income levels and
15 all usage levels. Customers who have lower usage will have somewhat more affordable
16 bills while customers with higher usage levels will have somewhat less affordable bills,
17 all other things equal. Likewise, customers with higher incomes will have somewhat
18 more affordable bills while customers with lower incomes will have somewhat less
19 affordable bills, all other things equal. By its nature, in other words, a flat across-the-
20 board discount simply does not allow a utility to narrowly target its affordability

1 assistance. In setting the discount level, therefore, the task is to achieve affordability as
2 closely as possible in the middle regions of usage and income.³⁴

3
4 In making this affordability assessment, it is important to remember, also, that
5 affordability is a range and not a point. While I set an affordable burden for total home
6 energy at 6% of income, as I discuss earlier in my testimony, with affordable electric
7 service thus at 3% of income, if these burdens varied up to 8% (and 4%), they would
8 nonetheless seem to remain in a range of reasonableness.³⁵

9
10 Based on these observations, I considered six scenarios in my affordability analysis. I
11 examined three alternative discount levels for A60 participants: (1) 15%; (2) 20%; and
12 (3) 25%. For each discount level, I considered affordability at 3% of income and, as a
13 check, affordability at 4% of income. Within each of the six scenarios, I examined
14 affordability at eight (8) usage levels.³⁶ Overall, in other words, I examined 48 different
15 possible affordability outcomes. For each of the six scenarios, I focus particular attention
16 on monthly usage at 500 kWh to 600 kWh. These two levels bracket National Grid's

³⁴ Assuming the discount is means-tested, all participants would be "low-income." References to "higher income" are simply relative. A household with income at 150% of Poverty Level is "higher income" than a household with income at 100% of Poverty Level.

³⁵ As I explained to the Manitoba Utilities Commission, "Clearly, however, the reasonableness of an energy burden is a range and not a point. Ultimately, whether an affordable burden should be set as 6% or as 8% (or some other figure) is a policy decision. The percentage of income burden that triggers significant payment-troubles (*e.g.*, service disconnections) appears to be in the range of 10% to 12% of annual income." I continued to note: "Affordability concerns are triggered at much lower percentage of income burdens. Affordability concerns, involving household budget trade-offs and payment troubles less intense than the loss of service appear to be triggered at the 6% to 8% percentage of income burden levels." Colton (November 2010). Home Energy Affordability in Manitoba: A Low-Income Affordability Program for Manitoba Hydro." (internal citations omitted).

³⁶ The usage levels I use are the same usage levels used by National Grid in its analysis of a 15% discount. See, Company response to DIV-14-51.

1 reported average monthly A60 usage of 540 kWh. In each instance, I calculate what
2 income would be necessary to achieve affordability at the discount level.

3
4 **Q. PLEASE EXPLAIN THE BASIS FOR YOUR RECOMMENDED 25%
5 DISCOUNT FOR A60 CUSTOMERS.**

6 A. The basis for my recommended 25% discount is grounded in the discount that is needed
7 to reasonably address the affordability issues that I have discussed throughout my
8 testimony. Increasing the depth of the A60 discount will address the affordability of low-
9 income bills in a way that National Grid's 15% discount has not done (and cannot do).
10 The incomes I use for comparative purposes are the same incomes I used above when I
11 found that the 15% discount does not yield an affordable bill.

12
13 **Q. WHAT DID YOU FIND?**

14 A. My findings regarding the impact of the A60 discount on affordability at alternative
15 discount levels are set forth in Schedule RDC-3. I find that:

16 ➤ A 15% discount does not result in an affordable bill to A60 participants. At
17 the 500 and 600 kWh levels (and a 3% affordability benchmark), the incomes
18 required to achieve affordability range from \$31,826 to \$37,755. Even using
19 a 4% benchmark, the incomes required to achieve affordability range up to
20 \$28,316 at 600 kWh, an income that exceeds that income level reasonably
21 expected for National Grid's low-income customers.

22 ➤ A 20% discount does not result in an affordable bill to A60 participants. At
23 the 500 and 600 kWh levels (and a 3% affordability benchmark), the incomes

1 needed to achieve affordability range from \$29,954 to \$35,534. A 4%
2 affordability benchmark reduces the necessary incomes to \$22,465 to \$26,651
3 at 500 and 600 kWh, which still remain incomes that exceed that which can
4 reasonably be expected for National Grid's low-income customers.

5 ➤ A 25% discount does not result in an affordable bill at the 3% affordability
6 benchmark (with required incomes ranging from \$28,082 to \$33,313 for the
7 500 and 600 kWh levels). However, using a 4% affordability benchmark, the
8 required incomes needed to achieve affordability fall to between \$21,061 and
9 \$24,985 at the 500 and 600 kWh levels. Affordability at these consumption
10 levels could reasonably be expected to be achievable for National Grid's low-
11 income customers in the middle income ranges I discuss above.

12
13 I find that the 25% discount fits the pattern that I describe immediately above. At mid-
14 level poverty incomes (50 – 75% of Poverty Level; 75 – 100% of Poverty Level), and
15 mid-range consumption (500 kWh, 600 kWh), the discount does a reasonably good job of
16 achieving an affordable burden. The average Rhode Island income at 50% – 75% of
17 Poverty Level is \$20,650, while the average Rhode Island income at 75% - 100% of
18 Poverty is \$24,089. If one looks at the upper income ranges by Poverty Level, 2-person
19 households with incomes at 150% of Poverty Level (2017)³⁷ would have an income of
20 \$24,360 while a 3-person household at 150% of Poverty Level (2017) would have an
21 income of \$30,630.³⁸ Each of these income levels compare favorably to the required

³⁷ This is to be contrasted to the *average* income of all household sizes with incomes at differing Poverty ranges discussed immediately above.

³⁸ The average household size in Rhode Island is 2.48 persons for all households; 2.66 for homeowner households; and 2.24 for tenant households. American Community Survey (2016 1 year data), Table B25010.

1 incomes (at a 4% benchmark) of \$21,061 (500 kWh) and \$24,985 (600 kWh). The
2 affordability fit is not perfect, since perfect fits cannot be expected with flat across-the-
3 board discounts. But a 25% discount provides a reasonable fit in a way that the 15% and
4 20% discount levels do not.

5
6 Households with lower income levels will have somewhat less affordability. Households
7 with higher income levels will have somewhat better affordability.

8
9 **Q. PLEASE EXPLAIN WHY YOU ENDORSE A CONTINUATION OF A FLAT**
10 **ACROSS-THE-BOARD DISCOUNT FOR NATIONAL GRID'S A60**
11 **CUSTOMERS.**

12 A. Historically, I have been a proponent of affordability programs that are called "fixed
13 credit percentage of income programs." Through such a program, a utility calculates an
14 affordable bill based on each household's individual annual gross income. The utility
15 then determines the annual credit needed to reduce the household's bill to that affordable
16 level. The annual credit is delivered on a monthly basis. If a household's bill increases
17 during the program year (e.g., if the household increases consumption), the household
18 pays the increase. If a household's bill decreases (e.g., if the household conserves energy
19 and reduces consumption), the household pockets the savings. A fixed credit percentage
20 of income program precisely targets affordability and is the best approach to achieve
21 affordability objectives.

1 A step away from a fixed credit percentage of income program is what is referred to as a
2 tiered discount. Through a tiered discount, rather than offering a single flat, across-the-
3 board discount as National Grid is doing in Rhode Island, a utility offers differing
4 percentage discounts based on differing income levels. A household with an income of
5 0% to 50% of Poverty, for example, would receive a higher discount than a household
6 with an income of 100% to 150% of Poverty. A utility can offer as many “tiers” as it
7 desires.³⁹ The more tiers that a utility incorporates, the more precisely targeted the
8 affordability assistance is.

9
10 With both a percentage of income program and a tiered rate discount, however, the actual
11 income of the customer is needed as part of the process of determining the appropriate
12 bill. With a fixed credit percentage of income program, the bill is directly based on the
13 household’s income. With a tiered discount, the household’s income is needed to
14 determine which discount tier should be applied to the bill.

15
16 As can be seen, both a percentage of income program and a tiered rate discount require
17 somewhat greater resources to administer because of their greater complexity. It is not
18 simply a matter of the utility’s capacity. The utility does not determine or verify a
19 household’s income. The income is verified by an external third party (e.g., a Community
20 Action Agency [CAA], a government social assistance program) and is provided to the
21 utility. Given Rhode Island’s experience to date with an across-the-board discount, and

³⁹ For example, a three-tier program would offer separate discounts based on: (1) 0 – 50% Poverty; (2) 51-100% Poverty; (3) 101 – 150% Poverty. In contrast, a six-tier program would offer separate discounts based on: (1) 0 – 25% Poverty; (2) 26-50% Poverty; (3) 51-75% Poverty; (4) 76-100% Poverty; (5) 101-125% Poverty; and (6) 126-150% Poverty.

1 assuming that the further refinement and expansion of that discount as I recommend
2 herein is adopted, I do not recommend a change in program design with the
3 accompanying increase in administrative burden.
4

5 **Q. WHAT DO YOU CONCLUDE?**

6 A. Based on the above discussion, I recommend an across-the-board total bill discount⁴⁰ of
7 25% to be delivered to National Grid's A60 customers in Rhode Island. I recommend
8 that the A60 discount be applied to SOS rates. This provides equity from both
9 perspectives. On the one hand, if ratepayers make shopping decisions that result in
10 higher supply rates, other ratepayers should not be called upon to subsidize those
11 ineffective shopping decisions. On the other hand, if ratepayers make shopping decisions
12 that result in lower supply rates, they should be able to pocket the savings resulting from
13 their effective shopping decisions.
14

15 **C. Introducing a Tiered Element to the A60 Discount.**

16 **Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR**
17 **TESTIMONY.**

18 A. In this section of my testimony, I explain how and why I would introduce a tiered rate
19 discount element to National Grid's A60 discount without taking the additional step of
20 introducing a fully tiered discount. Through the tiered discount element, I propose that

⁴⁰ While I considered the possibility of delivering a discount only on the distribution portion of the bill and/or the customer charge, I concluded that such an approach does not resolve the underlying administrative difficulties. In order for National Grid to know what percentage discount to provide on the distribution bill component, National Grid would *still* have to determine what the bill *would have been* under standard residential rates (i.e., without accounting for shopping). Limiting the discount only to the distribution component of the bill, in other words, does not eliminate that element of calculating the discount at SOS rates rather than at whatever shopping rates a customer may have contracted for under retail choice.

1 the Company give a limited “add” to the A60 discount if a customer enters the A60
2 program in the ways I identify below. The add I propose would be equal to five percent
3 (5%) of the customer’s total bill. Qualified customers would, in other words, receive a
4 30% discount rather than a 25% discount.

5
6 A 30% discount is consistent with the level of discount National Grid offers to low-
7 income customers in Massachusetts. (DIV-14-69) (“Effective October 1, 2016 and a
8 result of a general rate case filed in November 2015, the low income discount was
9 changed to 29 percent as ordered by the Department in DPU 15-155.”) Even then,
10 however, the discount I propose is more limited than that which National Grid offers in
11 Massachusetts. The Massachusetts discount is offered to all customers with incomes
12 found to be at or below 200 percent of Federal Poverty Level (DIV-14-69), rather than
13 the substantially more limited population I propose in my testimony herein.

14
15 **Q. DO YOU RECOMMEND PROVIDING AN ADDITIONAL DISCOUNT ONLY**
16 **TO THOSE CUSTOMERS WHO RECEIVE BENEFITS FROM ONE OF THE**
17 **PROGRAMS IDENTIFIED IN NATIONAL GRID’S EXISTING A60 TARIFF?**

18 A. At present, to qualify for National Grid’s A60 electric discount, a customer must either
19 receive LIHEAP or must document that they are a participant in one of the following four
20 programs: Medicaid; Food Stamps (SNAP); General Public Assistance; or Family
21 Independence Program (known now as Rhode Island Works).⁴¹ (RIPUC No. 2101, Sheet
22 1). I do not propose expanding this list of programs for the A60 discount generally Nor
23 do I propose using a different program to qualify customers for my recommended A60

⁴¹ FIP is what is generally thought of as “welfare.”

1 Adder. Let me be clear, however. While I recommend that the programs used to qualify
2 a customer for the Adder be one of the programs currently used in the A60 program, as I
3 explain further below, not all of those programs will qualify someone for the Adder.

4
5 **Q. DO ALL OF THESE PROGRAMS HAVE SIMILAR INCOME ELIGIBILITY**
6 **GUIDELINES?**

7 A. No. Not all of these public assistance programs are equal in terms of the income levels at
8 which their participants reside. Consider that:

- 9 ➤ LIHEAP in Rhode Island has substantively higher income eligibility than
10 other programs. In order to be income-qualified for LIHEAP in Rhode Island,
11 a household must have income at or below 60% of the State Median Income.
12 According to the Rhode Island Department of Human Services,⁴² income
13 eligibility extends up to an annual income of from \$29,080 for a 1-person
14 household to \$64,870 for a 5-person household.⁴³
15
16 ➤ In order to be income-qualified for SNAP in Rhode Island,⁴⁴ for the period
17 October 1, 2017 through September 30, 2018, a household must have income
18 at or below 185% of Poverty Level. These incomes levels range from
19 \$22,308 for a 1-person household (\$1,859/month x 12 months) to \$53,256 for
20 a 5-person household (\$4,438/month x 12 months).
21

22 In contrast to these two programs, the other three programs have substantively lower
23 incomes associated with them. Consider that:

- 24 ➤ General Public Assistance in Rhode Island is very limited. According to the State
25 Department of Human Services, to be eligible for GPA, a person must have an
26 illness, injury or medical condition that is expected to last 30 days or more and
27 prevents a person from working, and have a monthly income or \$327 for an
28 individual or \$449 for a couple.
29

⁴² <http://www.dhs.ri.gov/Programs/FY2018LowIncomeGuidelines.php> (last accessed March 15, 2018).

⁴³ Maximum allowed incomes for larger households are progressively higher.

⁴⁴ <http://www.dhs.ri.gov/Programs/SNAPEligibility.php> (last accessed March 15, 2018).

➤ Through Rhode Island Works (“RIW”), eligible families typically receive \$449 each month for a family of two; \$554 each month for a family of three; \$634 each month for a family of four; and \$714 each month for a family of five. When parents work, they are allowed to keep the first \$170 of earnings per month without receiving less cash assistance from the state. After the first \$170 in earnings, the cash benefit is reduced \$1 for each \$2 earned.⁴⁵ Under this policy, the earned income of an RIW participant can range up to a maximum of from \$1,068/month (\$12,816/year) for a 2-person family to \$1,598/month (\$19,176/year) for a 5-person family.

➤ The Rhode Island Medical Assistance Program (also known as “Medicaid”) is available to Rhode Island residents who are either low income or very low income. According to Benefits.gov,⁴⁶ in order to qualify for Medical Assistance in Rhode Island, a household may have a maximum annual income not exceeding from \$15,800 for a 1-person household up to \$37,825 for a 5-person household.⁴⁷

As is evident, General Public Assistance, Rhode Island Works (FIP) and the Rhode Island Medical Assistance Program (Medicaid) serve substantively lower income households than do either LIHEAP or SNAP.

Q. IS THERE A WAY TO DELIVER ADDITIONAL ASSISTANCE TO CUSTOMERS AT THE LOWEST INCOME LEVELS?

A. Yes. Even without moving to a full Tiered Rate Discount, there is a mechanism through which National Grid could deliver additional bill assistance to customers living with the lowest levels of income. I recommend that an A60 discount adder be provided to customers who enter the A60 program through Medicaid, General Public Assistance, or the Family Independent Program (“FIP”). In addition, even if a customer enters the A60 program through LIHEAP or SNAP, the customer can qualify for the A60 adder if he or

⁴⁵ <http://www.dhs.ri.gov/Programs/RIWorksEligibility.php> (last accessed March 15, 2018).

⁴⁶ Benefits.gov is the official benefits website of the United States government.

⁴⁷ <https://www.benefits.gov/benefits/benefit-details/1639> (last accessed March 15, 2018).

1 she can document their participation in one of these three programs. The receipt of
2 LIHEAP, in other words, does not disqualify a person from receiving the adder; nor is a
3 person who receives LIHEAP treated “adversely” because of their receipt of LIHEAP.
4

5 **Q. PLEASE EXPLAIN WHY YOU RECOMMEND AN A60 DISCOUNT ADDER TO**
6 **CERTAIN PROGRAM PARTICIPANTS?**

7 A. The three programs I have identified as the qualifiers for the A60 discount Adder serve
8 substantially lower income households than do either LIHEAP or SNAP. Given these
9 substantially lower incomes, the proposed 25% discount is likely to fall short of
10 approaching affordability for electric bills. In the absence of any current capacity to
11 determine actual incomes for a fully tiered discount program, therefore, I propose to use
12 these programs serving identifiably lower income households as a surrogate for
13 determining actual income levels.
14

15 **Q. DOES THE RECEIPT OF LIHEAP OR SNAP DISQUALIFY A PERSON FROM**
16 **RECEIVING YOUR PROPOSED A60 DISCOUNT ADDER?**

17 A. No. If someone can document that they participate in one of these programs, they are
18 eligible whether or not they receive LIHEAP and/or SNAP. The receipt of LIHEAP
19 and/or SNAP is not taken into consideration. Accordingly, neither the receipt of
20 LIHEAP nor the receipt of SNAP is a disqualifying factor in whether someone receives
21 the A60 discount Adder if the customer can document they participate in one of the
22 qualifying programs.
23

1 **Q. HOW DOES THE DETERMINATION OF ELIGIBILITY FOR YOUR**
2 **PROPOSED A60 DISCOUNT ADDER COMPORT WITH EXISTING**
3 **ADMINISTRATIVE PROCESSES FOR THE A60 DISCOUNT?**

4 A. The proposed A60 Discount Adder does not substantively change the administrative
5 processes for determining eligibility for the A60 discount. According to the Company, at
6 present, “National Grid receives requests to put customers on the A60 rate from
7 customers, representatives from the Rhode Island Division of Public Utilities and
8 Carriers, and customer assistance program (CAP) agencies (through e-mails, telephone
9 calls, or LIHEAP files).” (DIV-14-55). The Company states that “customers receiving
10 LIHEAP are enrolled through files provided to the Company from Community Action
11 Program agencies either when receiving a grant for the electric account or when notified
12 of eligibility for a non-electric heating source. Customers receiving a qualifying benefit
13 other than LIHEAP are requested to submit confirmation of benefit to the Company.
14 Upon receipt of confirmation, the account is placed on the A-60 rate.” (DIV-14-64). This
15 process would not change for the A60 Adder I recommend. Customers who rely upon a
16 benefit other than LIHEAP to qualify for the Adder (which they would need to do) would
17 be “requested to submit confirmation of benefits to the Company. Upon receipt of
18 confirmation the account [would be] placed on the A-60 rate” Adder.
19
20 This process, of course, is common to National Grid. For the National Grid low-income
21 in New York, for example, “automatic enrollment” occurs for LIHEAP recipients or
22 “upon receipt of a guarantee of payment from New York City’s Housing Resources
23 Administration (HRA) for customers who receive Direct Vouchers from HRA.” (DIV-

1 14-77-10, page 21). Customers from any of the eight *other* programs participation in
2 which qualifies them for the National Grid discount in New York “must provide proof of
3 their current participation.” (Id., at page 21).

4
5 **Q. HOW MANY CUSTOMERS CURRENTLY ENROLL IN THE A60 DISCOUNT**
6 **RATE THROUGH A PROGRAM OTHER THAN LIHEAP?**

7 A. Historically, not only a majority, but a substantial majority, of low-income customers
8 were enrolled in A60 through a program other than LIHEAP. According to National
9 Grid, “customers receiving a LIHEAP grant are automatically enrolled in A60 rate upon
10 processing the grant.” (DIV-14-58(c)). The difference between the total number of
11 participants and those participants “automatically enrolled” through LIHEAP thus
12 represents the number of A60 participants who entered the program through a mechanism
13 other than LIHEAP. That mechanism, as established above, involves such non-LIHEAP
14 recipients being required “to submit confirmation of benefits to the Company.” Only
15 “upon receipt of confirmation [is] the account placed on the A-60 rate.” (DIV-14-64).
16 Table 13 below shows, by month for 2016 and 2017, the total number of A60 participants
17 and the number and percent of A60 participants who entered the discount program
18 through a program other than LIHEAP.

Table 13. Number and Percent of A60 Participants Entering A60 through Other than LIHEAP (DIV-14-58(a) – DIV-14-578(b))									
2016					2017				
Month	A LIHEAP enrolled	B Non- LIHEAP enrolled	C Total (sum A + B)	D Pct Non- LIHEAP (B / C)	Month	E LIHEAP enrolled	F Non- LIHEAP (enrolled)	G Total (sum E + F)	H Pct Non- LIHEAP (F / G)
Jan-16	13,742	28,948	42,690	68%	Jan-17	15,973	17,866	33,839	53%
Feb-16	13,485	31,737	45,222	70%	Feb-17	15,096	17,719	32,815	54%
Mar-16	7,803	29,047	36,850	79%	Mar-17	14,844	18,547	33,391	56%
Apr-16	7,834	26,053	33,887	77%	Apr-17	13,891	18,524	32,415	57%
May-16	11,945	22,926	34,871	66%	May-17	15,019	20,609	35,628	58%
Jun-16	16,485	18,539	35,024	53%	Jun-17	20,448	15,344	35,792	43%
Jul-16	18,220	16,115	34,335	47%	Jul-17	25,134	9,375	34,509	27%
Aug-16	18,237	16,851	35,088	48%	Aug-17	29,587	5,597	35,184	16%
Sep-16	17,689	16,935	34,624	49%	Sep-17	27,380	5,635	33,015	17%
Oct-16	16,924	17,270	34,194	51%	Oct-17	25,574	5,638	31,212	18%
Nov-16	16,460	17,457	33,917	51%	Nov-17	21,336	5,561	26,897	21%
Dec-16	16,211	18,016	34,227	53%	Dec-17	20,670	6,308	26,978	23%
2016 avg	14,586	21,658	36,244	60%	2017 avg	20,413	12,227	32,640	37%

As can be seen, as recently as 2016, 60% of all A60 participants enrolled in the A60 discount through a means other than the receipt of LIHEAP. Through May 2017, more than half of A60 participants enrolled through a program other than LIHEAP with its “automatic enrollment.”

Q. PLEASE EXPLAIN WHETHER YOU HAVE CALCULATED A MAXIMUM FINANCIAL EXPOSURE BASED ON THE NUMBER OF CUSTOMERS WHO MIGHT RECEIVE ADDITIONAL ASSISTANCE THROUGH YOUR PROPOSED ADDER.

1 A. I can place some broad parameters on the maximum number of customers who I would
2 expect to receive additional assistance through the proposed A60 discount Adder that I
3 am recommending. However, there are some limits on these estimates. On the one hand,
4 not all customers who receive the A60 discount because of their participation in programs
5 other than LIHEAP would be expected to receive the additional benefits through the
6 Adder. Not all people entering A60 through a program other than LIHEAP would be a
7 participant in Medicaid, FIP or General Public Assistance. On the other hand, simply
8 because a customer enters A60 through LIHEAP does not mean that that customer would
9 not be eligible for the A60 Adder. LIHEAP recipients can also participate in one of the
10 three qualifying programs.

11
12 Having said that, we know from the most recent (2011) Congressionally-funded National
13 Energy Assistance Survey (“NEA-11”) that 27% of LIHEAP recipients in the Northeast
14 receive public assistance as their primary income⁴⁸ (with other primary income sources
15 being wages or retirement income).⁴⁹ If I were to use this participation rate as the
16 expected participation rate for the National Grid ratepayer-funded bill affordability
17 program, roughly 9,800 public assistance participants would receive the A60 discount
18 (average monthly A60 participation of 36,362 in 2016 x 0.27 = 9,818 public assistance
19 households receiving A60). Moreover, in Rhode Island, the Census reports that 13,085
20 households received public assistance (again, defined to include TANF and General

⁴⁸ In this regard, “public assistance” includes not only TANF and General Assistance, but not Supplemental Security Income (“SSI”).

⁴⁹ APPRISE, Inc. (November 2011). National Energy Assistance Survey: Final Report, at 53, prepared for National Energy Assistance Directors Association (“NEADA”).

1 Assistance, but not SSI) in 2016 (Table B19057, ACS 1-year data). It is not reasonable
2 to expect that 100% of public assistance recipients will participate in the A60 program.⁵⁰

3
4 With an average monthly A60 participation of 32,333 customers in 2017, therefore, I
5 conclude that a reasonable estimate of the maximum participation in the A60 Adder
6 would be between 5,000 and 10,000 customers. To be conservative in my analysis, and to
7 take into account that I recommend the use of Medicaid in addition to TANF and General
8 Assistance as entry points for the A60 Adder, I use the upper end of this estimate, a
9 participation figure of 10,000, to assess the cost impacts of my recommended A60 Adder
10 below.

11
12 **Q. WHAT DO YOU CONCLUDE?**

13 A. I conclude that adopting an A60 Adder for program participants who can demonstrate
14 that they participate in one of the three specified programs, each of which is among those
15 programs that currently qualify customers for the A60 discount generally but each of
16 which also serves a demonstrably lower income customers, would substantively improve
17 the affordability of service pursuant to the A60 rate. Adoption of such an Adder would
18 be a reasonable step to take for National Grid without having National Grid needing to
19 expand its administrative capacity to implement either a percentage of income program or
20 a tiered rate discount. Adoption of an A60 Adder uses administrative processes not only
21 that currently exist in National Grid's Rhode Island program, but processes that have
22 been adopted by National Grid in other jurisdictions.

⁵⁰ I discuss below how National Grid has an A60 participation rate of only 7.4%, despite the fact that 20% of the total population lives with income below 150% of Poverty Level.

D. The Cost of a 25% A60 Discount.

Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I explain the required cost offsets that should be applied to the A60 discount. I next explain the derivation of a total cost for a 25% A60 discount, including the recommended Adder. I finally assess the expected per kWh bill impacts associated with a 25% discount along with the Adder. I conclude that a 25% A60 discount, along with the Adder, can be delivered at a reasonable cost.

1. Bad Debt Cost Offsets to the A60 Discount.

Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I explain why there should be a bad debt “cost offset” applied to the dollars that are delivered to low-income customers through the A60 rate when those dollars are passed on to nonparticipants. The reason for the offset is clear. National Grid quantifies the amount of the low-income discount as if 100% of the low-income bills would have been collected in the absence of the discount. We know, however, that that assumption is not true. While National Grid should be reimbursed for money that it would have collected in the absence of the A60 discount, the Company should not be allowed to be reimbursed for dollars that it would not have collected even had no discount existed.

1 **Q. CAN YOU FURTHER EXPLAIN HOW NATIONAL GRID WOULD BE OVER-**
2 **COMPENSATED IN THE ABSENCE OF A BAD DEBT OFFSET?**

3 A. Yes. Assume that the participation in National Grid's A60 rate is increasing. This is not
4 an unreasonable assumption. National Grid's witness Isberg specifically stated in his
5 Direct Testimony in this proceeding that one intent of National Grid is to increase its A60
6 enrollment.

7
8 Even as A60 participation increases, however, base rates remain the same. It is important
9 to remember that the Company has already set its base rates taking into account the
10 unpaid bills from low-income customers. Through its base rates, National Grid will
11 continue to collect that uncollectible expense as though no net addition to A60
12 participants has occurred.

13
14 Since the Company's compensation for the A60 discount is reconcilable (through what
15 the Company refers to as the Low-Income Discount Rate Recovery Factor; what I will
16 refer to as the "A60 Rider"), as A60 participation increases, the Company collects the
17 entire amount of increased A60 discounts associated with any increased participation as
18 though that additional shortfall is a "new" expense. Even though the Company makes an
19 upward adjustment in the costs it collects through the A60 Rider, it is not required to
20 make a corresponding downward adjustment to base rates to remove those dollars that
21 were already included in base rates, but are now instead being collected through the A60
22 Rider as part of the A60 discount.

1 In fact, however, the participation by low-income customers in A60 does not create
2 “new” costs. Instead, participation in A60 simply moves the unpaid bills out of the group
3 of customers known as “residential” customers and into the group of customers known as
4 “A60 customers.” To allow the dollars of A60 discounts to be added to the A60 Rider
5 without correspondingly adjusting for those dollars that already have been included in
6 base rates allows the Company to collect those dollars in both places.

7
8 **Q. HAS ANY OTHER UTILITY COMMISSION RECOGNIZED THE NEED TO**
9 **IMPLEMENT SUCH A COST OFFSET?**

10 A. Yes. The Pennsylvania Public Utility Commission (“PUC”) set forth its policy on bad
11 debt in its CAP Policy Statement.⁵¹ According to the Commission’s CAP Policy
12 Statement:

13 In evaluating utility CAPs for ratemaking purposes, the Commission will
14 consider both revenue and expense impacts. Revenue impact considerations
15 include a comparison between the amount of revenue collected from CAP
16 participants prior to and during their enrollment in the CAP. CAP expense
17 impacts include both the expenses associated with operating the CAPs as well
18 as the potential decrease of customary utility operating expenses. **Operating**
19 **expenses include. . .uncollectible accounts expense for writing off bad debt**
20 **for these customers.** When making CAP-related expense adjustments and
21 projections, utilities should indicate whether a customer's participation in a
22 CAP produced an immediate reduction in customary utility expenses and a
23 reduction in future customary expenses pertaining to that account.
24

25 Pennsylvania PUC, CAP Policy Statement, Section 69.266, 52 Pa. Code §69.266 (Supp.
26 389, April 2007) (emphasis added). Moreover, in examining a proposed bad debt offset
27 in a rate case involving the Philadelphia Gas Works (“PGW”), the PUC reiterated that

⁵¹ “CAP” is Pennsylvania’s “Customer Assistance Program,” the low-income bill affordability program mandated by the PUC.

1 “the Commission’s CAP Policy Statement provides that the cost offset at issue should be
2 considered.”⁵²

3
4 **Q. IS THERE A SPECIFIC DOLLAR OFFSET TO BE APPLIED AGAINST A60**
5 **DISCOUNTS THAT YOU PROPOSE IN THIS PROCEEDING?**

6 A. No. The exact dollar adjustment will depend on the number of A60 participants and on
7 the average A60 bill. Instead of making a single dollar adjustment, the over-recovery
8 should be prevented by adopting a percentage offset to the A60 discount. The offset
9 should be equal to the difference in the bad debt percentage for low-income customers
10 and the bad debt percentage for residential customers. According to National Grid, the
11 bad debt ratio for low-income electric customers in 2017, the most recent year for which
12 data is available, was 10.05%, while the bad debt ratio for non-low-income residential
13 customers (what the Company referred to as “standard” customers) was 1.07%. The bad
14 debt offset for A60 cost recovery, therefore, should be 8.98% ($0.1005 - 0.0107 =$
15 0.0898). The A60 discount dollars to be collected from other customers, in other words,
16 should be the dollars of discount provided net of an 8.98% bad debt offset. I apply this
17 cost offset in my cost calculations below.

18

⁵² Pennsylvania PUC v. Philadelphia Gas Works, R-0006193, slip opinion, at 39, citing CAP Policy Statement (Order entered September 28, 2007). In reviewing the ALJ opinion, the Commission noted: “The ALJs also found that PGW never addressed whether double recovery is or is not possible when participation exceeds projections in CRP. Rather, PGW makes generalities of other reasons for increases in the CRP expense. The ALJs believe that the OCA made a convincing argument that double recovery is a possibility and can be alleviated by implementing a mechanism for reconciliation and that PGW did not provide a persuasive argument that the current practice guards against double recovery.” Id. The Commission held: “We find the ALJs recommendation to be supported by the record as well as Section 1408 of the Code. Accordingly, we find OCA’s argument to be convincing. Double recovery of uncollectible accounts expense is a possibility and can be alleviated by implementing a mechanism for reconciliation.” Id., at 42.

2. The Expected Cost for a 25% A60 Discount.

Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I document the total expected cost of moving to a 25% A60 discount. I perform this analysis in four steps.

➤ First, I calculate the total cost of moving from an across-the-board 15% discount to an across-the-board 25% discount. Rather than projecting future numbers, I calculate this cost by month as if the 25% discount had been in effect for the months of October 2015 through December 2017. I reduce this cost by the bad debt cost offset I describe above.

➤ Second, I identify the percentage allocation of total A60 costs to the residential class on a going forward basis.

➤ Third, I apply that allocation to determine the dollars of the A60 discount that would have been allocated to the residential class.⁵³

➤ Finally, I divide that cost allocation by the total residential consumption to determine a per kWh charge and multiply that per kWh charge by the average residential consumption by month to determine a monthly bill impact (again, assuming that the 25% discount would have been in effect for the 27-month period).

Q. WHAT DO YOU FIND?

A. Based on the methodology I describe above, I find:

➤ The total cost of increasing the A60 discount from 15% to 25% would have been \$4,040,721 in 2016 and \$3,523,900 in 2017. The costs paid by the residential class (given the “Year 1” allocations identified by National Grid on

⁵³ National Grid’s current cost allocation distributes the cost of the A60 discount over the usage of all customer classes. Direct Testimony of Isberg, page 8.

1 a going forward basis, DIV-14-61) would have been \$1,555,918 in 2016 and
2 \$1,356,911 in 2017.

- 3 ➤ The average monthly bill impact for a residential customer with average
4 consumption would have been \$0.30 in 2016 and would have been \$0.26 in
5 2017. The average annual bill impact for a residential customer with average
6 consumption would have been \$3.59 in 2016 and \$3.11 in 2017.

7 I conclude that increasing the A60 discount to 25% can be accomplished without placing
8 an undue burden on residential customers.

9
10 **Q. WHAT IS THE ADDITIONAL COST OF YOUR PROPOSED A60 DISCOUNT**
11 **ADDER?**

12 A. The additional cost of my recommended A60 adder is the incremental cost of moving
13 from a 25% A60 discount to a 30% discount for the number of participants qualifying for
14 the adder. Given the Company's lack of information about the number of A60
15 participants who enter through which program(s), it is not possible for me to develop a
16 specific cost for the A60 cost adder. However, I have developed what the cost would be
17 for each increment of participation that would be subject to the Rider. I use 1,000
18 participants as my increment. For each 1,000 customers who would have qualified for
19 the A60 discount Adder:

- 20 ➤ The total cost would have been \$21,318 if the Adder had been in effect in 2016
21 and \$21,077 if the Adder had been in effect in 2017.

➤ The annual bill impact would have been \$0.05 per residential ratepayer had the Adder been in effect in 2016 and would again have been \$0.05 had the Adder been in effect in 2017.

➤ The monthly bill impact would have been less than one-half of one cent in both 2016 and 2017 had the Adder been in effect.

Given these bill impacts, even had a full 10,000 households qualified for the Adder (between 25% and 30% of the 2016 and 2017 A60 average participation), as I identified above as my estimated maximum Adder participation, the additional monthly bill impact to residential customers would have been only four (4) cents, while the annual bill impact would have been less than 50 cents (\$0.49 in 2016 and \$0.48 in 2017). I conclude that the cost of providing the Adder I recommend is not unreasonable.

Q. ARE THERE CIRCUMSTANCES UNDER WHICH YOU WOULD RECOMMEND PLACING AFFIRMATIVE COST CONTROLS ON THE A60 DISCOUNT AS YOU PROPOSE IT?

A. Yes. It is always reasonable to be concerned about the costs a low-income program is imposing on other ratepayers. Not only should a program design be aware of the costs imposed on all ratepayers, one must be cognizant of the costs imposed on the near-poor in particular. The “near-poor” are those customers who have incomes too high for them to qualify for the low-income discount but sufficiently low to make their lives economically fragile. For example, households with incomes up to 250% of Poverty Level are likely not to qualify for the A60 discount but are also likely to be living at or below the self-sufficiency standard for Rhode Island.

1
2 Within this context, the costs of the A60 discount could exceed levels that are reasonable
3 primarily due to an enrollment that substantially exceeds currently expected participation
4 rates. While I do not expect that to occur, it is reasonable to acknowledge at least that
5 possibility and to have in mind cost-control options that might reasonably be available
6 should one need to exercise such options. The propriety of any given option would
7 depend, of course, on the cause of the increase in program costs. Determining such
8 propriety in the abstract is a difficult, if not impossible, decision to appropriately make in
9 the abstract.

10
11 I have attached, as Appendix B to this testimony, a list of cost-control options that might
12 reasonably be available. I do not offer any of these options for National Grid at this time.
13 I set them forth in Appendix B in no order of priority. And I do not offer this as a
14 comprehensive list of the only available options. I set forth the options in Appendix B
15 simply as examples of cost-control mechanisms that have been implemented in other
16 jurisdictions where I have experience in the design, implementation and/or evaluation of
17 low-income bill affordability programs.

18
19 **E. Relationship with Proposed Income-Eligible Rewards Program.**

20 **Q. PLEASE EXPLAIN THE INCOME-ELIGIBLE CUSTOMER REWARDS**
21 **PROGRAM THAT NATIONAL GRID IS PROPOSING.**

1 A. National Grid has proposed to develop what it refers to as its “Income-Based Customer
2 Rewards Program.”⁵⁴ Through this program, the Company proposes to offer financial
3 incentives for income-eligible customers to take actions that benefit themselves, the
4 Company, and other ratepayers. According to National Grid, such actions might involve
5 entering into budget billing plans, meeting prescribed payment performance targets, or
6 taking direct steps to reduce energy usage (and thus costs). (Rewards Program, p. 156).

7
8 According to National Grid, customers participating in the Rewards Program would gain
9 access to a “bank” from which “they can draw to pay their utility bill during months that
10 might otherwise be challenging. . .” The program “recognize[es] that many Income
11 Eligible customers lack access to savings that would traditionally provide a cushion
12 against unanticipated increases in expenses and/or reductions in income.” (Id., p.157).
13 Recognizing that the Rewards Program is not yet fully designed—National Grid expects a
14 design to be finalized in 2018—as I understand it, the program outlines presented in this
15 docket represent the type of creative thinking on how to serve income-eligible customers
16 that should be not only supported, but actively encouraged.

17
18 In support of its Rewards Program proposal, National Grid advances the following
19 proposition that I note with particular approval:

20 By definition, the Company’s Income Eligible customers are more vulnerable
21 to external financial shocks. Unanticipated expenses or income volatility can
22 reduce these customers’ ability to stay current on their utility bills, even when
23 they have taken action to manage their energy expenses. Reward accounts

⁵⁴ Narragansett Electric d/b/a National Grid, Docket No. 4770, Schedule DST-1, CH8, pp 10 et seq., (pdf pages 156 et seq). (hereafter “Rewards Program”).

1 can provide a financial buffer for customers who are otherwise less likely to
2 have savings they can draw upon in these situations.
3

4 **Q. PLEASE EXPLAIN WHY YOU “APPROVE” OF THIS COMPANY**
5 **RATIONALE TO PURSUE ITS REWARDS PROGRAM.**

6 A. Without going into the extensive academic literature that would support National Grid’s
7 observations, my experience supports the assertions of fact made by the Company in
8 support of its Rewards Program. For example, when I was a member of the national
9 Board of Directors of the National Fuel Funds Network (“NFFN”), I had occasion to
10 research “ability to pay” for low-income and near-low-income utility customers.⁵⁵

11 Amongst the findings I made were:

- 12 ➤ Working poor families tend to find themselves in lower quality hourly wage
13 jobs, often marked by considerable income fluctuations due to the number of
14 hours they are called upon to work. Persons working in these occupations
15 often face periods of lost wages. The U.S. Department of Labor refers to
16 periods of lost wages caused by a reduction in hours as “involuntary part time
17 employment.”
18
- 19 ➤ Low-income workers often have few or no workforce benefits, like paid leave
20 or flexible schedules that are essential if workers are to meet the needs of their
21 family members. More than three fourths (76 percent) of workers in the
22 bottom quartile of family income lack regular sick leave; more than half (58
23 percent) do not have consistent vacation leave. Families in the bottom income
24 quartile are more likely than other workers to lack *both* sick leave *and*
25 vacation leave.
26
- 27 ➤ Low-income families are less likely to have flexible work schedules. Among
28 low-income parents, 78 percent have jobs that offer no flexibility at all. The
29 majority of workers beneath the median income level say they cannot choose
30 or change their starting and quitting times, or take days off to care for their

⁵⁵ Colton (March 2002). A Fragile Income: Deferred Payment Plans and Ability to Pay of Working Poor Utility Customers, prepared for National Fuel Funds Network: Washington D.C. (internal quotation marks and internal citations deleted).

1 sick children. The lost wages attributable to the lack of paid leave for the
2 working poor is not theoretical. Data from the U.S. Department of Labor
3 shows that absence rates in occupations where the working poor tend to work
4 are from 50% to 60% higher than the absence rates in occupations populated
5 by their higher income counterparts. Absence rates for higher income
6 occupations are lower because time missed from work covered by paid leave
7 is not counted as an "absence."
8

9 In short, as evidenced by the title of my NFFN research document, the utility bill
10 payment problems faced by the poor and near-poor flow not simply from the level of
11 their income, but also from the fragility of their income. I conclude that the problems
12 National Grid references in its comments about "external shocks," as well as to
13 "volatility" in income and/or expenses, are not abstract or theoretical. These problems
14 that National Grid has identified are not only real, they are substantial. The Company's
15 Rewards Program helps to address these "fragility" problems.
16

17 **Q. PLEASE EXPLAIN WHY YOU HAVE REASON TO BELIEVE THAT AN**
18 **INITIATIVE SUCH AS NATIONAL GRID'S PROPOSED REWARDS**
19 **PROGRAM WILL POSITIVELY AFFECT THESE FRAGILITY PROBLEMS.**

20 A. Again, there is substantial academic literature which supports this conclusion, far too
21 much to discuss here. Let me focus, however, on just two research reports by the Urban
22 Institute. The research by McKernan, Ratcliffe and Vinopal focuses on the relationship
23 between "liquid assets" and "material hardships."⁵⁶ Reporting two or more of the ten
24 material hardships is deemed to be "general deprivation." The Urban Institute

⁵⁶ McKernan, Ratcliffe and Vinopal (November 2009). Do Assets Help Families Cope with Adverse Events," Brief No. 10, Urban Institute: Washington D.C. The 10 "material hardships" indicators include: food insecurity; food insufficiency, trouble paying basic bills, someone in the household reporting not seeing a doctor or dentist when in need of one (separate hardships), inability to pay rent or mortgage, inability to pay utility or medical bills, having phone line disconnected, having gas or electricity cutoff because of inability to pay, and eviction from home or apartment due to inability to pay rent or mortgage.

1 documented the relationship between the lack of liquid assets and the inability to avoid
2 material hardships during an “adverse event” (e.g., involuntary job loss, health related
3 work limitation). The Urban Institute reports “when a negative event occurs, asset-poor
4 families are about two to three times more likely to experience general deprivation than
5 non-asset families.” Having money in the bank helps. The Urban Institute further
6 reported that “roughly 40 percent of families that experience each of the negative events
7 do in fact spend down their liquid assets.” The report concludes: “A key hypothesis in
8 the asset-building literature is that asset holdings help families weather emergencies. .
9 .The results [of this study] suggest that both assets and income are important in
10 cushioning the blow of negative life events. . .Overall, families with assets are 23
11 percentage points less likely to suffer from general deprivation than asset-poor families
12 after experiencing a negative event; 9 percentage points of this difference are related to
13 income, leaving 14 percentage points related to asset holdings.”

14
15 A similar Urban Institute report later reported that “more than two-thirds of those in the
16 lowest quintile [of income] (70 percent) hold no liquid assets.”⁵⁷ This study looked at the
17 marginal effects for households with liquid assets of between \$1 and \$1,999. It reported
18 that “initiatives to promote low-income saving can avert hardship for low-income
19 households, even if the amount of accumulated liquid assets is relatively modest. Such a
20 buffer stock can enable households to fend off minor shocks to income or expenses and
21 avert the more serious consequences that might otherwise result.” Amongst those
22 “serious consequences,” Mills and Amick found that the effects of “relatively modest”

⁵⁷ Mills and Amick (December 2010). Can Savings Help Overcome Income Instability,” Brief No. 18, Urban Institute: Washington D.C.

1 liquid assets reduce the percentage of households with “missed utility payments” by
2 20.6% and reduced utility shutoffs by 33.3%.

3
4 The accumulation of Rewards proposed by National Grid is a type of “liquid asset” that
5 can be devoted to utility bill payment. The positive effects expected by National Grid are
6 soundly grounded in the literature.⁵⁸

7
8 **Q. IS YOUR TESTIMONY UNEQUIVOCALLY IN SUPPORT OF NATIONAL**
9 **GRID’S PROPOSED INCOME-ELIGIBLE REWARDS PROGRAM?**

10 A. No. As I mention above, National Grid has not really fully described what its Rewards
11 Program will look like. The Company states in the filing underlying this proceeding that
12 it intends to have a program design completed in 2018. My testimony should not be read
13 as indicating approval of that program design sight unseen. Rather, my testimony should
14 be read precisely for what it says. The Company’s stated rationale for its Rewards
15 Program has a solid empirical foundation. The Division and other stakeholders, of
16 course, would want the opportunity to review and comment upon the specific details of
17 National Grid’s design of its Reward Program when that design is completed and made
18 public.

19
20 **Q. PLEASE EXPLAIN HOW YOUR A60 RECOMMENDATIONS RELATE TO**
21 **THE COMPANY’S PROPOSED REWARDS PROGRAM.**

⁵⁸ See also, Steven Brobeck (June 2008). The Essential Role of Banks and Credit Unions in Facilitating Lower-Income Household Saving for Emergencies, Consumer Federation of America: Washington D.C. (those reporting no savings were four to ten times more likely to indicate unfavorable financial experiences than those with at least \$500 in savings. Those reporting emergency savings of \$1 to \$500 were two to five times more likely to indicate unfavorable experiences than those with at least \$500).

1 A. There is a need for both the A60 discount and National Grid's proposed Rewards
2 Program. The Rewards Program incentivizes income-eligible customers to take actions
3 that improve their immediate circumstances (e.g., entering into Budget Billing), and
4 make bill payment more likely (thus also delivering immediate benefits to the utility as
5 well). In turn, the incentives (i.e., accumulation of "Rewards") serve the critical role of
6 liquid assets as contingency funds in emergency situations (thus also delivering future
7 benefits to both the customer and the Company). The Rewards Program addresses
8 contingencies, unexpected changes in income or expenses.

9
10 In contrast, the A60 discount addresses *chronic* inability-to-pay (irrespective of whether
11 an emergency contingency arises). I conclude that the A60 discount and the Rewards
12 Program are interrelated and mutually supporting. Each of these programs helps make
13 the other program more effective.

14
15 **Part 4. National Grid's Proposed Residential Customer Charge.**

16
17 **Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR**
18 **TESTIMONY.**

19 A. In this section of my testimony, I assess the impact on low-use, low-income customers
20 arising from National Grid's proposal to increase its residential customer charge. The
21 Company proposes to increase its customer charge from \$5.00 to \$8.50 per month phased
22 in over three years for low-income customers. (DIV-14-49). In this section of my
23 testimony, I document both that a higher customer charge will have a disproportionately

1 adverse impact on low use customers. I further document that low income customers are
2 disproportionately low use customers.

3
4 **Q. UPON WHAT DO YOU BASE YOUR CONCLUSION THAT THE INCREASED**
5 **CUSTOMER CHARGE WILL DISPROPORTIONATELY ADVERSELY**
6 **AFFECT LOWER USE CUSTOMERS?**

7 A. This occurs as a matter of arithmetic. As usage decreases, the customer charge will
8 comprise a larger proportion of a customer's total bill. Accordingly, as the customer
9 charge increases, the percentage bill increase will be greater at lower consumption levels.
10 Using the same consumption levels that National Grid used to assess bill impacts,
11 changing the customer charge from \$5.00 to \$8.50 (while leaving all other bill
12 components equal), I find that the percentage bill increase arising from an increased
13 customer charge standing alone will be represent a 10.7% bill increase for customers with
14 usage of 150 kWh; declining to a 4.6% increase for customers with usage of 400 kWh;
15 declining to 2.7% for customers with usage of 700 kW; declining to a 1.6% increase to
16 customers with consumption of 1,200 kWh.

17
18 **Q. ISN'T THE AFFORDABILITY OF ELECTRICITY TO NATIONAL GRID'S**
19 **LOW-INCOME CUSTOMERS ENSURED THROUGH THE COMPANY'S A60**
20 **DISCOUNT?**

21 A. No. In 2017, National Grid reported that it had an average of 32,333 A60 customers per
22 month (DIV-14-52). In contrast, the Company reports that it had an average of 435,779
23 residential customers per month. Overall, in other words, National Grid had a low-

1 income participation rate of 7.4% ($32,333 / 435,779 = 0.0742$). In contrast, in 2016,
2 nearly 20% of Rhode Island's population lived with an income at or below 150% of
3 Federal Poverty Level. Assuming that the incidence of Poverty in National Grid's
4 customer population mirrors the incidence of Poverty in the state as a whole, National
5 Grid reaches only a small fraction of its customer base living with lower incomes. The
6 A60 discount does not offer protections to the two-thirds of the low-income customer
7 base who does not enroll in the A60 rate, even though income-eligible. Since some
8 programs that qualify customers for A60 have eligibility exceeding 150% of Poverty
9 (e.g., LIHEAP eligibility is set at 60% of median income), the under-enrollment I identify
10 above is even greater.

11
12 **Q. CAN YOU PROVIDE SOME COMPARISONS OF THE IMPACT THAT**
13 **INCREASING THE FIXED MONTHLY CUSTOMER CHARGE WILL HAVE**
14 **ON NATIONAL GRID'S LOW-INCOME POPULATION?**

15 A. Yes. When I multiply the \$42 bill increase attributed to the increased customer charge
16 ($\$8.50 - \5.00×12) times the number of estimated low-income customers on the
17 National Grid system I find the increased customer charge will impose an added bill of
18 \$3,678,864 on the low-income customer population of National Grid ($435,779 \times .201 =$
19 $87,592 \times \$42 = \$3,678,864$). Not all low-income customers will pay that increased
20 charge, however. At National Grid's proposed 15% discount, A60 customers will pay
21 only 85% of the total customer charge. I thus subtract out 15% of the increased customer
22 charge for the monthly average number of A60 participants in 2017 ($32,333 \times \$42 =$
23 $\$1,357,986 \times 0.15 = \$203,698$). The increased dollars imposed on the National Grid low-

1 income population due to the increased customer charge are \$3,475,146 (\$3,678,844 -
2 \$203,698 = \$3,475,146). In contrast, 20,859 National Grid electric customers received a
3 total of \$9,149,461 in LIHEAP grants in 2017. (DIV-14-55, DIV-14-59). In effect, in
4 other words, National Grid's increased bill to low-income customers, attributable
5 exclusively to the increased customer charge, is equal to 37.98% of the total dollars of
6 LIHEAP assistance received by National Grid's low-income customers (\$3,475,166 /
7 \$9,149,618 = 0.3798).

8
9 National Grid's low-income customer base, particularly in light of the payment problems
10 I discuss in detail above, simply does not have the capacity to absorb a 38% loss in the
11 purchasing power of LIHEAP. There would be substantial concern if the LIHEAP
12 program announced a 38% reduction in benefits in future years. The increased customer
13 charge, standing alone (even after applying a 15% discount), has the same effect to the
14 National Grid low-income electric customer population as a whole as reducing LIHEAP
15 by 38%.

16
17 **Q. DOES LOW-INCOME ELECTRICITY USAGE DIFFER FROM THE USAGE**
18 **LEVELS OF RESIDENTIAL CUSTOMERS GENERALLY?**

19 A. Yes. While low-income households tend to have less efficient energy consumption than
20 do residential customers generally on a per square foot of housing basis, because they
21 live in much smaller housing units, they tend to have lower overall electricity
22 consumption. According to the DOE's Residential Energy Consumption Survey

1 (“RECS”) (Table CE2.2), in the Northeast, the region of which Rhode Island is a part, as
2 incomes increase, electricity usage increases correspondingly.

Electricity Usage by Income (Northeast) (RECS, Table CE2.2)	
2009 Annual Household Income	kWh Usage
Less than \$20,000	5,541
\$20,000 to \$39,999	6,922
\$40,000 to \$59,000	7,381
\$60,000 to \$79,999	8,443
\$80,000 to \$99,999	9,706
\$100,000 to \$119,999	10,503
\$120,000 or More	11,577

3
4 It does not matter which end-use is being examined. As income increases, energy usage
5 increases also. The average household data by-end-use, in million BTU, for Northeast
6 households using the end-use (RECS, Table CE3.2) is presented immediately below.⁵⁹ In
7 each instance, usage increases as income increases.

⁵⁹ “Other” includes end uses not shown separately (e.g., cooking appliances, clothes washers, dryers, dishwashers, televisions, computers, small electronic devices, pools, hot tubs, and lighting.)

2009 Annual Household Income	Consumption by End-Use (mmBtu) (Northeast) (RECS Table CE3.2)					
	Total	Space Heating	Water Heating	Air Conditioning	Refrigerators	Other
Less than \$20,000	83.3	51.2	12.5	1.5	3.4	16.1
\$20,000 to \$39,999	98.2	57.2	16.4	1.8	3.5	20.6
\$40,000 to \$59,000	98.9	55.1	16.1	1.9	3.4	23.5
\$60,000 to \$79,999	99.9	55.1	16.5	2.0	3.7	24.2
\$80,000 to \$99,999	119.2	64.0	19.0	2.5	4.3	30.2
\$100,000 to \$119,999	131.1	65.9	22.6	3.3	4.5	35.8
\$120,000 or More	154.8	78.7	26.6	4.0	5.0	41.9

1

2 **Q. DOES THE DEPARTMENT OF ENERGY PROVIDE DATA THAT HELPS TO**
3 **EXPLAIN WHY LOW-INCOME CUSTOMERS TEND ALSO TO BE LOW USE**
4 **CUSTOMERS?**

5 A. Yes. The RECS data clearly shows that electricity consumption increases as the size of
6 the housing unit increases. The related housing characteristics support this conclusion.
7 Residents of single family housing have greater electricity consumption than residents of
8 multi-family housing do. Residents of large multi-family dwellings (5+ units) have lower
9 electricity consumption than residents of apartments in 2 – 4 unit buildings. Residents of
10 three bedroom units have higher consumption than residents of one bedroom units.

11

12 **Q. DO THE UNDERLYING DEMOGRAPHICS IN RHODE ISLAND PROVIDE**
13 **SUPPORT FOR THE APPLICABILITY OF THESE DEPARTMENT OF**
14 **ENERGY CONCLUSIONS TO NATIONAL GRID?**

15 A. Yes. There are two standard ways to measure the size of a housing unit when square
16 footage is not available. One way is to look at the number of rooms; the other way is to

1 look at the number of bedrooms. Both of these approaches document that lower-income
2 households live in smaller sized housing units. Schedule RDC-4 shows that:

3 ➤ While the average income of a Rhode Island household living in a unit with one
4 room is \$50,251, the average income of a household living in an eight-room unit
5 is \$128,956.

6 ➤ The same relationship holds true for housing size measured by the number of
7 bedrooms. While the average income for a Rhode Island household living in a
8 unit with one bedroom is \$48,323, the average income of a household living in a
9 housing unit with three bedrooms is \$92,375; the average income of a household
10 living in a unit with five bedrooms is \$136,336.

11 In both instances (number of rooms and number of bedrooms), the average income
12 increases as the size of the housing unit increases. And we know from the RECS data
13 that electricity usage increases as the size of the housing unit increases.

14
15 In addition to this data, Schedule RDC-5 presents a distribution of Rhode Island
16 households by income and by the size of the housing unit in which they live, measuring
17 housing unit size by the number of bedrooms in the unit.⁶⁰ The data shows that a higher
18 proportion of lower-income households live in smaller housing units and a higher
19 proportion of higher income households live in larger housing units. For example, while
20 roughly 17% to 21% of households with income less than \$20,000 live in units with one
21 bedroom or less, less than four percent (4%) of households with incomes greater than
22 \$150,000 live in units that small (1.3% of households with income \$150,000 - \$249,999;
23 2.2% of households with income \$150,000 or more). Conversely, while roughly 33% to

⁶⁰ A similar measurement could be made using the total number of rooms rather than the number of bedrooms.

1 36% of households with incomes of \$150,000 or more live in units with four or more
2 bedrooms, only 5.3% to 7.7% of households with incomes less than \$20,000 do.

3 Consistently, the percentage of households in each of the higher income ranges declines
4 as the number of bedrooms declines. In Rhode Island, higher income households clearly
5 tend to live in larger homes than lower income households do.
6

7 **Q. IS THERE ANY ADDITIONAL INFORMATION THAT SUPPORTS YOUR**
8 **CONCLUSION THAT LOW-INCOME AND LOW-USE ARE CLOSELY**
9 **RELATED?**

10 A. Yes. Schedule RDC-6 shows that low-income households are disproportionately tenants.
11 The U.S. Census Bureau reports that, in Rhode Island, while 4.6% of homeowners have
12 income less than \$15,000, 25.8% of renters do (American Community Survey, Table
13 B25118). While 10.0% of homeowners have income less than \$25,000, 41.4% of renters
14 have income that low. On the opposite end of the spectrum, while 55.0% of Rhode
15 Island homeowners have income of \$75,000 or more, 16.5% of renters do.
16

17 This distinction between homeowners and tenants is important because tenant
18 consumption is consistently found to be lower than homeowner consumption. As reported
19 by the U.S. Department of Energy's RECS, while average annual electricity usage by
20 homeowners in the Northeast is 9,541 kWh, average annual electric usage by renters is
21 5,654 kWh. The lower consumption of tenants (versus homeowner) occurs whether
22 comparing the annual consumption of single-family homeowners to that of single-family
23 renters (10,011 kWh vs. 8,985 kWh), or comparing the annual consumption of multi-

1 family homeowners to that of multi-family renters (5,718 kWh vs. 4,868 kWh). (2009
2 RECS, Table CE2.2).

3
4 **Q. WHY ARE THESE USAGE PATTERNS USEFUL IN ASSESSING THE**
5 **REASONABLENESS OF THE COMPANY’S PROPOSAL TO INCREASE ITS**
6 **RESIDENTIAL CUSTOMER CHARGE?**

7 A. The proposed increase in the customer charge imposes disproportionately high rate
8 increases on low-use customers. Low-income customers in the National Grid service
9 territory disproportionately tend also to be low-use customers. As a result, through its
10 increased customer charge, the Company proposes to increase rates the most to those who
11 can least afford to pay those rate increases. As I document in detail above, not only are
12 proportionately more low-income customers in arrears, but those who are in arrears, are
13 deeper in arrears. National Grid inappropriately proposes to respond to these payment
14 difficulties by raising rates the most to these customers.

15
16 **Q. WHAT IS YOUR ULTIMATE CONCLUSION WITH RESPECT TO THE**
17 **NATIONAL GRID CUSTOMER CHARGE?**

18 A. Based on the data and analysis I present above, I conclude that the most reasonable
19 residential customer charge in this proceeding is to leave the residential customer charge
20 at the level at which the residential customer charge is currently set.

21
22 **Q. PLEASE EXPLAIN HOW YOUR RECOMMENDATION TO KEEP THE**
23 **CUSTOMER CHARGE “AT THE LEVEL AT WHICH IT IS CURRENTLY SET”**

**INTERSECTS WITH YOUR RECOMMENDATIONS REGARDING THE A60
DISCOUNT.**

A. My statement above does not apply to the A60 discount. As I explain in more detail above, I recommend approval of National Grid's proposal to move away from applying the A60 discount to specific components of a low-income bill. Instead, I recommend approval of the proposal by National Grid to calculate an income-eligible bill in the same way that bills are calculated under standard residential rates. The A60 discount is then applied to that total bill. Accordingly, under my customer charge recommendation, an A60 customer would have his or her bill calculated using the standard residential rate, including the standard residential customer charge, and have the discount applied to the resulting bill to generate the A60 discounted bill.⁶¹

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes, it does.

⁶¹ Since I do not recommend adoption of the Company's proposed residential customer charge, I need not address the Company's proposed "phase-in" of the higher customer charge

Colton Schedules

Schedule RDC-1
National Grid A60 Discount by Month
(page 1 of 2)

	Month and Year (DIV-14-52)														
	10-15	11-15	12-15	01-16	02-16	03-16	04-16	05-16	06-16	07-16	08-16	09-16	10-16	11-16	12-16
Average usage per customer	492	445	585	608	575	541	485	409	494	599	722	647	467	441	544
A16-Bill Calculation	\$97.72	\$89.31	\$115.48	\$110.99	\$105.28	\$99.41	\$91.84	\$78.42	\$93.43	\$112.59	\$134.44	\$121.11	\$86.74	\$82.25	\$100.00
Existing A60 bill calculation	\$85.60	\$77.86	\$102.06	\$97.25	\$92.01	\$86.61	\$79.83	\$67.47	\$81.28	\$98.98	\$119.10	\$106.83	\$74.98	\$70.85	\$87.16
Existing A60 discount (\$s)	\$12.12	\$11.45	\$13.42	\$13.74	\$13.27	\$12.80	\$12.01	\$10.95	\$12.15	\$13.61	\$15.34	\$14.28	\$11.76	\$11.40	\$12.84
Existing A60 discount percent	12.4%	12.8%	11.6%	12.4%	12.6%	12.9%	13.1%	14.0%	13.0%	12.1%	11.4%	11.8%	13.6%	13.9%	12.8%

National Grid A60 Discount by Month
(page 2 of 2)

	Month and Year											
	01-17	02-17	03-17	04-17	05-17	06-17	07-17	08-17	09-17	10-17	11-17	12-17
Average usage per customer	612	560	543	529	426	464	622	615	553	475	483	550
A16-Bill Calculation	\$114.22	\$105.05	\$102.06	\$92.04	\$75.33	\$81.49	\$109.25	\$108.10	\$97.84	\$100.34	\$101.92	\$115.09
Existing A60 bill calculation	\$100.43	\$91.98	\$89.24	\$79.41	\$64.15	\$69.77	\$95.32	\$94.27	\$84.88	\$88.47	\$89.93	\$102.17
Existing A60 discount (\$s)	\$13.79	\$13.07	\$12.82	\$12.63	\$11.18	\$11.72	\$13.93	\$13.83	\$12.96	\$11.87	\$11.99	\$12.92
Existing A60 discount percent	12.1%	12.4%	12.6%	13.7%	14.8%	14.4%	12.8%	12.8%	13.2%	11.8%	11.8%	11.2%

Schedule RDC-2

National Grid A60 Discount by Year and Usage

2013	Total A60 Bill	Total A16 Bill	Existing A60 Discount	Existing A60 Pct Discount
150	\$20.67	\$27.70	\$7.03	34.0%
300	\$40.48	\$49.43	\$8.96	22.1%
400	\$53.68	\$63.92	\$10.24	19.1%
500	\$66.89	\$78.41	\$11.52	17.2%
600	\$80.09	\$92.90	\$12.81	16.0%
700	\$93.29	\$107.39	\$14.09	15.1%
1200	\$159.31	\$179.82	\$20.50	12.9%
2000	\$264.95	\$295.72	\$30.77	11.6%
2014	Total A60 Bill	Total A16 Bill	Existing A60 Discount	Existing A60 Pct Discount
150	\$23.26	\$30.39	\$7.13	30.7%
300	\$45.75	\$54.80	\$9.04	19.8%
400	\$60.75	\$71.07	\$10.32	17.0%
500	\$75.75	\$87.35	\$11.60	15.3%
600	\$90.74	\$103.63	\$12.89	14.2%
700	\$105.74	\$119.91	\$14.17	13.4%
1200	\$180.72	\$201.28	\$20.56	11.4%
2000	\$300.70	\$331.49	\$30.79	10.2%
2015	Total A60 Bill	Total A16 Bill	Existing A60 Discount	Existing A60 Pct Discount
150	\$26.52	\$33.65	\$7.13	26.9%
300	\$52.19	\$61.23	\$9.04	17.3%
400	\$69.30	\$79.63	\$10.32	14.9%
500	\$86.42	\$98.01	\$11.59	13.4%
600	\$103.53	\$116.40	\$12.88	12.4%
700	\$120.65	\$134.79	\$14.14	11.7%
1200	\$206.21	\$226.74	\$20.53	10.0%
2000	\$343.10	\$373.85	\$30.75	9.0%
2016	Total A60 Bill	Total A16 Bill	Existing A60 Discount	Existing A60 Pct Discount
150	\$25.08	\$32.21	\$7.13	28.4%
300	\$49.21	\$58.25	\$9.04	18.4%
400	\$65.30	\$75.61	\$10.31	15.8%
500	\$81.39	\$92.98	\$11.59	14.2%
600	\$97.47	\$110.34	\$12.87	13.2%
700	\$113.56	\$127.71	\$14.15	12.5%
1200	\$194.00	\$214.53	\$20.53	10.6%
2000	\$322.70	\$353.45	\$30.75	9.5%
2017	Total A60 Bill	Total A16 Bill	Existing A60 Discount	Existing A60 Pct Discount
150	\$25.43	\$32.58	\$7.15	28.1%
300	\$49.64	\$58.74	\$9.10	18.3%
400	\$65.77	\$76.18	\$10.41	15.8%
500	\$81.91	\$93.61	\$11.70	14.3%
600	\$98.04	\$111.04	\$13.00	13.3%
700	\$114.18	\$128.48	\$14.30	12.5%
1200	\$194.86	\$215.67	\$20.80	10.7%
2000	\$323.97	\$355.16	\$31.19	9.6%

Schedule RDC-3
(page 1 of 2)

Income Needed to Achieve Affordability at Varying Levels of Total Bill Discount (3.0% affordable burden)									
Usage (kWh)	15%			20%			25%		
	Monthly bill after discount	Annual bill after discount	Income for Affordability	Monthly bill after discount	Annual bill after discount	Income for Affordability	Monthly bill after discount	Annual bill after discount	Income for Affordability
150	\$27.69	\$332	\$11,077	\$26.06	\$313	\$10,425	\$24.43	\$293	\$9,774
300	\$49.93	\$599	\$19,971	\$46.99	\$564	\$18,796	\$44.05	\$529	\$17,621
400	\$64.75	\$777	\$25,900	\$60.94	\$731	\$24,376	\$57.13	\$686	\$22,853
500	\$79.56	\$955	\$31,826	\$74.88	\$899	\$29,954	\$70.20	\$842	\$28,082
600	\$94.39	\$1,133	\$37,755	\$88.84	\$1,066	\$35,534	\$83.28	\$999	\$33,313
700	\$109.21	\$1,311	\$43,684	\$102.79	\$1,233	\$41,115	\$96.36	\$1,156	\$38,545
1200	\$183.32	\$2,200	\$73,327	\$172.53	\$2,070	\$69,014	\$161.75	\$1,941	\$64,700
2000	\$301.89	\$3,623	\$120,754	\$284.13	\$3,410	\$113,651	\$266.37	\$3,196	\$106,548

Schedule RDC-3
(page 2 of 2)

Income Needed to Achieve Affordability at Varying Levels of Total Bill Discount (4.0% affordable burden)									
Usage (kWh)	15%			20%			25%		
	Monthly bill after discount	Annual bill after discount	Income for Affordability	Monthly bill after discount	Annual bill after discount	Income for Affordability	Monthly bill after discount	Annual bill after discount	Income for Affordability
150	\$27.69	\$332	\$8,308	\$26.06	\$313	\$7,819	\$24.43	\$293	\$7,330
300	\$49.93	\$599	\$14,978	\$46.99	\$564	\$14,097	\$44.05	\$529	\$13,216
400	\$64.75	\$777	\$19,425	\$60.94	\$731	\$18,282	\$57.13	\$686	\$17,140
500	\$79.56	\$955	\$23,869	\$74.88	\$899	\$22,465	\$70.20	\$842	\$21,061
600	\$94.39	\$1,133	\$28,316	\$88.84	\$1,066	\$26,651	\$83.28	\$999	\$24,985
700	\$109.21	\$1,311	\$32,763	\$102.79	\$1,233	\$30,836	\$96.36	\$1,156	\$28,909
1200	\$183.32	\$2,200	\$54,995	\$172.53	\$2,070	\$51,760	\$161.75	\$1,941	\$48,525
2000	\$301.89	\$3,623	\$90,566	\$284.13	\$3,410	\$85,238	\$266.37	\$3,196	\$79,911

Schedule RDC-4

Average Income by Number of Rooms or Number of Bedrooms in Housing Unit Billed for Electricity (Rhode Island) American Community Survey (2016: 5-year data)		
Number of Rooms / Bedrooms	Average Income by Number of Rooms / Number of Bedrooms	
	Rooms	Bedrooms
0	---	\$54,020
1	\$50,251	\$48,323
2	\$41,846	\$63,468
3	\$51,331	\$92,375
4	\$57,878	\$123,613
5 /a/	\$70,509	\$136,336
6	\$85,665	
7	\$108,791	
8	\$128,956	
9 /b/	\$147,329	
Total	\$87,651	\$87,651
NOTES:		
/a/ For bedrooms, data is top-coded at 5 bedrooms.		
/b/ For rooms, data is top coded at 9 rooms.		

Schedule RDC-5

Distribution of Housing Units by Income and Housing Unit Size (Number of Bedrooms): Rhode Island (billed for electricity)									
	\$1 - \$10,000	\$10 - \$20,000	\$20 - \$30,000	\$30 - \$40,000	\$40 - \$50,000	\$50 - \$75,000	\$75 - \$150,000	\$150 - \$250,000	\$250,000 or more
No bedroom	2.1%	2.0%	2.0%	0.5%	0.9%	0.5%	0.5%	0.3%	0.5%
1 bedroom	19.2%	15.3%	9.9%	9.6%	6.9%	6.6%	2.9%	1.0%	1.7%
2 bedrooms	38.3%	36.6%	39.5%	36.4%	35.2%	29.3%	20.0%	10.1%	8.1%
3 bedrooms	35.2%	38.4%	39.7%	43.7%	43.7%	50.0%	55.3%	56.1%	43.6%
4 bedrooms	4.5%	6.9%	8.4%	8.6%	11.5%	11.9%	18.7%	28.7%	38.8%
5 or more bedrooms	0.8%	0.8%	0.4%	1.2%	1.7%	1.7%	2.5%	3.8%	7.3%
Total bedrooms	100%	100%	100%	100%	100%	100%	100%	100%	100%
American Community Survey (2016: 5-year data)									

Schedule RDC-6

Number of Bedrooms by Tenure (Rhode Island)		
Household Income	Percent Home Owner	Percent Tenant
Less than \$5,000	1.2%	6.6%
\$5,000 - \$9,999	1.1%	8.9%
\$10,000 - \$14,999	2.3%	10.3%
\$15,000 - \$19,999	2.5%	7.9%
\$20,000 - \$24,999	2.9%	7.7%
\$25,000 - \$34,999	6.7%	12.4%
\$35,000 - \$49,999	10.7%	14.2%
\$50,000 - \$74,999	17.5%	15.5%
\$75,000 - \$99,999	16.0%	8.0%
\$100,000 - \$149,999	21.2%	5.9%
\$150,000 or more	17.8%	2.6%
Total	100%	100%
SOURCE: American Community Survey (2016: 5-year data) (Table B25118).		

Appendix A: Colton Curriculum Vitae

ROGER D. COLTON

BUSINESS ADDRESS:

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Public Finance and General Economics
34 Warwick Road, Belmont, MA 02478
617-484-0597 (voice) *** 617-484-0594 (fax)
roger@fsconline.com (e-mail)
http://www.fsconline.com (www address)

EDUCATION:

J.D. (Order of the Coif), University of Florida (1981)

M.A. (Economics), McGregor School, Antioch University (1993)

B.A. Iowa State University (1975) (journalism, political science, speech)

PROFESSIONAL EXPERIENCE:

Fisher, Sheehan and Colton, Public Finance and General Economics: 1985 - present.

As a co-founder of this economics consulting partnership, Colton provides services in a variety of areas, including: regulatory economics, poverty law and economics, public benefits, fair housing, community development, energy efficiency, utility law and economics (energy, telecommunications, water/sewer), government budgeting, and planning and zoning.

Colton has testified in state and federal courts in the United States and Canada, as well as before regulatory and legislative bodies in more than three dozen states. He is particularly noted for creative program design and implementation within tight budget constraints.

Commentator: Belmont Citizen-Herald: 2014 – present

Author of biweekly “Community Conversations” column for Belmont Citizen-Herald, weekly newspaper (June 2014 to present).

Host of biweekly “Community Conversations” podcast, Belmont Citizen-Herald, BMC Podcast Network (October 2016 to present)

National Consumer Law Center (NCLC): 1986 - 1994

As a staff attorney with NCLC, Colton worked on low-income energy and utility issues. He pioneered cost-justifications for low-income affordable energy rates, as well as developing models to quantify the non-energy benefits (*e.g.*, reduced credit and collection costs, reduced working capital) of low-income energy efficiency. He designed and implemented low-income affordable rate and fuel assistance programs across the country. Colton was

charged with developing new practical and theoretical underpinnings for solutions to low-income energy problems.

Community Action Research Group (CARG): 1981 - 1985

As staff attorney for this non-profit research and consulting organization, Colton worked primarily on energy and utility issues. He provided legal representation to low-income persons on public utility issues; provided legal and technical assistance to consumer and labor organizations; and provided legal and technical assistance to a variety of state and local governments nationwide on natural gas, electric, and telecommunications issues. He routinely appeared as an expert witness before regulatory agencies and legislative committees regarding energy and telecommunications issues.

PROFESSIONAL AFFILIATIONS:

Columnist: Belmont Citizen-Herald
Producer: Belmont Media Center: BMC Podcast Network
Newscaster: Belmont Media Center: Belmont Journal
Member: Belmont Town Meeting
Vice-chair: Belmont Light General Manager Screening Committee
Chair: Belmont Goes Solar
Coordinator: BelmontBudget.org (Belmont's Community Budget Forum)
Coordinator: Belmont Affordable Shelter Fund (BASF)
Chair: Belmont Solar Initiative Oversight Committee
Member: City of Detroit Blue Ribbon Panel on Water Affordability
Chair: Belmont Energy Committee
Member: Massachusetts Municipal Energy Group (Mass Municipal Association)
Past Chair: Housing Work Group, Belmont (MA) Comprehensive Planning Process
Past Member: Board of Directors, Belmont Housing Trust, Inc.
Past Chair: Waverley Square Fire Station Re-use Study Committee (Belmont MA)
Past Member: Belmont (MA) Energy and Facilities Work Group
Past Member: Belmont (MA) Uplands Advisory Committee
Past Member: Advisory Board: Fair Housing Center of Greater Boston.
Past Chair: Fair Housing Committee, Town of Belmont (MA)
Past Member: Aggregation Advisory Committee, New York State Energy Research and Development Authority.
Past Member: Board of Directors, Vermont Energy Investment Corporation.
Past Member: Board of Directors, National Fuel Funds Network
Past Member: Board of Directors, Affordable Comfort, Inc. (ACI)
Past Member: National Advisory Committee, U.S. Department of Health and Human Services, Administration for Children and Families, Performance Goals for Low-Income Home Energy Assistance.
Past Member: Editorial Advisory Board, International Library, *Public Utility Law Anthology*.
Past Member: ASHRAE Guidelines Committee, GPC-8, *Energy Cost Allocation of Comfort HVAC Systems for Multiple Occupancy Buildings*

Past Member: National Advisory Committee, U.S. Department of Housing and Urban Development, Calculation of Utility Allowances for Public Housing.

Past Member: National Advisory Board: Energy Financing Alternatives for Subsidized Housing, New York State Energy Research and Development Authority.

PROFESSIONAL ASSOCIATIONS:

National Association of Housing and Redevelopment Officials (NAHRO)

National Society of Newspaper Columnists (NSNC)

Association for Enterprise Opportunity (AEO)

Iowa State Bar Association

Energy Bar Association

Association for Institutional Thought (AFIT)

Association for Evolutionary Economics (AEE)

Society for the Study of Social Problems (SSSO)

International Society for Policy Studies

Association for Social Economics

BOOKS

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Colton, *et al.*, *Tenants' Rights to Utility Service*, National Consumer Law Center: Boston (1994).

Colton, *The Regulation of Rural Electric Cooperatives*, National Consumer Law Center: Boston (1992).

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Colton (2009). *Mirror, Mirror on the Wall: How Well Does Belmont's Town Meeting Reflect the Community at Large*, prepared for Fisher, Sheehan & Colton, Public Finance and General Economics, Belmont (MA).

Colton (2009). *An Outcomes Planning Approach to Serving TPU Low-Income Customers*, prepared for Tacoma Public Utilities, Tacoma (WA).

Colton (2009). *An Outcome Evaluation of Indiana's Low-Income Rate Affordability Programs: 2008 – 2009*, prepared for Citizens Gas and Coke Utility, Northern Indiana Public Service Company, Vectren Energy Delivery Indianapolis (IN).

Roger Colton (2009). *The Earned Income Tax Credit (EITC) as "Energy Assistance" in Pennsylvania*, prepared for Pennsylvania Utility Law Project (PULP).

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Colton (2009). *Energy Efficient Utility Allowances as a Usage Reduction Tool in Pennsylvania*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *Home Energy Consumption Expenditures by Income (Pennsylvania)*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *The Contribution of Utility Bills to the Unaffordability of Low-Income Rental Housing in Pennsylvania*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *The Integration of Federal LIHEAP Benefits with Ratepayer-Funded Percentage of Income Payment Programs (PIPPs): Legal and Policy Questions Involving the Distribution of Benefits*, prepared for Pennsylvania Office of Consumer Advocate, Harrisburg (PA).

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Colton (2008). *Public Health Outcomes Associated with Energy Poverty: An Analysis of Behavioral Risk Factor Surveillance System (BRFSS) Data from Iowa*, prepared for Iowa Department of Human Rights.

Colton (2008). *Indiana Billing and Collection Reporting: Natural Gas and Electric Utilities: 2007*, prepared for Coalition to Keep Indiana Warm.

Colton (2008). *Inverted Block Tariffs and Universal Lifeline Rates: Their Use and Usability in Delivering Low-Income Electric Rate Relief*, prepared for Hydro-Quebec.

Colton (2007). *Best Practices: Low-Income Affordability Programs, Articulating and Applying Rating Criteria*, prepared for Hydro-Quebec.

Colton (2007). *An Outcome Evaluation of Indiana's Low-Income Rate Affordability Programs*, performed for Citizens Gas & Coke Utility, Vectren Energy Delivery, Northern Indiana Public Service Company.

Colton (2007). *A Multi-state Study of Low-Income Programs*, in collaboration with Apprise, Inc., prepared for multiple study sponsors.

Colton (2007). *The Law and Economics of Determining Hot Water Energy Use in Calculating Utility Allowances for Public and Assisted Housing*.

Colton (2007). *Comments of Belmont Housing Trust on Energy Conservation Standards for Residential Furnaces and Boilers*, Belmont Housing Trust (Belmont MA).

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Colton (2006). *Home Energy Affordability in Maryland: Necessary Regulatory and Legislative Actions*, prepared for the Maryland Office of Peoples Counsel.

Colton (2006). *A Ratepayer Funded Home Energy Affordability Program for Low-Income Households: A Universal Service Program for Ontario's Energy Utilities*, prepared for the Low-Income Energy Network (Toronto).

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Colton (2005). *Impact Evaluation of NIPSCO Winter Warmth Program*, prepared for Northern Indiana Public Service Company.

Colton (2005). *A Water Affordability Program for the Detroit Water and Sewer Department*, prepared for Michigan Poverty Law Center.

Colton (2004). *Paid but Unaffordable: The Consequences of Energy Poverty in Missouri*, prepared for the National Low-Income Home Energy Consortium.

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COLTON EXPERIENCE AS EXPERT WITNESS

1988 – PRESENT

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O UGI-Electric	Office of Consumer Advocate	R-2017-2640058	Customer service / Low-income cost recovery	Pennsylvania	18
I/M/O Philadelphia Water Department requested rates for 2019 - 2021	Philadelphia Public Advocate	None	Water rate:: low-income program cost recovery / public fire protection / storm water charge exemptions	Philadelphia	18
I/M/O Commonwealth Edison Prepayment Meters	Illinois Office of Attorney General	17-0837	Electric customer service	Illinois	18
I/M/O 2018/2020 Statewide Energy Efficiency Plan	The Way Home / New Hampshire Legal Assistance	DE 17-136	Non-energy impacts / Low-income energy efficiency	New Hampshire	17
I/M/O DTE (electric) / gas EWR (energy waste reduction) plan	Sierra Club / Natural Resources Defense Council	Case No. U-18262	Low-income energy efficiency	Michigan	17
I/M/O DTE (electric)	Sierra Club / Natural Resources Defense Council	Case No. U-18255	Low-income energy efficiency	Michigan	17
I/M/O Merger of AltaGas and WGL Holdings	Office of People's Counsel	Case No. 9449	Low-income / charitable contributions / community impacts	Maryland	17
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-2017-2587783	Low-income / rate design	Pennsylvania	17
I/M/O UGI-Peoples Natural Gas	Office of Consumer Advocate	R-2016-2580030	Low-income	Pennsylvania	17
I/M/O Peoples Natural Gas	Office of Attorney General	16-0376	Low-income	Illinois	17
I/M/O UGI-PNG	Office of Consumer Advocate	R-2016-2580030	Rate design/EE&CP/Low-Income	Pennsylvania	17

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I/M/O Pacific Gas and Electric Company	TURN	15-09-001	Electric bill affordability	California	16
I/M/O FirstEnergy Companies (Met Ed, Penelec, PennPower, West Penn Power)	Office of Consumer Advocate	R-2016-2537349, R-2016-2537352, R-2016-2537355, R-2016-2537359 (consolidated)	Rate design / low-income program cost recovery	Pennsylvania	16
I/M/O PGW Demand Side Management	Office of Consumer Advocate	P-2014-2459362	Demand Side Management	Pennsylvania	16
I/M/O Columbia Gas of Pennsylvania	Office of Consumer Advocate	R-2016-2529660	Rate design / customer service / Low-income program cost recovery	Pennsylvania	16
I/M/O Philadelphia Water Department	Public Advocate, City of Philadelphia	N/A	Low-income program design	Philadelphia	16
I/M/O UGI Gas	Office of Consumer Advocate	M-2015-2518438	Rate design, energy efficiency, customer service	Pennsylvania	16
Keener v. Consumers Energy	Keener (plaintiff)	15-146908-NO	Collections	State District Ct--MI	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, PECO Energy	Office of Consumer Advocate	M-2015-2515691	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, Duquesne Light Company	Office of Consumer Advocate	M-2015-2515375	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, FirstEnergy Companies (Metropolitan Edison, Penelec, Penn Power, West Penn Power)	Office of Consumer Advocate	M-2015-2514767; M-2015-2514768; M-2015-2514769; M-2015-2514772	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, PPL Electric Corporation	Office of Consumer Advocate	M-2015-251-2515642	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O BC Hydro	Public Interest Action Centre	N/A	Rate design / terms and conditions / energy efficiency	British Columbia	15 - 16

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Augustin v. Philadelphia Gas Works	Augustin (Plaintiffs)	2:14—cv-04238	Constitutional notice issues	U.S. District Court (E.D. PA)	15
I/M/O PPL Utilities	Office of Consumer Advocate	R-2015-2469275	Rate design / customer service	Pennsylvania	15
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2015-2468056	Rate design / customer service	Pennsylvania	15
I/M/O PECO Energy Company	Office of Consumer Advocate	R-2015-2468981	Rate design / customer service	Pennsylvania	15
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	P-2014-2459362	Demand Side Management	Pennsylvania	15
I/M/O SBG Management v. Philadelphia Gas Works	SBG Management	C-2012-2308454	Customer service	Pennsylvania	15
I/M/O Manitoba Hydro	Resource Action Centre		Low-income affordability	Manitoba	15
I/M/O FirstEnergy Companies (Met Ed, WPP, Penelec, Penn Power)	Office of Consumer Advocate	R-2014-2428742 (8743, 8744, 8745)	Rate design / customer service / storm communications	Pennsylvania	14
I/M/O Xcel Energy Company	Energy CENTS Coalition	E002/GR-13-868	Rate design / energy conservation	Minnesota	14
I/M/O Peoples Gas Light and Coke Company / North Shore Gas	Office of Attorney General	14-0224 / 14--0225	Rate design / customer service	Illinois	14
I/M/O Columbia Gas of Pennsylvania	Office of Consumer Advocate	R-2014-2406274	Rate design / customer service	Pennsylvania	14
I/M/O Duquesne Light Company Rates	Office of Consumer Advocate	R-2013-2372129	Rate design / customer service / storm communications	Pennsylvania	13
I/M/O Duquesne Light Company Universal Service	Office of Consumer Advocate	M-2013-2350946	Low-income program design	Pennsylvania	13
I/M/O Peoples-TWP	Office of Consumer Advocate	P-2013-2355886	Low-income program design / rate design	Pennsylvania	13
I/M/O PECO CAP Shopping Plan	Office of Consumer Advocate	P-2013-2283641	Retail shopping	Pennsylvania	13
I/M/O PECO Universal Service Programs	Office of Consumer Advocate	M-201202290911	Low-income program design	Pennsylvania	13

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I/M/O Privacy of Consumer Information	Legal Services Advocacy Project	CI-12-1344	Privacy of SSNs & consumer information	Minnesota	13
I/M/O Atlantic City Electric Company	Division of Rate Counsel	BPU-12121071	Customer service / Storm communications	New Jersey	13
I/M/O Jersey Central Power and Light Company	Division of Rate counsel	BPU-12111052	Customer service / Storm communications	New Jersey	13
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2012-2321748	Universal service	Pennsylvania	13
I/M/O Public Service Company of Colorado Low-Income Program Design	Xcel Energy d/b/a PSCo	12A--EG	Low-income program design / cost recovery	Colorado	12
I/M/O Philadelphia Water Department.	Philadelphia Public Advocate	No. Docket No.	Customer service	Philadelphia	12
I/M/O PPL Electric Power Corporation	Office of Consumer Advocate	R-2012-2290597	Rate design / low-income programs	Pennsylvania	12
I/M/O Peoples Natural Gas Company	Office of Consumer Advocate	R-2012-2285985	Rate design / low-income programs	Pennsylvania	12
I/M/O Merger of Constellation/Exelon	Office of Peoples Counsel	CASE 9271	Customer Service	Maryland	11
I/M/O Duke Energy Carolinas	North Carolina Justice Center	E-7, SUB-989	Customer service/low-income rates	North Carolina	11
Re. Duke Energy/Progress Energy merger	NC Equal Justice foundation	E-2, SUB 998	Low-income merger impacts	North Carolina	11
Re. Atlantic City Electric Company	Division of Rate Counsel	ER1186469	Customer Service	New Jersey	11
Re. Camelot Utilities	Office of Attorney General	11-0549	Rate shock	Illinois	11
Re. UGI—Central Penn Gas	Office of Consumer Advocate	R-2010-2214415	Low-income program design/cost recovery	Pennsylvania	11
Re. National Fuel Gas	Office of Consumer Advocate	M-2010-2192210	Low-income program cost recovery	Pennsylvania	11
Re. Philadelphia Gas Works	Office of Consumer Advocate	P-2010-2178610	Program design	Pennsylvania	11
Re. PPL	Office of Consumer Advocate	M-2010-2179796	Low-income program cost recovery	Pennsylvania	11
Re. Columbia Gas Company	Office of Consumer Advocate	R-2010-2215623	Rate design/Low-income program cost recovery	Pennsylvania	11
Crowder et al. v. Village of Kauffman	Crowder (plaintiffs)	3:09-CV-02181-M	Section 8 utility allowances	Texas Fed Court	11
I/M/O Peoples Natural Gas Company.	Office of Consumer Advocate	T-2010-220172	Low-income program design/cost recovery	Pennsylvania	11

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I/M/O Commonwealth Edison	Office of Attorney General	10-0467	Rate design/revenue requirement	Illinois	10
I/M/O National Grid d/b/a Energy North	NH Legal Assistance	DG-10-017	Rate design/revenue requirement	New Hampshire	10
I/M/O Duquesne Light Company	Office of Consumer Advocate	R-2010-2179522	Low-income program cost recovery	Pennsylvania	10
I/M/O Avista Natural Gas Corporation	The Opportunity Council	UE-100467	Low-income assistance/rate design	Washington	10
I/M/O Manitoba Hydro	Resource Conservation Manitoba (RCM)	CASE NO. 17/10	Low-income program design	Manitoba	10
I/M/O TW Phillips	Office of Consumer Advocate	R-2010-2167797	Low-income program cost recovery	Pennsylvania	10
I/M/O PECO Energy—Gas Division	Office of Consumer Advocate	R-2010-2161592	Low-income program cost recovery	Pennsylvania	10
I/M/O PECO Energy—Electric Division	Office of Consumer Advocate	R-2010-2161575	Low-income program cost recovery	Pennsylvania	10
I/M/O PPL Energy	Office of Consumer Advocate	R-2010-2161694	Low-income program cost recovery	Pennsylvania	10
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2009-2149262	Low-income program design/cost recovery	Pennsylvania	10
I/M/O Atlantic City Electric Company	Office of Rate Council	R09080664	Customer service	New Jersey	10
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-2009-2139884	Low-income program cost recovery	Pennsylvania	10
I/M/O Philadelphia Gas Works	Office of Consumer Advocates	R-2009-2097639	Low-income program design	Pennsylvania	10
I/M/O Xcel Energy Company	Xcel Energy Company (PSCo)	085-146G	Low-income program design	Colorado	09
I/M/O Atmos Energy Company	Atmos Energy Company	09AL-507G	Low-income program funding	Colorado	09
I/M/O New Hampshire CORE Energy Efficiency Programs	New Hampshire Legal Assistance	D-09-170	Low-income efficiency funding	New Hampshire	09
I/M/O Public Service Company of New Mexico (electric)	Community Action of New Mexico	08-00273-UT	Rate Design	New Mexico	09
I/M/O UGI Pennsylvania Natural Gas Company (PNG)	Office of Consumer Advocate	R-2008-2079675	Low-income program	Pennsylvania	09
I/M/O UGI Central Penn Gas Company (CPG)	Office of Consumer Advocate	R-2008-2079660	Low-income program	Pennsylvania	09
I/M/O PECO Electric (provider of last resort)	Office of Consumer Advocate	R-2008-2028394	Low-income program	Pennsylvania	08

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I/M/O Equitable Gas Company	Office of Consumer Advocate	R-2008-2029325	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Office of Ohio Consumers' Counsel	08-072-GA-AIR	Rate design	Ohio	08
I/M/O Dominion East Ohio Gas Company	Office of Ohio Consumers' Counsel	07-829-GA-AIR	Rate design	Ohio	08
I/M/O Vectren Energy Delivery Company	Office of Ohio Consumers' Counsel	07-1080-GA-AIR	Rate design	Ohio	08
I/M/O Public Service Company of North Carolina	NC Department of Justice	G-5, SUB 495	Rate design	North Carolina	08
I/M/O Piedmont Natural Gas Company	NC Department of Justice	G-9, SUB 550	Rate design	North Carolina	08
I/M/O National Grid	New Hampshire Legal Assistance	DG-08-009	Low-income rate assistance	New Hampshire	08
I/M/O EmPower Maryland	Office of Peoples Counsel	PC-12	Low-income energy efficiency	Maryland	08
I/M/O Duke Energy Carolinas Save-a-Watt Program	NC Equal Justice Foundation	E-7, SUB 831	Low-income energy efficiency	North Carolina	08
I/M/O Zia Natural Gas Company	Community Action New Mexico	08-00036-UT	Low-income/low-use rate design	New Mexico	08
I/M/O Universal Service Fund Support for the Affordability of Local Rural Telecomm Service	Office of Consumer Advocate	I-0004010	Telecomm service affordability	Pennsylvania	08
I/M/O Philadelphia Water Department	Public Advocate	No Docket No.	Credit and Collections	Philadelphia	08
I/M/O Portland General Electric Company	Community Action--Oregon	UE-197	General rate case	Oregon	08
I/M/O Philadelphia Electric Company (electric)	Office of Consumer Advocate	M-00061945	Low-income program	Pennsylvania	08
I/M/O Philadelphia Electric Company (gas)	Office of Consumer Advocate	R-2008-2028394	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2008-2011621	Low-income program	Pennsylvania	08
I/M/O Public Service Company of New Mexico	Community Action New Mexico	08-00092-UT	Fuel adjustment clause	New Mexico	08
I/M/O Petition of Direct Energy for Low-Income Aggregation	Office of Peoples Counsel	CASE 9117	Low-income electricity aggregation	Maryland	07
I/M/O Office of Consumer Advocate et al. v. Verizon and Verizon North	Office of Consumer Advocate	C-20077197	Lifeline telecommunications rates	Pennsylvania	07
I/M/O Pennsylvania Power Company	Office of Consumer Advocate	P-00072437	Low-income program	Pennsylvania	07

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O National Fuel Gas Distribution Corporation	Office of Consumer Advocate	M-00072019	Low-income program	Pennsylvania	07
I/M/O Public Service of New Mexico--Electric	Community Action New Mexico	07-00077-UT	Low-income programs	New Mexico	07
I/M/O Citizens Gas/NIPSCO/Vectren for Universal Service Program	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	CASE 43077	Low-income program design	Indiana	07
I/M/O PPL Electric	Office of Consumer Advocate	R-00072155	Low-income program	Pennsylvania	07
I/M/O Section 15 Challenge to NSPI Rates	Energy Affordability Coalition	P-886	Discrimination in utility regulation	Nova Scotia	07
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-00061931	Low-income programs / credit and collections	Pennsylvania	07
I/M/O Equitable Gas Company	Office of Consumer Advocate	M-00061959	Low-income program	Pennsylvania	07
I/M/O Public Service Company of New Mexico	Community Action of New Mexico	Case No. 06-000210-UT	Late charges / winter moratorium / decoupling	New Mexico	06
I/M?O Verizon Massachusetts	ABCD	Case NO. DTE 06-26	Late charges	Massachusetts	06
I/M/O Section 11 Proceeding, Energy Restructuring	Office of Peoples Counsel	PC9074	Low-income needs and responses	Maryland	06
I/M/O Citizens Gas/NIPSCO/Vectren for Univ. Svc. Program	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	Case No. 43077	Low-income program design	Indiana	06
I/M/O Public Service Co. of North Carolina	North Carolina Attorney General/Dept. of Justice	G-5, Sub 481	Low-income energy usage	North Carolina	06
I/M/O Electric Assistance Program	New Hampshire Legal Assistance	DE 06-079	Electric low-income program design	New Hampshire	06
I/M/O Verizon Petition for Alternative Regulation	New Hampshire Legal Assistance	DM-06-072	Basic local telephone service	New Hampshire	06
I/M/O Pennsylvania Electric Co/Metropolitan Edison Co.	Office of Consumer Advocate	N/A	Universal service cost recovery	Pennsylvania	06
I/M/O Duquesne Light Company	Office of Consumer Advocates	R-00061346	Universal service cost recovery	Pennsylvania	06
I/M/O Natural Gas DSM Planning	Low-Income Energy Network	EB-2006-0021	Low-income gas DSM program.	Ontario	06
I/M/O Union Gas Co.	Action Centre for Tenants Ontario	EB-2005-0520	Low-income program design	Ontario	06

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
	(ACTO)				
I/M/O Public Service of New Mexico merchant plant	Community Action New Mexico	05-00275-UT	Low-income energy usage	New Mexico	06
I/M/O Customer Assistance Program design and cost recovery	Office of Consumer Advocate	M-00051923	Low-income program design	Pennsylvania	06
I/M/O NIPSCO Proposal to Extend Winter Warmth Program	Northern Indiana Public Service Company	Case 42927	Low-income energy program evaluation	Indiana	05
I/M/O Piedmont Natural Gas	North Carolina Attorney General/Dept. of Justice	G-9, Sub 499	Low-income energy usage	North Carolina	05
I/M/O PSEG merger with Exelon Corp.	Division of Ratepayer Advocate	EM05020106	Low-income issues	New Jersey	05
Re. Philadelphia Water Department	Public Advocate	No docket number	Water collection factors	Philadelphia	05
I/M/O statewide natural gas universal service program	New Hampshire Legal Assistance	N/A	Universal service	New Hampshire	05
I/M/O Sub-metering requirements for residential rental properties	Tenants Advocacy Centre of Ontario	EB-2005-0252	Sub-metering consumer protections	Ontario	05
I/M/O National Fuel Gas Distribution Corp.	Office of Consumer Advocate	R-00049656	Universal service	Pennsylvania	05
I/M/O Philadelphia Gas Works (PGW)	Office of Consumer Advocate	R-00049157	Low-income and residential collections	Pennsylvania	04
I/M/O Nova Scotia Power, Inc.	Dalhousie Legal Aid Service	NSUARB-P-881	Universal service	Nova Scotia	04
I/M/O Lifeline Telephone Service	National Ass'n State Consumer Advocates (NASUCA)	WC 03-109	Lifeline rate eligibility	FCC	04
Mackay v. Verizon North	Office of Consumer Advocate	C20042544	Lifeline rates—vertical services	Pennsylvania	04
I/M/O PECO Energy	Office of Consumer Advocate	N/A	Low-income rates	Pennsylvania	04
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	P00042090	Credit and collections	Pennsylvania	04
I/M/O Citizens Gas & Coke/Vectren	Citizens Action Coalition of Indiana	Case 42590	Universal service	Indiana	04
I/M/O PPL Electric Corporation	Office of Consumer Advocate	R00049255	Universal service	Pennsylvania	04
I/M/O Consumers New Jersey Water Company	Division of Ratepayer Advocate	N/A	Low-income water rate	New Jersey	04

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8982	Low-income gas rate	Maryland	04
I/M/O National Fuel Gas	Office of Consumer Advocate	R-00038168	Low-income program design	Pennsylvania	03
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8959	Low-income gas rate	Maryland	03
Golden v. City of Columbus	Helen Golden	C2-01-710	ECOA disparate impacts	Ohio	02
Huegel v. City of Easton	Phyllis Huegel	00-CV-5077	Credit and collection	Pennsylvania	02
I/M/O Universal Service Fund	Public Utility Commission staff	N/A	Universal service funding	New Hampshire	02
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	M-00021612	Universal service	Pennsylvania	02
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8920	Rate design	Maryland	02
I/M/O Consumers Illinois Water Company	Illinois Citizens Utility Board	02-155	Credit and collection	Illinois	02
I/M/O Public Service Electric & Gas Rates	Division of Ratepayer Advocate	GR01050328	Universal service	New Jersey	01
I/M/O Pennsylvania-American Water Company	Office of Consumer Advocate	R-00016339	Low-income rates and water conservation	Pennsylvania	01
I/M/O Louisville Gas & Electric Prepayment Meters	Kentucky Community Action Association	200-548	Low-income energy	Kentucky	01
I/M/O NICOR Budget Billing Plan Interest Charge	Cook County State's Attorney	01-0175	Rate Design	Illinois	01
I/M/O Rules Re. Payment Plans for High Natural Gas Prices	Cook County State's Attorney	01-0789	Budget Billing Plans	Illinois	01
I/M/O Philadelphia Water Department	Office of Public Advocate	No docket number	Credit and collections	Philadelphia	01
I/M/O Missouri Gas Energy	Office of Peoples Counsel	GR-2001-292	Low-income rate relief	Missouri	01
I/M/O Bell Atlantic--New Jersey Alternative Regulation	Division of Ratepayer Advocate	T001020095	Telecommunications universal service	New Jersey	01
I/M/O Entergy Merger	Low-Income Intervenors	2000-UA925	Consumer protections	Mississippi	01
I/M/O T.W. Phillips Gas and Oil Co.	Office of Consumer Advocate	R00994790	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O Peoples Natural Gas Company	Office of Consumer Advocate	R-00994782	Ratemaking of universal service costs.	Pennsylvania	00

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O UGI Gas Company	Office of Consumer Advocate	R-00994786	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O PFG Gas Company	Office of Consumer Advocate	R00994788	Ratemaking of universal service costs.	Pennsylvania	00
Armstrong v. Gallia Metropolitan Housing Authority	Equal Justice Foundation	2:98-CV-373	Public housing utility allowances	Ohio	00
I/M/O Bell Atlantic--New Jersey Alternative Regulation	Division of Ratepayer Advocate	T099120934	Telecommunications universal service	New Jersey	00
I/M/O Universal Service Fund for Gas and Electric Utilities	Division of Ratepayer Advocate	EX00200091	Design and funding of low-income programs	New Jersey	00
I/M/O Consolidated Edison Merger with Northeast Utilities	Save Our Homes Organization	DE 00-009	Merger impacts on low-income	New Hampshire	00
I/M/O UtiliCorp Merger with St. Joseph Light & Power	Missouri Dept. of Natural Resources	EM2000-292	Merger impacts on low-income	Missouri	00
I/M/O UtiliCorp Merger with Empire District Electric	Missouri Dept. of Natural Resources	EM2000-369	Merger impacts on low-income	Missouri	00
I/M/O PacifiCorp	The Opportunity Council	UE-991832	Low-income energy affordability	Washington	00
I/M/O Public Service Co. of Colorado	Colorado Energy Assistance Foundation	99S-609G	Natural gas rate design	Colorado	00
I/M/O Avista Energy Corp.	Spokane Neighborhood Action Program	UE9911606	Low-income energy affordability	Washington	00
I/M/O TW Phillips Energy Co.	Office of Consumer Advocate	R-00994790	Universal service	Pennsylvania	00
I/M/O PECO Energy Company	Office of Consumer Advocate	R-00994787	Universal service	Pennsylvania	00
I/M/O National Fuel Gas Distribution Corp.	Office of Consumer Advocate	R-00994785	Universal service	Pennsylvania	00
I/M/O PFG Gas Company/Northern Penn Gas	Office of Consumer Advocate	R-00005277	Universal service	Pennsylvania	00
I/M/O UGI Energy Company	Office of Consumer Advocate	R-00994786	Universal service	Pennsylvania	00
Re. PSCO/NSP Merger	Colorado Energy Assistance Foundation	99A-377EG	Merger impacts on low-income	Colorado	99 - 00
I/M/O Peoples Gas Company	Office of Consumer Advocate	R-00994782	Universal service	Pennsylvania	99

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-00994781	Universal service	Pennsylvania	99
I/M/O PG Energy Company	Office of Consumer Advocate	R-00994783	Universal service	Pennsylvania	99
I/M/O Equitable Gas Company	Office of Consumer Advocate	R-00994784	Universal service	Pennsylvania	99
Allerruzzo v. Klarchek	Barlow Allerruzzo	N/A	Mobile home fees and sales	Illinois	99
I/M/O Restructuring New Jersey's Natural Gas Industry	Division of Ratepayer Advocate	GO99030123	Universal service	New Jersey	99
I/M/O Bell Atlantic Local Competition	Public Utility Law Project	P-00991648	Lifeline telecommunications rates	Pennsylvania	99
I/M/O Merger Application for SBC and Ameritech Ohio	Edgemont Neighborhood Association	N/A	Merger impacts on low-income consumers	Ohio	98 - 99
Davis v. American General Finance	Thomas Davis	N/A	Damages in "loan flipping" case	Ohio	98 - 99
Griffin v. Associates Financial Service Corp.	Earlie Griffin	N/A	Damages in "loan flipping" case	Ohio	98 - 99
I/M/O Baltimore Gas and Electric Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8794	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Delmarva Power and Light Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8795	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Electric Power Co. Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8796	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Edison Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8797	Consumer protection/basic generation service	Maryland	98 - 99
VMHOA v. LaPierre	Vermont Mobile Home Owners Association	N/A	Mobile home tying	Vermont	98
Re. Restructuring Plan of Virginia Electric Power	VMH Energy Services, Inc.	PUE960296	Consumer protection/basic generation service	Virginia	98
Mackey v. Spring Lake Mobile Home Estates	Timothy Mackey	N/A	Mobile home fees	State ct: Illinois	98
Re. Restructuring Plan of Atlantic City Electric	New Jersey Division of Ratepayer Advocate	E097070457	Low-income issues	New Jersey	97-98

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Re. Restructuring Plan of Jersey Central Power & Light	New Jersey Division of Ratepayer Advocate	E097070466	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Public Service Electric & Gas	New Jersey Division of Ratepayer Advocate	E097070463	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Rockland Electric	New Jersey Division of Ratepayer Advocate	E09707466	Low-income issues	New Jersey	97-98
Appleby v. Metropolitan Dade County Housing Agency	Legal Services of Greater Miami	N/A	HUD utility allowances	Fed. court: So. Florida	97 - 98
Re. Restructuring Plan of PECO Energy Company	Energy Coordinating Agency of Philadelphia	R-00973953	Universal service	Pennsylvania	97
Re. IES Industries Merger	Iowa Community Action Association	SPU-96-6	Low-income issues	Iowa	97
Re. New Hampshire Electric Restructuring	NH Comm. Action Ass'n	N/A	Wires charge	New Hampshire	97
Re. Merger of Atlantic City Electric and Connectiv	Division of Ratepayer Advocate	EM97020103	Low-income	New Jersey	97
Re. Connecticut Power and Light	City of Hartford	92-11-11	Low-income	Connecticut	97
Re. Comprehensive Review of RI Telecomm Industry	Consumer Intervenors	1997	Consumer protections	Rhode Island	97
Re. Natural Gas Competition in Wisconsin	Wisconsin Community Action Association	N/A	Universal service	Wisconsin	96
Re. Baltimore Gas and Electric Merger	Maryland Office of Peoples Counsel	CASE NO. 8725	Low-income issues	Maryland	96
Re. Northern States Power Merger	Energy Cents Coalition	E-002/PA-95-500	Low-income issues	Minnesota	96
Re. Public Service Co. of Colorado Merger	Colorado Energy Assistance Foundation	N/A	Low-income issues	Colorado	96
Re. Massachusetts Restructuring Regulations	Fisher, Sheehan & Colton	DPU-96-100	Low-income issues/energy efficiency	Massachusetts	96

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O PGW FY1996 Tariff Revisions	Philadelphia Public Advocate	No Docket No.	Credit and collection / customer service	Philadelphia	96
Re. FERC Merger Guidelines	National Coalition of Low-Income Groups	RM-96-6-000	Low-income interests in mergers	Washington D.C.	96
Re. Joseph Keliikuli III	Joseph Keliikuli III	N/A	Damages from lack of homestead	Honolulu	96
Re. Theresa Mahaulu	Theresa Mahaulu	N/A	Damages from lack of homestead	Honolulu	95
Re. Joseph Ching, Sr.	Re. Joseph Ching, Sr.	N/A	Damages from lack of homestead	Honolulu	95
Joseph Keaulana, Jr.	Joseph Keaulana, Jr.	N/A	Damages from lack of homestead	Honolulu	95
Re. Utility Allowances for Section 8 Housing	National Coalition of Low-Income Groups	N/A	Fair Market Rent Setting	Washington D.C.	95
Re. PGW Customer Service Tariff Revisions	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Customer Responsibility Program	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	95
Re. Houston Lighting and Power Co.	Gulf Coast Legal Services	12065	Low-Income Rates	Texas	95
I/M/O Petition to Stay PGW's Suspension of CRP customers who did Not Assign LIHEAP Grant to PGW	Philadelphia Public Advocate	No Docket No.	Low-Income rates	Philadelphia	95
Re. PGW Tariff Changes, Programs and Information Systems	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Request for Modification of Winter Moratorium	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Dept of Hawaii Homelands Trust Homestead Production	Native Hawaiian Legal Corporation	N/A	Prudence of trust management	Honolulu	94
Re. SNET Request for Modified Shutoff Procedures	Office of Consumer Counsel	94-06-73	Credit and collection	Connecticut	94
Re. Central Light and Power Co.	United Farm Workers	128280	Low-income rates/DSM	Texas	94
Blackwell v. Philadelphia Electric Co.	Gloria Blackwell	N/A	Role of shutoff regulations	Penn. courts	94
U.S. West Request for Waiver of Rules	Wash. Util. & Transp. Comm'n	UT-930482	Telecommunications regulation	Washington	94

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
	Staff				
Re. U.S. West Request for Full Toll Denial	Colorado Office of Consumer Counsel	93A-6113	Telecommunications regulation	Colorado	94
Washington Gas Light Company	Community Family Life Services	Case 934	Low-income rates & energy efficiency	Washington D.C.	94
Clark v. Peterborough Electric Utility	Peterborough Community Legal Centre	6900/91	Discrimination of tenant deposits	Ontario, Canada	94
Dorsey v. Housing Auth. of Baltimore	Baltimore Legal Aide	N/A	Public housing utility allowances	Federal district court	93
Penn Bell Telephone Co.	Penn. Utility Law Project	P00930715	Low-income phone rates	Pennsylvania	93
Philadelphia Gas Works	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	93
Central Maine Power Co.	Maine Assn Ind. Neighborhoods	Docket No. 91-151-C	Low-income rates	Maine	92
New England Telephone Company	Mass Attorney General	92-100	Low-income phone rates	Massachusetts	92
Philadelphia Gas Works	Philadelphia Public Advocate	No Docket No.	Low-income DSM	Philadelphia	92
Philadelphia Water Dept.	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	92
Public Service Co. of Colorado	Land and Water Fund	91A-783EG	Low-income DSM	Colorado	92
Sierra Pacific Power Co.	Washoe Legal Services	N/A	Low-income DSM	Nevada	92
Consumers Power Co.	Michigan Legal Services	No Docket No.	Low-income rates	Michigan	92
Columbia Gas	Office of Consumer Advocate (OCA)	R9013873	Energy Assurance Program	Pennsylvania	91
Mass. Elec. Co.	Mass Elec Co.	N/A	Percentage of Income Plan	Massachusetts	91
AT&T	TURN	90-07-5015	Inter-LATA competition	California	91
Generic Investigation into Uncollectibles	Office of Consumer Advocate	I-900002	Controlling uncollectibles	Pennsylvania	91
Union Heat Light & Power	Kentucky Legal Services (KLS)	90-041	Energy Assurance Program	Kentucky	90

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CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Philadelphia Water	Philadelphia Public Advocate (PPA)	No Docket No.	Controlling accounts receivable	Philadelphia	90
Philadelphia Gas Works	PPA	No Docket No.	Controlling accounts receivable	Philadelphia	90
Mississippi Power Co.	Southeast Mississippi Legal Services Corp.	90-UN-0287	Formula ratemaking	Mississippi	90
West Kentucky Gas	KLS	90-013	Energy Assurance Program	Kentucky	90
Philadelphia Electric Co.	PPA	N/A	Low-income rate program	Philadelphia	90
Montana Power Co.	Montana Ass'n of Human Res. Council Directors	N/A	Low-income rate proposals	Montana	90
Columbia Gas Co.	Office of Consumer Advocate	R-891468	Energy Assurance Program	Pennsylvania	90
Philadelphia Gas Works	PPA	No Docket No.	Energy Assurance Program	Philadelphia	89
Southwestern Bell Telephone Co.	SEMLSC	NF-89749	Formula ratemaking	Mississippi	90
Generic Investigation into Low-income Programs	Vermont State Department of Public Service	Case No. 5308	Low-income rate proposals	Vermont	89
Generic Investigation into Dmnd Side Management Measures	Vermont DPS	N/A	Low-income conservation programs	Vermont	89
National Fuel Gas	Office of Consumer Advocate	N/A	Low-income fuel funds	Pennsylvania	89
Montana Power Co.	Human Resource Develop. Council District XI	N/A	Low-income conservation	Montana	88
Washington Water Power Co.	Idaho Legal Service Corp.	N/A	Rate base, rate design, cost-allocations	Idaho	88

Appendix B: Potential Cost Control Options for Low- Income Bill Assistance Programs

**Potential Cost Control Options
for a Low-Income Utility Bill Affordability Program
(non-exclusive list)**

Rhode Island PUC Docket 4770

By:

**Roger Colton
Fisher, Sheehan & Colton**

April 2018

Options exist for Rhode Island stakeholders to consider should participation rates in National Grid's A60 rate discount grow to the point where program costs become higher than policymakers believe to be reasonable. These cost control options can be used to directly control the overall costs of the A60 program. In the alternative, options can be employed that have the intended effect of controlling the overall costs of the A60 programs. Without endorsing any particular individual option, and setting forth such options in no order of priority, the list below identifies a series of program cost control measures that have been used in differing jurisdictions in which I have been involved with the design and/or implementation of low-income bill affordability programs paid for with ratepayer dollars:

- **Targeted energy efficiency:** Targeting energy efficiency toward high use A60 participants, who by definition will impose the highest discount costs on the program as a whole (e.g., a customer with a \$1,000 bill by definition imposes higher discount costs than a customer with a \$500 bill), will reduce program costs. Targeted efficiency investments are generally considered to be "good program design" whether or not the costs of a bill affordability program are reaching levels that give rise for concern. In a program such as National Grid's A60 discount, for example, targeted energy efficiency would generate a return on investment of 25% to 30% (depending on which program component the customer participates in) simply through avoided discounts, even before considering any other traditional avoided costs. With the belief that high use is consistent with high energy reduction potential, and given the further belief that higher use is associated with higher levels of arrears, targeting energy efficiency investments to high use A60 participants serves a variety of policy objectives, controlling the A60 costs being just one.
- **Maximum charge per nonparticipant per month:** A state might impose a ceiling on the maximum charge that nonparticipating customers will be called upon to make each month toward a bill affordability program. The maximum charge would be stated in terms of dollars per month. For example, such a ceiling might provide that no residential

customer would pay more than \$2/month for the A60 discount program. This mechanism assumes, however, that program costs are recovered on a fixed charge basis rather than on a volumetric basis.

- **Maximum charge per kWh / CCF:** In the alternative, rather than viewing maximum costs as a fixed charge per month, a state might impose a maximum charge per unit of energy (kWh or CCF). In this way, higher users would pay a higher monthly amount for the bill affordability assistance. Customers could avoid paying the charge by reducing their consumption. Nonetheless, in the aggregate, placing a ceiling on the per unit of energy charge has the effect of placing a ceiling on overall total program costs.
- **Maximum aggregated program costs:** Rather than placing a ceiling on program costs by limiting program cost recovery, this option places a ceiling on total program costs on an annual basis. When the total expenditure ceiling is reached, program enrollment ceases until the next fiscal year brings a new budget.
- **Pre-approved annual budget:** One way for regulators to control program costs is to require a program to undergo an annual review, and receive an annual approval, of the expected program budget each year. While not subject to full-fledged litigation, a proposed budget would be filed with the Commission on an annual basis and be subject to a notice-and-comment proceeding through which stakeholders might respond. During the year, the approved budget could not be exceeded.
- **Participation ceiling:** One way to control total program costs is to impose a ceiling on the overall allowed program participation. Rather than directly controlling costs, in other words, this approach will indirectly impose a “soft” program cost ceiling by controlling the number of low-income customers who are allowed to participate. The intent of such a mechanism is to tie-in the expectations on which a program’s expected expenditures are based. If National Grid’s cost recovery is based on an expected participation of 45,000 customers, for example, with that 45,000 being a hypothetical intended only for illustration, the Company would not be caught by surprise if an economic melt-down resulted in 60,000 applicants being found eligible. It is a “soft” ceiling because the total program budget is still subject to upward swings based on upward swings in rates and/or severe weather. Nonetheless, if regulators believe the *primary* cause of budget uncertainty is program participation, use of a participation ceiling is not unreasonable.
- **Benefit ceiling:** One common cost control mechanism is to impose a ceiling on the benefits to be provided to participating low-income customers. A benefit ceiling can be imposed in a number of different ways. For example, it can be done on either a monthly or on an annual basis (e.g., no more than \$150/month or \$1,800/year). Those two approaches are distinctly different, particularly for heating customers. The heating customer may stay under the annual ceiling even if exceeding the monthly ceiling during the heating months. On the one hand, a benefit ceiling is supported by the policy

proposition that ratepayers bear no obligation to provide continuing affordability subsidies no matter how high the consumption. On the other hand, concerns are expressed about unintended consequences. Benefit ceilings should not arbitrarily harm people who have heating accounts, people who have large families, or low-income households who because of their poverty live in housing where it is difficult or impossible to control energy consumption. Moreover, some utilities express concern that they find themselves wondering whether they are spending more on implementing the solution to the problem than they had been spending on the high use with which to begin.

- **Minimum payments:** While not as directly applicable to programs such as the A60 program as they are to percentage of income programs, nonetheless, utilities frequently impose a minimum payment requirement on program participants. The reason this controls program costs (even for a discount such as the A60 program) is because customers with lower consumption, whose undiscounted bills would be lower than their minimum payment under A60, would choose not to participate in the discount program and to instead remain on the utility's standard residential rates. The minimum payment is supported in policy by the belief that affordability discounts should not be provided to low-income customers simply because they are low-income. They should rather be provided to those for whom the discount might make the difference between an affordable bill and an unaffordable bill. Customers with lower usage are more likely to have an affordable bill even without a discount. Accordingly, if cost control is an additional objective, it is reasonable to reduce total program costs by limiting program participation by low use customers.

In setting forth the list of potential cost control mechanisms above, I do not mean to suggest that this list is a comprehensive exposition of all possible cost control mechanisms. These are simply mechanisms with which I have some experience. Moreover, in setting forth the list of potential cost control mechanisms above, I do not mean to suggest that these options are mutually exclusive. The options could be implemented individually or one in combination with another. Finally, any numbers I use in the list above are used strictly for the sake of illustration. They are not used as a suggestion of the reasonableness of those numbers in the option being discussed.