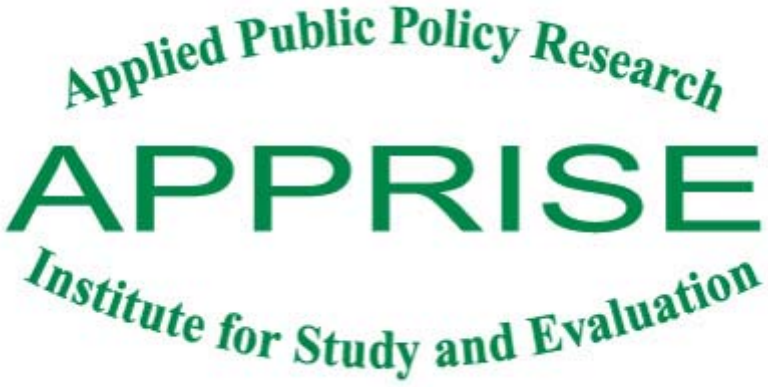

NJ Comfort Partners Affordability Evaluation

Final Report

Prepared for the New Jersey Comfort Partners Working Group

February 2004

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Appendix

Executive Summary

This report presents the findings from the Final Affordability Evaluation of the Comfort Partners Program. In this evaluation we analyzed pre- and post-treatment payment and usage data to examine changes in energy affordability. The Final Affordability Evaluation is the sixth component of the comprehensive evaluation of the Comfort Partners Program.

Introduction

The New Jersey Clean Energy Collaborative consists of Public Service Electric and Gas, Jersey Central Power and Light, Conectiv Power Delivery, Rockland Electric Company, New Jersey Natural Gas, NUI Elizabethtown Gas, and South Jersey Gas. The Collaborative has designed eight Residential Energy Efficiency Programs and three Nonresidential Energy Efficiency Programs to reduce the total amount of electricity and natural gas used in New Jersey and to reduce the summer peak demand for electricity. The Residential Low Income Program Working Group designed the Comfort Partners Program to meet the Collaborative's usage reduction goals and to improve energy affordability for low-income customers.

The Comfort Partners Program was designed to overcome the market barriers affecting energy usage and energy affordability for low-income customers. The program delivers comprehensive usage reduction and energy education services to low-income customers. The program also includes an arrearage forgiveness component designed to assist customers in retiring outstanding arrears.

The Residential Low Income Program Working Group commissioned a comprehensive evaluation "to determine the extent to which Program goals are being achieved and to provide feedback on how the Program might be modified to better achieve these goals." The Working Group contracted with RoperASW (work is currently being performed by APPRISE Incorporated) to conduct this evaluation. The evaluation team includes APPRISE, MaGrann Associates, Blasnik and Associates, and Renaissance Consulting and Analysis.

Methodology and Data

Data Collection

Each utility was sent a request for usage and payment data for all customers who were enrolled in the Comfort Partners Program beginning in January 2002 and completed by September 30, 2003. Electronic data were received from PSE&G and JCP&L, and hard copy data were received from Conectiv, New Jersey Natural Gas, NUI/Elizabethtown Gas, South Jersey Gas, and Rockland Electric.

Treatment and Control Groups

In the evaluation of the Comfort Partners Program, customers who participated in the program at a later date are utilized as the control group. These customers serve as a good control because they are low-income customers who were eligible for the program and chose to participate. We use data for these customers for the two years preceding service delivery, to compare their change in indicators in the years prior to receiving services to the treatment group's change in outcomes after receiving services.

In this report, we examine the baseline and post-treatment statistics for many indicators of program outcomes. The difference between the follow-up measure and the baseline measure for the treatment group is considered the gross change. This is the actual change in behaviors and outcomes for those customers who were served by the program. Some of these changes may be due to the program, and some of these changes are due to other exogenous factors. The change for the control group is also presented. To the extent that the control group is similar to the treatment group this change represents how the measures would have changed for the treatment group if they had not received program services. The net change is the difference between the change for the treatment group and the change for the control group, and represents the actual impact of the program, controlling for other exogenous changes.

Data Attrition

When conducting the payment analysis, it is important to compare customers' actual bills and payments, rather than normalized or annualized measures, as we are interested in the actual experienced payment behavior. Therefore, the affordability analysis restricts the bulk of the study to those customers who have close to one full year of transactions and usage data. Such restrictions mean that a significant number of customers who received program services are not included in the majority of the analysis. The problem is more severe for the control group, because two years of pre-treatment data are required. We present annualized findings for the group with complete data as well as findings for a larger group of customers in the appendix, so that that the extent of bias caused by limiting the analysis group can be examined.

Key Performance Indicators

This report compares customers' payments and bills for the year preceding service delivery and the year following service delivery. We focus on several performance indicators that reveal the impact of the program on the customers' ability to pay their bills. From the perspective of the utility, these indicators reveal the extent to which the program has impacted customers' bill payment behavior in terms of meeting payment obligations. To the extent that bill payment behavior has improved, there is an implication that the program has also increased affordability of energy bills. However, even if bill payment behavior has not improved, the program may have had a beneficial impact on energy affordability. For example, if coverage rates, arrears, and shortfall remain the same, but charges and payments

decline, the customers have experienced an increase in affordability because they have greater funds available to meet other needs. Therefore, we include gas and electric charges as well as cash payments as indicators of customer affordability.

The key performance indicators that are examined in this report are explained below.

- *Number of cash payments:* The number of cash payments made is an indicator of the regularity of payments. Payment-troubled customers' general behavior is to miss a number of bills and then to make up payments.[1]

- *Cash coverage rate:* The cash coverage rate is equal to total cash payments divided by total charges. This is the percentage of bills paid in the absence of assistance payments and other credits.

- *Total coverage rate:* The total coverage rate is the total of cash, assistance payments, and other credits divided by the total charges. Assistance payments include HEAP, LIFELINE, USF, and NJ SHARES. However, not all of the utilities code all of these types of payments. Therefore, in some instances, some of these payments are included with cash payments, and in some instances these payments are included as credits.

- *Shortfall:* The shortfall is the difference between the customer's annual bill and the customer's annual total payments. If the customer has paid less than the full bill (including assistance and other credits) and has added to his or her outstanding balance over the year, then the shortfall will be a positive number. If the customer has paid more than the full bill, then the shortfall will be a negative number.

- *Arrears:* The arrears are the customer's balances at the end of the pre-treatment period and at the end of the post-treatment period. They are equal to the customer's balance prior to the period, plus the shortfall for the period.

- *Gas and electric charges:* These are the charges made to customers for gas and electric usage. Total charges will exceed these charges because total charges include other items such as service, appliance purchases, and collections charges.

- *Cash payments:* These are the payments that are made by the customer. These payments differ from total payments, as total payments include assistance payments and other credits made to the customer.

In this report, we examine the baseline and post-treatment measures for all of these variables. We compare the change in these variables to the change for a control group who had not yet received services from the Comfort Partners Program.

[1] There are a few reasons why the number of cash payments is not always a good indicator of customers' payment regularity. First, some utilities divide customer payments into several different payments in certain instances. Second, when customers receive a large program benefit such as LIHEAP, this may result in a credit, and the customer may skip payments for a few months without running up arrears.

Table 1 displays the key performance statistics for all of the utilities combined, by type of customer. The first section of the table displays statistics for electric non-heating customers from Conectiv, JCP&L, and PSE&G. These customers show a small but significant decrease in shortfall of approximately $50, both gross and in comparison to the control group. There was a small decline in arrears, but this change was not statistically significant. These customers also had a decrease in electric charges and in cash payments (both gross and net), showing that the program had a modest effect on affordability for electric non-heating customers. These customers had a decrease in their electric charges of $95 compared to the control group, and a decrease in cash payments of $46 compared to the control group.

The next section of the table displays the same statistics for electric heating customers from Conectiv, JCP&L, and PSE&G. The vast majority of these customers are from JCP&L. While arrears and shortfall decreased in comparison to the control group, the difference was not significant. Electric charges for this group of customers stayed approximately the same. It is inferred that these customers experienced a decrease in baseload usage and charges, but an increase in electric heating usage and charges due to a more severe winter in 2003 than in 2002. These customers significantly increased their cash payments compared to the control group.

Data for gas customers from NJNG, NUI, PSE&G (gas only customers), and SJG are displayed in the next segment of the table. These customers experienced a decrease in their cash and total coverage rate and an increase in their shortfall, but the change was not significantly different from the control group. These customers had a significant increase in their gas charges that was greater for the treatment group than for the control group. This result implies that the customers who participated in the Comfort Partners Program had a decrease in affordability compared to those who did not participate. However, the control group for these customers was not ideal, as most of those in the treatment group received service delivery in the third quarter of 2002 and most of those in the control group received service delivery in the first quarter of 2003. As a result, usage during different times of the year and different weather patterns is compared, and results for the treatment group relative to the control group cannot be considered representative. Weather normalized savings in the usage impacts report show modest declines in usage for most of the gas utilities.

The next section of the table displays results for combination electric and gas customers from PSEG. These customers experienced increases in their coverage rates and large and statistically significant decreases in their shortfall and arrears when compared to the control group. Electric charges (both gross and net) declined significantly for these customers. Gas charges increased significantly for these customers, but by significantly less than the increase for the control group customers. These findings suggest an increase in affordability for these customers as a result of participating in Comfort Partners.

Table 1
Key Performance Statistics
All Utilities
By Customer Type

Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	453	453		267	
Payment Coverage Indicators					
Number of Cash Payments	10.9	10.2	-.7**	-.7**	0
Cash Coverage Rate	86%	88%	2%	-3%*	5%*
Total Coverage Rate	101%	107%	6%**	2%	4%
Shortfall	$13	-$33	-$46**	$4	-$50*
Arrears	$126	$112	-$14	$2	-$16
Customer Affordability Indicators					
Electric Charges	$793	$721	-$72**	$23*	-$95**
Cash Payments	$707	$635	-$72**	-$26	-$46*

Electric Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	137	137		51	
Payment Coverage Indicators					
Number of Cash Payments	10.9	9.9	-1.0**	-2.0**	1.0
Cash Coverage Rate	80%	75%	-5%	-12%*	7%
Total Coverage Rate	107%	106%	-1%	-3%	2%
Shortfall	-$71	-$65	$5	$71	-$66
Arrears	$43	$2	-$41[#]	$8	-$49
Customer Affordability Indicators					
Electric Charges	$1341	$1360	$19	-$5	$24
Cash Payments	$1077	$1038	-$39	-$231*	$192*

Gas Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	430	430		180	
Payment Coverage Indicators					
Number of Cash Payments	9.4	8.6	-.8**	-.8**	0

Gas Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Cash Coverage Rate	77%	62%	-15%**	-11%**	-4%
Total Coverage Rate	104%	95%	-9%**	-8%**	-1%
Shortfall	-$29	$61	$90**	$80**	$10
Arrears	$78	$92	$14	$54**	-$40
Customer Affordability Indicators					
Gas Charges	$992	$1124	$131**	$53**	$78**
Cash Payments	$815	$708	-$107**	-$141**	$34

Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Payment Coverage Indicators					
Number of Cash Payments	10.2	10.6	.4#	.2	.2
Cash Coverage Rate	79%	80%	1%	-9%**	10%**
Total Coverage Rate	99%	99%	0%	-7%**	7%**
Shortfall	$37	$27	-$10	$135**	-$145**
Arrears	$357	$374	$17	$211**	-$194**
Customer Affordability Indicators					
Electric Charges	$757	$649	-$108**	$39*	-$147**
Gas Charges	$899	$1036	$137**	$224**	-$87**
Cash Payments	$1344	$1379	$35	$51	-$16

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table 2 displays key performance statistics for Conectiv non-heating customers. These customers experienced increases in their coverage rates and decreases in their shortfall, both gross and net. Electric charges did not change significantly, but these customers increased their cash payments.

Table 2
Key Performance Statistics
Conectiv Non-Heating Customers

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Payment Coverage Indicators					
Number of Cash Payments	7.8	8.7	.9*	-.8	1.7**
Cash Coverage Rate	80%	91%	11%*	-3%*	14%**
Total Coverage Rate	92%	102%	10%#	3%	7%
Shortfall	$203	$8	-$195*	$0	-$195**
Arrears	$259	$290	$31	-$1	$32
Customer Affordability Indicators					
Electric Charges	$867	$859	-$8	$21#	-$29
Cash Payments	$687	$795	$108*	-$29	$137**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table 3 displays the key performance statistics for JCP&L non-heating customers. This table shows that the cash coverage rate did not change significantly for the treatment group, but the total coverage rate increased from 103 percent to 111 percent. Shortfall and arrears decreased significantly for the treatment group. This table also shows that electric charges and cash payments declined significantly for the treatment group indicating that the program increased affordability for participants.

Table 3
Key Performance Statistics
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Payment Coverage Indicators					
Number of Cash Payments	12.4	11.3	-1.1**	-.8**	-.3
Cash Coverage Rate	88%	89%	1%	-3%*	4%#
Total Coverage Rate	103%	111%	8%**	3%	5%
Shortfall	-$31	-$61	-$30#	$0	-$30

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Arrears	$114	$66	-$48**	-$1	-$47**
Customer Affordability Indicators					
Electric Charges	$814	$743	-$71**	$21#	-$92**
Cash Payments	$746	$627	-$119**	-$29	-$90**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table 4 displays the same statistics for JCP&L's heating customers. These customers had a small decline in the level of arrears. The high pre-treatment total coverage rate of 107 percent suggests that the program was not targeting payment-troubled customers. These customers did not have a significant decline in electric charges. The treatment group did have a decline in cash payments, but the decline for the treatment group was smaller than the decline for the control group.

Table 4
Key Performance Statistics
JCP&L Heating Customers

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Payment Coverage Indicators					
Number of Cash Payments	11.2	10.1	-1.1**	-2.1**	1.0
Cash Coverage Rate	78%	74%	-4%#	-13%*	9%#
Total Coverage Rate	107%	106%	-1%	-3%	2%
Shortfall	-$83	-$67	$16	$74	-$58
Arrears	$16	-$29	-$45#	$9	-$54
Customer Affordability Indicators					
Electric Charges	$1334	$1356	$22	-$6	$28
Cash Payments	$1090	$1023	-$67*	-$237*	$170*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table 5 displays key performance statistics for NJNG customers. The high total coverage rate of 106 percent in the baseline period suggests that the program was not targeting payment-troubled customers and would not be expected to increase payment coverage rates. These customers experienced a decrease in the total coverage rate and an increase in shortfall and arrears.

However, only the increase in arrears was significant in comparison to the control group. These customers experienced an increase in gas charges that was greater than the increase for the control group. However, this relative increase may be due to the fact that the control customers were served at a different time of year than the treatment customers and that weather differed during their analysis periods. Customers in the treatment group increased their cash payments by significantly more than those in the control group.

Table 5
Key Performance Statistics
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Payment Coverage Indicators					
Number of Cash Payments	8.1	7.8	-.3	-.9**	.6*
Cash Coverage Rate	73%	71%	-2%	-8%**	6%*
Total Coverage Rate	106%	95%	-11%**	-4%	-7%
Shortfall	-$49	$50	$99**	$50*	$49
Arrears	-$39	$28	$67**	$21	$46#
Customer Affordability Indicators					
Gas Charges	$953	$1042	$89**	$39**	$50*
Cash Payments	$760	$764	$4	-$134**	$138**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table 6 displays the key performance indicators for NUI customers. These customers increased their cash and total coverage rates and decreased their shortfall and arrears in comparison to the control group. The high total coverage rate of 105% for the treatment customers in the baseline period suggests that the program was not targeting payment-troubled customers and that it would not be expected to have an impact on coverage rates. These customers also experienced a gross decline in their arrears. Gas charges increased for these customers, but the change was not significantly different from what the control group experienced.

Table 6
Key Performance Statistics
NUI Customers

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Payment Coverage Indicators					
Number of Cash Payments	8.6	8.5	-.1	-.7	.6
Cash Coverage Rate	86%	83%	-3%	-27%**	24%**
Total Coverage Rate	105%	107%	2%	-25%**	27%**
Shortfall	-$39	-$51	-$12	$227**	-$239**
Arrears	$171	$66	-$105**	$212**	-$317**
Gas Charges	$1027	$1116	$89**	$98**	-$9
Cash Payments	$963	$934	-$29	-$200*	$171*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table 7 displays the key performance statistics for PSE&G combination customers. The payment coverage statistics remained relatively constant for the treatment group, but worsened significantly for the control group. The mean total coverage rate for the treatment group was 99 percent in both the pre and post-treatment periods. The high pre-treatment coverage rates suggest that the program was not targeting payment-troubled customers, and that an increase in coverage rates would not be expected as a result of participating in the program. Electric charges declined significantly for the treatment group, and increased slightly for the control group. Gas charges increased for the treatment group, but not by as much as those for the control group. Cash payments did not change. These statistics indicate that the program had a positive impact on affordability for these customers.

Table 7
Key Performance Statistics
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Payment Coverage Indicators					
Number of Cash Payments	10.2	10.6	.4#	.2	.2
Cash Coverage Rate	79%	80%	1%	-9%**	10%**

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Total Coverage Rate	99%	99%	0%	-7%**	7%**
Shortfall	$37	$27	-$10	$135**	-$145**
Arrears	$357	$374	$17	$211**	-$194**
Customer Affordability Indicators					
Electric Charges	$757	$649	-$108**	$39*	-$147**
Gas Charges	$899	$1036	$137**	$224**	-$87**
Cash Payments	$1344	$1379	$35	$51	-$16

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table 8 displays the key performance statistics for PSE&G electric non-heating customers. These customers had a decrease in the number of cash payments and a small increase in the mean level of arrears. Electric charges (gross and net) declined significantly and cash payments declined significantly for the treatment group, indicating that the program had a positive impact on affordability for these customers.

Table 8
Key Performance Statistics
PSE&G Electric Non-Heating Customers

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Payment Coverage Indicators					
Number of Cash Payments	9.5	8.7	-.8**	-.3	-.5
Cash Coverage Rate	86%	84%	-2%	-4%	2%
Total Coverage Rate	100%	102%	2%	-3%	5%
Shortfall	$5	$2	-$3	$26	-$29
Arrears	$84	$113	$29**	$15	$14
Customer Affordability Indicators					
Electric Charges	$714	$611	-$103**	$32	-$135**
Cash Payments	$641	$574	-$67**	-$15	-$52

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table 9 displays key performance statistics for SJG customers. These customers experienced decreases in their coverage rates and increases in their shortfall. However, only the decline in the cash coverage rate was significantly different from that of the control group. These

customers experienced an increase in charges that was significantly greater than that for the control group. Again, this is probably due at least partially to the difference in the time periods for the treatment and control groups. Cash payments declined significantly for the treatment group, and by significantly more than for the control group.

Table 9
Key Performance Statistics
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Payment Coverage Indicators					
Number of Cash Payments	10.8	9.1	-1.7**	-.8**	-.9
Cash Coverage Rate	76%	43%	-33%**	-12%**	-21%**
Total Coverage Rate	101%	89%	-12%**	-8%**	-4%
Shortfall	$1	$125	$124**	$81**	$43
Arrears	$151	$172	$21	$54**	-$33
Customer Affordability Indicators					
Gas Charges	$1036	$1229	$193**	$49**	$143**
Cash Payments	$810	$551	-$259**	-$146**	-$113*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Debt Reduction Component

The Debt Reduction component is one aspect of the Comfort Partners Program that differs substantially among the different utilities, both in terms of the program parameters, and in terms of the way the program is implemented and delivered. This program component was allowed to differ across utilities because of differing customer information systems placing different constraints on how the forgiveness could be implemented, as well as differing utility budgets for the Debt Reduction.

As part of the Comfort Partners Process Evaluation, APPRISE conducted interviews with program managers and collected information on eligibility for and parameters for debt reduction plans. Some of this information is important in understanding the outcomes of the plans. Table 10 summarizes the information that was collected.

Table 10
Debt Reduction Program Parameters

	Arrearage Level for Program Eligibility		Calculation of Monthly Payment	Calculation of Arrearage Forgiveness	Maximum Arrearage Forgiveness	Arrearage Crediting
	Min	Max				
Conectiv	$300	$1500	Previous year's bill-10% for energy savings + .5*arrears/12	50% of arrears	$750	Each month
JCP&L	None	None	Percentage of income	Total arrears	$750	Each month
NJ Natural Gas	$250	$750	Previous year's bill-10% for energy savings + arrears over $750/12	Total arrears	$750	At enrollment full arrears is credited
NUI	None	$1500	Previous year's bill/12	Total arrears	$750	At enrollment full arrears is credited
PSE&G	$300	$2000	(Previous year's bill-10% for energy savings)/12 + 2.5% of arrears	40% of arrears (52% for TANF customers)	$750	First half after first year completed and second half after second year completed
South Jersey Gas	None	None	Previous year's bill-10% for energy savings + arrears over $300/12	Total arrears	$300	Each month

Table 11 displays the number of debt reduction participants that each utility provided data for. Statistics on program parameters will be analyzed for all of these customers. However, payment statistics are only available for customers in the treatment and control groups.

Table 11
Number of Debt Reduction Participants
By Utility and Treatment Group

	Conectiv	JCP&L	NJ Natural Gas	NUI	PSE&G	South Jersey Gas
Treatment Group	58	39	20	12	94	27
Control Group	9	24	7	35	354	20
Not in Analysis Groups	5	60	27	5	106	11

	Conectiv	JCP&L	NJ Natural Gas	NUI	PSE&G	South Jersey Gas
TOTAL	72	123	54	52	554	58

Table 12 compares the annual payments required under the payment agreements to the actual payments made in the post-treatment period. The mean payment required for JCP&L non-heating customers with complete payment data was $1021. These customers made average payments of $842 over the year. The average percentage of the annual payments required under the plan that were made by JCP&L customers was 106 percent.[2] Arrears for these customers declined from $466 at the time of enrollment in the debt reduction plan to $203 at the end of the post-treatment period. These customers were successful in reducing their arrears because they made a large percentage of the payments required by the plan and they received arrearage forgiveness each month.

PSE&G combination customers were expected to pay $2203 over the year according to the plan agreement. These customers paid an average of $2025. The average percentage of the annual payments under the plan that were made by PSE&G customers was 90 percent. Arrears for these customers declined from $705 at the time of enrollment in the debt reduction plan to $697 at the end of the post-treatment period. These customers were not successful in reducing their arrears because they did not make the payments required by the plan and they did not receive arrearage forgiveness unless they successfully completed a year of payments on the plan.

SJG customers were expected to pay $1119 over the year according to the plan and paid an average of $946. The average percentage of the annual payments under the plan that were made by SJG customers was 83 percent. Arrears for these customers declined from $376 at the time of enrollment to $221 by the end of the follow-up period. These customers reduced their arrears because each month that they made payments they received arrearage forgiveness of approximately $25.

The other utilities did not have enough customers in the debt reduction component with complete payment data to include in this analysis.

Table 12
Monthly Payment Agreements and Actual Payments Made
By Utility

	JCP&L	PSE&G	South Jersey Gas
Type of customer	Non-heating	Combination	Gas
Number of households	22	40	22
Annual payments required	$1021	$2203	$1119
Annualized customer	$842	$2025	$946

[2] Note that this is not the total payments made divided by the total amount required, but the average of these ratios across the customers.

	JCP&L	PSE&G	South Jersey Gas
payments			
Coverage rate*	106%	94%	83%
Arrears at plan enrollment	$466	$705	$376
Ending arrears	$203	$697	$221
Arrearage forgiveness	$247	$87	$151

*This is not the total payments made divided by the total amount required, but the average of these ratios across the customers.

Summary of Findings

The New Jersey Comfort Partners Program was designed to reduce energy usage and improve energy affordability for low-income households by providing energy efficiency and energy education services. The usage impact report shows that the program achieved moderate savings for participating customers in the first full year of program treatments. However, it is important to recognize that there are other factors affecting energy bills, including weather and prices. Changes in these variables can easily overshadow the savings from reduced usage in the short-term, and customers may see no gross decline in their bills (or an increase) in a particular year, even if they are better off than those who did not receive energy efficiency services.

This report shows that the program achieved modest affordability impacts for some of the participating customers treated in the first full year of program implementation. The Comprehensiveness Report showed that cost-effective investments were not being undertaken in twenty-five percent of the homes served.[3] The Process Evaluation Report showed that the program was not targeting high use customers and this report shows that the program is not targeting customers with affordability problems. One modification to the program that may increase affordability impacts is to reduce the number of households served while increasing the investment level in each home and improving targeting of high usage and payment-troubled households. If the program served these customers and achieved significantly greater energy savings, the resulting changes in energy bills may be significant to customers even in the presence of more severe weather and increased prices.

Another option for significantly improving energy affordability for low-income customers is to recognize that a usage reduction program is a blunt instrument for such an outcome. A mechanism such as the Universal Services Program that limits electric and gas costs to six percent of the low-income customer's income may more effectively address affordability problems. Customers who had the highest subsidies or exceeded the subsidy limit because of their high usage could then be targeted for energy efficiency services. Such targeting

[3] For some utilities this was due to the budget that was available for program treatments. This was also due to the fact that crews had a challenging time implementing the guideline. This was one of the issues that the Working Group planned to address after the delivery of these reports. However, changes were not made to the program due to a transition in program administration.

would directly benefit ratepayers, as subsidies to these customers would be reduced as their usage declined.

Results for All Utilities

This report finds varying levels of savings and affordability impacts for customers from different utilities. There are many differences between the utilities that may have resulted in these varying results.

- *Utility experience:* Two utilities, JCP&L and PSE&G, have had years of prior experience implementing and managing a comprehensive usage reduction program. The other utilities do not have this level of experience.

- *Inspections:* Two utilities, JCP&L and PSE&G have hired independent inspectors to provide verification of the quality of the work provided by the third party implementation contractors, HDMC and Bill Busters. NJNG has also jointly conducted inspections with JCP&L, but these inspections are done on a lower percentage of completed jobs. SJG and NUI also subcontracted with PSE&G to have inspections done on their jobs, but most of these jobs were inspected after the end of the study period.

- *Baseline usage:* Utilities have different methods for targeting customers to serve in the program. Those utilities that are successful at bringing in the customers who have the highest pre-treatment usage are the ones who will achieve the greatest impacts on usage and affordability. If utilities are successful at targeting customers with affordability problems, they may also be more successful at having significant impacts on energy affordability.

- *Contractors:* HDMC is the primary implementation contractor, providing energy efficiency services for all of the utilities in the state. Bill Busters provides services on a small percentage of JCP&L jobs. However, HDMC uses several auditors and teams to complete the quantity of jobs required by the program. The quality of these crews may vary around the state, impacting usage reduction and energy affordability.

- *Subcontractors:* Subcontractors used by HDMC to install insulation vary across the state. Differences have been seen in the quality of work provided by these contractors. This is another factor that may affect savings and affordability impacts.

Given the number of customers in each utility and the multitude of factors outlined above, it is not possible to pinpoint a primary cause of different impacts. The usage impact report with controlled weather normalized usage will provide more detailed information on the contributions of some of these factors. When thinking about improving the program to provide better results for low-income customers, these are some of the factors that should be considered.

The key findings for each type of customer and each utility are summarized below.

Electric Non-Heating Customers

- Electric non-heating customers had a gross increase in their total coverage rate, but this increase is not statistically different from that of the control group. These customers had a small but significant decline in arrears. Electric charges and cash payments both declined, indicating that the program had a positive impact on affordability for these customers.

Electric Heating Customers

- Electric heating customers experienced a small decline in arrears, but this is not statistically different from that of the control group. Cash payments for these customers increased as compared to the control group.

Gas Customers

- Gas customers had a decline in their coverage rates and an increase in their shortfall, but these changes are not statistically different from those of the control group. Gas charges increased for treated customers, and by more than they increased for control customers.[4] Cash payments declined, but the change is not statistically different from that of the control group.

Combination Customers

- Combination customers experienced a significant decrease in electric usage and charges and a significant increase in gas usage and charges. However, the control group experienced increases in gas usage and charges, and larger increases in electric usage and charges. These changes suggest that the program resulted in a decrease in electric and gas usage for households receiving treatments, but that the cold winter resulted in a gross increase in gas usage. These customers increased their total payments, but by significantly less than the control group. Their cash and total coverage rates did not increase significantly, except in comparison with the control group's decline in coverage rates.

Conectiv

- Conectiv electric non-heating customers had a large and significant decrease in shortfall, and an increase in cash payments.

- Conectiv electric non-heating customers with baseline coverage rates of less than 90 percent had a significant decrease in total charges. Their total coverage rate increased significantly, but this change was not significantly different from that of the control group.

[4] This may be due to the fact that treatment and control customers were treated in different quarters of the year, and the changes in weather and prices that they experienced are not comparable.

- Conectiv electric non-heating customers with baseline arrearages over $100 had a significant increase in payments and coverage rates. The increase in the total coverage rate was not significantly different from that of the control group. These customers also had a significant decline in their shortfall.

JCP&L

JCP&L Non-Heating Customers

- JCP&L non-heating customers decreased their cash payments, but by significantly less than the control group. Total coverage rates increased for the treatment group but the change was not significantly different from that of the control group. Arrears for these customers declined significantly. Electric charges and cash payments declined significantly for these customers, indicating that the program had a positive impact on affordability.

- JCP&L non-heating customers with baseline total coverage rates less than 90 percent experienced the largest decrease in charges. Changes in their other statistics were not significantly different from the control group. JCP&L non-heating customers with baseline total coverage rates between 90 and 99 percent appeared to benefit most from the program. Their total coverage rates increased significantly, and as compared to the control group. Both charges and cash and total payments declined significantly for these customers. Customers with baseline total coverage rates over 100 percent, the majority of participants, experienced a significant decline in both charges and payments, but no significant change in coverage rates.

- JCP&L non-heating customers with baseline arrears between -$100 and $100 experienced small but statistically significant declines in shortfall and arrears. Customers with baseline arrears over $100 experienced a larger decline in arrears, but it was not significantly greater than the decline experienced by the control group.

- JCP&L non-heating customers who participated in the debt reduction program made a high percentage of their required payments, received arrearage forgiveness, and had a large decrease in arrears.

JCP&L Heating Customers

- JCP&L heating customers experienced a decline in arrears, but this change was not significantly different from that of the control group. Their total cash payments declined, but much less than those of the control group.

NJNG

- NJNG customers had a significant decline in their total coverage rates, but this change was not significantly different from that of the control group. Shortfall increased, but not by significantly more than the control group. Arrears increased

significantly. Gas charges increased, and by significantly more than the control group.[5]

- NJNG customers with baseline total coverage rates of less than 90 percent had significant increases in payments and coverage rates, but these changes were not significantly different from those of the control group.

NUI

- NUI customers had a significant decline in arrears. Their gas charges increased, but this change was not significantly different from that of the control group. Their cash payments increased significantly as compared to the control group.

PSE&G

PSE&G Combination Customers

- PSE&G combination customers experienced a significant decrease in electric usage and charges and a significant increase in gas usage and charges. However, the control group experienced increases in gas usage and charges, and larger increases in electric usage and charges. These changes suggest that the program resulted in a decrease in electric and gas usage for households receiving treatments, but that the cold winter resulted in a gross increase in gas usage. They increased their total payments, but by significantly less than the control group. Their cash and total coverage rates did not increase significantly, except in comparison with the control group's decline in coverage rates.

- PSE&G combination customers with baseline total coverage rates less than 90 percent had significant increases in payments and coverage rates, but these changes were not significantly different from the control group.

- PSE&G combination customers with baseline arrears greater than $100 had declines in charges compared to the control group, and increased their total coverage rate compared to the control group.

- PSE&G combination customers who participated in the debt reduction program made a high percentage of their required payments, but they were not likely to receive arrearage forgiveness, and they did not significantly reduce their arrears.

[5] This may be due to the fact that treatment and control customers were treated in different quarters of the year, and the weather and prices they experienced are not comparable.

PSE&G Electric Non-Heating Customers

- PSE&G electric non-heating customers experienced a decrease in electric charges. They decreased their cash payments but not by significantly more than the treatment group.

SJG

- SJG customers had a decrease in their total coverage rate and an increase in their shortfall, but these changes were not significantly different from that of the control group. Their gas charges increased, and by significantly more than those of the control group.[6] Their cash payments declined.

- SJG customers with baseline total coverage rates of under 90 percent had significant increases in their total payments and total coverage rates, but these changes were not statistically different from those of the control group.

- SJG customers who participated in the arrearage reduction program made a large percentage of their required payments, received arrearage forgiveness, and significantly reduced their arrears.

[6] This may be due to the fact that treatment and control customers were treated in different quarters of the year, and the weather and prices they experienced are not comparable.

I. Introduction

This report presents the findings from the Final Affordability Evaluation of the Comfort Partners Program. In this evaluation we analyzed pre- and post-treatment payment and usage data to examine changes in energy affordability. The Final Affordability Evaluation is the sixth component of the comprehensive evaluation of the Comfort Partners Program.

A. Background

The New Jersey Clean Energy Collaborative consists of Public Service Electric and Gas, Jersey Central Power and Light, Conectiv Power Delivery, Rockland Electric Company, New Jersey Natural Gas, NUI Elizabethtown Gas, and South Jersey Gas. The Collaborative has designed eight Residential Energy Efficiency Programs and three Nonresidential Energy Efficiency Programs to reduce the total amount of electricity and natural gas used in New Jersey and to reduce the summer peak demand for electricity. The Residential Low Income Program Working Group designed the Comfort Partners Program to meet the Collaborative's usage reduction goals and to improve energy affordability for low-income customers.

The Comfort Partners Program was designed to overcome the market barriers affecting energy usage and energy affordability for low-income customers, including:

- Lack of information on how to improve energy efficiency and on the benefits of energy efficiency,
- Lack of capital to upgrade energy efficiency and, in many cases, to keep up with regular bills,
- Inadequate targeting of low-income customers by market-based residential service providers, and
- Split incentives between renters and landlords.

The Comfort Partners Program addresses the market barriers through:

- Direct installation of all cost-effective energy efficiency measures (addressing all fuels),
- Comprehensive, personalized customer energy education and counseling, and
- Arrearage forgiveness for participants who agree to payment plans.

The Comfort Partners Program is targeted to customers with income at or below 150% of the federal poverty income guidelines or who are receiving benefits from certain public assistance programs.

B. Evaluation

The Residential Low Income Program Working Group commissioned a comprehensive evaluation "to determine the extent to which Program goals are being achieved and to provide feedback on how the Program might be modified to better achieve these goals." The Working Group contracted with RoperASW (work is currently being performed by APPRISE Incorporated) to conduct this evaluation. The evaluation team includes APPRISE, MaGrann Associates, Blasnik and Associates, and Renaissance Consulting and Analysis.

The comprehensive evaluation of the Comfort Partners Program consists of seven evaluation components.

1) *Tracking System Evaluation*: Assessment of the consistency of information tracked by the utilities, the sufficiency of the data for management and reporting, the accuracy of the data in the system, and the efficiency of the tracking system procedures

2) *Comprehensiveness Evaluation*: Examination of the appropriateness of Comfort Partners protocols and practices, and the comprehensiveness of service delivery

3) *Process Evaluation*: Review of the effectiveness of the Program design and implementation, measurement of customer reactions to the education component and customer satisfaction with program services, and identification of barriers to program delivery and low-income customer participation

4) *Baseline Affordability Impact Projections*: Projections of the affordability impacts of the program using baseline usage data, program service delivery data, and engineering models of program impacts

5) *Baseline Usage Impact Projections*: Projections of the usage impacts of the program using baseline usage data, program service delivery data, and engineering models of program impacts

6) *Affordability Impact*: Analysis of affordability impacts of the program for 2002 based on customer billing and payment data, service delivery data, and affordable payment program data

7) *Usage Impact*: Analysis of usage impacts of the program for 2002 based on customer billing and payment data and service delivery data

The Tracking System Evaluation was completed by 3/15/02. The Comprehensiveness Evaluation and the Process Evaluation were completed by 8/15/02. The Baseline Affordability Impact Projections and the Baseline Usage Impact Projections were completed by 2/15/03. The Affordability Impact and the Usage Impact analyses will be completed by 1/31/04.

C. Organization of the Report

Seven sections follow this introduction.

1) *Section II – Methodology and Data*: Provides a description of the data used in the analyses and the methodology for the study.

2) *Section III – Key Performance Indicators:* Provides description and analysis of the key performance indicators, including the number of cash payments, the cash coverage rate, the total coverage rate, shortfall, arrearages, electric and gas charges, and cash payments.

3) *Section IV – Charges, Payments, and Coverage Rates:* Provides detailed analysis of charges, payments, and coverage rates for the baseline and follow-up periods.

4) *Section V – Arrearages and Shortfall*: Provides detailed analysis of arrearages at the end of the baseline and follow-up periods, and shortfall for the baseline and follow-up periods.

5) *Section VI – Debt Reduction Component*: Provides analysis of program statistics and performance indicators for participants in the debt reduction plan.

6) *Section VII – Components Analysis*: Provides an analysis of the factors that affected affordability for participants in the Comfort Partners Program.

7) *Section VIII – Summary of Findings*: Provides a summary of the key report findings.

APPRISE prepared this report under contract to the participating utilities of the New Jersey Clean Energy Collaborative. The participating utilities and HDMC facilitated this research by furnishing program data to APPRISE. Any errors or omissions in this report are the responsibility of APPRISE. Further, the statements, findings, conclusions, and recommendations are solely those of analysts from APPRISE and do not necessarily reflect the views of the Collaborative or the member utilities.

II. Methodology and Data

This report examines the baseline and post-treatment payment characteristics of customers served by the Comfort Partners Program in order to measure the effect of the program on affordability of energy bills. To conduct this analysis, billing and transactions data were requested from participating utilities and service delivery data were requested from contractors. This section describes the data from these sources and how they were used to analyze the impact of the program.

A. Data Collection

Data were requested from each of the seven utilities and HDMC, the service delivery contractor. JCP&L provided data from their WARM system for customers served by Bill Busters.

1. Utility Data

Each utility was sent a request for usage and payment data for all customers who were enrolled in the Comfort Partners Program beginning in January 2002 and completed by September 30, 2003. Electronic data were received from PSE&G and JCP&L, and hard copy data were received from Conectiv, New Jersey Natural Gas, NUI/Elizabethtown Gas, South Jersey Gas, and Rockland Electric.

Utility data were used to calculate each participant's electric and gas consumption, bills, cash payments, and assistance payments for the year prior to receiving services under the Comfort Partners Program, and the year following receipt of services. One major issue that arises when processing these data is how to deal with customers with less than one full year of pre- or post-treatment usage and payment history. Customers may not have a full year of data because they moved into their current residence less than one year prior to receiving services under the Comfort Partners Program or because they moved out of the residence where they received services less than one full year after service delivery. Alternatively, there may be a need to consider more than a full year of data for some customers because of estimated or cancelled bills that fall at either end of the year. Additionally, other potential data problems can result in less than one full year of available usage and/or payment data.

When conducting the payment analysis, it is important to compare customers' actual bills and payments, rather than annualized measures, as we are interested in the actual experienced payment behavior. Therefore, the affordability analysis restricts the bulk of the study to those customers who have close to one full year of transactions and usage data. However, by restricting the analysis to a subgroup of customers, there is a concern that results could be biased. For example, customers who are not in their homes for a full year prior to receiving services may have greater mobility and may be found to be those customers who have the most difficulty paying their bills. To address

this concern, we compare some key results for the primary analysis group to annualized results for this same group of customers and to annualized results for a more inclusive group of customers. This analysis provides an understanding of the extent to which biases result from restricting the analysis population in this manner.

Many other issues arise when interpreting utility billing data. To provide a completely accurate picture of customers' payment behavior, it is necessary to discuss billing and accounting procedures with utility representatives who have broad knowledge about these practices. Below are some examples of issues that arise when analyzing the data.

- *Bills/transactions:* Which records should be included in the analysis? For example, a utility bill may cover a greater number of days than the time elapsed since the last bill. How should duplicate bills that cover the same time period be treated? How should gaps between bills be interpreted?

- *Assistance payments:* Many different types of assistance payments are available in New Jersey, including LIHEAP, Lifeline, NJ SHARES, and USF. Some utilities do not code all of these payments as assistance payments. Some may be entered as a regular payment, and some may be entered as a bill credit. How can we be sure to accurately account for all assistance payments?

- *Billing irregularities:* Some customers' bills do not appear to be reasonable. For example, the calculated average price per therm is usually around $1. However, a few cases had an average calculated price of over $2. Should these cases be removed from the analysis?

APPRISE has worked with the utilities and carefully reviewed billing and transactions files in order to determine how to interpret billing and payment histories.

2. Contractor Data

Service delivery data were requested from HDMC and JCP&L for all customers who were enrolled in the Comfort Partners Program beginning in January 2002 and who had been completed by September 2003. These data contain information on usage reduction services, and are used to categorize customers into treatment and control groups, type of utility customer (heating, or non-heating), and types of services received.

B. Treatment and Control Groups

When measuring the impact of an intervention, it is necessary to recognize other exogenous factors that can impact changes in behavior or outcomes. Changes in a customer's ability and effort to pay energy bills, between the year preceding service delivery and the year following service delivery, may be affected by many factors other than program services received. Some of these factors include changes in the economy as a whole, changes in household composition including a divorce or the birth of a child, changes in the weather

that impact the amount of energy needed, changes in the availability of energy assistance, and changes in the utility's collection practices. As much as possible, we examine the factors that can be identified to determine the impact of each one and of the program itself. However, some of these factors cannot be identified, and other factors are not even anticipated.

To determine the impact of the program in the absence of exogenous factors, we examine the change in outcomes for program participants compared to the change in outcomes for another group of households. This group of households is called a control group. The control group is designed to be as similar as possible to the treatment group, those who received services and who we are evaluating, so that the exogenous changes for the control group are as similar as possible to those of the treatment group.

In the evaluation of the Comfort Partners Program, we use customers who participated in the program at a later date as the control group. These customers serve as a good control because they are low-income customers who were eligible for the program and chose to participate. We use data for these customers for the two years preceding service delivery, to compare their change in indicators in the years prior to receiving services to the treatment group's change in outcomes after receiving services.

Customers designated as the treatment group, those whose outcomes we evaluate in this report, received Comfort Partners services during the first three quarters of 2002. Customers in the control group received Comfort Partners services during the first three quarters of 2003. Customers served in the last quarter of 2002 are not included in the analysis, as data for the controls treated in the last quarter of 2003 would not be available in time for this report.

In this report, we examine the baseline and post-treatment statistics for many indicators of program outcomes. The difference between the follow-up measure and the baseline measure for the treatment group is considered the gross change. This is the actual change in behaviors and outcomes for those customers who were served by the program. Some of these changes may be due to the program, and some of these changes are due to other exogenous factors, but this is the customer's actual experience. The change for the control group is also presented. To the extent that the control group is similar to the treatment group this change represents how the measures would have changed for the treatment group if they had not received program services. The net change is the difference between the change for the treatment group and the change for the control group, and represents the actual impact of the program, controlling for other exogenous changes.

C. Data Attrition

When conducting the payment analysis, it is important to compare customers' actual bills and payments, rather than annualized measures, as we are interested in the actual experienced payment behavior. Therefore, the affordability analysis restricts the bulk of the study to those customers who have close to one full year of transactions and usage data.

Such restrictions mean that a significant number of customers who received program services are not included in the majority of the analysis. This problem is more severe for the control group than for the treatment group because the control group requires two years of pre-treatment data. In this section we document why customers were excluded from the main analysis.

Table II-1 displays data attrition statistics for Conectiv customers. There were 241 customers in the treatment group and 20 customers in the control group whose utility data matched with HDMC service delivery data. However, due to limitations in data availability, only 28 percent of the treatment group and none of the control group households could be included in the analysis. JCP&L households are therefore used as a control for Conectiv customers.

Table II-1
Data Attrition for Conectiv Customers

Conectiv Customers		
	Treatment Group	Control Group
Initial Number	241	20
Minimal data availability in baseline or follow-up period	106	4
Less than 11 months of transactions data	64	16
Less than 10 months of baseline or follow-up billing data	2	0
More than 405 days of data	0	0
Billing error	1	0
Customers with complete data	68	0
Percent with complete data	28%	0%

Table II-2 displays reasons for data attrition for JCP&L customers. JCP&L had 481 customers in the treatment group and 333 customers in the control group whose utility data matched with HDMC service delivery data and WARM service delivery data. Most of these customers had complete billing and transactions data. Eighty percent of both the treatment and control group are included in the analysis for JCP&L customers.

Table II-2
Data Attrition for JCP&L Customers

JCP&L Customers		
	Treatment Group	Control Group
Initial Number	481	333
Minimal data availability in baseline or follow-up period	2	2
Less than 11 months of transactions data	65	61
Less than 10 months of baseline or follow-up billing data	27	0

JCP&L Customers		
	Treatment Group	Control Group
Customers with complete data	387	270
Percent with complete data	80%	81%

Table II-3 displays the reasons for data attrition for NJNG customers. There were 234 NJNG customers in the treatment group and 173 customers in the control group whose utility data matched with HDMC service delivery data. Of these, 71 percent of the treatment group and 85 percent of the control group had enough data to be included in the analysis.

Table II-3
Data Attrition for NJNG Customers

NJNG Customers		
	Treatment Group	Control Group
Initial Number	234	173
Minimal data availability in baseline or follow-up period	18	14
Less than 11 months of transactions data	40	10
Less than 10 months of baseline or follow-up billing data	7	0
More than 405 days of data	2	2
Customers with complete data	167	147
Percent with complete data	71%	85%

Table II-4 displays the reasons for data attrition for NUI customers. There were 121 treatment group customers and 50 control group customers whose utility data matched with HDMC service delivery data. Sixty-two percent of each group had enough data to be included in the analysis.

Table II-4
Data Attrition for NUI Customers

NUI Customers		
	Treatment Group	Control Group
Initial Number	121	50
Minimal data availability in baseline or follow-up period	8	8
Less than 11 months of transactions data	34	6
Less than 10 months of baseline or follow-up billing data	2	3
More than 405 days of data	2	2
Customers with complete data	75	31
Percent with complete data	62%	62%

Table II-5 displays the reasons for and the extent of data attrition for PSE&G customers. There were 870 customers in the treatment group and 1914 customers in the control group whose HDMC service delivery data matched with the utility transactions and billing data. The transactions data for the PSE&G customers was limited in that only a certain number of transactions are maintained on their IT system. This is more of a problem for the control customers than for the treatment customers, because treatment data was collected over time, but control data could only be collected once the customers were treated in 2003, and then two years of pre-treatment data were needed. If the required amount of data were available, the quasi baseline and follow-up periods for the control group would have been constructed as one and two years prior to treatment, respectively. However, in order to maintain a significant number of the control customers, the quasi baseline and post-treatment periods were constructed so that the full availability of data was used, there was a full year of billing data for each period, and there was some overlap between the baseline and follow-up period.

Customers in the treatment group were eliminated because there were only a few months of baseline or follow-up data, because there were less than 11 months of transactions data, or because there were less than ten months of baseline or follow-up billing data. Forty-three percent of the treatment group had complete data and are included in the analysis. Customers in the control group were eliminated because they had less than 11 months of transactions data or because there were more than 120 days of overlap between the baseline and follow-up periods. Only twelve percent of the control group had enough data to use in the analysis. Therefore, little emphasis is placed on the results for this group in the analyses that follow.

Table II-5
Data Attrition for PSE&G Customers

PSE&G Customers		
	Treatment Group	Control Group
Initial Number	870	1914
Minimal data availability in baseline or follow-up period	40	0
Less than 11 months of transactions data	359	621
Less than 10 months of baseline or follow-up billing data	98	0
Overlap >120 days	0	1070
Customers with complete data	373	223
Percent with complete data	43%	12%

Rockland Electric only had 2 customers in the treatment group and 3 customers in the control group. Sufficient pre- and post- billing and transactions data were not received for these customers, so they are not included in the analysis in this report.

Table II-6 displays the reasons for data attrition for South Jersey Gas customers. There were 211 SJG customers in the treatment group and 49 customers in the control group whose

utility data matched with HDMC service delivery data. Eighty-two percent of the treatment group but none of the customers in the control group had enough data to be included in the analysis. Therefore, NJNG and NUI customers are used as a control group for SJG customers.

Table II-6
Data Attrition for SJG Customers

SJG Customers		
	Treatment Group	Control Group
Initial Number	211	49
Minimal data availability in baseline or follow-up period	5	4
Less than 11 months of transactions data	29	45
Less than 10 months of baseline or follow-up billing data	0	0
Problem bills	5	0
Customers with complete data	172	0
Percent with complete data	82%	0%

One of the reasons why there is sometimes not enough data for the analysis of payments is that customers move into their homes less than one year before service delivery or they move out of their homes less than one year after service delivery. Table II-7 examines the extent to which the data attrition explained above is due to moving for JCP&L's treatment group. The first column displays the number of customers who were removed from the analysis due to each data problem, and the second column shows the number of these for whom the problem was due to a move-in or move-out. This table shows that 421 of the 481 households remained after removing those whose move date caused a data problem. Sixty of the 94 customers who were removed from the analysis were removed due to a move-in or move-out date.

Table II-7
Data Attrition Due to Moves
JCP&L Treatment Group

JCP&L Treatment Group				
Data Problem	N	Problem Due to Service Start or End Date?	N	Observations Remaining
				481
Base period usage or payment begin or end date missing	0	Service begin date less than 90 days before treatment start date	0	481
Post treatment period usage or payment begin or end date missing	2	Service end date less than 90 days after treatment end date	2	479
Less than 11 months of transactions data before treatment start date	32	Service begin date less than 11 months before treatment start date	30	449

JCP&L Treatment Group				
Data Problem	N	Problem Due to Service Start or End Date?	N	Observations Remaining
Less than 11 months of transactions data after treatment end date	33	Service end date less than 11 months after treatment end date	28	421
Less than 10 months of usage or payment data before treatment start date	0	Service begin date less than 11 months before treatment start date	0	421
Less than 10 months of usage or payment data after treatment end date	27	Service end date less than 11 months after treatment end date	0	421

Table II-8 examines the extent to which the data attrition explained above is due to moving for JCP&L's control group. This table shows that 272 of the 333 households remained after removing those whose move date caused a data problem. Sixty-one of the 63 customers who were removed from the analysis were removed due to a move-in or move-out date.

Table II-8
Data Attrition Due to Moves
JCP&L Control Group

JCP&L Control Group				
Data Problem	N	Problem Due to Service Start or End Date?	N	Observations Remaining
				333
Base period usage or payment begin or end date missing	1	Service begin date less than 90 days before treatment start date	1	332
Post treatment period usage or payment begin or end date missing	1	Service end date less than 90 days after treatment end date	1	331
Less than 11 months of transactions data before treatment start date	59	Service begin date less than 11 months before treatment start date	59	272
Less than 11 months of transactions data after treatment end date	2	Service end date less than 11 months after treatment end date	0	272
Less than 10 months of usage or payment data before treatment start date	0	Service begin date less than 11 months before treatment start date	0	272
Less than 10 months of usage or payment data after treatment end date	0	Service end date less than 11 months after treatment end date	0	272

Table II-9 examines the extent to which the data attrition explained above is due to moving for PSE&G's treatment group. This table shows that 665 of the 870 households remained after removing those whose moving caused a data problem. Of the 497 customers who were removed from the analysis, 205 were removed due to a move-in or move-out date.

Table II-9
Data Attrition Due to Moves
PSE&G Treatment Group

PSEG Treatment Group				
Data Problem	N	Problem Due to Service Start or End Date?	N	Observations Remaining
				870
Base period usage or payment begin or end date missing	31	Service begin date less than 90 days before treatment start date	24	846
Post treatment period usage or payment begin or end date missing	10	Service end date less than 90 days after treatment end date	9	837
Less than 11 months of transactions data before treatment start date	308	Service begin date less than 11 months before treatment start date	110	727
Less than 11 months of transactions data after treatment end date	76	Service end date less than 11 months after treatment end date	61	666
Less than 10 months of usage or payment data before treatment start date	11	Service begin date less than 11 months before treatment start date	0	666
Less than 10 months of usage or payment data after treatment end date	13	Service end date less than 11 months after treatment end date	1	665

Table II-10 examines the extent to which the data attrition explained above is due to moving for PSE&G's control group. This table shows that 1271 of the 1914 households remained after removing those whose moving caused a data problem. Of the 1691 customers who were removed from the analysis, 643 were removed due to a move-in or move-out date.

Table II-10
Data Attrition Due to Moves
PSE&G Control Group

PSEG Control Group				
Data Problem	N	Problem Due to Service Start or End Date?	N	Observations Remaining
				1914
Base period usage or payment begin or end date missing	0	Service begin date less than 90 days before treatment quasi start date	0	1914
Post treatment period usage or payment begin or end date missing	0	Service end date less than 90 days after treatment quasi end date	0	1914
Less than 11 months of transactions data before treatment quasi start date	621	Service begin date less than 11 months before treatment quasi start date	54	1860
Less than 11 months of transactions data after treatment quasi end date	0	Service end date less than 11 months after treatment quasi end date	0	1860
Less than 10 months of usage or payment data before treatment quasi start date	0	Service begin date less than 11 months before treatment quasi start date	0	1860
Less than 10 months of usage or payment data after treatment quasi end date	0	Service end date less than 11 months after treatment end date	0	1860

PSEG Control Group				
Data Problem	N	Problem Due to Service Start or End Date?	N	Observations Remaining
More than 120 days of overlap between quasi pre and post treatment periods	1470	Service begin date less than 245 days before treatment start date	558	1302
More than 120 days of overlap between quasi pre and post treatment periods	912	Service end date less than 245 days after treatment end date	31	1271

III. Key Performance Indicators

This report compares customers' payments and bills for the year preceding service delivery and the year following service delivery. We focus on several performance indicators that reveal the impact of the program on the customers' ability to pay their bills. From the perspective of the utility, these indicators reveal the extent to which the program has impacted customers' bill payment behavior in terms of meeting payment obligations. To the extent that bill payment behavior has improved, there is an implication that the program has also increased affordability of energy bills. However, even if bill payment behavior has not improved, the program may have had a beneficial impact on energy affordability. For example, if coverage rates, arrears, and shortfall remain the same, but charges and payments decline, the customers have experienced an increase in affordability because they have greater funds available to meet other needs. Therefore, we include gas and electric charges as well as cash payments as indicators of customer affordability.

The following performance indicators are examined in this section. In later sections of this report we examine some of these indicators in greater detail.

- *Number of cash payments:* The number of cash payments made is an indicator of the regularity of payments. Payment-troubled customers' general behavior is to miss a number of bills and then to make up payments.[7]

- *Cash coverage rate:* The cash coverage rate is equal to total cash payments divided by total charges. This is the percentage of bills paid in the absence of assistance payments and other credits.

- *Total coverage rate:* The total coverage rate is the total of cash, assistance payments, and other credits divided by the total charges. Assistance payments include HEAP, LIFELINE, USF, and NJ SHARES. However, not all of the utilities code all of these types of payments. Therefore, in some instances, some of these payments are included with cash payments, and in some instances these payments are included as credits.

- *Shortfall:* The shortfall is the difference between the customer's annual bill and the customer's annual total payments. If the customer has paid less than the full bill (including assistance and other credits) and has added to his or her outstanding balance over the year, then the shortfall will be a positive number. If the customer has paid more than the full bill, then the shortfall will be a negative number.

[7] There are a few reasons why the number of cash payments is not always a good indicator of customers' payment regularity. First, some utilities divide customer payments into several different payments in certain instances. Second, when customers receive a large program benefit such as LIHEAP, this may result in a credit, and the customer may skip payments for a few months without running up arrears.

- *Arrears:* The arrears are the customer's balances at the end of the pre-treatment period and at the end of the post-treatment period. They are equal to the customer's balance prior to the period, plus the shortfall for the period.

- *Gas and electric charges:* These are the charges made to customers for gas and electric usage. Total charges will exceed these charges because total charges include other items such as service, appliance purchases, and collections charges.

- *Cash payments:* These are the payments that are made by the customer. These payments differ from total payments, as total payments include assistance payments and other credits made to the customer.

In this report, we examine the baseline and post-treatment measures for all of these variables. We compare the change in these variables to the change for a control group who had not yet received services from the Comfort Partners Program.

Table III-1 displays the key performance statistics for all of the utilities combined, by type of customer. The first section of the table displays statistics for electric non-heating customers from Conectiv, JCP&L, and PSE&G. These customers show a small but significant decrease in shortfall of approximately $50, both gross and in comparison to the control group. There was a small decline in arrears, but this change was not statistically significant. These customers also had a decrease in electric charges and in cash payments (both gross and net), showing that the program had a modest effect on affordability for electric non-heating customers. These customers had a decrease in their electric charges of $95 compared to the control group, and a decrease in cash payments of $46 compared to the control group.

The next section of the table displays the same statistics for electric heating customers from Conectiv, JCP&L, and PSE&G. The vast majority of these customers are from JCP&L. While arrears and shortfall decreased in comparison to the control group, the difference was not significant. Electric charges for this group of customers stayed approximately the same. It is inferred that these customers experienced a decrease in baseload usage and charges, but an increase in electric heating usage and charges due to a more severe winter in 2003 than in 2002. These customers significantly increased their cash payments compared to the control group.

Data for gas customers from NJNG, NUI, PSE&G (gas only customers), and SJG are displayed in the next segment of the table. These customers experienced a decrease in their cash and total coverage rate and an increase in their shortfall, but the change was not significantly different from the control group. These customers had a significant increase in their gas charges that was greater for the treatment group than for the control group. This result implies that the customers who participated in the Comfort Partners Program had a decrease in affordability compared to those who did not participate. However, the control group for these customers was not ideal, as most of those in the treatment group received service delivery in the third quarter of 2002 and most of those in the control group received service delivery in the first quarter of 2003. As a result, usage during different times of the year and different weather patterns is compared, and results for the treatment group relative to the control group cannot be considered representative.

Weather normalized savings in the usage impacts report show modest declines in usage for most of the gas utilities.

The next section of the table displays results for combination electric and gas customers from PSEG. These customers experienced increases in their coverage rates and large and statistically significant decreases in their shortfall and arrears when compared to the control group. Electric charges (both gross and net) declined significantly for these customers. Gas charges increased significantly for these customers, but by significantly less than the increase for the control group customers. These findings suggest an increase in affordability for these customers as a result of participating in Comfort Partners.

Table III-1
Key Performance Statistics
All Utilities
By Customer Type

Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	453	453		267	
Payment Coverage Indicators					
Number of Cash Payments	10.9	10.2	-.7**	-.7**	0
Cash Coverage Rate	86%	88%	2%	-3%*	5%*
Total Coverage Rate	101%	107%	6%**	2%	4%
Shortfall	$13	-$33	-$46**	$4	-$50*
Arrears	$126	$112	-$14	$2	-$16
Customer Affordability Indicators					
Electric Charges	$793	$721	-$72**	$23*	-$95**
Cash Payments	$707	$635	-$72**	-$26	-$46*

Electric Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	137	137		51	
Payment Coverage Indicators					
Number of Cash Payments	10.9	9.9	-1.0**	-2.0**	1.0
Cash Coverage Rate	80%	75%	-5%	-12%*	7%
Total Coverage Rate	107%	106%	-1%	-3%	2%
Shortfall	-$71	-$65	$5	$71	-$66
Arrears	$43	$2	-$41#	$8	-$49
Customer Affordability Indicators					

Electric Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Electric Charges	$1341	$1360	$19	-$5	$24
Cash Payments	$1077	$1038	-$39	-$231*	$192*

Gas Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	430	430		180	
Payment Coverage Indicators					
Number of Cash Payments	9.4	8.6	-.8**	-.8**	0
Cash Coverage Rate	77%	62%	-15%**	-11%**	-4%
Total Coverage Rate	104%	95%	-9%**	-8%**	-1%
Shortfall	-$29	$61	$90**	$80**	$10
Arrears	$78	$92	$14	$54**	-$40
Customer Affordability Indicators					
Gas Charges	$992	$1124	$131**	$53**	$78**
Cash Payments	$815	$708	-$107**	-$141**	$34

Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Payment Coverage Indicators					
Number of Cash Payments	10.2	10.6	.4#	.2	.2
Cash Coverage Rate	79%	80%	1%	-9%**	10%**
Total Coverage Rate	99%	99%	0%	-7%**	7%**
Shortfall	$37	$27	-$10	$135**	-$145**
Arrears	$357	$374	$17	$211**	-$194**
Customer Affordability Indicators					
Electric Charges	$757	$649	-$108**	$39*	-$147**
Gas Charges	$899	$1036	$137**	$224**	-$87**
Cash Payments	$1344	$1379	$35	$51	-$16

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table III-2 displays key performance statistics for Conectiv non-heating customers. These customers experienced increases in their coverage rates and decreases in their shortfall, both gross and net. Electric charges did not change significantly, but these customers increased their cash payments.

Table III-2
Key Performance Statistics
Conectiv Non-Heating Customers

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Payment Coverage Indicators					
Number of Cash Payments	7.8	8.7	.9*	-.8	1.7**
Cash Coverage Rate	80%	91%	11%*	-3%*	14%**
Total Coverage Rate	92%	102%	10%#	3%	7%
Shortfall	$203	$8	-$195*	$0	-$195**
Arrears	$259	$290	$31	-$1	$32
Customer Affordability Indicators					
Electric Charges	$867	$859	-$8	$21#	-$29
Cash Payments	$687	$795	$108*	-$29	$137**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table III-3 displays the key performance statistics for JCP&L non-heating customers. This table shows that the cash coverage rate did not change significantly for the treatment group, but the total coverage rate increased from 103 percent to 111 percent. Shortfall and arrears decreased significantly for the treatment group. This table also shows that electric charges and cash payments declined significantly for the treatment group indicating that the program increased affordability for participants.

Table III-3
Key Performance Statistics
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Payment Coverage Indicators					

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Cash Payments	12.4	11.3	-1.1**	-.8**	-.3
Cash Coverage Rate	88%	89%	1%	-3%*	4%#
Total Coverage Rate	103%	111%	8%**	3%	5%
Shortfall	-$31	-$61	-$30#	$0	-$30
Arrears	$114	$66	-$48**	-$1	-$47**
Customer Affordability Indicators					
Electric Charges	$814	$743	-$71**	$21#	-$92**
Cash Payments	$746	$627	-$119**	-$29	-$90**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table III-4 displays the same statistics for JCP&L's heating customers. These customers had a small decline in the level of arrears. The high pre-treatment total coverage rate of 107 percent suggests that the program was not targeting payment-troubled customers. These customers did not have a significant decline in electric charges. The treatment group did have a decline in cash payments, but the decline for the treatment group was smaller than the decline for the control group.

Table III-4
Key Performance Statistics
JCP&L Heating Customers

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Payment Coverage Indicators					
Number of Cash Payments	11.2	10.1	-1.1**	-2.1**	1.0
Cash Coverage Rate	78%	74%	-4%#	-13%*	9%#
Total Coverage Rate	107%	106%	-1%	-3%	2%
Shortfall	-$83	-$67	$16	$74	-$58

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Arrears	$16	-$29	-$45#	$9	-$54
Customer Affordability Indicators					
Electric Charges	$1334	$1356	$22	-$6	$28
Cash Payments	$1090	$1023	-$67*	-$237*	$170*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table III-5 displays key performance statistics for NJNG customers. The high total coverage rate of 106 percent in the baseline period suggests that the program was not targeting payment-troubled customers and would not be expected to increase payment coverage rates. These customers experienced a decrease in the total coverage rate and an increase in shortfall and arrears. However, only the increase in arrears was significant in comparison to the control group. These customers experienced an increase in gas charges that was greater than the increase for the control group. However, this relative increase may be due to the fact that the control customers were served at a different time of year than the treatment customers and that weather differed during their analysis periods. Customers in the treatment group increased their cash payments by significantly more than those in the control group.

Table III-5
Key Performance Statistics
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Payment Coverage Indicators					
Number of Cash Payments	8.1	7.8	-.3	-.9**	.6*
Cash Coverage Rate	73%	71%	-2%	-8%**	6%*
Total Coverage Rate	106%	95%	-11%**	-4%	-7%
Shortfall	-$49	$50	$99**	$50*	$49
Arrears	-$39	$28	$67**	$21	$46#
Customer Affordability Indicators					
Gas Charges	$953	$1042	$89**	$39**	$50*
Cash Payments	$760	$764	$4	-$134**	$138**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table III-6 displays the key performance indicators for NUI customers. These customers increased their cash and total coverage rates and decreased their shortfall and arrears in comparison to the control group. The high total coverage rate of 105% for the treatment customers in the baseline period suggests that the program was not targeting payment-troubled customers and that it would not be expected to have an impact on coverage rates. These customers also experienced a gross decline in their arrears. Gas charges increased for these customers, but the change was not significantly different from what the control group experienced.

Table III-6
Key Performance Statistics
NUI Customers

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Payment Coverage Indicators					
Number of Cash Payments	8.6	8.5	-.1	-.7	.6
Cash Coverage Rate	86%	83%	-3%	-27%**	24%**
Total Coverage Rate	105%	107%	2%	-25%**	27%**
Shortfall	-$39	-$51	-$12	$227**	-$239**
Arrears	$171	$66	-$105**	$212**	-$317**
Gas Charges	$1027	$1116	$89**	$98**	-$9
Cash Payments	$963	$934	-$29	-$200*	$171*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table III-7 displays the key performance statistics for PSE&G combination customers. The payment coverage statistics remained relatively constant for the treatment group, but worsened significantly for the control group. The mean total coverage rate for the treatment group was 99 percent in both the pre and post-treatment periods. The high pre-treatment coverage rates suggest that the program was not targeting payment-troubled customers, and that an increase in coverage rates would not be expected as a result of participating in the program. Electric charges declined significantly for the treatment group, and increased slightly for the control group. Gas charges increased for the treatment group, but not by as much as those for the control group. Cash payments did not change. These statistics indicate that the program had a positive impact on affordability for these customers.

Table III-7
Key Performance Statistics
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Payment Coverage Indicators					
Number of Cash Payments	10.2	10.6	.4#	.2	.2
Cash Coverage Rate	79%	80%	1%	-9%**	10%**
Total Coverage Rate	99%	99%	0%	-7%**	7%**
Shortfall	$37	$27	-$10	$135**	-$145**
Arrears	$357	$374	$17	$211**	-$194**
Customer Affordability Indicators					
Electric Charges	$757	$649	-$108**	$39*	-$147**
Gas Charges	$899	$1036	$137**	$224**	-$87**
Cash Payments	$1344	$1379	$35	$51	-$16

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table III-8 displays the key performance statistics for PSE&G electric non-heating customers. These customers had a decrease in the number of cash payments and a small increase in the mean level of arrears. Electric charges (gross and net) declined significantly and cash payments declined significantly for the treatment group, indicating that the program had a positive impact on affordability for these customers.

Table III-8
Key Performance Statistics
PSE&G Electric Non-Heating Customers

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Payment Coverage Indicators					
Number of Cash Payments	9.5	8.7	-.8**	-.3	-.5
Cash Coverage Rate	86%	84%	-2%	-4%	2%
Total Coverage Rate	100%	102%	2%	-3%	5%
Shortfall	$5	$2	-$3	$26	-$29
Arrears	$84	$113	$29**	$15	$14

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Customer Affordability Indicators					
Electric Charges	$714	$611	-$103**	$32	-$135**
Cash Payments	$641	$574	-$67**	-$15	-$52

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table III-9 displays key performance statistics for SJG customers. These customers experienced decreases in their coverage rates and increases in their shortfall. However, only the decline in the cash coverage rate was significantly different from that of the control group. These customers experienced an increase in charges that was significantly greater than that for the control group. Again, this is probably due at least partially to the difference in the time periods for the treatment and control groups. Cash payments declined significantly for the treatment group, and by significantly more than for the control group.

Table III-9
Key Performance Statistics
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Payment Coverage Indicators					
Number of Cash Payments	10.8	9.1	-1.7**	-.8**	-.9
Cash Coverage Rate	76%	43%	-33%**	-12%**	-21%**
Total Coverage Rate	101%	89%	-12%**	-8%**	-4%
Shortfall	$1	$125	$124**	$81**	$43
Arrears	$151	$172	$21	$54**	-$33
Customer Affordability Indicators					
Gas Charges	$1036	$1229	$193**	$49**	$143**
Cash Payments	$810	$551	-$259**	-$146**	-$113*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

IV. Charges, Payments, and Coverage Rates

The previous section looked at the key performance statistics. In this section we examine in more detail the factors that affect coverage rates, as well as coverage rates for different segments of customers.

A. Charges

Table IV-1 displays total charges, electric charges, and usage for Conectiv non-heating customers. The total charges include all of the charges made to the customer in the year preceding program treatments and the year following program treatments. These charges include service charges, appliance replacement charges for appliances purchased independently by the customer from the utility, and charges due to late payments or collection costs. Total charges for these customers decline by significantly more than those for the control group, indicating that the program has positively affected affordability for these customers. Electric usage increased by a small amount for the treatment group. This statistic cannot be displayed for the control group, as sufficient data is not available.

Table IV-1
Total Charges, Electric Charges, and Usage
Conectiv Non-Heating Customers

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Total Charges	$971	$871	-$100	-$8	-$92*
Electric Charges	$867	$859	-$8	$21#	-$29
Electric Usage (kWh)	7198	7265	67	--	--

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-2 displays annualized charges for Conectiv non-heating customers. Results are the same as those displayed in the above table.

Table IV-2
Total Charges, Electric Charges, and Usage
Conectiv Non-Heating Customers
Annualized Data

Conectiv Non-Heating Customers Annualized Data					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Total Charges	$976	$874	-$102	-$12	-$90*
Electric Charges	$872	$862	-$10	$17	-$27
Electric Usage (kWh)	7238	7294	56	--	--

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-3 displays total charges, electric charges, and usage for JCP&L non-heating customers. This table shows that charges decreased significantly for the treatment group. Electric charges also decreased significantly for the treatment group. Electric usage decreased, but the change was not significant. These data are not displayed for the control group because usage data is not available for a long enough period for these customers prior to treatment.

Table IV-3
Total Charges, Electric Charges, and Usage
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Total Charges	$803	$666	-$137**	-$8	-$127**
Electric Charges	$814	$743	-$71**	$21#	-$92**
Electric Usage (kWh)	6715	6550	-165	--	--

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-4 displays annualized total charges, electric charges, and usage for JCP&L non-heating customers. Total and electric charges show similar decreases as in the table above. The annualized data also showed a significant decrease in electric usage for customers receiving treatments under the Comfort Partners Program.

Table IV-4
Total Charges, Electric Charges, and Usage
JCP&L Non-Heating Customers
Annualized Data

JCP&L Non-Heating Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Total Charges	$806	$678	-$128**	-$12	-$116**
Electric Charges	$817	$757	-$60**	$17	-$77**
Electric Usage (kWh)	7,096	6,669	-427**	--	--

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-5 displays total charges, electric charges, and usage for JCP&L heating customers. These customers had a significant increase in electric usage from the baseline to post-treatment period, probably due to differences in weather between the two periods. The usage impact report will analyze weather-normalized changes in usage.

Table IV-5
Total Charges, Electric Charges, and Usage
JCP&L Heating Customers

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Total Charges	$1304	$1292	-$12	-$60	$48
Electric Charges	$1334	$1356	$22	-$6	$28
Electric Usage (kWh)	11,860	13,248	1,388**	--	--

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-6 displays annualized total charges, electric charges, and usage for JCP&L heating customers. These data show a significant increase in electric charges and a smaller, but significant increase in electric usage for the treatment group.

Table IV-6
Total Charges, Electric Charges, and Usage
JCP&L Heating Customers
Annualized Data

JCP&L Heating Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Total Charges	$1309	$1336	$27	-$60	$87
Electric Charges	$1339	$1400	$61*	-$4	$65
Electric Usage (kWh)	12,873	13,685	812**	--	--

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-7 displays total charges, gas charges, and usage for NJNG customers. These customers have an increase in total charges, gas charges, and gas usage that is significantly greater than that for the control group. Again, the difference is partially due to the different time periods for which data were available for the treatment and control group.

Table IV-7
Total Charges, Gas Charges and Usage
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Total Charges	$1024	$1057	$33#	-$70**	$103**
Gas Charges	$953	$1042	$89**	$39**	$50*
Gas Usage (Therms)	905	1069	164**	113**	51**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-8 displays annualized total charges, gas charges, and usage for NJNG customers. The annualized results are similar to those shown above.

Table IV-8
Total Charges, Gas Charges, and Usage
NJNG Customers
Annualized Data

NJNG Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Total Charges	$1028	$1060	$32#	-$96**	$128**
Gas Charges	$957	$1043	$86**	$15	$71**
Gas Usage (Therms)	909	1071	162**	90**	72**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-9 displays total charges, gas charges, and usage for NUI customers. These customers experienced an increase in gas charges and usage. However, the change for the treatment group was not significantly different from that for the control group.

Table IV-9
Total Charges, Gas Charges, and Usage
NUI Customers

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Total Charges	$1086	$1078	-$8	$18	-$26
Gas Charges	$1027	$1116	$89**	$98**	-$9
Gas Usage (Therms)	958	1055	97**	151**	-54

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-10 displays annualized total charges, gas charges, and usage for NUI customers. These results are similar to those shown in the table above.

Table IV-10
Total Charges, Gas Charges, and Usage
NUI Customers
Annualized Data

NUI Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Total Charges	$1110	$1086	-$24	-$7	-$17
Gas Charges	$1051	$1123	$72**	$75*	-$3
Gas Usage (Therms)	980	1061	81**	131**	-50

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-11 displays total charges, electric and gas charges, and electric and gas usage for PSE&G combination customers. This table shows that while electric usage and electric charges decreased significantly for treatment customers, gas usage and gas charges increased significantly. Within the control group, both electric usage and electric charges increased significantly and gas usage and gas charges increased by more than it did for the treatment group, leading to a significant net reduction in all of these variables for treatment households. These changes suggest that the program resulted in a decrease in electric and gas usage for households receiving treatments, but that the cold winter resulted in a gross increase in gas usage. The program had positive impacts on affordability for participating customers, resulting in a net decline in total charges of $274.

Table IV-11
Total Charges, Electric and Gas Charges, and Usage
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Total Charges	$1673	$1688	$15	$289**	-$274**
Electric Charges	$757	$649	-$108**	$39*	-$147**
Gas Charges	$899	$1036	$137**	$224**	-$87**
Electric Usage (kWh)	6832	6120	-712**	612**	-1324**
Gas Usage (Therms)	948	1042	94**	192**	-98**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-12 displays annualized total charges, electric and gas charges, and usage for PSE&G combination customers. These statistics are similar to those presented in the above table.

Table IV-12
Total Charges, Electric and Gas Charges, and Usage
PSE&G Combination Customers
Annualized Data

PSE&G Combination Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Total Charges	$1682	$1762	$80**	$289**	-$209**
Electric Charges	$760	$674	-$86**	$39*	-$125**
Gas Charges	$904	$1084	$180**	$224**	-$44
Electric Usage (kWh)	6864	6353	-511**	612**	-1123**
Gas Usage (Therms)	953	1090	137**	192**	-55#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-13 displays total charges, electric charges, and usage for PSE&G electric non-heating customers. Customers treated by the program showed a significant decrease in charges, electric charges, and electric usage. The net change for treatment customers was a significant reduction in total charges, electric charges, and electric usage. This table shows that the program increased affordability for participating customers by reducing total charges by $88 as compared to the control group.

Table IV-13
Total Charges, Electric Charges, and Usage
PSE&G Electric Non-Heating Customers

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Total Charges	$722	$647	-$75**	$13	-$88**
Electric Charges	$714	$611	-$103**	$32	-$135**
Electric Usage (kWh)	6394	5749	-645**	548*	-1193**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-14 shows annualized total charges, electric charges, and usage for PSE&G electric non-heating customers. The annualized data show the same results as the previous table.

Table IV-14
Total Charges, Electric Charges and Usage
PSE&G Electric Non-Heating Customers
Annualized Data

PSE&G Electric Non-Heating Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Total Charges	$722	$665	-$57**	$13	-$70*
Electric Charges	$714	$626	-$88**	$32	-$120**
Electric Usage (kWh)	6392	5890	-502**	548*	-1050**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-15 displays total charges, gas charges, and usage for SJG customers. These customers had an increase in total charges, gas charges, and gas usage. The increases for total charges and gas charges were significantly greater than those for the control group.

Table IV-15
Total Charges, Gas Charges and Usage
SJG Customers

SJG Customers					
	Treatment Group			NJNG Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Total Charges	$1042	$1234	$192**	-$54**	$246**
Gas Charges	$1036	$1229	$193**	$49**	$144**
Gas Usage (Therms)	857	995	138**	120**	18

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-16 displays annualized total charges, gas charges, and usage for SJG customers. Annualized gas usage for the control group does not increase by as much as that for the treatment group, leading to a significant net increase in gas usage. Again, this may be due to the different periods of data for the treatment and control groups.

Table IV-16
Total Charges, Gas Charges, and Usage
SJG Customers
Annualized Data

SJG Customers Annualized Data					
	Treatment Group			NJNG Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Total Charges	$1051	$1244	$193**	-$80**	$273**
Gas Charges	$1045	$1239	$194**	$25*	$169**
Gas Usage (Therms)	$864	$1004	$140**	97**	43*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

B. Payments

Table IV-17 displays cash payments, assistance payments, and total payments for Conectiv non-heating customers. These customers increased their cash payments, had a small decrease in assistance payments, and increased their total payments.

Table IV-17
Cash and Assistance Payments
Conectiv Non-Heating Customers

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Number of Cash Payments	7.8	8.7	.9*	-.8**	1.7**
Average Size of Cash Payments	$98	$96	-$2	$1	-$3
Total Cash Payments	$687	$795	$108*	-$29	$137**
Total Assistance Payments	$78	$65	-$13*	$15*	-$28*
Total Payments	$769	$863	$94#	-$8	$102*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-18 displays annualized cash, assistance, and total payments for Conectiv non-heating customers. These results are the same as those displayed above.

Table IV-18
Cash and Assistance Payments
Conectiv Non-Heating Customers
Annualized Data

Conectiv Non-Heating Customers Annualized Data					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Number of Cash Payments	7.8	8.7	.9*	-.9**	1.8**
Average Size of Cash Payments	$98	$96	-$2	$1	-$3
Total Cash Payments	$690	$798	$108*	-$31#	$139**
Total Assistance Payments	$78	$65	-$13*	$15*	-$28*
Total Payments	$771	$865	$94#	-$10	$104*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-19 displays the types of assistance payments received by Conectiv non-heating customers. These customers only received Lifeline assistance, and experienced a small decline in this assistance.

Table IV-19
Types of Assistance Payments
Conectiv Non-Heating Customers

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Lifeline	$78	$64	-$14*	$14*	-$28**
Universal Service	$0	$1	$1	$0	$1#
Total Assistance Payments	$78	$65	-$13*	$15*	-$28*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-20 examines cash, assistance, and total payments for JCP&L non-heating customers. The previous section showed that these customers had a significant decrease in charges between the pre and post-treatment periods. This table shows that while assistance payments stayed relatively constant, cash payments decreased significantly, leading to a significant decline in the total amount of payments made. The control group did not show the same reduction in payments. This reduction in payments for the treatment group

suggests that the Comfort Partners Program has had a positive impact on energy affordability for program participants.

Table IV-20
Cash and Assistance Payments
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Number of Cash Payments	12.4	11.3	-1.1**	-.8**	-.3
Average Size of Cash Payments	$57	$52	-$5**	$1	-$6**
Total Cash Payments	$746	$627	-$119**	-$29	-$90**
Total Assistance Payments	$82	$86	$4	$15*	-$11
Total Payments	$834	$727	-$107**	-$8	$-99**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-21 displays annualized cash and assistance payments for JCP&L non-heating customers. These results are similar to those presented in the previous table.

Table IV-21
Cash and Assistance Payments
JCP&L Non-Heating Customers
Annualized Data

JCP&L Non-Heating Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Number of Cash Payments	12.4	11.5	-.9**	-.9**	0
Average Size of Cash Payments	$57	$52	-$5**	$1	-$6**
Total Cash Payments	$746	$637	-$109**	-$31#	-$78**
Total Assistance Payments	$82	$87	$5	$15*	-$10
Total Payments	$834	$739	-$95**	-$10	-$85**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-22 displays the different types of assistance payments received by JCP&L non-heating customers. Amounts of all types of assistance payments stayed relative constant for these customers. The largest source of assistance for these customers was Lifeline.

Table IV-22
Types of Assistance Payments
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
LIHEAP	$5	$2	-$3	-$2	-$1
Lifeline	$78	$74	-$4	$14*	-$18**
Fuel funds	$0	$9	$9	$3#	$6
Universal Service	$0	$0	$0	$0	$0
Total Assistance Payments	$82	$86	$4	$14*	-$10

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-23 displays cash and assistance payments for JCP&L heating customers. This table shows that the treatment group significantly decreased their cash payments but increased their assistance payments, leading to an insignificant change in the total amount of payments. The control group had a larger decrease in cash payments and a larger increase in assistance payments.

Table IV-23
Cash and Assistance Payments
JCP&L Heating Customers

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Number of Cash Payments	11.2	10.1	-1.1**	-2.1**	1.0
Average Size of Cash Payments	$94	$95	$1	$0	$1
Total Cash Payments	$1090	$1023	-$67*	-$237*	$170*
Total Assistance Payments	$294	$329	$35#	$96**	-$61#
Total Payments	$1387	$1359	-$28	-$133#	$105

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-24 displays annualized cash and assistance payments for JCP&L heating customers. These results are similar to those shown in the previous table.

Table IV-24
Cash and Assistance Payments
JCP&L Heating Customers
Annualized Data

JCP&L Heating Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Number of Cash Payments	11.2	10.3	-.9*	-2.1**	1.2#
Average Size of Cash Payments	$94	$95	$1	$0	$1
Total Cash Payments	$1092	$1054	-$38	-$236*	$198**
Total Assistance Payments	$294	$339	$45*	$96**	-$51
Total Payments	$1389	$1401	$12	-$132	$144*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-25 displays different types of assistance payments for JCP&L heating customers. Customers in the treatment group received somewhat more in LIHEAP assistance and somewhat less in Lifeline. The introduction of Universal Service contributed to the small total increase in assistance payments for this group. However, the control group received greater increases in LIHEAP, Lifeline, and total assistance, so the net change for the treatment group was a decrease in assistance payments.

Table IV-25
Types of Assistance Payments
JCP&L Heating Customers

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
LIHEAP	$128	$166	$38*	$48#	-$10
Lifeline	$167	$156	-$10*	$43*	-$53**
Fuel funds	$0	$2	$2	$5	-$3
Universal Service	$0	$5	$5**	$0	$5#
Total Assistance Payments	$294	$329	$35#	$96**	-$61#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-26 displays cash, assistance, and total payments for NJNG customers. Cash payments for treatment customers stayed relatively constant, but cash payments for control customers declined significantly. Assistance payments declined by $69 for the treatment group, leading to a decline in total payments. However, this decline was not as large as the decline in total payments for the control group.

Table IV-26
Cash and Assistance Payments
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Number of Cash Payments	8.1	7.8	-.3	-.9**	.6*
Average Size of Cash Payments	$98	$98	$0	-$12**	$12#
Total Cash Payments	$760	$764	$4	-$134**	$138**
Total Assistance Payments	$306	$237	-$69**	$14	-$83**
Total Payments	$1074	$1007	-$67*	-$119**	$52

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-27 displays annualized cash payments, assistance payments, and total payments for NJNG customers. These results are similar to those shown above.

Table IV-27
Cash and Assistance Payments
NJNG Customers
Annualized Data

NJNG Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Number of Cash Payments	8.1	7.8	-.3	-1.1**	.8**
Average Size of Cash Payments	$98	$98	$0	-$12**	$12#
Total Cash Payments	$759	$763	$4	-$156**	$160**
Total Assistance Payments	$307	$236	-$71**	$10	-$81*
Total Payments	$1072	$1004	-$68*	-$146**	$78#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-28 displays the types of assistance payments received by NJNG customers. The treatment customers experienced decreases in NJ SHARES payments and universal service payments. The control group experienced a significant increase in universal service payments. This difference is due to the different time periods covered by the treatment and control groups. Treatment customers received $200 credits from the Universal Service program in the spring of 2002 and this was their baseline period. Their follow-up period ended before the new Universal Service program was initiated. Control group customers received the lump sum Universal Service payment in the follow-up period. Total assistance payments declined significantly for the treatment group.

Table IV-28
Types of Assistance Payments
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
LIHEAP	$165	$163	-$2	-$38#	$36
Lifeline	$64	$59	-$5	$19**	-$24**
NJ SHARES	$32	$7	-$25*	-$11#	-$14
Universal Service	$46	$8	-$38**	$44**	-$82**
Total Assistance Payments	$306	$237	-$69**	$14	-$83**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-29 displays cash payments, assistance payments, and total payments for NUI customers. Treatment group customers had a small increase in total assistance payments. Control customers significant decreased their cash and total payments.

Table IV-29
Cash and Assistance Payments
NUI Customers

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Number of Cash Payments	8.6	8.5	-.1	-.7	.6
Average Size of Cash Payments	$116	$104	-$12	-$22*	$10
Total Cash Payments	$963	$934	-$29	-$200*	$171*
Total Assistance Payments	$160	$193	$33#	-$8	$41

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Total Payments	$1125	$1130	$5	-$209*	$214*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-30 displays annualized cash payments, assistance payments, and total payments for NUI customers. These results are similar to those shown above.

Table IV-30
Cash and Assistance Payments
NUI Customers
Annualized Data

NUI Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Number of Cash Payments	8.8	8.4	-.4	-.9	.5
Average Size of Cash Payments	$116	$104	-$12	-$22*	$10
Total Cash Payments	$983	$932	-$51	-$223*	$172*
Total Assistance Payments	$163	$194	$31	-$10	$41
Total Payments	$1148	$1128	-$20	-$233**	$213*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-31 displays the types of assistance payments received by NUI customers. Their data system does not track NJ SHARES payments separately. These customers received LIHEAP and Lifeline assistance.

Table IV-31
Types of Assistance Payments
NUI Customers

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
LIHEAP	$116	$140	$24	-$12	$36
Lifeline	$44	$53	$9	$3	$6

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Universal Service	$0	$1	$1	$0	$1
Total Assistance Payments	$160	$193	$33#	-$8	$41

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-32 displays cash and assistance payments for PSE&G combination customers. The previous section showed that these customers did not have a significant change in their total charges, as gas charges increased and electric charges decreased. This table shows that payments also did not change significantly for the treatment group. However, in comparison to the controls, total payments for the treatment group declined.

Table IV-32
Cash and Assistance Payments
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Number of Cash Payments	10.2	10.6	.4#	.2	.2
Average Size of Cash Payments	$138	$137	-$1	$3	-$4
Total Cash Payments	$1344	$1379	$35	$51	-$16
Total Assistance Payments	$303	$293	-$10	$110**	-$120**
Total Payments	$1636	$1661	$25	$154**	-$129*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-33 displays annualized cash and assistance payments for PSE&G combination customers. The annualized data show a significant increase in cash and total payments made by treatment households. However, these changes are not significantly different from the control group.

Table IV-33
Cash and Assistance Payments
PSE&G Combination Customers
Annualized Data

PSE&G Combination Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Number of Cash Payments	10.2	11.1	.9**	.2	.7#
Average Size of Cash Payments	$138	$137	-$1	$3	-$4
Total Cash Payments	$1346	$1429	$83*	$51	$32
Total Assistance Payments	$304	$311	$7	$110**	-$103**
Total Payments	$1638	$1730	$92*	$154**	-$62

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-34 displays different types of assistance received by PSE&G combination customers. PSE&G's data system only allows for separate accounting of LIHEAP and Lifeline payments. Customers in the treatment group did not have a significant change in the amount of LIHEAP or Lifeline assistance received. The control group did have a large increase in the amount of LIHEAP received, but this may be due to the seasonality of the program and the fact that the data periods for this group were shifted as explained in the data section.

Table IV-34
Types of Assistance Payments
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315			
LIHEAP	$269	$254	-$15	$104**	-$119**
Lifeline	$34	$39	$5	$7	-$2
Total Assistance Payments	$303	$293	-$10	$110**	-$120**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-35 displays cash and assistance payments for PSE&G electric non-heating customers. These customers had a decrease in cash and total payments, corresponding to their decrease in electric usage and charges.

Table IV-35
Cash and Assistance Payments
PSE&G Electric Non-heating Customers

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Number of Cash Payments	9.5	8.7	-.8**	-.3	-.5
Average Size of Cash Payments	$72	$72	$0	$6	-$6
Total Cash Payments	$641	$574	-$67**	-$15	-$52
Total Assistance Payments	$77	$76	-$1	$6	-$7
Total Payments	$717	$646	-$71**	-$12	-$59

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-36 displays annualized cash and assistance payments for PSE&G electric non-heating customers. The results shown here are similar to those in the above table.

Table IV-36
Cash and Assistance Payments
PSE&G Electric Non-Heating Customers
Annualized Data

PSE&G Electric Non-Heating Customers Annualized Data					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Number of Cash Payments	9.5	9.0	-.5#	-.3	-.2
Average Size of Cash Payments	$72	$72	$0	$6	-$6
Total Cash Payments	$639	$588	-$51*	-$15	-$36
Total Assistance Payments	$77	$79	$2	$6	-$4
Total Payments	$715	$662	-$53*	-$12	-$41

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-37 displays the types of assistance payments received by PSE&G electric non-heating customers. These customers do not show significant changes in the amount of assistance received.

Table IV-37
Types of Assistance Payments
PSE&G Electric Non-Heating Customers

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
LIHEAP	$5	$7	$2	$2	$0
Lifeline	$72	$69	-$2	$5	-$7
Total Assistance Payments	$77	$76	-$1	$6	-$7

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-38 displays cash payments, assistance payments, and total payments for SJG customers. The treatment customers had a large significant decrease in their cash payments that was significantly larger than the decrease in cash payments made by the control group. Total assistance payments increased and total payments increased.[8]

Table IV-38
Cash and Assistance Payments
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Number of Cash Payments	10.8	9.1	-1.7**	-.8**	-.9
Average Size of Cash Payments	$88	$61	-$27**	-$14**	-$13*
Total Cash Payments	$810	$551	-$259**	-$146**	-$113*
Total Assistance Payments	$139	$221	$82**	$10	$72**
Total Payments	$1041	$1109	$68#	-$135**	$203**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-39 shows annualized cash payments, assistance payments, and total payments for SJG customers. Results are the same as those shown above.

[8] The difference between cash payments and total payments is other credits. SJG customers show large other credits on their bills. These other credits may include certain types of assistance payments, as only LIHEAP assistance payments are identified separately in their system.

Table IV-39
Cash and Assistance Payments
SJG Customers
Annualized Data

SJG Customers Annualized Data					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Number of Cash Payments	10.8	9.2	-1.6**	-1.1**	-.5
Average Size of Cash Payments	$88	$61	-$27**	-$14**	-$13*
Total Cash Payments	$814	$551	-$263**	-$168**	-$95*
Total Assistance Payments	$139	$222	$83**	$7	$76**
Total Payments	$1046	$1109	$63	-$161**	$224**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

SJG only had information on HEAP assistance payments, so a breakdown of the types of assistance payments is not presented.

C. *Coverage Rates*

Table IV-40 displays charges, payments, and coverage rates for Conectiv non-heating customers. These customers experienced a decrease in charges, an increase in cash and total payments, and an increase in coverage rates.

Table IV-40
Charges, Payments, and Coverage Rates
Conectiv Non-Heating Customers

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Charges	$971	$871	-$100	-$8	-$92*
Cash Payments	$687	$795	$108*	-$29	$137**
Cash Coverage Rate	80%	91%	11%*	-3%*	14%**
Total Payments	$769	$863	$94#	-$8	$102**

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Total Coverage Rate	92%	102%	10%#	3%	7%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-41 displays charges, payments, and coverage rates for JCP&L non-heating customers. Treatment customers had a significant decrease in charges, cash payments, and total payments, and a significant increase in the total coverage rate. These customers experienced an increase in energy affordability, and, on average, increased their total coverage rates in order to pay down accumulated arrears.

Table IV-41
Charges, Payments, and Coverage Rates
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Charges	$803	$666	-$137**	-$8	-$129**
Cash Payments	$746	$627	-$119**	-$29	-$90**
Cash Coverage Rate	88%	89%	1%	-3%*	4%#
Total Payments	$834	$727	-$107**	-$8	-$99**
Total Coverage Rate	103%	111%	8%**	3%	5%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-42 displays charges, payments, and coverage rates for JCP&L non-heating customers. These customers had a small decrease in the total amount of cash payments and the cash coverage rate, but the total payments and coverage rate did not change significantly. The net change for cash payments and the cash coverage rates was positive, as the control group had a much larger decline in these indicators. As the total coverage rate for the baseline period was 107 percent, we would not expect the program to have a significant impact on coverage rates.

Table IV-42
Charges, Payments, and Coverage Rates
JCP&L Heating Customers

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Charges	$1304	$1292	-$12	-$59	-$48
Cash Payments	$1090	$1023	-$67*	-$237*	$170*
Cash Coverage Rate	78%	74%	-4%#	-13%*	9%#
Total Payments	$1387	$1359	-$28	-$133#	$105
Total Coverage Rate	107%	106%	-1%	-3%	2%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-43 displays charges, payments, and coverage rates for NJNG customers. These customers had an increase in charges. Their total payments declined, but by less than the control group. Total coverage rates declined from 106 percent to 95 percent.

Table IV-43
Charges, Payments, and Coverage Rates
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Charges	$1024	$1057	$33#	-$70**	$103**
Cash Payments	$760	$764	$4	-$134**	$138**
Cash Coverage Rate	73%	71%	-2%	-8%**	6%*
Total Payments	$1074	$1007	-$67*	-$120**	$53
Total Coverage Rate	106%	95%	-11%**	-4%	7%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-44 displays charges, payments, and coverage for NUI customers. The treatment group did not have a significant change in the values of any of these statistics. The control group, however, had declines in payments and coverage rates.

Table IV-44
Charges, Payments, and Coverage Rates
NUI Customers

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Charges	$1086	$1078	-$8	$18	-$26
Cash Payments	$963	$934	-$29	-$200*	$171*
Cash Coverage Rate	86%	83%	-3%	-27%**	24%**
Total Payments	$1125	$1130	$5	-$209*	$214*
Total Coverage Rate	105%	107%	2%	-25%**	27%**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-45 displays charges, payments, and coverage rates for PSE&G combination customers. The treatment customers did not experience a significant change in any of these indicators. The control group, however, did have a significant increase in charges, a decrease in the cash coverage rate, an increase in total payments, and a decrease in the total coverage rate. The net positive effect on coverage rates for the treatment group indicates that the program had a positive effect on energy affordability for PSE&G combination customers participating in the Comfort Partners Program.

Table IV-45
Charges, Payments, and Coverage Rates
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Charges	$1673	$1688	$15	$289**	-$274**
Cash Payments	$1344	$1379	$35	$51	-$16
Cash Coverage Rate	79%	80%	1%	-9%**	10%**
Total Payments	$1636	$1661	$25	$154**	-$129*
Total Coverage Rate	99%	99%	0%	-7%**	7%**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-46 displays charges, payments, and coverage rates for PSE&G electric non-heating customers. These customers experienced a decrease in charges, cash payments, and total

payments, but did not significantly increase their total coverage rate, as the pretreatment level was already 100 percent. These customers experienced an increase in energy affordability as a result of the Comfort Partners Program.

Table IV-46
Charges, Payments, and Coverage Rates
PSE&G Electric Non-Heating Customers

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Charges	$722	$647	-$75**	$13	-$88**
Cash Payments	$641	$574	-$67**	-$15	-$52
Cash Coverage Rate	86%	84%	-2%	-4%	2%
Total Payments	$717	$646	-$71**	-$12	-$59
Total Coverage Rate	100%	102%	2%	-3%	5%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-47 displays charges, payments, and coverage rates for SJG customers. These customers had a significant increase in charges, a significant decrease in cash payments, and an increase in total payments. The total coverage rate declined from 101 percent to 89 percent.

Table IV-47
Charges, Payments, and Coverage Rates
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Charges	$1042	$1234	$192**	-$54**	$246**
Cash Payments	$810	$551	-$259**	-$146**	-$113*
Cash Coverage Rate	76%	43%	-33%**	-12%**	-21%**
Total Payments	$1041	$1109	$68#	-$135**	$203**
Total Coverage Rate	101%	89%	-12%**	-8%**	-4%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

D. Coverage Rates by Baseline Total Coverage Rates

The previous section showed that, as a whole, customers treated by the Comfort Partners Program had mean total coverage rates of close to or well over 100 percent prior to participating in the program, indicating that as a whole they were not a payment-troubled group. In this section, we examine the distribution of coverage rates and how these coverage rates change for customers in different parts of the distribution.

Table IV-48 displays the baseline total coverage distribution by utility and customer type. This table shows that the majority of customers had baseline total coverage rates of 100 percent or more.

Table IV-48
Baseline Total Coverage Distribution
By Utility and Customer Type
Treatment Group

	Conectiv	JCP&L		NJNG	NUI	PSE&G		SJG
	Non-Heating	Non-Heating	Heating			Combination	Electric Non-Heating	
<90%	32%	13%	7%	19%	19%	24%	17%	34%
90%-99%	17%	20%	18%	25%	9%	20%	17%	10%
100% or more	51%	68%	76%	56%	72%	56%	66%	56%

Table IV-49 displays charges, payments, and coverage rates by baseline total coverage rate for Conectiv non-heating customers. Customers with baseline total coverage rates below 90 percent experienced a large decrease in total charges and an increase in payments. They increased their total coverage rate from 65 percent to 111 percent. This change was approximately the same as for the control group. Customers with baseline total coverage rates between 90 and 99 percent did not have a significant change in these indicators, except that total coverage rates decreased in comparison to the control group. Customers with baseline total coverage rates of 100 percent or more decreased their total coverage rates from 109 percent to 99 percent.

Table IV-49
Charges, Payments, and Coverage Rates
By Baseline Total Coverage Rate
Conectiv Non-Heating Customers

Conectiv Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Total Coverage Rate Less Than 90%					
Number of Customers	21	21		18	
Charges	$1402	$1014	-$388*	-$4	-$384#
Cash Payments	$653	$971	318*	$127#	$191
Cash Coverage Rate	57%	103%	46%**	21%**	25%*
Total Payments	$717	$1024	$307*	$216**	$91
Total Coverage Rate	65%	111%	46%**	49%**	-3%
Baseline Total Coverage Rate 90% - 99%					
Number of Customers	11	11		49	
Charges	$961	$1026	$65	$4	$61
Cash Payments	$830	$840	$10	$29	-$19
Cash Coverage Rate	83%	80%	-3%	4%*	-7%
Total Payments	$901	$921	$20	$42*	-$22
Total Coverage Rate	94%	92%	-2%	7%**	-9%*
Baseline Total Coverage Rate 100% or Greater					
Number of Customers	33	33		153	
Charges	$700	$728	$28	-$13	$41
Cash Payments	$662	$668	$6	-$65**	$71
Cash Coverage Rate	93%	86%	-7%	-9%**	2%
Total Payments	$757	$740	-$17	-$50*	$33
Total Coverage Rate	109%	99%	-10%#	-4%	-6%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-50 displays charges, payments, and coverage rates by baseline total coverage rates for JCP&L non-heating customers. Customers with a baseline total coverage rate of less than 90 percent had a mean baseline total coverage rate of 76 percent. The mean total coverage rate increased to 111% percent for these customers, due to a large decrease in charges and a small increase in total payments. In contrast, charges for the control group did not decrease, total payments increased significantly, and the total coverage rate increased by 48 percentage points. Total coverage rates for customers with baseline coverage rates between 90 and 99 percent increased from 95 percent to 115 percent due to a decrease in

charges. Total coverage rates for customers with baseline coverage rates of 100 percent or more did not change significantly because a decrease in cash payments accompanied the decrease in charges. This table shows that by placing a greater emphasis on targeting customers with payment problems, the program could have a greater impact on energy affordability for its customers, and a greater impact on the company's profitability.[9]

Table IV-50
Charges, Payments, and Coverage Rates
By Baseline Total Coverage Rate
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Total Coverage Rate Less Than 90%					
Number of Customers	32	32		18	
Charges	$977	$758	-$219**	-$4	-$215*
Cash Payments	$693	$734	$41	$127#	-$86
Cash Coverage Rate	66%	91%	25%**	21%**	4%
Total Payments	$750	$831	$81	$216**	-$135
Total Coverage Rate	76%	111%	35%**	49%**	-14%
Baseline Total Coverage Rate 90% - 99%					
Number of Customers	51	51		49	
Charges	$820	$644	-$176**	$4	-$180**
Cash Payments	$702	$626	-$76#	$29	-$105*
Cash Coverage Rate	80%	91%	11%**	4%*	7%*
Total Payments	$783	$721	-$62#	$42*	-$104**
Total Coverage Rate	95%	115%	20%**	7%**	13%**
Baseline Total Coverage Rate 100% or Greater					
Number of Customers	173	173		153	
Charges	$766	$656	-$110**	-$13	-$97**
Cash Payments	$769	$607	-$162**	-$65**	-$97**
Cash Coverage Rate	94%	88%	-6%*	-9%**	3%

[9] There is anecdotal evidence that some low-income customers pay their utility bills at the expense of food or medical care. To the extent that reducing energy bills enables these customers to increase their expenditures on other needs, the program may be providing an important affordability benefit for these households with full coverage of their bills.

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Total Payments	$864	$710	-$154**	-$50*	-$104**
Total Coverage Rate	111%	109%	-2%	-4%	2%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-51 displays charges, payments, and coverage rates by baseline total coverage rate for NJNG customers. Customers with baseline total coverage rates less than 90 percent had a large increase in their cash and total payments and their total coverage rate. Customers with baseline total coverage rates between 90 and 99 percent did not have a significant change in these indicators, but in comparison to the control group their charges increased and their total coverage rate decreased. Customers with baseline total coverage rates of 100 percent or more experienced an increase in charges and a decrease in payments and coverage rates. Their total coverage rate declined from 120 percent to 92 percent.

Table IV-51
Charges, Payments, and Coverage Rates
By Baseline Total Coverage Rate
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Total Coverage Rate Less Than 90%					
Number of Customers	32	32		8	
Charges	$1087	$1137	$50	-$48	$98
Cash Payments	$573	$895	$322**	$115	$207
Cash Coverage Rate	51%	76%	25%**	14%	11%
Total Payments	$821	$1162	$341**	$319**	$22
Total Coverage Rate	74%	100%	26%**	34%**	-8%
Baseline Total Coverage Rate 90% - 99%					
Number of Customers	42	42		33	
Charges	$1067	$1044	-$23	-$146**	$123*
Cash Payments	$919	$894	-$25	-$82*	$57
Cash Coverage Rate	85%	85%	0%	5%	-5%
Total Payments	$1040	$1043	$3	-$35	$38
Total Coverage Rate	98%	100%	2%	16%*	-14%*

Baseline Total Coverage Rate 100% or Greater					
Number of Customers	93	93		106	
Charges	$984	$1035	$51*	-$47**	$98**
Cash Payments	$753	$661	-$92**	-$169**	$77#
Cash Coverage Rate	74%	64%	-10%**	-14%**	4%
Total Payments	$1176	$936	-$240**	-$179**	-$61
Total Coverage Rate	120%	92%	-28%**	-13%**	-15%**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

There were not enough customers in most of the payment categories to display these data for NUI customers.

Table IV-52 displays chargers, payments, and coverage rates by baseline total coverage rate for PSE&G combination customers. Customers with baseline total coverage rates below 90 percent did not experience a significant change in charges, but they increased their average payments and coverage rates. The total coverage rate for this group increased from 73 percent in the baseline period to 103 percent in the post-treatment period. Customers with baseline total coverage rates between 90 and 99 percent did not have a significant change in their total coverage rates. Customers whose total coverage rates in the baseline period were 100 percent or more had a decrease in total coverage rates from 112 percent to 98 percent. This table shows that increased targeting of payment-troubled customers could improve program outcomes.

Table IV-52
Charges, Payments, and Coverage Rates
By Baseline Total Coverage Rate
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Total Coverage Rate Less Than 90%					
Number of Customers	76	76		38	
Charges	$1812	$1801	-$11	$174**	-$185
Cash Payments	$1109	$1498	$389**	$289**	$100
Cash Coverage Rate	58%	82%	24%**	17%**	7%
Total Payments	$1356	$1839	$483**	$415**	$68
Total Coverage Rate	73%	103%	30%**	20%**	10%
Baseline Total Coverage Rate 90% - 99%					
Number of Customers	62	62		21	

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Charges	$1758	$1746	-$12	$439*	-$451**
Cash Payments	$1430	$1448	$18	$129	-$111
Cash Coverage Rate	81%	82%	1%	-12%**	13%*
Total Payments	$1686	$1702	$16	$362*	-$346*
Total Coverage Rate	96%	98%	2%	0%	2%
Baseline Total Coverage Rate 100% or Greater					
Number of Customers	177	177		114	
Charges	$1583	$1619	$36	$300**	$264**
Cash Payments	$1415	$1303	-$112*	-$42	-$70
Cash Coverage Rate	87%	79%	-8%**	-18%**	9%**
Total Payments	$1739	$1571	-$168**	$29	-$197**
Total Coverage Rate	112%	98%	-14%**	-19%**	5%#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-53 displays charges, payments, and coverage rates by baseline total coverage rate for SJG customers. Customers with baseline total coverage rates of under 90 percent increased their total payments and their total coverage rate. Their total coverage rate increased from 64 percent to 91 percent. This compares to customers in other utilities with baseline total coverage rates under 90 percent who experienced decreases in utility charges and increased their coverage rates to 110 percent.

Table IV-53
Charges, Payments, and Coverage Rates
By Baseline Total Coverage Rate
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Total Coverage Rate Less Than 90%					
Number of Customers	58	58		10	
Charges	$1129	$1200	$71	-$84	$155
Cash Payments	$587	$529	-$58	-$21	-$37
Cash Coverage Rate	49%	40%	-9%#	5%	-14%
Total Payments	$759	$1103	$344**	$190	$154
Total Coverage Rate	64%	91%	27%**	32%*	-5%

Baseline Total Coverage Rate 90% - 99%					
Number of Customers	18	18		39	
Charges	$1041	$1275	$234*	-$115**	$349**
Cash Payments	$730	$537	-$193#	-$57	-$136
Cash Coverage Rate	69%	43%	-26%**	5%	-31%**
Total Payments	$998	$1208	$210	-$16	$226*
Total Coverage Rate	96%	92%	-4%	14%*	-18%#
Baseline Total Coverage Rate 100% or Greater					
Number of Customers	96	96		129	
Charges	$989	$1247	$258**	-$34#	$292**
Cash Payments	$959	$567	-$392**	-$182**	-$210**
Cash Coverage Rate	94%	44%	-50%**	-18%	-32%**
Total Payments	$1219	$1094	-$125**	-$196**	$71
Total Coverage Rate	123%	88%	-35%**	-18%**	-17%**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

E. Coverage Rates by Baseline Arrearage

Some of the customers that are served by the program have negative arrears, meaning they had paid more than their full balances, at the end of the baseline period. This may be due to the irregularity of payment cycles and the way the baseline and follow-up periods were constructed, the receipt of large assistance benefits, or the receipt of credits due to overestimated annual bills and budget plans. Customers who had large negative arrears at the end of the baseline period would be expected to decrease their payments and coverage rates in order to deplete those balances. Customers who have large positive arrearages, on the other hand, would be expected to have high coverage rates in order to pay down those arrears. This section examines coverage rates for three groups of customers, those who end the baseline period with arrears of less than negative $100, those who end the baseline period with arrears between -$100 and $100, and those who end the baseline period with arrears over $100.

Table IV-54 displays charges, payments, and coverage rates by baseline arrearages for Conectiv non-heating customers. Only one of these customers had baseline arrearages less than -$100, so this group is not shown. Customers with baseline arrears between -$100 and $100 do not have significant changes in their charges or payments. Customers with baseline arrears over $100 experienced a decrease in their charges and a significant increase in their payments and coverage rates.

Table IV-54
Charges, Payments, and Coverage Rates
By Baseline Arrearages
Conectiv Non-Heating Customers

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears -$100 to $100					
Number of Customers	41	41		169	
Charges	$685	$681	-$4	-$2	-$2
Cash Payments	$587	$571	-$16	-$15	-$1
Cash Coverage Rate	84%	81%	-3%	-2%	-1%
Total Payments	$688	$660	-$28	$6	-$34
Total Coverage Rate	102%	98%	-4%	5%	-9%
Baseline Arrears >$100					
Number of Customers	23	23		30	
Charges	$1442	$1193	-$249	-$53	-$196
Cash Payments	$824	$1178	$354**	-$101	$455**
Cash Coverage Rate	73%	107%	34%**	-8%	42%**
Total Payments	$868	$1203	$335**	-$33	$368*
Total Coverage Rate	76%	109%	33%**	8%	25%

Table IV-55 displays coverage rates by baseline arrearages for JCP&L non-heating customers. This table shows that only a small number of customers had a negative balance over $100 and the majority of customers had arrears between -$100 and $100. Customers with arrears below -$100 decreased their cash payments and coverage rates. Customers with arrears between -$100 and $100 increased their coverage rates due to decreases in their bills. Customers with arrears over $100 were able to decrease their cash payments and achieve a small increase in coverage rates due to a larger reduction in charges. The control group had a comparatively smaller decrease in charges and cash payments, showing that Comfort Partners had a positive affordability benefit for those customers with the greatest arrears and most in need of assistance.

Table IV-55
Charges, Payments, and Coverage Rates
By Baseline Arrearages
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	9	9		21	
Charges	$697	$638	-$59	$9	-$68
Cash Payments	$589	$445	-$144	-$35	-$109
Cash Coverage Rate	78%	68%	-10%	-8%	-2%
Total Payments	$764	$595	-$169#	-$83#	86
Total Coverage Rate	110%	99%	-11%	-18%**	7%
Baseline Arrears -$100 to $100					
Number of Customers	164	164		169	
Charges	$608	$497	-$111**	-$2	-$109**
Cash Payments	$508	$434	-$74**	-$15	-$59**
Cash Coverage Rate	80%	83%	3%*	-2%	5%*
Total Payments	$612	$538	-$74**	$6	-$80**
Total Coverage Rate	101%	110%	9%**	5%	4%
Baseline Arrears >$100					
Number of Customers	83	83		30	
Charges	$1201	$1003	-$197**	-$53	-$144#
Cash Payments	$1234	$1026	-$208**	-$101	-$107
Cash Coverage Rate	104%	102%	-2%	-8%	6%
Total Payments	$1281	$1116	-$165**	-$33	-$132
Total Coverage Rate	108%	114%	6%#	8%	-2%

Table IV-56 displays coverage rates by baseline arrearages for JCP&L heating customers. Customers with large negative arrears decreased their payments and coverage rates. Customers with baseline arrears between -$100 and $100 had a small decrease in cash payments, but all of their other indicators remained constant. Customers with arrears greater than $100 were able to increase their coverage rates while reducing cash payments due to a large decrease in charges.

Table IV-56
Charges, Payments, and Coverage Rates
By Baseline Arrearages
JCP&L Heating Customers

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	28	28		7	
Charges	$1040	$1202	$162	-$31	$193
Cash Payments	$775	$663	-$112	-$297	$185
Cash Coverage Rate	62%	49%	-13%#	-26%	13%
Total Payments	$1259	$1154	-$105	-$222	$117
Total Coverage Rate	117%	103%	-14%	-20%*	6%
Baseline Arrears -$100 to $100					
Number of Customers	69	69		22	
Charges	$1185	$1166	-$19	-$88	$69
Cash Payments	$982	$917	-$65*	-$270	$205*
Cash Coverage Rate	80%	76%	-4%	-15%	11%
Total Payments	$1230	$1219	-$11	-$181*	$170*
Total Coverage Rate	103%	105%	2%	-7%	9%
Baseline Arrears >$100					
Number of Customers	34	34		21	
Charges	$1765	$1624	-$141**	-$40	-$101
Cash Payments	$1570	$1534	-$36	-$182	$146
Cash Coverage Rate	89%	92%	3%	-5%	8%
Total Payments	$1811	$1814	$3	-$54	$57
Total Coverage Rate	106%	110%	4%	7%	-3%

Table IV-57 displays charges, payments, and coverage rates by baseline arrears for NJNG customers. Customers with baseline arrears less than -$100 experienced an increase in charges and a decrease in payments and coverage rates. Customers with baseline arrears between -$100 and $100 did not have a significant change in their indicators. However, in comparison to the control group, charges, payments, and coverage rates increased for these customers. Customers with baseline arrears over $100 did not have significant changes in these indicators.

Table IV-57
Charges, Payments, and Coverage Rates
By Baseline Arrearages
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	47	47		25	
Charges	$1004	$1079	$75*	-$47	$122*
Cash Payments	$553	$534	-$19	-$48	$29
Cash Coverage Rate	50%	43%	-7%	-8%	1%
Total Payments	$1167	$924	-$243**	-$300**	$57
Total Coverage Rate	121%	84%	-37%**	-28%**	-9%
Baseline Arrears -$100 to $100					
Number of Customers	90	90		109	
Charges	$986	$1002	$16	-$66**	$82**
Cash Payments	$829	$839	$10	-$157**	$167**
Cash Coverage Rate	83%	84%	1%	-11%	12%**
Total Payments	$986	$997	$11	-$106**	$117**
Total Coverage Rate	100%	97%	0%	-4%*	4%
Baseline Arrears >$100					
Number of Customers	30	30		13	
Charges	$1171	$1187	$16	-$143	$159
Cash Payments	$877	$901	$24	-$108	$132
Cash Coverage Rate	76%	77%	1%	12%	-11%
Total Payments	$1188	$1164	-$24	$113	-$137
Total Coverage Rate	98%	100%	2%	37%#	-35%#

There were not enough customers in the arrearage groups to display these data for NUI customers.

Table IV-58 displays charges, payments, and coverage rates by baseline arrears for PSE&G combination customers. Customers with baseline arrears less than -$100 had a decrease in their total coverage rate. Customers with baseline arrears between -$100 and $100 had an increase in charges and a decrease in the total coverage rate. However, these customers faired well in comparison to the control group, whose charges increased by significantly more. Customers with baseline arrears greater than $100 had a significant decrease in charges compared to the control group, and an increase in their total coverage rate.

Table IV-58
Charges, Payments, and Coverage Rates
By Baseline Arrearages
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	17	17		12	
Charges	$1037	$1172	$135	$221*	-$86
Cash Payments	$733	$795	$62	-$351	$413*
Cash Coverage Rate	53%	55%	2%	-35%**	37%
Total Payments	$1296	$1102	-$194	-$249*	$55
Total Coverage Rate	129%	96%	-33%**	-39%**	6%
Baseline Arrears -$100 to $100					
Number of Customers	53	53		66	
Charges	$1126	$1218	$92*	$261**	-$169**
Cash Payments	$875	$895	$20	$85*	-$65
Cash Coverage Rate	75%	74%	-1%	-9%**	8%#
Total Payments	$1169	$1150	-$19	$183**	-$202*
Total Coverage Rate	103%	95%	-8%*	-5%*	-3%
Baseline Arrears >$100					
Number of Customers	245	245		95	
Charges	$1835	$1825	-$10	$318**	-$328**
Cash Payments	$1488	$1524	$34	$79	-$45
Cash Coverage Rate	82%	83%	1%	-7%*	8%*
Total Payments	$1761	$1811	$50	$184**	-$134#
Total Coverage Rate	97%	100%	3%*	-6%#	9%*

Table IV-59 displays charges, payments, and coverage rates by baseline arrearages for PSE&G electric non-heating customers. Customers with baseline arrears between -$100 and $100 had a decrease in charges, cash payments, and total payments, but no change in their total coverage rate. Customers with arrears over $100 had a decrease in charges and an increase in total coverage rates.

Table IV-59
Charges, Payments, and Coverage Rates
By Baseline Arrearages
PSE&G Electric Non-Heating Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	5	5		1	--
Charges	$462	$438	-$24	--	--
Cash Payments	$367	$313	-$54	--	--
Cash Coverage Rate	63%	56%	-7%	--	--
Total Payments	$592	$425	-$167*	--	--
Total Coverage Rate	120%	99%	-21%	--	--
Baseline Arrears -$100 to $100					
Number of Customers	84	84		27	
Charges	$575	$526	-$49*	$35*	-$84*
Cash Payments	$507	$441	-$66*	-$22	-$44
Cash Coverage Rate	85%	79%	-6%**	-6%	0%
Total Payments	$589	$525	-$64*	-$20	-$44
Total Coverage Rate	102%	102%	0%	-5%	5%
Baseline Arrears >$100					
Number of Customers	43	43		19	
Charges	$1039	$909	-$130**	-$4	-$126*
Cash Payments	$936	$865	-$71	$19	-$90
Cash Coverage Rate	90%	97%	7%	0%	7%
Total Payments	$981	$907	-$74	$22	-$96
Total Coverage Rate	95%	101%	6%	0%	6%

Table IV-60 displays charges, payments, and coverage rates by baseline arrearages for SJG customers. Customers with baseline arrearages less than -$100 experienced an increase in charges, a decrease in payments, and a decrease in coverage rates. Customers with baseline arrears between -$100 and $100 experienced an increase in charges and a decrease in coverage rates. Customers with baseline arrears over $100 had an increase in charges and total payments, and kept their total coverage rates constant.

Table IV-60
Charges, Payments, and Coverage Rates
By Baseline Arrearages
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	31	31		31	
Charges	$933	$1177	$244**	-$19	$263**
Cash Payments	$622	$308	-$314**	-$100#	-$214*
Cash Coverage Rate	65%	27%	-38%**	-20%**	-18%#
Total Payments	$940	$823	-$117	-$326**	-$209*
Total Coverage Rate	100%	69%	-31%**	-40%**	9%**
Baseline Arrears -$100 to $100					
Number of Customers	50	50		128	
Charges	$815	$1074	$259**	-$58**	$317**
Cash Payments	$687	$575	-$112	-$160**	-$148
Cash Coverage Rate	80%	51%	-29%**	-12%**	-17%**
Total Payments	$893	$935	$42	-$113**	$155**
Total Coverage Rate	106%	88%	-18%**	-4%*	-14%**
Baseline Arrears >$100					
Number of Customers	91	91		19	
Charges	$1204	$1341	$137**	-$87	$224*
Cash Payments	$941	$621	-$320**	-$123	-$197
Cash Coverage Rate	78%	44%	-34%**	4%	-38%**
Total Payments	$1156	$1302	$146**	$24	$122
Total Coverage Rate	98%	97%	-1%	20%	-21%#

F. Coverage Rates by Services Received

In this section we examine changes in coverage rates by services received for those utilities with data on enough customers to provide this breakdown.

Table IV-61 displays charges, payments, and coverage rates by services received for JCP&L non-heating customers. Customers who received a refrigerator plus a measure or insulation visit experienced an increase in total coverage rates of 8 percentage points due to a reduction in charges. Customers who received a refrigerator, a measure visit, and an insulation visit

had an increase in total coverage rates of 12 percentage points. Both of these groups of customers had a mean baseline total coverage rate of over 100 percent. However, these customers who received refrigerators are those who would be expected to see the greatest impact of the program on electric non-heating bills.

Table IV-61
Charges, Payments, and Coverage Rates
By Services Received
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
No Service or Refrigerator Only					
Number of Customers	17	17		29	
Charges	$838	$774	-$64*	$9	-$73
Cash Payments	$921	$762	-$159	-$69	-$90
Cash Coverage Rate	104%	95%	-9%	-13%	4%
Total Payments	$980	$876	-$104	-$50	-$54
Total Coverage Rate	113%	112%	-1%	-9%	8%
Measure or Insulation Visit					
Number of Customers	47	47		43	
Charges	$739	$646	-$92**	-$36	-$56
Cash Payments	$640	$599	-$41	-$33	-$8
Cash Coverage Rate	81%	87%	6%	-1%	7%
Total Payments	$743	$691	-$52#	-$15	-$37
Total Coverage Rate	103%	107%	4%	6%	-2%
Refrigerator Plus Measure or Insulation Visit					
Number of Customers	63	63		47	
Charges	$849	$666	-$183**	-$16	-$167**
Cash Payments	$748	$589	-$159**	-$19	-$140**
Cash Coverage Rate	86%	84%	-2%	0%	-2%
Total Payments	$837	$710	-$127**	-$25	-$102*
Total Coverage Rate	101%	109%	8%*	0%	8%
Measure and Insulation Visit					
Number of Customers	60	60		59	
Charges	$728	$659	-$69#	-$13	-$56
Cash Payments	$716	$627	-$89*	-$33	-$56
Cash Coverage Rate	92%	91%	-1%	-1%	0%

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Total Payments	$783	$716	-$67*	$3	-$70#
Total Coverage Rate	105%	112%	7%	11%	-4%
Refrigerator, Measure, and Insulation Visit					
Number of Customers	69	69		42	
Charges	$862	$660	-$202**	$23	-$225**
Cash Payments	$799	$645	-$154**	-$1	-$153*
Cash Coverage Rate	86%	91%	5%	-6%#	11%*
Total Payments	$901	$741	-$160**	$33	-$193**
Total Coverage Rate	102%	114%	12%**	0%	12%*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-62 displays charges, payments, and coverage rates by services received for NJNG customers. Customers who received measure and/or insulation visits experienced smaller increases in charges than those who received no services or only a refrigerator. Customers who received these measures also had smaller decreases in coverage rates (or increases in coverage rates) than those who received no service or only a refrigerator.

Table IV-62
Charges, Payments, and Coverage Rates
By Services Received
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
No Service or Refrigerator Only					
Number of Customers	10	10		14	
Charges	$1215	$1478	$263*	-$85	$348**
Cash Payments	$891	$966	$75	-$210	$285
Cash Coverage Rate	72%	63%	-9%#	-11%	2%
Total Payments	$1461	$1274	-$187	-$251*	$64
Total Coverage Rate	121%	86%	-35%**	-15%	-20%
Measure or Insulation Visit					
Number of Customers	38	38		39	
Charges	$986	$986	$0	-$93**	$93#
Cash Payments	$705	$768	$63	-$91**	$154*

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Cash Coverage Rate	69%	77%	8%	-3%	11%#
Total Payments	$1032	$991	-$41	-$90*	$49
Total Coverage Rate	108%	98%	-10%	2%	-12%
Refrigerator Plus Measure or Insulation Visit					
Number of Customers	30	30		29	
Charges	$960	$1029	$69	-$101**	$170**
Cash Payments	$820	$862	$42	-$161**	$203**
Cash Coverage Rate	84%	85%	1%	-10%**	11%*
Total Payments	$965	$1008	$43	-$204	$247**
Total Coverage Rate	99%	98%	-1%	-10%*	9%
Measure and Insulation Visit					
Number of Customers	40	40		41	
Charges	$975	$989	$14	-$59#	$73#
Cash Payments	$699	$618	-$81#	-$165**	$84
Cash Coverage Rate	69%	62%	-7%	-13%*	6%
Total Payments	$1010	$926	-$84	-$47	-$37
Total Coverage Rate	104%	95%	9%	1%	8%
Refrigerator, Measure, and Insulation Visit					
Number of Customers	49	49		24	
Charges	$1094	$1098	$4	-$3	$7
Cash Payments	$790	$780	-$10	-$75	$65
Cash Coverage Rate	72%	68%	-4%	-4%	0%
Total Payments	$1145	$1029	-$116#	-$112#	-$4
Total Coverage Rate	106%	94%	-12%*	-9%	-3%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-63 displays charges, payments, and coverage rates by services received for PSE&G combination customers. Customers who received only a measure or insulation visit did not have a significant gross increase in the total coverage rate, but the total coverage rate was significantly higher compared to the control group. The control group had a much greater increase in charges and decrease in cash and total coverage rates than the treatment group. Customers who had a measure and insulation visit, or a measure, refrigerator and insulation visit had a significant increase in coverage rates compared to the control group.

Table IV-63
Charges, Payments, and Coverage Rates
By Services Received
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
No Service or Refrigerator Only					
Number of Customers	45	45		33	
Charges	$1565	$1665	$100	$138**	-$38
Cash Payments	$1165	$1401	$235*	$75	$160
Cash Coverage Rate	72%	79%	7%	-1%	8%
Total Payments	$1503	$1651	$149	$107	$42
Total Coverage Rate	98%	97%	-1%	-2%	1%
Measure or Insulation Visit					
Number of Customers	56	56		33	
Charges	$1608	$1756	$148*	$350**	-$202*
Cash Payments	$1254	$1441	$187#	-$11	$198
Cash Coverage Rate	78%	82%	4%	-14%**	18%*
Total Payments	$1515	$1746	$231*	$96	$135
Total Coverage Rate	96%	100%	4%	-14%**	18%*
Refrigerator Plus Measure or Insulation Visit					
Number of Customers	69	69		53	
Charges	$1455	$1430	$25	$404**	-$429**
Cash Payments	$1169	$1136	-$33	$189	-$222*
Cash Coverage Rate	78%	78%	0%	-7%*	7%
Total Payments	$1476	$1437	-$39	$330**	-$369**
Total Coverage Rate	105%	101%	-4%	-5%	1%
Measure and Insulation Visit					
Number of Customers	65	65		30	
Charges	$1728	$1791	$63	$224	-$161
Cash Payments	$1419	$1575	$156#	$19	$137
Cash Coverage Rate	81%	87%	6%	-9%#	15%*
Total Payments	$1685	$1777	$93	$102	-$9
Total Coverage Rate	97%	100%	3%	-7%	10%#
Refrigerator, Measure, and Insulation Visit					
Number of Customers	80	80		24	

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Charges	$1922	$1792	-$130**	$244**	-$374**
Cash Payments	$1599	$1372	-$227**	-$159	-$68
Cash Coverage Rate	82%	77%	-5%#	-20%**	15%*
Total Payments	$1895	$1707	-$188*	-$28	-$160
Total Coverage Rate	99%	97%	-2%	-13%#	11%#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table IV-64 displays charges, payments, and coverage rates by services received for SJG customers. Customers who received measure and insulation visits experienced smaller increases in charges than those who received no services or only a refrigerator.

Table IV-64
Charges, Payments, and Coverage Rates
By Services Received
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
No Service or Refrigerator Only					
Number of Customers	26	26		16	
Charges	$1106	$1426	$320**	-$69	$389**
Cash Payments	$921	$662	-$259**	-$203	-$56
Cash Coverage Rate	80%	43%	-37%**	-11%	-26%*
Total Payments	$1103	$1252	$149	-$262	$411*
Total Coverage Rate	101%	87%	-14%#	-16%	2%
Measure or Insulation Visit					
Number of Customers	37	37		49	
Charges	$934	$1159	$225**	-$71*	$296**
Cash Payments	$632	$575	-$57	-$112**	$55
Cash Coverage Rate	67%	44%	-23%**	-10%*	-13%
Total Payments	$872	$1002	$130	-$96*	$226*
Total Coverage Rate	95%	88%	-7%	-2%	-5%
Refrigerator Plus Measure or Insulation Visit					
Number of Customers	35	35		34	

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Charges	$841	$1031	$189**	-$98*	$287**
Cash Payments	$661	$433	-$228**	-$155**	-$72
Cash Coverage Rate	78%	43%	-35%**	-10%**	-25%**
Total Payments	$889	$936	$47	-$200**	$247**
Total Coverage Rate	108%	91%	-17%*	-11%*	-6%
Measure and Insulation Visit					
Number of Customers	35	35		47	
Charges	$1168	$1295	$127*	-$37	$164**
Cash Payments	$950	$509	-$441**	-$179**	-$262**
Cash Coverage Rate	81%	38%	-43%**	-16%**	-27%**
Total Payments	$1181	$1212	$31	-$67#	$98
Total Coverage Rate	101%	93%	-8%	-4%	-4%
Refrigerator, Measure, and Insulation Visit					
Number of Customers	39	39		32	
Charges	$1168	$1304	$136**	$1	$135*
Cash Payments	$912	$598	-$314**	-$111#	-$203#
Cash Coverage Rate	76%	45%	-31%**	-10%	-21%#
Total Payments	$1171	$1177	$6	-$164**	$170#
Total Coverage Rate	98%	89%	-9%#	-16%#	7%

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

V. Shortfall and Arrearages

This section of the report examines changes in shortfall and arrearages. Shortfall is the difference between the total amount billed and the total amount paid during the year preceding service delivery and the year following service delivery. Arrearages are the level of the customer's balance at the end of the baseline and post-treatment periods.

A. Shortfall and Arrearages

Table V-1 displays charges, total payments, shortfall, and arrearages for Conectiv non-heating customers. These customers experienced a decrease in charges, an increase in payments, and a decrease in shortfall. Mean shortfall decreased from $203 to $8. About half of this decline was due to the decrease in charges, and about half was due to an increase in payments.

Table V-1
Charges, Total Payments, Shortfall, and Arrearages
Conectiv Non-Heating Customers

Conectiv Non-Heating					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Charges	$971	$871	-$100	-$8	-$92*
Total Payments	$769	$863	$94#	-$8	$102*
Shortfall	$203	$8	-$195*	$0	-$195**
Arrearage	$259	$290	$31	-$1	$32

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table V-2 displays charges, total payments, shortfall, and arrearages for JCP&L non-heating customers. These customers had a mean negative shortfall in the baseline and follow-up periods, meaning that their payments were greater than their charges. The mean shortfall decreased by $30. The mean arrearages decreased from $114 in the baseline period to $66 in the follow-up period. The arrearages declined significantly compared to the control group that did not experience a change in arrears.

Table V-2
Charges, Total Payments, Shortfall, and Arrearages
JCP&L Non-Heating Customers

JCP&L Non-Heating					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Charges	$803	$666	-$137**	-$8	-$129**
Total Payments	$834	$727	-$107**	-$8	-$99**
Shortfall	-$31	-$61	-$30#	$0	-$30
Arrearage	$114	$66	-$48**	-$1	-$46**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table V-3 displays charges, total payments, shortfall, and arrearages for JCP&L heating customers. These customers also had a mean negative shortfall in both the baseline and follow-up years. There was not a significant change in the mean shortfall for these customers. There was a decline in arrearages.

Table V-3
Charges, Total Payments, Shortfall, and Arrearages
JCP&L Heating Customers

JCP&L Heating					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Charges	$1304	$1292	-$12	-$60	$48
Total Payments	$1387	$1359	-$28	-$133#	$105
Shortfall	-$83	-$67	$16	$74	-$58
Arrearage	$16	-$29	-$45#	$9	-$54

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table V-4 displays charges, total payments, shortfall, and arrearages for NJNG customers. These customers had an increase in charges, shortfall, and arrearages.

Table V-4
Charges, Total Payments, Shortfall, and Arrearages
NJNG Customers

NJNG					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Charges	$1024	$1057	$33#	-$70**	$103**
Total Payments	$1074	$1007	-$67*	-$120**	$53
Shortfall	-$49	$50	$99**	$50*	$49
Arrearage	-$39	$28	$67**	$21	$46#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table V-5 displays charges, total payments, shortfall, and arrearages for NUI customers. These customers had a decrease in arrearages. Their payments increased and their shortfall decreased in comparison to the control group.

Table V-5
Charges, Total Payments, Shortfall, and Arrearages
NUI Customers

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Charges	$1086	$1078	-$8	$18	-$26
Total Payments	$1125	$1130	$5	-$209*	$214*
Shortfall	-$39	-$51	-$11	$227**	-$238**
Arrearage	$171	$66	-$105**	$212**	-$317**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table V-6 displays charges, payments, shortfall, and arrearages for PSE&G combination customers. The customers in the treatment group did not have a significant change in any of these indicators. The control group experienced a large increase in charges, payments, shortfall, and arrearages. Therefore, the treatment customers had a relative decrease in these indicators, suggesting that the program increased affordability and payments.

Table V-6
Charges, Total Payments, Shortfall, and Arrearages
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Charges	$1673	$1688	$15	$290**	-$275**
Total Payments	$1636	$1661	$25	$154**	-$129*
Shortfall	$37	$27	-$10	$136**	-$146**
Arrearage	$357	$374	$17	$211**	-$194**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table V-7 displays charges, total payments, shortfall, and arrearages for PSE&G electric non-heating customers. There was not a significant change in the mean shortfall for this group of customers. There was a small increase in arrearages. However, it was not significantly larger than that for the control group.

Table V-7
Charges, Total Payments, and Shortfall
PSE&G Electric Non-Heating Customers

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Charges	$722	$647	-$75**	$13	-$88**
Total Payments	$717	$646	-$71**	-$12	-$59
Shortfall	$5	$2	-$3	$26	-$29
Arrearage	$84	$113	$29**	$15	$14

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table V-8 displays charges, total payments, shortfall, and arrearages for SJG customers. These customers had an increase in charges and payments. Shortfall increased, but not by significantly more than for the control group.

Table V-8
Charges, Total Payments, Shortfall, and Arrearages
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Charges	$1042	$1234	$192**	-$54**	$246#
Total Payments	$1041	$1109	$68#	-$135**	$203**
Shortfall	$1	$125	$124**	$81**	$43
Arrearage	$151	$172	$21	$54**	-$33

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

B. Shortfall and Arrearages by Baseline Arrearages

Table V-9 examines shortfall and arrearages by baseline arrearages for Conectiv non-heating customers. Customers with baseline arrears between -$100 and $100 increased their arrears by $73 and customers with baseline arrears over $100 had a large decrease in shortfall, and a small and insignificant decrease in arrearages.

Table V-9
Shortfall and Arrearages
By Baseline Arrearages
Conectiv Non-Heating Customers

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears -$100 to $100					
Number of Customers	41	41		169	
Shortfall	-$3	$21	$24	-$8	$32
Arrearages	$29	$102	$73**	$2	$71**
Baseline Arrears >$100					
Number of Customers	23	23		30	
Shortfall	$574	-$9	-$583*	-$20	-$563*
Arrearages	$693	$643	-$50	-$86*	$36

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table V-10 displays shortfall and arrearages by baseline arrearages for JCP&L non-heating customers. Customers with negative arrears increased their shortfall and arrearages, but they did not change significantly compared to the control group. Customers with arrears between -$100 and $100 had a small decrease in shortfall and arrearages, as compared to the control group whose shortfall and arrears did not change significantly. Customers with arrears over $100 had a large decrease in arrears, but it was not significantly different than the change for the control group.

Table V-10
Shortfall and Arrearages
By Baseline Arrearages
JCP&L Non-Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	9	9		21	
Shortfall	-$67	$42	$109	$92*	$17
Arrearages	-$144	-$27	$117#	$97**	$20
Baseline Arrears -$100 to $100					
Number of Customers	164	164		169	
Shortfall	-$4	-$40	-$36**	-$8	-$28*
Arrearages	$24	$3	-$21**	$2	-$23**
Baseline Arrears >$100					
Number of Customers	83	83		30	
Shortfall	-$80	-$113	-$33	-$20	-$13
Arrearages	$319	$201	-$118**	-$86*	-$32

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table V-11 displays shortfall and arrearages by baseline arrearages for JCP&L heating customers. Customers with negative baseline arrears had a large increase in shortfall and arrearages, but still had negative arrears in the follow-up period. Their increase in shortfall and arrears was not significantly greater than that for the control group. Customers with baseline arrears between -$100 and $100 had a decrease in their arrears to a mean level of -$53. Customers with baseline arrears over $100 had a large decrease in shortfall and arrears.

Table V-11
Shortfall and Arrearages
By Baseline Arrearages
JCP&L Heating Customers

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	28	28		7	
Shortfall	-$219	$48	$266**	$191*	$76
Arrearages	-$373	-$206	$167**	$198	-$31
Baseline Arrears -$100 to $100					
Number of Customers	69	69		22	
Shortfall	-$46	-$53	-$7	$93	-$100
Arrearages	$28	-$25	-$53*	$28	-$81
Baseline Arrears >$100					
Number of Customers	34	34		21	
Shortfall	-$46	-$190	-$144	$14	-$158
Arrearages	$310	$108	-$202**	-$72	-$130

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table V-12 displays shortfall and arrearages by baseline arrearages for NJNG customers. Customers with baseline arrears less than -$100 had a large increase in shortfall and arrears. Customers with baseline arrears between –$100 and $100 and those with baseline arrears over $100 did not have a significant change in these indicators.

Table V-12
Shortfall and Arrearages
By Baseline Arrearages
NJNG Customers

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	47	47		25	
Shortfall	-$164	$155	$319**	$254**	$65
Arrearages	-$324	-$27	$297**	$129#	$168*
Baseline Arrears -$100 to $100					

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	90	90		109	
Shortfall	$0	$5	$5	$40*	-$35
Arrearages	$8	$9	$1	$8	-$7
Baseline Arrears >$100					
Number of Customers	30	30		13	
Shortfall	-$18	$23	$41	-$256#	$297
Arrearages	$264	$173	-$91	-$81	-$10

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

There were not enough data for NUI customers to display shortfall and arrearages by baseline arrearages.

Table V-13 displays shortfall and arrearages by baseline arrearages for PSE&G combination customers. Customers with arrears less than -$100 in the baseline period had a large increase in shortfall and arrearages. However, compared to the control group their arrearages declined. Customers with baseline arrears between -$100 and $100 had an increase in shortfall and arrearages and had an average arrearage of $162 at the end of the follow-up period. Again, this was not significantly different from the control group. Customers with baseline arrearages over $100 had a decrease in shortfall, but an insignificant change in arrearages. Compared to the control group, they had a large decrease in both shortfall and arrears.

Table V-13
Shortfall and Arrearages
By Baseline Arrearages
PSE&G Combination Customers

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	17	17		12	
Shortfall	-$259	$71	$330**	$471**	-$141
Arrearages	-$250	$9	$259**	$505	-$246*
Baseline Arrears -$100 to $100					
Number of Customers	53	53		66	
Shortfall	-$43	$69	$112*	$77*	$35

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Arrearages	$37	$162	$125**	$100	$25
Baseline Arrears >$100					
Number of Customers	245	245		95	
Shortfall	$74	$15	-$59#	$135*	-$194**
Arrearages	$468	$445	-$23	$250**	-$273**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table V-14 displays shortfall and arrearages by baseline arrearages for PSE&G electric non-heating customers. Customers with baseline arrears less than -$100 had an increase in shortfall and arrears. Customers with baseline arrears between -$100 and $100 had a small increase in arrears, but this was not different from the control group. Customers with baseline arrears over $100 did not have a significant change in shortfall or arrears.

Table V-14
Shortfall and Arrearages
By Baseline Arrearages
PSE&G Electric Non-Heating Customers

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	5	5		1	--
Shortfall	-$130	$12	$142	--	--
Arrearages	-$247	-$122	$125*	--	--
Baseline Arrears -$100 to $100					
Number of Customers	84	84		27	
Shortfall	-$14	$1	$15	$54	-$39
Arrearages	$26	$57	$31**	$36	-$5
Baseline Arrears >$100					
Number of Customers	43	43		19	
Shortfall	$58	$2	-$56	-$25	-$31
Arrearages	$235	$252	$17	-$9	$26

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table V-15 displays shortfall and arrearages by baseline arrearages for SJG customers. Customers with baseline arrears less than -$100 had a large increase in shortfall and arrears. Customers with arrears between -$100 and $100 also had significant increases in shortfall and arrears. Customers with baseline arrears greater than $100 had a large decline in arrears of $195. The control group did not have a decline.

Table V-15
Shortfall and Arrearages
By Baseline Arrearages
SJG Customers

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Baseline Arrears <-$100					
Number of Customers	31	31		31	
Shortfall	-$7	$354	$361**	$307**	$54
Arrearages	-$301	$108	$409**	$153**	$256**
Baseline Arrears -$100 to $100					
Number of Customers	50	50		128	
Shortfall	-$77	$140	$217**	$54**	$163**
Arrearages	$3	$149	$146**	$35**	$111**
Baseline Arrears >$100					
Number of Customers	91	91		19	
Shortfall	$47	$39	-$8	-$111	$103
Arrearages	$403	$208	-$195**	$21	-$216*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

VI. Debt Reduction Component

The Debt Reduction component is one aspect of the Comfort Partners Program that differs substantially among the different utilities, both in terms of the program parameters, and in terms of the way the program is implemented and delivered. This program component was allowed to differ across utilities because of differing customer information systems placing different constraints on how the forgiveness could be implemented, as well as differing utility budgets for the Debt Reduction.

As part of the Comfort Partners Process Evaluation, APPRISE conducted interviews with program managers and collected information on eligibility for and parameters for debt reduction plans. Some of this information is important in understanding the outcomes of the plans. Table VI-1 summarizes the information that was collected.

Table VI-1
Debt Reduction Program Parameters

	Arrearage Level for Program Eligibility		Calculation of Monthly Payment	Calculation of Arrearage Forgiveness	Maximum Arrearage Forgiveness	Arrearage Crediting
	Min	Max				
Conectiv	$300	$1500	Previous year's bill-10% for energy savings + .5*arrears/12	50% of arrears	$750	Each month
JCP&L	None	None	Percentage of income	Total arrears	$750	Each month
NJ Natural Gas	$250	$750	Previous year's bill-10% for energy savings + arrears over $750/12	Total arrears	$750	At enrollment full arrears is credited
NUI	None	$1500	Previous year's bill/12	Total arrears	$750	At enrollment full arrears is credited
PSE&G	$300	$2000	(Previous year's bill-10% for energy savings)/12 – 2.5% of arrears	40% of arrears	$750	First half after first year completed and second half after second year completed
South Jersey Gas	None	None	Previous year's bill-10% for energy savings + arrears over $300/12	Total arrears	$300	Each month

Table VI-2 displays the number of debt reduction participants that each utility provided data for. Statistics on program parameters will be analyzed for all of these customers. However, payment statistics are only available for customers in the treatment and control groups.

Table VI-2
Number of Debt Reduction Participants
By Utility and Treatment Group

	Conectiv	JCP&L	NJ Natural Gas	NUI	PSE&G	South Jersey Gas
Treatment Group	58	39	20	12	94	27
Control Group	9	24	7	35	354	20
Not in Analysis Groups	5	60	27	5	106	11
TOTAL	72	123	54	52	554	58

Table VI-3 displays the number of debt reduction participants by debt reduction enrollment quarter.

Table VI-3
Number of Debt Reduction Participants
By Debt Reduction Enrollment Quarter

	Conectiv	JCP&L	NJ Natural Gas	NUI	PSE&G	South Jersey Gas
Q1 2002	11	24	2	1	36	0
Q2 2002	24	15	3	7	44	27
Q3 2002	24	27	18	6	43	4
Q4 2002	1	15	14	2	73	0
Q1 2003	6	21	17	2	81	5
Q2 2003	2	20	0	16	225	13
Q3 2003	4	1	0	18	52	9
TOTAL	72	123	54	52	554	58

Table VI-4 displays statistics for Conectiv. The data displayed in this table were reported by HDMC. The arrearage and payments amounts are estimated because the amounts were reported as HDMC enrolled the clients, before they were confirmed by the utility. These customers start the plan with arrears of approximate $750 and a monthly payment of approximately $150.

Table VI-4
Arrearage Reduction Parameters
By Type of Customer and Data Availability
Conectiv Customers

Conectiv Customers who Participated in Debt Reduction Plan				
	All Customers	Treatment Group	Control Group	Not in Treatment or Control Group
Number of Customers	72	58	9	5
Arrears at Plan Enrollment	$745	$746	$887	$476
Monthly Plan Payment	$151	$146	$212	$99

Table VI-5 displays arrearage reduction parameters for NJNG customers. The data displayed in this table were reported by HDMC. The arrearage and payments amounts are estimated because the amounts were reported as HDMC enrolled the clients, before they were confirmed by the utility. These customers had arrears of approximately $400 and a monthly payment of $133.

Table VI-5
Arrearage Reduction Parameters
By Type of Customer and Data Availability
NJNG Customers

NJNG Customers who Participated in Debt Reduction Plan				
	All Customers	Treatment Group	Control Group	Not in Treatment or Control Group
Number of Customers	54	20	7	27
Arrears at Plan Enrollment	$412	$426	$248	$443
Monthly Plan Payment	$133	$100	$243	$130

Table VI-6 displays arrearage reduction parameters for NUI customers. The data displayed in this table were reported by HDMC. The arrearage and payments amounts are estimated because the amounts were reported as HDMC enrolled the clients, before they were confirmed by the utility. These customers had arrears of almost $700 and a monthly payment of $171.

Table VI-6
Arrearage Reduction Parameters
By Type of Customer and Data Availability
NUI Customers

NUI Customers who Participated in Debt Reduction Plan				
	All Customers	Treatment Group	Control Group	Not in Treatment or Control Group
Number of Customers	52	12	35	5
Arrears at Plan Enrollment	$692	$469	$803	$446
Monthly Plan Payment	$171	$248	$156	$94

Table VI-7 displays statistics on program parameters for JCP&L Debt Reduction participants. Mean arrears at program enrollment was $359 overall. The monthly payment plan averaged $81. Seventy-one percent of participants received arrearage forgiveness, and the mean amount of arrearage forgiveness received was $221.

Table VI-7
Arrearage Reduction Parameters
By Type of Customer and Data Availability
JCP&L Customers

JCP&L Customers who Participated in Debt Reduction Plan								
	All Customers	Treatment Group			Control Group			Not in Treatment or Control Group
		All Customers	All Non-Heating Customers	Non-Heating Customers With Complete Data	All Customers	All Non-Heating Customers	Non-Heating Customers With Complete Data	
Number of Customers	123	39	27	22	24	18	12	60
Arrears at Plan Enrollment	$359	$293	$384	$466	$518	$585	$438	$293
Monthly Plan Payment	$81	$95	$84	$85	$74	$59	$52	$76
Planned Arrearage Forgiveness	$359	$293	$384	$466	$518	$585	$438	$293
% Removed	9%	15%	19%	18%	4%	0%	8%	7%
Days on Plan	390	374	357	368	409	406	425	394
% Received Arrearage	71%	69%	70%	68%	75%	83%	92%	70%

JCP&L Customers who Participated in Debt Reduction Plan								
	All Customers	Treatment Group			Control Group			Not in Treatment or Control Group
		All Customers	All Non-Heating Customers	Non-Heating Customers With Complete Data	All Customers	All Non-Heating Customers	Non-Heating Customers With Complete Data	
Forgiveness								
Arrearage Forgiveness Received	$182	$221	$239	$247	$232	$265	$296	$136

Table VI-8 displays debt reduction program parameters for PSE&G customers who participated in the program. Arrears at plan enrollment averaged $822 and the monthly plan payment averaged $202. Twelve percent of customers received arrearage forgiveness, and the mean amount of arrearage forgiveness received was $17. The low percentage of customers who received arrearage forgiveness relates to the program design that provides for the first half of arrearage forgiveness after one full year of payments and the second half of arrearage forgiveness after the second full year of payments.

Table VI-8
Arrearage Reduction Parameters
By Type of Customer and Data Availability
PSE&G Customers

PSE&G Customers Who Participated in Debt Reduction Plan							
	All Customers	Treatment Group			Control Group		Not in Treatment or Control Group
		All Customers	All Combined Customers	Combined Customers With Complete Data	All Customers	All Combined Customers	
Number of Customers	554	94	84	40	354	332	106
Arrears at Plan Enrollment	$822	$718	$737	$705	$852	$862	$815
Monthly Plan Payment	$202	$182	$187	$184	$207	$211	$202
Planned Arrearage Forgiveness	$334	$292	$300	$286	$346	$349	$334
% Removed	6%	24%	23%	18%	1%	1%	8%
Days on Plan	294	506	518	516	210	209	391
% Received Arrearage Forgiveness	12%	56%	62%	68%	0%	0%	10%
Arrearage Forgiveness Received	$17	$75	$83	$87	$0	$0	$22

Table VI-9 displays arrearage reduction parameters for SJG customers who participated in the debt reduction component. Arrears at plan enrollment averaged about $400 for these customers. About half of these customers were removed at some point before the plan ended, but because these customers received forgiveness on a monthly basis, about 80 percent received some forgiveness. The mean level of forgiveness received was $112.

Table VI-9
Arrearage Reduction Parameters
By Type of Customer and Data Availability
SJG Customers

SJG Customers Who Participated in Debt Reduction Plan					
	All Customers	Treatment Group		Control Group	Not in Treatment or Control Group
		All Customers	Combined Customers With Complete Data	All Customers	
Number of Customers	58	27	22	20	11
Arrears at Plan Enrollment	$408	$389	$376	$468	$355
Monthly Plan Payment	$117	$94	$93	$167	$83
Planned Arrearage Forgiveness	$242	$239	$225	$259	$222
% Removed	46%	48%	41%	35%	73%
Days on Plan	265	338	355	160	274
% Received Arrearage Forgiveness	83%	93%	95%	70%	82%
Arrearage Forgiveness Received	$112	$136	$151	$73	$123

Table VI-10 compares the annual payments required under the payment agreements to the actual payments made in the post-treatment period. The mean payment required for JCP&L non-heating customers with complete payment data was $1021. These customers made average payments of $842 over the year. The average percentage of the annual payments required under the plan that were made by JCP&L customers was 106 percent.[10] Arrears for these customers declined from $466 at the time of enrollment in the debt reduction plan to $203 at the end of the post-treatment period. These customers were successful in reducing their arrears because they made a large percentage of the payments required by the plan and they received arrearage forgiveness each month.

[10] Note that this is not the total payments made divided by the total amount required, but the average of these ratios across the customers.

PSE&G combination customers were expected to pay $2203 over the year according to the plan agreement. These customers paid an average of $2025. The average percentage of the annual payments under the plan that were made by PSE&G customers was 94 percent. Arrears for these customers declined from $705 at the time of enrollment in the debt reduction plan to $697 at the end of the post-treatment period. These customers were not successful in reducing their arrears because they did not make all of the payments required by the plan and they did not receive arrearage forgiveness unless they successfully completed a year of payments on the plan.

SJG customers were expected to pay $1119 over the year according to the plan and paid an average of $946. The average percentage of the annual payments under the plan that were made by SJG customers was 83 percent. Arrears for these customers declined from $376 at the time of enrollment to $221 by the end of the follow-up period. These customers reduced their arrears because each month that they made payments they received arrearage forgiveness of approximately $25.

The other utilities only had a few customers in the debt reduction component treatment group with complete payment data, so they are not included in the table below.

Table VI-10
Monthly Payment Agreements and Actual Payments Made
By Utility

	JCP&L	PSE&G	South Jersey Gas
Type of customer	Non-heating	Combination	Gas
Number of households	22	40	22
Annual payments required	$1021	$2203	$1119
Annualized customer payments	$842	$2025	$946
Coverage rate*	106%	94%	83%
Arrears at plan enrollment	$466	$705	$376
Ending arrears	$203	$697	$221
Arrearage forgiveness	$247	$87	$151

*This is not the total payments made divided by the total amount required, but the average of these ratios across the customers.

Table VI-11 displays key performance indicators for JCP&L non-heating customers who participated in the debt reduction plan. Statistics are shown for all non-heating customers and only those customers with complete payment data. These customers had a large increase in their total coverage rate, a large decrease in shortfall, and a large decrease in arrears. The increase in the coverage rate was similar to that for the control group, but the decrease in shortfall was greater than for the control group, and the control group actually had an increase in arrears. The results of this table are consistent with the table above, showing that the debt reduction plan helped these customers to improve their status with respect to their electric bills.

Table VI-11
Key Performance Indictors for Debt Reduction Participants
JCP&L Non-Heating Customers

JCP&L							
	All Non-Heating Customers				Non-Heating Customers With Complete Payment Data		
	Treatment Group			Control Group	Treatment Group		
	Baseline	Follow-Up	Change	Change	Baseline	Follow-Up	Change
Number of Customers	27	27		18	22	22	
Number of Cash Payments	14.4	12.8	-1.6	-.7	15.4	13.1	-2.3*
Cash Coverage Rate	100%	101%	1%	-20%	101%	101%	0%
Total Coverage Rate	103%	137%	34%*	36%	104%	141%	37%*
Shortfall	-$24	-$232	-$208*	-$99	-$16	-$244	-$228#
Arrears	$341	$180	-$161*	$74	$360	$203	-$157#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. **Denotes statistical significance at the 99 percent level.

Table VI-12 displays the key performance indicators for JCP&L non-heating debt reduction participants with complete payment data to compare with those for a comparison group of JCP&L Comfort Partners participants with over $250 in arrears who did not participate in the debt reduction component. The purpose of this table is to evaluate the impact of the debt reduction component, independently of the Comfort Partners Program. This control group did not increase the coverage rate or decrease the shortfall to the extent that debt reduction participants did, but the control group was also able to decrease arrears by the end of the follow-up period due to a total coverage rate of 110 percent.

Table VI-12
Key Performance Indictors
Debt Reduction Participants
JCP&L Non-Heating Debt Reduction Participants
And a Comparison Group

JCP&L – Non-Heating Customers						
	Treatment Group Arrearage Reduction Participants			Treatment Group Arrearage Reduction Non-Participants Baseline Arrears>$250		
	Baseline	Follow-Up	Change	Baseline	Follow-Up	Change
Number of Customers	22	22		26	26	
Number of Cash Payments	15.4	13.1	-2.3*	19.3	17.0	-2.3
Cash Coverage Rate	101%	101%	0%	103%	104%	1%
Total Coverage Rate	104%	141%	37%*	109%	110%	1%
Shortfall	-$16	-$244	-$228#	-$150	-$100	$50

JCP&L – Non-Heating Customers						
	Treatment Group Arrearage Reduction Participants			Treatment Group Arrearage Reduction Non-Participants Baseline Arrears>$250		
	Baseline	Follow-Up	Change	Baseline	Follow-Up	Change
Arrears	$360	$203	-$157#	$490	$362	-$128*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table VI-13 displays key performance indicators for PSE&G combination customers who participated in the debt reduction program. These customers were successful in increasing their coverage rates and reducing their shortfall. This is especially true when compared to the control group that decreased its coverage rate and increased shortfall. The Debt Reduction participants did not significantly reduce their arrears, but they faired significantly better than the control group with a $355 increase in arrears.

Table VI-13
Key Performance Indictors for Debt Reduction Participants
PSE&G Combination Customers

PSE&G							
	All Combination Customers				Combination Customers With Complete Payment Data		
	Treatment Group			Control Group	Treatment Group		
	Baseline	Follow-Up	Change	Change	Baseline	Follow-Up	Change
Number of Customers	84	84		332	40	40	
Number of Cash Payments	7.8	11.7	3.9**	1.8**	8.8	10.6	1.8*
Cash Coverage Rate	71%	81%	10%*	-24%**	80%	81%	1%
Total Coverage Rate	81%	99%	18%**	-23%**	92%	101%	9%#
Shortfall	$207	$82	-$125#	$271**	$157	$23	-$133
Arrears	$720	$784	$64	$355**	$699	$697	-$2

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table VI-14 displays the key performance indicators for PSE&G combination debt reduction participants with complete payment data to compare with those for a comparison group of PSE&G Comfort Partners participants between $300 and $2000 in arrears who did not participate in the debt reduction component. This comparison allows for an evaluation of the Debt Reduction plan, independently of Comfort Partners. Customers with this level of arrears were chosen for this comparison group, as these are the customers who were eligible for the plan. As compared to customers who did participate in the debt reduction plan, these customers had similar outcomes.

Table VI-14
Key Performance Indictors
Debt Reduction Participants
PSE&G Combination Debt Reduction Participants
And a Comparison Group

PSE&G – Combination Customers						
	Treatment Group Arrearage Reduction Participants			Treatment Group Arrearage Reduction Non-Participants $300<Baseline Arrears<$2000		
	Baseline	Follow-Up	Change	Baseline	Follow-Up	Change
Number of Customers	40	40		87	87	
Number of Cash Payments	8.8	10.6	1.8*	9.8	10.9	1.1*
Cash Coverage Rate	80%	81%	1%	72%	86%	14%**
Total Coverage Rate	92%	101%	9%#	91%	102%	11%**
Shortfall	$157	$23	-$133	$179	$11	-$168*
Arrears	$699	$697	-$2	$664	$602	-$62

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

Table VI-15 displays key performance indicators for SJG Debt Reduction participants. The control group is not shown because they do not have sufficient data. These customers show a decrease in both shortfall and arrears.

Table VI-15
Key Performance Indictors for Debt Reduction Participants
SJG Customers

SJG						
	All Customers			Customers With Complete Payment Data		
	Treatment Group			Treatment Group		
	Baseline	Follow-Up	Change	Baseline	Follow-Up	Change
Number of Customers	27	27		22	22	
Number of Cash Payments	6.3	7.7	1.4	6.7	8.2	1.5
Cash Coverage Rate	71%	41%	-30%*	59%	42%	-17%#
Total Coverage Rate	91%	89%	-2%	82%	89%	7%
Shortfall	$131	$86	-$45	$178	$125	-$53
Arrears	$352	$243	-$109	$282	$221	-$61

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table VI-16 compares key performance statistics for SJG debt reduction participants to statistics for SJG customers with arrears of $250 or more who did not participate in the debt reduction program. This table shows that the customers who did not participate in the debt reduction component reduced their arrears by more than those who did participate. This may be due to the fact that these customers received other types of assistance or to the fact that the customers who did not participate had higher baseline arrears.

Table VI-16
Key Performance Indictors
Debt Reduction Participants
SJG Debt Reduction Participants
And a Comparison Group

SJG Customers						
	Treatment Group Arrearage Reduction Participants			Treatment Group Arrearage Reduction Non-Participants $250<Baseline Arrears		
	Baseline	Follow-Up	Change	Baseline	Follow-Up	Change
Number of Customers	22	22		44	44	
Number of Cash Payments	6.7	8.2	1.5	12.0	8.8	-3.2**
Cash Coverage Rate	59%	42%	-17%#	82%	42%	-40%
Total Coverage Rate	82%	89%	7%	98%	97%	-1%
Shortfall	$178	$125	-$53	$48	$34	-$14
Arrears	$282	$221	-$61	$527	$254	-$273**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level.
** Denotes statistical significance at the 99 percent level.

VII. Components Analysis

In this section we examine the various factors that may impact customers' energy bills and payments, and assess the extent to which each factor had an influence. Factors that may impact a customer's bill include the usage reduction caused by the Comfort Partners Program, changes in energy prices, and changes in weather. Factors that may affect the customers' ability to meet their payment obligations include energy assistance such as Lifeline, LIHEAP, NJ SHARES, and USF, and arrearage forgiveness received as part of the debt reduction program.

Table VII-1 displays the components analysis for Conectiv non-heating customers in the treatment group. This table shows that these factors did not change significantly to impact affordability for Conectiv customers.

Table VII-1
Components Analysis for Conectiv Treatment Group

	Conectiv Non-Heating Customers Treatment Group		
	Baseline	Follow-Up	Change
Number of Customers	65	65	
Gas Usage (Therms)	7198	7265	67
Cost per Therm	12.3¢	12.1¢	-.2¢**
LIHEAP Assistance	$0	$0	$0
Universal Service	$0	$1	$1
Total Assistance Payments	$78	$65	-$13

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table VII-2 examines these factors for JCP&L non-heating and heating customers. This table shows that the only statistically significant change that the non-heating customers experienced was a small decrease in the price per kWh. In addition to this change, heating customers experienced a large increase in electric usage (not adjusted for weather), and a small increase in assistance payments including LIHEAP and Universal Service that was introduced in the follow-up year.

Table VII-2
Components Analysis for JCP&L Treatment Group

JCP&L						
	Non-Heating Customers Treatment Group			Heating Customers Treatment Group		
	Baseline	Follow-Up	Change	Baseline	Follow-Up	Change
Number of Customers	256	256		131	131	

JCP&L						
	Non-Heating Customers Treatment Group			Heating Customers Treatment Group		
Electric Usage (kWh)	6,715	6,550	-165	11,860	13,248	1,388**
Cost per kWh	12.5¢	11.4¢	-1.1¢**	11.3¢	10.3¢	-1.0¢**
LIHEAP Assistance	$4.6	$2.3	-$2.3	$128	$166	$38*
Universal Service	$0	$.31	$.31#	$0	$4.71	$5**
Total Assistance Payments	$82	$86	$4	$294	$329	$35#
Arrearage Forgiveness	$0	$21	$21	$0	$8	$8

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table VII-3 displays the components analysis for NJNG customers. These customers had a significant increase in their gas usage, a small decrease in the cost per therm, and a decrease in their assistance payments. All of these factors lead to a decrease in the affordability of energy payments for these customers.

Table VII-3
Components Analysis for NJNG Treatment Group

	NJNG Customers Treatment Group		
	Baseline	Follow-Up	Change
Number of Customers	167	167	
Gas Usage (Therms)	905	1069	164**
Cost per Therm	$1.05	$.98	-$.07**
LIHEAP Assistance	$165	$163	-$2
Universal Service	$46	$8	-$38**
Total Assistance Payments	$307	$237	-$70**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table VII-4 displays the components analysis for NUI customers. These customers had a small increase in assistance payments, but no other change in the factors that would affect affordability for these customers.

Table VII-4
Components Analysis for NUI Treatment Group

	NUI Non-Heating Customers Treatment Group		
	Baseline	Follow-Up	Change
Number of Customers	75	75	

	NUI Non-Heating Customers Treatment Group		
	Baseline	Follow-Up	Change
Gas Usage (Therms)	958	1055	97
Cost per Therm	$1.10	$1.09	-$0.01
LIHEAP Assistance	$116	$140	$24
Universal Service	$0	$1	$1
Total Assistance Payments	$160	$193	$33#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table VII-5 displays factors that may affect bills and payments for the PSE&G treatment group. Combination customers had a significant decrease in electric usage, an increase in gas usage, and an increase in prices. Electric non-heating customers had a significant decrease in electric usage and prices.

Table VII-5
Components Analysis for PSE&G Treatment Group

PSE&G						
	Combination Customers Treatment Group			Electric Non-Heating Customers Treatment Group		
	Baseline	Follow-Up	Change	Baseline	Follow-Up	Change
Number of Customers	315	315		132	132	
Electric Usage (kWh)	6,832	6,120	-713**	6394	5749	-645**
Gas Usage (Therms)	948	1,042	94**	--	--	--
Cost per kWh	11.1¢	10.7¢	-.4¢**	11.3¢	10.8¢	-.5¢**
Cost per Therm	$0.98	$1.01	$0.03**	--	--	--
LIHEAP Assistance	$269	$254	-$15	$5	$7	$2
Arrearage Forgiveness	$0	$11	$11	$0	$0	$0

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table VII-6 displays the components analysis for SJG customers. These customers experienced a significant increase in their gas usage and an increase in their assistance payments.

Table VII-6
Components Analysis for SJG Treatment Group

	SJG Customers Treatment Group		
	Baseline	Follow-Up	Change
Number of Customers	172	172	
Gas Usage (Therms)	857	995	138**
Cost per Therm	$1.23	$1.25	$0.02**
LIHEAP Assistance	$139	$221	$82**
Total Assistance Payments	$139	$221	$82**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

VIII. Summary of Findings

This report provides detailed analysis of the affordability impacts of the Comfort Partners Program. In this section of the report, we examine findings for all utilities and for each utility individually, in order to provide a condensed and comprehensive summary of program impacts.

A. Overview

The New Jersey Comfort Partners Program was designed to reduce energy usage and improve energy affordability for low-income households by providing energy efficiency and energy education services. The usage impact report shows that the program achieved moderate savings for participating customers. However, it is important to recognize that there are other factors affecting energy bills, including weather and prices. Changes in these variables can easily overshadow the savings from reduced usage in the short-term, and customers may see no gross decline in their bills (or an increase) in a particular year, even if they are better off than those who did not receive energy efficiency services.

This report shows that the program achieved modest affordability impacts for some of the participating customers. The Comprehensiveness Report showed that cost-effective investments were not being undertaken in twenty-five percent of the homes served. The Process Evaluation Report showed that the program was not targeting high use customers and this report shows that the program is not targeting customers with affordability problems. One modification to the program that may increase affordability impacts is to reduce the number of households served while increasing the investment level in each home and improving targeting of high usage and payment-troubled households. If the program served these customers and achieved significantly greater energy savings, the resulting changes in energy bills may be significant to customers even in the presence of more severe weather and increased prices.

Another option for significantly improving energy affordability for low-income customers is to recognize that a usage reduction program is a blunt instrument for such an outcome. A mechanism such as the Universal Services Program that limits electric and gas costs to six percent of the low-income customer's income may more effectively address affordability problems. Customers who had the highest subsidies or exceeded the subsidy limit because of their high usage could then be targeted for energy efficiency services. Such targeting would directly benefit ratepayers, as subsidies to these customers would be reduced as their usage declined.

B. Results for All Utilities

This report finds varying levels of savings and affordability impacts for customers from different utilities. There are many differences between the utilities that may have resulted in these varying results.

- *Utility experience:* Two utilities, JCP&L and PSE&G, have had years of prior experience implementing and managing a comprehensive usage reduction program. The other utilities do not have this level of experience.

- *Inspections:* Two utilities, JCP&L and PSE&G have hired independent inspectors to provide verification of the quality of the work provided by the third party implementation contractors, HDMC and Bill Busters. NJNG has also jointly conducted inspections with JCP&L, but these inspections are done on a lower percentage of completed jobs. The other utilities have not implemented third party quality control.

- *Baseline usage:* Utilities have different methods for targeting customers to serve in the program. Those utilities that are successful at bringing in the customers who have the highest pre-treatment usage are the ones who will achieve the greatest impacts on usage and affordability. If utilities are successful at targeting customers with affordability problems, they may also be more successful at having significant impacts on energy affordability.

- *Contractors:* HDMC is the primary implementation contractor, providing energy efficiency services for all of the utilities in the state. Bill Busters provides services on a small percentage of JCP&L jobs. However, HDMC uses several auditors and teams to complete the quantity of jobs required by the program. The quality of these crews may vary around the state, impacting usage reduction and energy affordability.

- *Subcontractors:* Subcontractors used by HDMC to install insulation vary across the state. Differences have been seen in the quality of work provided by these contractors. This is another factor that may affect savings and affordability impacts.

Given the number of customers in each utility and the multitude of factors outlined above, it is not possible to pinpoint a primary cause of different impacts. The usage impact report with controlled weather normalized usage will provide more detailed information on the contributions of some of these factors. When thinking about improving the program to provide better results for low-income customers, these are some of the factors that should be considered.

Below the findings fore each type of customer and each utility are summarized.

<u>Electric Non-Heating Customers</u>

- Electric non-heating customers had a gross increase in their total coverage rate, but this increase is not statistically different from that of the control group. These customers had a small but significant decline in arrears. Electric charges and cash payments both declined, indicating that the program had a positive impact on affordability for these customers.

Electric Heating Customers

- Electric heating customers experienced a small decline in arrears, but this is not statistically different from that of the control group. Cash payments for these customers increased as compared to the control group.

Gas Customers

- Gas customers had a decline in their coverage rates and an increase in their shortfall, but these changes are not statistically different from those of the control group. Gas charges increased for treated customers, and by more than they increased for control customers.[11] Cash payments declined, but the change is not statistically different from that of the control group.

Combination Customers

- Combination customers experienced a significant decrease in electric usage and charges and a significant increase in gas usage and charges. However, the control group experienced increases in gas usage and charges, and larger increases in electric usage and charges. These changes suggest that the program resulted in a decrease in electric and gas usage for households receiving treatments, but that the cold winter resulted in a gross increase in gas usage. These customers increased their total payments, but by significantly less than the control group. Their cash and total coverage rates did not increase significantly, except in comparison with the control group's decline in coverage rates.

C. Conectiv

- Conectiv electric non-heating customers had a large and significant decrease in shortfall, and an increase in cash payments.

- Conectiv electric non-heating customers with baseline coverage rates of less than 90 percent had a significant decrease in total charges. Their total coverage rate increased significantly, but this change was not significantly different from that of the control group.

- Conectiv electric non-heating customers with baseline arrearages over $100 had a significant increase in payments and coverage rates. The increase in the total coverage rate was not significantly different from that of the control group. These customers also had a significant decline in their shortfall.

[11] This may be due to the fact that treatment and control customers were treated in different quarters of the year, and the weather and prices they experienced are not comparable.

D. JCP&L

JCP&L Non-Heating Customers

- JCP&L non-heating customers decreased their cash payments, but by significantly less than the control group. Total coverage rates increased for the treatment group but the change was not significantly different from that of the control group. Arrears for these customers declined significantly. Electric charges and cash payments declined significantly for these customers, indicating that the program had a positive impact on affordability.

- JCP&L non-heating customers with baseline total coverage rates less than 90 percent experienced the largest decrease in charges. Changes in their other statistics were not significantly different from the control group. JCP&L non-heating customers with baseline total coverage rates between 90 and 99 percent appeared to benefit most from the program. Their total coverage rates increased significantly, and as compared to the control group. Both charges and cash and total payments declined significantly for these customers. Customers with baseline total coverage rates over 100 percent, the majority of participants, experienced a significant decline in both charges and payments, but no significant change in coverage rates.

- JCP&L non-heating customers with baseline arrears between -$100 and $100 experienced small but statistically significant declines in shortfall and arrears. Customers with baseline arrears over $100 experienced a larger decline in arrears, but it was not significantly greater than the decline experienced by the control group.

- JCP&L non-heating customers who participated in the debt reduction program made a high percentage of their required payments, received arrearage forgiveness, and had a large decrease in arrears.

JCP&L Heating Customers

- JCP&L heating customers experienced a decline in arrears, but this change was not significantly different from that of the control group. Their total cash payments declined, but much less than those of the control group.

E. NJNG

- NJNG customers had a significant decline in their total coverage rates, but this change was not significantly different from that of the control group. Shortfall increased, but not by significantly more than the control group. Arrears increased

significantly. Gas charges increased, and by significantly more than the control group.[12]

- NJNG customers with baseline total coverage rates of less than 90 percent had significant increases in payments and coverage rates, but these changes were not significantly different from those of the control group.

F. NUI

- NUI customers had a significant decline in arrears. Their gas charges increased, but this change was not significantly different from that of the control group. Their cash payments increased significantly as compared to the control group.

G. PSE&G

PSE&G Combination Customers

- PSE&G combination customers experienced a significant decrease in electric usage and charges and a significant increase in gas usage and charges. However, the control group experienced increases in gas usage and charges, and larger increases in electric usage and charges. These changes suggest that the program resulted in a decrease in electric and gas usage for households receiving treatments, but that the cold winter resulted in a gross increase in gas usage. They increased their total payments, but by significantly less than the control group. Their cash and total coverage rates did not increase significantly, except in comparison with the control group's decline in coverage rates.

- PSE&G combination customers with baseline total coverage rates less than 90 percent had significant increases in payments and coverage rates, but these changes were not significantly different from the control group.

- PSE&G combination customers with baseline arrears greater than $100 had declines in charges compared to the control group, and increased their total coverage rate compared to the control group.

- PSE&G combination customers who participated in the debt reduction program made a high percentage of their required payments, but they were not likely to receive arrearage forgiveness, and they did not significantly reduce their arrears.

PSE&G Electric Non-Heating Customers

[12] This may be due to the fact that treatment and control customers were treated in different quarters of the year, and the weather and prices they experienced are not comparable.

- PSE&G electric non-heating customers experienced a decrease in electric charges. They decreased their cash payments but not by significantly more than the treatment group.

H. SJG

- SJG customers had a decrease in their total coverage rate and an increase in their shortfall, but these changes were not significantly different from that of the control group. Their gas charges increased, and by significantly more than those of the control group.[13] Their cash payments declined.

- SJG customers with baseline total coverage rates of under 90 percent had significant increases in their total payments and total coverage rates, but these changes were not statistically different from those of the control group.

- SJG customers who participated in the arrearage reduction program made a large percentage of their required payments, received arrearage forgiveness, and significantly reduced their arrears.

[13] This may be due to the fact that treatment and control customers were treated in different quarters of the year, and the weather and prices they experienced are not comparable.

Appendix

Analysis of More Complete Sample

The analysis in this report focused on those customers who had complete payment and transactions histories for the year preceding service delivery and the year following service delivery. This appendix compares key performance indicators using annualized data for a larger sample of customers with the results presented earlier in this report.

Table A-1 displays key performance statistics for Conectiv non-heating customers with complete data available, for comparison with the next table.

Table A-1
Key Performance Statistics
Conectiv Non-Heating Customers
Complete Data Available

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	65	65		220	
Payment Coverage Indicators					
Number of Cash Payments	7.8	8.7	.9*	-.8	1.7**
Cash Coverage Rate	80%	91%	11%*	-3%*	14%**
Total Coverage Rate	92%	102%	10%#	3%	7%
Shortfall	$203	$8	-$195*	$0	-$195**
Arrears	$259	$290	$31	-$1	$32
Customer Affordability Indicators					
Electric Charges	$867	$859	-$8	$21#	-$29
Cash Payments	$687	$795	$108*	-$29	$137**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-2 displays key performance statistics for a more complete sample of Conectiv non-heating customers. While most of the statistics are the same as for the more restricted sample shown above, there are a few significant differences. In the restricted sample, shortfall decreases from $203 in the baseline period to $8 in the follow-up period. In the sample that includes customers with minimal data available, shortfall is $69 in the baseline period and $10 in the follow-up period. Electric charges for the sample with minimal data are about $100 more than those for the sample with complete data in both the baseline and follow-up periods. Cash

payments increase more significantly for the sample with minimal data available than they do for the sample with complete information.

Table A-2
Key Performance Statistics
Conectiv Non-Heating Customers
Minimal Data Available

Conectiv Non-Heating Customers					
	Treatment Group			JCP&L Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	114	114		238	
Payment Coverage Indicators					
Number of Cash Payments	6.7	8.9	2.1**	-1.1**	3.2**
Cash Coverage Rate	78%	91%	13%*	-5%**	18%**
Total Coverage Rate	90%	100%	10%#	1%	9%
Shortfall	$69	$10	-$59	$2	-$61
Arrears	$353	$352	-$1	-$8	$7
Customer Affordability Indicators					
Electric Charges	$971	$979	$8	$22*	-$14
Cash Payments	$677	$909	$232**	-$35*	$267**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-3 displays the key performance indicators for the sample of JCP&L non-heating customers with complete data available for comparison with the following table.

Table A-3
Key Performance Indicators
JCP&L Non-Heating Customers
Complete Data Available

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	256	256		220	
Payment Coverage Indicators					
Number of Cash Payments	12.4	11.3	-1.1**	-.8**	-.3
Cash Coverage Rate	88%	89%	1%	-3%*	4%#
Total Coverage Rate	103%	111%	8%**	3%	5%

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Shortfall	-$31	-$61	-$30#	$0	-$30
Arrears	$114	$66	-$48**	-$1	-$47**
Customer Affordability Indicators					
Electric Charges	$814	$743	-$71**	$21#	-$92**
Cash Payments	$746	$627	-$119**	-$29	-$90**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-4 displays the key performance indicators for JCP&L non-heating customers, including those with only minimal data available. This table shows that all of these key performance indicators are very similar for the complete data treatment group and the treatment group including customers with only minimal data available. Results for the control group, and the net change in outcomes also show the same findings.

Table A-4
Key Performance Indicators
JCP&L Non-Heating Customers
Minimal Data Available

JCP&L Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	301	301		238	
Payment Coverage Indicators					
Annualized Number of Cash Payments	12.4	11.4	-1.0**	-1.1**	.1
Cash Coverage Rate	89%	89%	0%	-5%**	5%#
Total Coverage Rate	104%	110%	6%**	1%	5%
Annualized Shortfall	-$34	-$57	-$23	$2	-$25
Arrears	$108	$63	-$45**	-$8	-$37**
Customer Affordability Indicators					
Annualized Electric Charges	$807	$756	-$51**	$22*	-$73**
Annualized Cash Payments	$742	$638	-$104**	-$35*	-$69*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-5 displays the key performance indicators for JCP&L heating customers with complete data available for comparison with the next table.

Table A-5
Key Performance Indicators
JCP&L Heating Customers
Complete Data Available

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	131	131		50	
Payment Coverage Indicators					
Number of Cash Payments	11.2	10.1	-1.1**	-2.1**	1.0
Cash Coverage Rate	78%	74%	-4%#	-13%*	9%#
Total Coverage Rate	107%	106%	-1%	-3%	2%
Shortfall	-$83	-$67	$16	$74	-$58
Arrears	$16	-$29	-$45#	$9	-$54
Customer Affordability Indicators					
Electric Charges	$1334	$1356	$22	-$6	$28
Cash Payments	$1090	$1023	-$67*	-$237*	$170*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-6 displays key performance indicators for JCP&L heating customers, including those where there is only minimal data available. These results are very similar for the two groups. One difference is that the customers with complete data show an insignificant change in the total coverage rate, but the table below shows a decline of 6 percentage points in the total coverage rate. Changes for the control group and the net change are also very similar for the two groups.

Table A-6
Key Performance Indicators
JCP&L Heating Customers
Minimal Data Available

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		56	
Payment Coverage Indicators					
Number of Cash Payments	10.9	9.9	-1.0**	-2.1**	1.0
Cash Coverage Rate	79%	72%	-7%*	-14%**	7%
Total Coverage Rate	110%	104%	-6%#	-9%	3%
Shortfall	-$84	-$42	$42	$100	-$58

JCP&L Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Arrears	$17	-$46	-$63**	$14	-$77
Customer Affordability Indicators					
Annualized Electric Charges	$1307	$1323	$16	$33	-$17
Annualized Cash Payments	$1044	$983	-$61*	-$198*	$137*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-7 displays key performance indicators for NJNG customers with complete data available for comparison with the table below.

Table A-7
Key Performance Indicators
NJNG Customers
Complete Data Available

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	167	167		147	
Payment Coverage Indicators					
Number of Cash Payments	8.1	7.8	-.3	-.9**	.6*
Cash Coverage Rate	73%	71%	-2%	-8%**	6%*
Total Coverage Rate	106%	95%	-11%**	-4%	-7%
Shortfall	-$49	$50	$99**	$50*	$49
Arrears	-$39	$28	$67**	$21	$46#
Customer Affordability Indicators					
Gas Charges	$953	$1042	$89**	$39**	$50*
Cash Payments	$760	$764	$4	-$134**	$138**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-8 displays key performance indicators for NJNG customers, including those with minimal data available. These statistics are very similar to those shown above.

Table A-8
Key Performance Indicators
NJNG Customers
Minimal Data Available

NJNG Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	199	199		154	
Payment Coverage Indicators					
Number of Cash Payments	7.6	7.2	-.4#	-.7**	.3
Cash Coverage Rate	72%	69%	-3%	-10%**	7%*
Total Coverage Rate	108%	92%	-15%**	-6%#	-9%#
Shortfall	-$57	$56	$113**	$50*	$63#
Arrears	-$42	$26	$68**	$14	$54*
Customer Affordability Indicators					
Annualized Gas Charges	$970	$1022	$52*	$19#	$33
Annualized Cash Payments	$742	$729	-$13	-$161**	$148**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-9 displays key performance statistics for NUI customers with complete data available, for comparison with the next table.

Table A-9
Key Performance Statistics
NUI Customers
Complete Data Available

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	75	75		31	
Payment Coverage Indicators					
Number of Cash Payments	8.6	8.5	-.1	-.7	.6
Cash Coverage Rate	86%	83%	-3%	-27%**	24%**
Total Coverage Rate	105%	107%	2%	-25%**	27%**
Shortfall	-$39	-$51	-$12	$227**	-$239**
Arrears	$171	$66	-$105**	$212**	-$317**
Gas Charges	$1027	$1116	$89**	$98**	-$9

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Cash Payments	$963	$934	-$29	-$200*	$171*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-10 displays key performance statistics for NUI customers, including those with minimal data available. These statistics are very similar to those shown in the table above.

Table A-10
Key Performance Statistics
NUI Customers
Minimal Data Available

NUI Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	104	104		41	
Payment Coverage Indicators					
Number of Cash Payments	7.9	7.7	-.2	0	-.2
Cash Coverage Rate	82%	80%	-2%	-23%**	21%**
Total Coverage Rate	100%	104%	4%	-22%	26%**
Shortfall	$5	-$17	-$22	$246**	-$268**
Arrears	$190	$99	-$91**	$208**	-$299**
Gas Charges	$1081	$1134	$53#	$58	-$5
Cash Payments	$948	$873	-$75#	-$220*	$145#

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-11 displays key performance indicators for PSE&G combination customers with complete data available for comparison with the next table.

Table A-11
Key Performance Indicators
PSE&G Combination Customers
Complete Data Available

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	315	315		173	
Payment Coverage Indicators					
Number of Cash Payments	10.2	10.6	.4#	.2	.2
Cash Coverage Rate	79%	80%	1%	-9%**	10%**
Total Coverage Rate	99%	99%	0%	-7%**	7%**
Shortfall	$37	$27	-$10	$135**	-$145**
Arrears	$357	$374	$17	$211**	-$194**
Customer Affordability Indicators					
Electric Charges	$757	$649	-$108**	$39*	-$147**
Gas Charges	$899	$1036	$137**	$224**	-$87**
Cash Payments	$1344	$1379	$35	$51	-$16

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-12 displays key performance indicators for PSE&G combination customers, including those where minimal data is available. This table shows similar results to the table above. The table below shows a greater increase in the number of cash payments. Customers in the table below also have higher mean levels of shortfall in both the baseline and follow-up periods.

Table A-12
Key Performance Indicators
PSE&G Combination Customers
Minimal Data Available

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	554	554		817	
Payment Coverage Indicators					
Number of Cash Payments	10.3	12.8	2.5**	3.7**	-1.2**
Cash Coverage Rate	84%	81%	-3%	-18%**	15%**

PSE&G Combination Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Total Coverage Rate	102%	101%	-1%	-18%**	17%**
Shortfall	$76	$44	-$32	$207**	-$239**
Arrears	$402	$405	$3	$234**	-$231**
Customer Affordability Indicators					
Annualized Electric Charges	$750	$680	-$70**	$45**	-$115**
Annualized Gas Charges	$949	$1132	$183**	$261**	-$78**
Annualized Cash Payments	$1215	$1483	$268**	$444**	-$176**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-13 displays key performance indicators for PSE&G electric non-heating customers to compare with the following table.

Table A-13
Key Performance Indicators
PSE&G Electric Non-Heating Customers
Complete Data Available

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	132	132		47	
Payment Coverage Indicators					
Number of Cash Payments	9.5	8.7	-.8**	-.3	-.5
Cash Coverage Rate	86%	84%	-2%	-4%	2%
Total Coverage Rate	100%	102%	2%	-3%	5%
Shortfall	$5	$2	-$3	$26	-$29
Arrears	$84	$113	$29**	$15	$14
Customer Affordability Indicators					
Electric Charges	$714	$611	-$103**	$32	-$135**
Cash Payments	$641	$574	-$67**	-$15	-$52

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-14 displays key performance indicators for PSE&G electric non-heating customers, including those customers with only minimal data available. These results are similar to those in the table above. The mean total coverage rates in the table below are slightly lower than those above, and the arrears in the table below are slightly higher than those above.

Table A-14
Key Performance Indicators
PSE&G Electric Non-Heating Customers
Minimal Data Available

PSE&G Electric Non-Heating Customers					
	Treatment Group			Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	179	179		168	
Payment Coverage Indicators					
Number of Cash Payments	9.4	9.5	.1	2.0**	-1.9**
Cash Coverage Rate	86%	85%	-1%	-5%#	4%
Total Coverage Rate	96%	99%	3%	-4%	7%
Shortfall	$7	$26	$19	$53**	-$34
Arrears	$109	$150	$41*	$20	$21
Customer Affordability Indicators					
Annualized Electric Charges	$740	$659	-$81**	$37	-$118**
Annualized Cash Payments	$643	$638	-$5	$106**	-$111**

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-15 displays key performance indicators for SJG customers with complete data available for comparison with the next table.

Table A-15
Key Performance Statistics
SJG Customers
Complete Data Available

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	172	172		178	
Payment Coverage Indicators					
Number of Cash Payments	10.8	9.1	-1.7**	-.8**	-.9
Cash Coverage Rate	76%	43%	-33%**	-12%**	-21%**
Total Coverage Rate	101%	89%	-12%**	-8%**	-4%
Shortfall	$1	$125	$124**	$81**	$43
Arrears	$151	$172	$21	$54**	-$33
Customer Affordability Indicators					

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Gas Charges	$1036	$1229	$193**	$49**	$143**
Cash Payments	$810	$551	-$259**	-$146**	-$113*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.

Table A-16 displays key performance statistics for SJG customers, including those with minimal data available. These statistics are very similar to those in the previous table.

Table A-16
Key Performance Statistics
SJG Customers
Minimal Data Available

SJG Customers					
	Treatment Group			NJNG/NUI Control Group	Net Change
	Baseline	Follow-Up	Change	Change	
Number of Customers	194	194		231	
Payment Coverage Indicators					
Number of Cash Payments	10.1	8.7	-1.4**	.4	-1.8**
Cash Coverage Rate	79%	44%	-35%**	-13%**	-22%**
Total Coverage Rate	103%	90%	-13%**	-5%#	-8%*
Shortfall	-$10	$123	$133**	$63**	$70#
Arrears	$158	$181	$23	$39#	-$16
Customer Affordability Indicators					
Gas Charges	$1041	$1231	$190**	-$27	$217**
Cash Payments	$824	$553	-$271**	-$173**	-$98*

#Denotes statistical significance at the 90 percent level. *Denotes statistical significance at the 95 percent level. ** Denotes statistical significance at the 99 percent level.