

AN OUTCOME EVALUATION OF INDIANA'S LOW-INCOME RATE AFFORDABILITY PROGRAMS

2008/2009 REPORT

Programs Studied:

Citizens Gas & Coke Utility's Universal Service Program
Vectren Energy's Universal Service Program
Northern Indiana Public Service Company's Winter Warmth Program

PREPARED BY:

**ROGER COLTON
FISHER, SHEEHAN & COLTON
PUBLIC FINANCE AND GENERAL ECONOMICS
BELMONT, MA 02478**

AUGUST 2009

TABLE OF SECTIONS

Introduction.....	1
The Basic Universal Service Program (Citizens Gas/Vectren).....	3
Revenue Collection.....	4
Level of Collection Effort.....	16
Effectiveness of Collection.....	26
Arrears and Payments.....	37
Summary and Conclusions.....	53
The Crisis Payment Program (Citizens Gas).....	55
Revenue Collection.....	56
Level of Collection Effort.....	62
Effectiveness of Collection.....	68
Arrears and Payments.....	70
Summary and Conclusions.....	75
The Winter Warmth Program (NIPSCO).....	77
Revenue Collection.....	78
Level of Collection Effort.....	87
Effectiveness of Collection.....	93
Arrears and Payments.....	100
Summary and Conclusions.....	110
Summary of Findings.....	112

The Basic Universal Service Program (USP)..... 112

The Crisis Payment Program..... 118

The Winter Warmth Program..... 121

INTRODUCTION

This evaluation examines the operation of low-income rates offered by three Indiana utilities in 2008 and 2009. Offered by Citizens Gas and Coke Utilities (CGCU), Vectren Energy Delivery and Northern Indiana Public Service Company (NIPSCO), the programs present two different fundamental models by which to respond to low-income inability-to-pay.

- The CGCU/Vectren model provides proactive basic rate affordability assistance applied to current bills for customers identified as “low-income” through the fuel assistance program; the CGCU/Vectren programs have a corresponding “crisis” component as well.
- The NIPSCO model provides reactive crisis assistance to customers who are facing a pending disconnection of service due to high arrears. Funding from the NIPSCO program is distributed so as to prevent the disconnection of service.

The discussion below will separately examine the two types of assistance. While the low-income programs were modestly revised in 2008, they present the same fundamental approaches as operated in prior years.

This evaluation focuses on the collections impacts of the two program designs from the perspective of the utility. The evaluation considers the amount of revenue collected through the Indiana programs, the level of effort employed to generate that revenue, and the effectiveness and efficiency of the effort directed toward that collection. A full year of data is available for 2008, while 2009 data is limited to the months of January through May.

The discussion below is presented in the following sections.

- Section 1 examines the payment and collections outcomes for the basic Universal Service Program for Vectren and Citizens Gas.
- Section 2 examines the payment and collections outcomes for the “crisis” component of the Universal Service Program for Citizens Gas;
- Section 3 examines the payment and collections outcomes for the NIPSCO Winter Warmth program.

Each section is divided into an examination of particular payment and collection outcomes. The discussion considers the performance of program participants relative to the following attributes:

- Revenue collection;

- Level of collection effort;
- Collection effectiveness; and
- Arrears and payments.

Throughout the report, these metrics are examined in different ways. Monthly data is used at some places while cumulative data is used in other places. Events are used in some places (e.g., number of bills, number of payments), while dollars are used in other places. The metrics thus can fall into one of four typologies. An Example using “bills” is set forth in Illustration 1 below:

Illustration 1		
	Monthly Data	Cumulative Data
Events	Number of June 2008 bills	Cumulative number of bills (January 2008 – June 2008)
Dollars	Dollar of bills rendered on June 2008	Cumulative dollars of bills rendered on bills (January 2008 – June 2008)

The metrics used to measure each of these four factors are identified at the beginning of each section below. The basic CGCU/Vectren affordability program; the crisis program; and the NIPSCO Winter Warmth program are all examined in light of the same fundamental metrics.¹

¹ The metrics have been somewhat adjusted for the Crisis program to adapt them to the specific operation of Crisis interventions.

THE BASIC UNIVERSAL SERVICE PROGRAM (USP): Citizens Gas and Vectren Energy Delivery

The Universal Service Program (USP) offered by Citizens Gas and Vectren Energy provides a tiered discount to low-income customers who receive benefits through Indiana's Low-Income Home Energy Assistance Program (LIHEAP). The discount tiers are based on a point system utilized by the Indiana LIHEAP office to identify vulnerable households. The point system is based in large part, but not entirely, on the income of the participant.

Previous evaluations of the Indiana USP have examined the impact of the USP on the payment performance by customers who participate in the program relative to the payment performance of low-income customers that did not participate in the program. Those previous evaluations found:

- Participants in the USP, despite their discounted rates, generated greater revenue to the two utilities than did customers who did not participate in the program. This increased revenue occurred because USP participants paid a sufficiently higher proportion of their bills to more than offset the amount of the discount; and
- Characterizing the amount of the discount as a “cost” of the USP,² the cost per additional dollar collected under the discount was less than it would have cost using traditional collection processes to have generated the same additional collections.³

The results of this year's evaluation support and lend further credence to those previous findings.

The purpose of this year's evaluation is not to compare program participants to program non-participants. Neither company can identify low-income customers on their respective systems that do not receive fuel assistance. Since all fuel assistance recipients participate in the USP, a comparison of “participant” low-income customers to “non-participant” low-income customers is not possible. The purpose of this year's evaluation therefore is to assess the performance of continuing program participants against the performance of new program participants.

² This characterization was made only for purposes of analysis. In fact, despite discount, the USP generated more paid revenue from program participants than the standard residential rate had generated. Characterizing the discount as a “cost” assumes that, in the absence of the discount, 100% of the bills would have been paid in full. That assumption is clearly contrary to fact.

³ Under standard rates, in other words, a utility spends a certain amount of money on collection efforts and receives an increased stream of revenue in return for those efforts. Under the discount program, characterizing the amount of the discount as a “cost,” a utility spends a certain amount of money on collections and discounts and receives an increased stream of revenue in return for those efforts. The previous evaluation found that the cost per dollar of increased revenue collection was less under the discounted rates than it was under the standard rates.

The evaluation of the CGCU and Vectren low-income programs is based on a comparison of two groups of customers. The two groups of low-income customers that are examined involve the following:

- **Continuing participants:** Group 1 of customers involves those customer who participated in the Universal Service Program in both 2007 and 2008;
- **New participants:** Group 2 of customers involves those customers who participated in the Universal Service Program in 2008 but not in 2007.

In addition to assessing the performance of the study population as a whole, the discussion below disaggregates each Group into four sets of arrears (as measured by the January 2008 arrears). The discussion below can thus compare not only the performance of Group 1 customers to the performance Group 2 customers, but can also track the performance of customers disaggregated by their January 2008 arrears both within and between Groups.

REVENUE COLLECTION

The basic measure of revenue collection used in this evaluation involves the “payment coverage ratio.” The payment coverage ratio considers the percent of the bill rendered to a customer that the customer actually pays. A higher payment coverage ratio is better than a lower ratio. A ratio of 1.0 means that the customer’s payments during a prescribed time frame exactly equal the customer’s bills for current usage during that same time frame.

The “payment coverage ratio,” however, is not a single, static concept. “Payment coverage” can be viewed from various perspectives. One “coverage ratio” considers the extent to which total payments cover bills for current usage during a prescribed time frame. Another “coverage ratio” might consider the extent to which customer payments cover total bills (including the beginning arrears). Coverage ratios can be examined on a month-by-month basis, or on an annual basis.

In this analysis, the following coverage ratios are considered below for the Continuing (Group 1) and New (Group 2) USP participants:

- The cumulative payment coverage ratio for bills for current usage. In the assessment of a cumulative coverage ratio the payment in each month is added to the sum of payments from previous months and divided by the sum of the bills for current consumption;
- The cumulative payment coverage ratio (starting in April); and
- The cumulative payment coverage ratio after subtracting beginning arrears (starting in January) from the payments. This cumulative payment coverage ratio begins its analysis taking the end-of-winter (April) arrears as the starting point.

As with every other aspect of this evaluation, it must be noted that the payment coverage ratio is but one part of a rich tapestry of payment and collection outcomes. There is no single number of inquiries that can provide “the answer” to the question of whether the USP program “works.”

The purpose of this evaluation is not to look for a single answer, but rather to identify the existence and significance of *patterns* of outcomes. Increased payments with decreased collection efforts are better than increased payments with increased collection efforts. Increased dollars of payments with increased numbers of payments is better than increased dollars of payments with decreased numbers of payments. The need of an evaluation such as follows is to identify patterns; to determine whether the patterns among various factors are consistent one with another; and to assess what factors might result in inconsistent patterns should they exist.

This approach is highlighted by the use of an annual payment coverage ratio.⁴ An annual payment coverage ratio figure, standing alone, is an incomplete number. Looking only at the payment coverage ratio, two customers, each of whom have a \$1,200 bill and a 0.90 annual coverage ratio (i.e., each customer paid 90% of his or her bill on an annual basis) are viewed as being the same. One customer, however, could have made twelve \$100 payments, while the other made two \$600 payments. One customer could have been current in each month but the last, while the other customer was delinquent in each month. One customer could have paid 90% of his or her bill with no collection interventions, while the other could have paid 90% only after repeated and intensive collection efforts. As is clear, despite the identity in payment coverage ratios, not only the costs to the company, but also the risks to the company, differ sharply between these two customers.

Citizens Gas and Coke Utilities

The assessment of payment coverage ratios that follows below disaggregates the participant Continuing customers (Group 1) and New customers (Group 2) by the extent to which customers had arrears at the beginning of the program year. The two Groups were of virtually identical size: Group 1 had 999 customers total while Group 2 had 998 customers total. The Groups were disaggregated by arrears appearing on the January 2008 bill.

⁴ The “annual” payment coverage ratio would be the cumulative ratio in the twelfth month. This evaluation continues the cumulative ratios throughout the months with available data.

Group 1 and Group 2 by January 2008 Arrears (CGCU)		
	Group 1	Group 2
<\$1	575	471
\$1 - \$100	156	150
\$101 - \$250	173	257
\$250 or more	92	110
Total	999	998

Group 1: Received USP in 2007 and 2008.
Group 2: Received USP in 2008 but not 2007.

As measured by this arrears trigger (January 2008), there were more customers having participated in USP in both 2007 and 2008 with no arrears than there were of customers who had not previously participated in USP. There were fewer customers with high beginning arrears. Of the customers who had participated in USP in both 2007 and 2008, somewhat fewer than 600 had no arrears, while 265 had January 2008 arrears of more than \$100. In contrast, of the customers who did not participate in USP in 2007, somewhat fewer than 500 had no January 2008 arrears, while nearly 370 had a January 2008 arrears of more than \$100.

The Universal Service Program offered by Citizens Gas does not appear to eliminate seasonal differences in payment patterns for USP participants. As Table 1 shows, beginning in January, both participant groups paid between 50% and 60% of their bill each month. Those coverage ratios remained relatively constant in January and February.

Payment patterns began to improve in April, however, with program participants having paid their complete current bill (year-to-date) by September and October. The payment coverage dropped again as the 2009 winter heating season began, with the same payment improvement beginning to be seen in April and May 2009.

Not surprisingly, the cumulative payment coverage ratios for customers with higher arrears were higher than the cumulative payment coverage ratios for customers with lower arrears. Previous evaluations of the Indiana programs have found that the USP programs have had a greater positive impact on customers with high arrears. Moreover, since the data in Table 1 does not adjust for payments toward arrears, any payment toward pre-existing arrears will inflate the payment coverage ratio of the current bill. Any payment toward arrears, in other words, will be deemed a payment toward the current bill.

Table 1 (CGCU)
Cumulative Payment Coverage Ratio (January 2008 – May 2009)

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.517	0.569	0.673	0.751	0.830	0.864	0.899	0.921	0.936	0.989	1.016	0.954	0.879	0.845	0.870	0.889	0.904
Group Total	0.606	0.632	0.712	0.785	0.849	0.871	0.907	0.933	0.956	1.005	1.008	0.944	0.881	0.855	0.880	0.906	0.921
< \$1	0.676	0.579	0.610	0.667	0.738	0.765	0.794	0.808	0.825	0.885	0.924	0.898	0.845	0.822	0.835	0.844	0.852
< \$1	0.776	0.621	0.608	0.664	0.736	0.769	0.802	0.824	0.847	0.905	0.914	0.875	0.832	0.818	0.838	0.854	0.863
\$1 - \$100	0.407	0.524	0.685	0.794	0.902	0.933	0.984	1.012	1.015	1.079	1.117	1.003	0.903	0.860	0.892	0.922	0.943
\$1 - \$100	0.659	0.624	0.752	0.848	0.920	0.948	0.978	1.008	1.032	1.090	1.089	1.007	0.916	0.891	0.918	0.952	0.979
\$101 - \$250	0.337	0.551	0.768	0.856	0.940	0.976	1.012	1.059	1.070	1.123	1.112	1.007	0.906	0.868	0.909	0.942	0.968
\$101 - \$250	0.424	0.637	0.773	0.865	0.921	0.930	0.974	1.002	1.035	1.073	1.080	0.987	0.909	0.869	0.904	0.936	0.959
> \$250	0.292	0.602	0.778	0.893	0.968	1.038	1.094	1.136	1.177	1.200	1.221	1.091	0.963	0.894	0.942	0.975	1.006
> \$250	0.448	0.659	0.845	0.924	0.975	0.991	1.034	1.087	1.100	1.141	1.131	1.042	0.965	0.925	0.948	0.992	1.008

Group 1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

From a positive perspective, the Citizens Gas USP program participants, including those with beginning arrears, tend to pay nearly their entire current bill over the course of twelve months. By December 2008, both Groups had cumulative payment coverage ratios of 0.954 (Group 1) and 0.944 (Group 2) respectively (meaning they had paid between 94% and 95% of their current bill). Each population with arrears but one (Group 2 with January arrears between \$101 and \$250) had a payment coverage ratio of greater than 1.0 (meaning they had paid their entire current bill and retired all or some of their arrears). Even the population with a cumulative payment coverage ratio of less than 1.0 in December 2008 (Group 2, January 2008 arrears between \$101 and \$250) had a payment coverage ratio of 0.987 (these customers paid 99% of their current bill).

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	x	x	x	1.134	1.285	1.273	1.289	1.290	1.277	1.345	1.337	1.156	0.994	0.925	0.954	0.975	0.993
Group Total	x	x	x	1.168	1.283	1.251	1.301	1.335	1.352	1.427	1.366	1.157	1.002	0.942	0.972	1.007	1.026
< \$1	x	x	x	0.943	1.099	1.084	1.088	1.070	1.068	1.150	1.175	1.083	0.969	0.917	0.926	0.933	0.939
< \$1	x	x	x	0.934	1.113	1.121	1.143	1.147	1.158	1.242	1.205	1.078	0.968	0.927	0.945	0.962	0.970
\$1 - \$100	x	x	x	1.292	1.479	1.416	1.473	1.482	1.441	1.534	1.532	1.233	1.024	0.941	0.978	1.017	1.042
\$1 - \$100	x	x	x	1.355	1.459	1.417	1.439	1.486	1.496	1.595	1.509	1.242	1.029	0.971	1.003	1.050	1.089
\$101 - \$250	x	x	x	1.306	1.472	1.455	1.487	1.582	1.553	1.639	1.522	1.208	0.992	0.920	0.976	1.020	1.056
\$101 - \$250	x	x	x	1.348	1.408	1.321	1.424	1.475	1.540	1.597	1.523	1.210	1.016	0.932	0.982	1.029	1.062
> \$250	x	x	x	1.547	1.612	1.716	1.810	1.889	1.934	1.921	1.821	1.378	1.084	0.955	1.019	1.063	1.106
> \$250	x	x	x	1.416	1.443	1.396	1.529	1.729	1.737	1.830	1.689	1.324	1.095	0.995	1.033	1.107	1.133

Group 1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

The use of levelized budget billing would result in these impacts. By design, levelized budget billing cost-shifts higher winter bills to non-winter months. Accordingly, the ability of USP participants to pay their entire current annual bill is of more significance than the seasonal cost-shifting resulting from the mismatch between seasonal payments and seasonal bills.

The conclusion that the seasonal bill payment shifting can be attributed, at least in substantial part, to levelized budget billing can be derived from Table 2 as well. Table 2 examines the cumulative bill payment coverage ratio, with the initial month being set as April rather than January. The cumulative coverage ratio for the two groups as a whole began and remained in excess of 1.0 for the period through January 2009 (with the January cumulative coverage ratios dropping to 0.994 and 1.002 for Group 1 and Group 2 respectively). By May 2009, the cumulative payment coverage ratio for the period as a whole was back to 0.993 for Group 1 and 1.026 for Group 2.

The prepayment of winter bills is seen, however, particularly in the coverage ratios for May 2008 through November. The cumulative payment coverage ratios for those months consistently fell in the range of 1.3 to 1.4, meaning that USP participants were paying between 130% and 140% of their actual year-to-date bill during those months. The payment coverage ratio exceeding 1.0 cannot be attributed exclusively to pre-existing arrears. Even customers that had a \$0 pre-existing arrears exhibited cumulative payment coverage ratios of greater than 1.0. These customers, in other words, were pre-paying part of a future bill.

Again, the payment coverage ratios for customers with high beginning arrears (in this instance, high April arrears) were consistently higher than customers with lower arrears (and customers

with no arrears). The conclusion flowing from these observations is that the USP was particularly helpful in allowing high arrears customers pay their entire current bill in addition to making payments toward their pre-existing arrears.

For the populations as a whole, as well as for program participants with arrears less than \$250, the payment performance of Group 1 customers was virtually the same as the payment performance of Group 2 customers. In contrast, as measured by cumulative payment coverage ratios, the payment performance of customers with high April arrears was somewhat better for Group 1 customers (those having participated in USP for two consecutive years) through the warm weather months. By the beginning of the next heating season (December 2008), the payment performance of high arrears customers had equalized at a cumulative payment coverage ratio in excess of 1.0 for both groups.

From one perspective, a utility offering a low-income program should be interested in generating payments by their program participants that, at a minimum, cover their ongoing bills for current consumption. Tables 1 and 2 above document that the Citizens Gas USP participants have accomplished that objective. By the end of the warm weather months, USP participants have made payments that, as a cumulative total, equal or exceed 100% of their bills for current usage. Three scenarios can occur:

- To the extent that customers have a cumulative payment coverage ratio at exactly 1.0, those customers are “no worse off” than they were before receiving their annual bills. They have paid exactly their current bill, but no more (and no less).
- To the extent that customers have a cumulative payment coverage ratio of more than 1.0, they have not only paid their entire current bill, but they have made some payment toward their arrears as well. Customers with a cumulative payment coverage ratio of more than 1.0 are better off in that they have reduced their arrears.
- To the extent that customers have a cumulative payment coverage ratio of less than 1.0, they have not paid their entire current bill. These customers may well have made payments toward arrears. A customer with a current bill of \$100 and an arrears of \$50, who makes a \$50 payment, has retired his or her arrears but would have made no payment toward his or her current bill.

While in Tables 1 and 2, all payments are directed toward bills for current usage, Table 3 presents a somewhat different perspective. In Table 3, all payments are assumed to be used to retire arrears until those arrears reach \$0. January 2008 arrears are used to develop Table 3. Only when payments exceed the January 2008 arrears are those payments applied against the payment coverage ratio. The Tables simply measure different attributes. While Tables 1 and 2 measure whether a customer is at least staying “even” by paying his or her current bill, Table 3 examines the extent to which customers are making the utility whole on the entire payment obligation (current bill plus arrears).

Table 3 (CGCU)																	
Cumulative Payment Coverage Ratio after Subtracting January Arrears																	
January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.119	0.365	0.530	0.632	0.723	0.766	0.808	0.836	0.855	0.913	0.947	0.895	0.827	0.799	0.827	0.848	0.865
Group Total	0.097	0.375	0.531	0.634	0.712	0.744	0.786	0.817	0.844	0.898	0.909	0.857	0.805	0.788	0.816	0.845	0.861
< \$1	0.677	0.579	0.610	0.667	0.738	0.765	0.794	0.809	0.825	0.885	0.924	0.898	0.845	0.822	0.835	0.844	0.852
< \$1	0.779	0.622	0.609	0.665	0.737	0.769	0.802	0.825	0.847	0.906	0.914	0.876	0.832	0.819	0.838	0.855	0.864
\$1 - \$100	0.064	0.346	0.561	0.692	0.813	0.852	0.908	0.939	0.945	1.012	1.056	0.952	0.859	0.821	0.855	0.887	0.908
\$1 - \$100	0.358	0.474	0.646	0.759	0.839	0.873	0.908	0.939	0.966	1.027	1.030	0.956	0.872	0.853	0.882	0.917	0.945
\$101 - \$250	(0.5)	0.114	0.455	0.594	0.704	0.758	0.805	0.858	0.877	0.937	0.942	0.864	0.785	0.761	0.809	0.845	0.873
\$101 - \$250	(0.4)	0.205	0.465	0.606	0.684	0.710	0.761	0.794	0.831	0.877	0.897	0.830	0.773	0.747	0.788	0.824	0.848
> \$250	(1.0)	(0.1)	0.288	0.477	0.589	0.684	0.754	0.804	0.856	0.891	0.939	0.856	0.768	0.726	0.786	0.824	0.858
> \$250	(0.9)	(0.1)	0.351	0.499	0.588	0.628	0.677	0.728	0.747	0.795	0.804	0.750	0.708	0.692	0.726	0.775	0.792

Group 1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

As a result, the payment coverage ratios in Table 3 are lower than in Tables 1 and 2, since some of the payments have been “diverted” to retiring arrears first. Table 3 can present three scenarios:

- A “negative” payment coverage ratio means that the payments were less than the outstanding arrears. Under a negative coverage ratio, the customer still owes all or part of his or her pre-existing arrears plus their entire current bill.⁵
- A payment coverage ratio that is positive, but less than 1.0, means that the customer has completely retired his or her arrears, but has not made payments equal to the entire current bill. A payment coverage ratio of 0.40, for example, means that a customer has completely retired his or her pre-existing arrears and made additional payments equal to 40% of the customer’s current bill.
- A payment coverage ratio that is positive, and is greater than 1.0, means that the customer has completely retired his or her arrears *and* has made payments that exceed the customer’s current bill. A customer on a levelized budget billing plan, for example, may well pre-pay some portion of the next winter heating season’s monthly bills. A customer who receives a lump-sum LIHEAP payment may well have pre-paid his or her current monthly bill.

⁵ A negative payment coverage ratio may occur when the January arrears are subtracted from any payment before calculating the coverage ratio. A negative payment coverage ratio indicates that there are still outstanding arrears. For example, a customer with a \$100 bill and a \$100 pre-existing arrears, making a \$50 payment would have a payment coverage ratio of (0.50) (\$50 payment minus \$100 arrears / \$100 bill).

Citizens Gas customers that have participated in the USP program for more than one year (Group 1) have a payment performance that closely tracks the payment performance of first-year participants (Group 2). For the total population within each group of participants, the payment coverage ratio (after subtracting the January arrears) is virtually identical for Group 1 and Group 2 program participants. In April, the Group 1 coverage ratio is 0.632 while the Group 2 coverage ratio is 0.634. By September, the Group 1 coverage ratio is 0.855 while the Group 2 coverage ratio is 0.844. By January 2009, the Group 1 coverage ratio is 0.827 while the group 2 ratio is 0.805.

By the end of the study period, the Group 1 cumulative payment coverage ratio is 0.865 while the Group 2 ratio is 0.861. What this means is that by the end of the study period, the Group 1 USP participants had completely retired their January 2008 arrears and had paid 86.5% of their current bill in that period. Group 2 USP participants had completely retired their January 2008 arrears and paid 86.1% of their current bill in that period.

The ability to retire arrears was evident even when the two participant groups were disaggregated by the size of their January 2008 arrears. By May 2009:

- Participants who had no January 2008 arrears had a cumulative payment coverage of between 0.852 (Group 1) and 0.864 (Group 2).
- Participants who had January 2008 arrears of between \$1 and \$100 had a cumulative payment coverage ratio of between 0.908 (Group 1) and 0.945 (Group 2).
- Participants who had January 2008 arrears of between \$101 and \$250 had a cumulative coverage ratio of between 0.873 (Group 1) and 0.848 (Group 2).
- Participants who had January 2008 arrears of more than \$250 had a cumulative payment coverage ratio of between 0.858 (Group 1) and 0.792 (Group 2).

As was seen above, the USP appears to have assisted the customers with the highest arrears the most. While the overall payment ratio was less than 1.0, customers with arrears greater than \$250 nonetheless had retired those arrears and had paid between 80% (0.792) and 86% (0.858) of their current bill during the period.⁶

Vectren Energy Delivery

As with the Citizens Gas discussion above, the assessment of payment coverage ratios for Vectren Energy's USP participants disaggregates the participant Groups by the extent to which customers had arrears at the beginning of the program year. The Vectren populations selected for evaluation included the same two selection criteria. Group 1 consisted of customers who had participated in USP for both 2007 and 2008. Group 2 consisted of customers who had participated in USP for 2008 but not 2007. The two groups of Vectren customers were of similar,

⁶ As previously stated, the payment coverage ratio does not provide the entire picture. Other parts of this evaluation will examine the collection effort needed to generate these payments.

though not identical, size. Relative to its new participants (Group 2), Vectren's Continuing participants (Group 1) had proportionately more accounts with no arrears (91% vs. 82%) and more with arrears less than \$100. In contrast, Vectren's Group 1 participants had proportionately fewer customers with high arrears (>\$250) relative to Group 2 (5% vs. 13%), and a lower proportion of customers with arrears greater than \$100 (5% vs. 11%). Compared to the Citizens Gas populations, Vectren had far more accounts with \$0 in January arrears and far fewer with high arrears.⁷

Group 1 and Group 2 by January 2008 Arrears (Vectren)		
	Group 1	Group 2
<\$1	441 (91%)	567 (82%)
\$1 - \$100	16 (3%)	50 (7%)
\$101 - \$250	19 (4%)	52 (8%)
\$250 or more	6 (1%)	24 (3%)
Total	482	693
Group 1: Received USP in 2007 and 2008. Group 2: Received USP in 2008 but not 2007.		

Vectren's USP program appears to have succeeded in eliminating most of the seasonal variation in payment patterns. As shown in Table 1, unlike the seasonal pattern with many utilities, when winter payments decline relative to the size of the winter bills, Vectren's USP participants maintain a cumulative payment coverage ratio of at or near 1.0 year-round. While the payment coverage ratio demonstrates an insubstantial drop in the winter months, even in the months of January, February and March, the coverage ratios remain well in excess of 90%. Consider that:

- In January 2009, the payment coverage ratio for Group 1 was 97%, while it was 104% for Group 2;
- In February 2009, the payment coverage ratio for Group 1 was 92%, while for Group 2 it was 98%;

By April 2009, the payment coverage ratios were at or above 100% (99% for Group 1 and 103% for Group 2).

Nor did Vectren's USP participants show a substantial variation in month-by-month cumulative payment coverage ratios. After retiring the beginning arrears (which can largely explain the lower payment coverage ratios in the early months of the evaluation), the Group 1 population maintained a consistent cumulative payment coverage ratio between a low of 92% in February 2009) and a high of 115% in October 2008. The Group 2 population also maintained a relatively consistent payment coverage ratio, with a low of 98% in February 2009 and a high of 153% in May 2008.

⁷ The lower numbers of Group 1 accounts with January 2008 arrears makes the findings regarding these Group 1 sub-populations less robust.

Within the population of Vectren USP participants with January 2008 arrears, the payment coverage ratios were nearly identical by the end of the study period. While the accounts with arrears had low payment coverage ratios in the earlier months of the study period, by May 2009, the Vectren accounts with differing levels of January 2008 arrears had a cumulative coverage ratio falling in a range between a low of 86% (Group 2, arrears \$1 - \$100) and a high of 96% (Group 2, arrears of greater than \$250). Both the Group 1 and Group 2 sub-populations with January 2008 arrears less than \$1 had cumulative payment coverage ratios of greater than 100% by the end of the study period.

Group 2 Vectren participants (New participants) generated a payment pattern where they have higher cumulative payment coverage ratios than their Group 1 counterparts early in the study period. The differences subside over the course of the study period.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.507	0.608	0.599	0.843	1.045	1.052	1.069	1.048	1.034	1.152	1.112	1.078	0.968	0.916	0.956	0.985	0.976
Group Total	0.977	0.950	0.758	1.196	1.534	1.433	1.378	1.306	1.245	1.320	1.266	1.178	1.035	0.976	1.007	1.030	1.025
< \$1	0.606	0.702	0.640	0.922	1.163	1.150	1.165	1.123	1.098	1.235	1.174	1.138	1.003	0.943	0.981	1.010	1.003
< \$1	1.762	1.218	0.838	1.376	1.765	1.589	1.498	1.395	1.320	1.390	1.328	1.221	1.059	0.994	1.025	1.049	1.042
\$1 - \$100	0.314	0.396	0.557	0.690	0.789	0.791	0.814	0.806	0.833	0.870	0.921	0.869	0.837	0.803	0.855	0.871	0.860
\$1 - \$100	0.329	0.563	0.660	0.816	0.781	0.851	0.879	0.913	0.866	0.943	0.911	0.951	0.898	0.862	0.887	0.908	0.913
\$101 - \$250	0.286	0.481	0.536	0.699	0.830	0.854	0.850	0.874	0.895	0.932	0.936	0.901	0.870	0.843	0.890	0.905	0.889
\$101 - \$250	0.291	0.573	0.565	0.939	0.950	0.914	0.927	0.915	0.928	0.994	0.952	0.934	0.875	0.840	0.871	0.873	0.899
> \$250	0.546	0.538	0.514	0.756	0.841	0.887	0.899	0.913	0.874	0.994	0.959	0.924	0.859	0.820	0.873	0.922	0.903
> \$250	0.476	0.705	0.685	0.813	0.932	0.910	0.903	0.914	0.900	1.015	1.004	0.928	0.920	0.899	0.959	0.972	0.960

Group 1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

The prepayment of Vectren's winter bills for its USP population is particularly evident in Table 2. In Table 2, rather than beginning with the January bills, Vectren's cumulative payment coverage ratio begins with the payments compared to current bills beginning with the April bill. As discussed above (with the analysis beginning in January), for both Group 1 and Group 2, by the end of twelve months (April 2009), the cumulative payment coverage ratio is almost exactly 100% (107% for Group 1; 106% for Group 2). For both Groups, however, the monthly payments substantially exceed the monthly current bills. Setting aside the months of April and May (where payments are likely to reflect payments toward pre-existing arrears), the payment coverage ratio for both Group 1 and Group 2 total populations range in the range of 140% to

150%. Only when colder weather in November and December generate higher bills for current consumption do the payment coverage ratios begin to trend toward 100%.

As with the Table 1 analysis (looking at cumulative coverage ratios beginning with January), Group 2 coverage ratios appear exceed the coverage ratios early in the study period. By September/October, however, those differences have disappeared. Within each Group, no systematic difference in payment patterns appears based on the level of January 2008 arrears.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	x	x	x	1.971	1.984	1.675	1.593	1.439	1.350	1.518	1.396	1.295	1.096	1.007	1.048	1.079	1.065
Group Total	x	x	x	2.834	2.394	1.876	1.693	1.520	1.403	1.486	1.393	1.264	1.079	1.005	1.038	1.062	1.056
< \$1	x	x	x	2.095	2.053	1.696	1.618	1.444	1.351	1.534	1.398	1.308	1.097	1.008	1.046	1.077	1.066
< \$1	x	x	x	3.082	2.511	1.937	1.734	1.548	1.429	1.505	1.414	1.277	1.083	1.009	1.041	1.066	1.058
\$1 - \$100	x	x	x	1.296	1.471	1.349	1.339	1.254	1.286	1.344	1.397	1.187	1.051	0.957	1.020	1.036	1.014
\$1 - \$100	x	x	x	1.725	1.160	1.229	1.236	1.227	1.062	1.195	1.104	1.151	1.033	0.962	0.987	1.012	1.017
\$101 - \$250	x	x	x	1.486	1.715	1.570	1.427	1.397	1.383	1.418	1.371	1.233	1.111	1.030	1.084	1.096	1.065
\$101 - \$250	x	x	x	2.593	1.952	1.574	1.495	1.361	1.320	1.415	1.283	1.194	1.048	0.969	0.998	0.994	1.025
> \$250	x	x	x	2.995	2.286	1.910	1.765	1.589	1.348	1.581	1.406	1.293	1.109	1.005	1.063	1.131	1.095
> \$250	x	x	x	1.671	1.802	1.455	1.336	1.284	1.186	1.416	1.307	1.119	1.059	1.002	1.073	1.086	1.064
Group 1 (Continuing Participants) is in Yellow. Group 2 (New Participants) is in White.																	

In examining the Table 2 data, it is important to again remember the caution that payment coverage ratios, while important data, do not present a complete picture. For example, while the cumulative payment coverage ratio of Group 1 customers with January 2008 arrears of less than \$1 appear to be effectively identical to Group 1 customers with January 2008 arrears of between \$101 and \$250 (coverage ratio of 1.066 vs. coverage ratio of 1.065 in May 2009), to gain a full understanding of the payment performance of the two sets of customers would require a further inquiry into the level of collection activity, the efficiency of collection activity, and the effectiveness of collection activity required to generate those payment coverage ratios. While the payment coverage ratios may be the same, in other words, Vectren may well have been required to devote substantively different levels of effort to generate those payment coverages.

Table 3 documents that Vectren’s USP participants pay not only their complete current bill, but do so after making payments sufficient to retire their January 2008 arrears.⁸ As noted above,

⁸ Note that a group payment coverage ratio of more than 1.0 (subtracting the January 2008 arrears) does not mean that the Group of customers will have incurred \$0 in arrears. When working with payment coverage ratios, a higher ratio will cancel a lower ratio. A Group payment coverage ratio of 1.0 might consist of one customer with a

Vectren USP customers require roughly three to four months to retire their January 2008 arrears. Certainly by May 2008, both the Continuing USP participants (Group 1) and the New USP participants (Group 2) as a total population have achieved cumulative payment coverage ratios of more than 1.0 (after subtracting January 2008 arrears from the payments). Customers with \$0 in January 2008 arrears exhibited cumulative payment coverage ratios well in excess of 1.0.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.593	0.674	0.640	0.877	1.073	1.076	1.091	1.067	1.051	1.168	1.126	1.091	0.979	0.925	0.965	0.993	0.984
Group Total	0.946	0.933	0.749	1.189	1.529	1.430	1.375	1.303	1.243	1.318	1.264	1.176	1.033	0.975	1.006	1.029	1.024
< \$1	1.046	1.052	0.852	1.093	1.297	1.260	1.263	1.207	1.173	1.305	1.237	1.192	1.046	0.981	1.015	1.042	1.034
< \$1	2.212	1.411	0.937	1.452	1.810	1.620	1.524	1.416	1.338	1.407	1.343	1.234	1.069	1.003	1.033	1.056	1.049
\$1 - \$100	0.170	0.273	0.474	0.623	0.728	0.733	0.758	0.753	0.781	0.820	0.874	0.827	0.801	0.771	0.825	0.843	0.833
\$1 - \$100	0.2	0.444	0.583	0.750	0.723	0.800	0.831	0.871	0.829	0.907	0.878	0.920	0.870	0.837	0.864	0.886	0.891
\$101 - \$250	(0.1)	0.138	0.305	0.509	0.657	0.695	0.700	0.733	0.763	0.805	0.816	0.791	0.774	0.755	0.809	0.826	0.812
\$101 - \$250	(0.3)	0.211	0.322	0.740	0.774	0.755	0.778	0.779	0.801	0.874	0.840	0.834	0.788	0.763	0.800	0.804	0.832
> \$250	(0.5)	(0.1)	0.185	0.459	0.573	0.646	0.671	0.706	0.687	0.813	0.795	0.769	0.721	0.696	0.759	0.810	0.794
> \$250	(0.1)	0.344	0.450	0.608	0.749	0.743	0.746	0.768	0.766	0.886	0.890	0.825	0.832	0.822	0.889	0.905	0.895

Group 1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

In contrast, the cumulative coverage ratios of Vectren accounts with arrears never quite reach 1.0 after subtracting the January 2008 arrears. The sub-populations demarcated by January 2008 arrears had cumulative payment coverage ratios (after subtracting payments toward the January arrears) of:

- between 83% (Group 1 with arrears between \$1 and \$100) and 89% (Group 2 with arrears of \$1 to \$100);
- between 81% (Group 1 with arrears between \$101 and \$250) and 83% (Group 2 with arrears between \$101 and \$250); and
- between 79% (Group 1 with arrears greater than \$250) and 90% (Group 2 with arrears greater than \$250).⁹

coverage ratio of 1.2 and a second customer with a coverage ratio of 0.8. In this case, while the coverage ratio for the Group as a whole will be 1.0, Customer 1 will have \$0 in arrears while Customer 2 will have a positive amount of arrears. Accordingly, while the average payment coverage ratio is 1.0, that Group of customers may well still have dollars of arrears.

⁹ Again, these results say nothing about what effort the company incurred in generating the payment coverage ratios.

These results shows that, while the two Groups as a whole, as well as the sub-population with \$0 in January arrears, paid their complete current bills and all arrears in the study period, the sub-populations with positive January 2008 arrears retired their arrears and paid between 80% and 90% of their current bill. The biggest difference is between customers with January arrears and without January arrears rather than between the different levels of January arrears.

LEVEL OF COLLECTION EFFORT

This section of the evaluation examines the level of collection effort that each utility devotes to its USP participants. The level of collection effort is an important constraint on the payment coverage ratios discussed above. Two customers, each of whom have paid 95% of their bills for current usage, present substantially different pictures of cost and risk to the utility if one makes his or her payment with little or no collection effort while the other makes the same dollar payment, but only after the utility exerts considerable collection interventions directed toward the customer.

In assessing the collection efforts, the same two populations were considered. Group 1 involves customers who participated in USP for both 2007 and 2008. Group 2 participated in USP in 2008 but not in 2007. Each of these groups is again disaggregated by the level of arrears at the beginning of the study period (January 2008).

Collections are measured by the metric referred to as “collection months.” A “collection month” marks a month in which any collection activity occurs.

Using the two groups identified above, the level of collection efforts are considered using the following metrics. The analysis begins by setting out a basic count of the number of collection months and then introduces increasingly refined measures by which to derive the significance of the number of collection months. The metrics include:

- The cumulative number of collection months. This provides a simple count of the amount of collection effort exerted;
- The cumulative number of collection months indexed to the cumulative dollars of bills. Indexing the count of collection months to the count of the dollars of bills allows a comparison between time periods and group sizes since the index eliminates the impact of population size on the metric;
- The number of collection months per each bill issued on a monthly basis. Rather than looking at the collection effort for the study period as a whole (through an accumulation of month-by-month data, this monthly metric provides insights into trends and seasonal variations;
- The number of collection months for each 1,000 payments received. Knowing how payments are received each month, this metric provides insights into how hard a utility must work to generate those payments.

Citizens Gas and Coke Utilities

While Group 2 USP participants (those who participated in 2008 but not in 2007) have very similar payment coverage ratios to Group 1 participants, as described above, they nonetheless impose a substantially greater burden on the utility than does Group 1 (the Continuing participants). Table 4 (CGCU) presents the cumulative number of collection months for the two groups of USP participants. By May 2009, Group 2 USP participants had experienced nearly 14% more collection months (4,808 vs. 4,207) than had their Group 1 counterparts.

Customers with \$0 in January 2008 arrears presented less of a collection problem for Citizens Gas. While the USP participants with no arrears constituted 58% and 47% of all USP customers in the Group 1 and Group 2 samples respectively, they represented only 28% and 30% of the cumulative collection months over the study period. While the USP population as a whole generated 4.2 and 4.8 collection months per year for each program participant in Group 1 and Group 2 respectively, accounts with no January arrears generated only 2.2 and 2.8 collection months for Group 1 and Group 2 respectively over the course of the 17 month study period.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	160	198	521	1191	1685	2061	2349	2595	2778	2935	3052	3174	3284	3350	3669	3958	4207
Group Total	311	428	785	1579	2171	2609	2911	3172	3356	3494	3614	3784	3947	4052	4335	4586	4808
< \$1	15	20	108	304	459	577	667	742	794	849	884	923	959	983	1,092	1,189	1,280
< \$1	11	27	121	338	502	627	717	799	850	892	919	968	1024	1064	1159	1249	1323
\$1 - \$100	19	25	113	266	381	467	535	590	645	685	713	736	757	767	842	911	974
\$1 - \$100	41	56	125	276	384	471	534	585	620	652	686	720	753	770	836	894	948
\$101 - \$250	75	94	187	389	532	641	727	798	849	890	928	968	1,003	1,022	1,108	1,188	1,247
\$101 - \$250	176	235	374	654	874	1032	1133	1223	1295	1343	1385	1452	1506	1546	1637	1713	1782
> \$250	51	59	113	232	313	376	420	465	490	511	527	547	565	578	627	670	706
> \$250	83	110	165	311	411	479	527	565	591	607	624	644	664	672	703	730	755

Group 1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

The index of collection months to the dollars of bills is presented in Table 5 below. Three observations are evident from the data presented in Table 5.

- First, the collection effort directed toward customers with no January 2008 arrears is significantly less than the collection efforts directed toward customers that did have January arrears. By May 2009, while there were fewer than 2.0 collection months generated for each \$1,000 in bills issued to accounts with no arrears in January 2008,

there were more than 4.0 collection months generated for each \$1,000 in bills generated for accounts that had arrears of between \$1 and \$250, with between 3.4 and 4.0 collection months generated for each \$1,000 in bills issued to accounts with January 2008 arrears greater than \$250.

- Second, from the perspective of the number of collection months per \$1,000 in bills, there is little difference between having low arrears and having high arrears. The distinction lies between having no arrears in January 2008 and having some level of arrears. Remember, the population studied each month does not involve the accounts with arrears in that month. The disaggregation of arrears is based on the level of arrears appearing on the January 2008 bill.
- Finally, across the board, customers that had participated in USP for two years required less collection effort than customers who began their USP participation in 2008 (but had not participated in 2007) did. By May 2008, Group 2 customers as a whole required 3.16 collection months per \$1,000 in bills issued (cumulative over the study period), compared to 2.47 collection months per \$1,000 in bills issued for Group 1 customers. For each level of arrears, the Continuing (Group 1) USP participants required roughly one-half fewer collection months per \$1,000 in bills than did those customers who had not participated in USP for both years (Group 2). While payment coverage ratios for the two populations may have been roughly the same, in other words, the populations in the two groups did not present identical collection outcomes.

Table 5 (CGCU)
Cumulative Collection Activity Months per Cumulative Bills (\$000s)

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.94	0.59	1.10	2.09	2.65	2.97	3.15	3.28	3.32	3.29	3.12	2.80	2.50	2.26	2.32	2.39	2.47
Group Total	1.73	1.20	1.55	2.62	3.26	3.63	3.85	4.04	4.10	4.07	3.90	3.59	3.26	3.00	3.03	3.09	3.16
< \$1	0.17	0.11	0.43	1.00	1.35	1.55	1.64	1.68	1.68	1.66	1.57	1.45	1.32	1.21	1.25	1.30	1.35
< \$1	0.15	0.18	0.56	1.29	1.73	1.99	2.11	2.21	2.22	2.19	2.07	1.93	1.79	1.67	1.71	1.76	1.80
\$1 - \$100	0.78	0.53	1.68	3.24	4.10	4.57	4.92	5.16	5.39	5.45	5.18	4.57	3.99	3.57	3.68	3.83	4.01
\$1 - \$100	1.80	1.22	1.93	3.57	4.51	5.12	5.51	5.86	5.96	6.01	5.86	5.32	4.75	4.31	4.38	4.54	4.74
\$101 - \$250	2.20	1.42	2.03	3.53	4.35	4.84	5.21	5.55	5.66	5.72	5.47	4.79	4.20	3.77	3.84	3.97	4.10
\$101 - \$250	3.43	2.33	2.65	3.89	4.75	5.22	5.54	5.84	6.04	6.04	5.80	5.25	4.69	4.33	4.34	4.41	4.52
> \$250	2.18	1.31	1.81	3.16	3.87	4.35	4.67	5.05	5.14	5.16	4.86	4.20	3.59	3.17	3.20	3.30	3.43
> \$250	2.77	1.86	1.98	3.21	3.86	4.22	4.57	4.92	5.06	5.09	4.95	4.55	4.14	3.79	3.80	3.85	3.95

Group 1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

The same conclusion can be drawn from Table 6. As described above, a collection month measures each month in which some collection activity occurs. Each collection activity is measured the same; accounts with multiple collection months are counted the same as accounts with only one collection month. The purpose of measuring collection months is not to ascertain the complete extent or depth of collection activities as it is to measure the need for the utility to take some action.

Unlike prior tables, which often present cumulative data, Table 6 presents collection months per bill issued by month. This allows a picture to emerge as to the ebb and flow of collection activities by month and by season. As with the prior index based on cumulative collection months, the data on collection months shows that participants who remain in the USP for more than one year present a lower collection burden on the utility than do participants who joined USP in 2008. On a month by month basis, Citizens Gas found it less likely that it would need to engage in some level of collection activity for longer-term USP participants.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.143	0.038	0.327	0.534	0.495	0.392	0.330	0.291	0.220	0.197	0.144	0.148	0.135	0.082	0.414	0.393	0.350
Group Total	0.256	0.118	0.365	0.628	0.598	0.466	0.392	0.365	0.266	0.210	0.180	0.250	0.244	0.164	0.478	0.453	0.424
< \$1	0.026	0.009	0.154	0.282	0.270	0.211	0.169	0.146	0.104	0.110	0.070	0.079	0.073	0.049	0.228	0.207	0.199
< \$1	0.023	0.034	0.200	0.365	0.346	0.274	0.220	0.211	0.136	0.115	0.075	0.136	0.158	0.116	0.291	0.285	0.244
\$1 - \$100	0.122	0.038	0.571	0.824	0.735	0.581	0.507	0.426	0.430	0.336	0.226	0.185	0.174	0.085	0.688	0.676	0.636
\$1 - \$100	0.240	0.099	0.473	0.799	0.715	0.596	0.512	0.472	0.321	0.314	0.324	0.327	0.320	0.172	0.710	0.674	0.692
\$101 - \$250	0.387	0.110	0.547	0.890	0.827	0.661	0.610	0.514	0.372	0.342	0.302	0.296	0.269	0.150	0.735	0.741	0.573
\$101 - \$250	0.556	0.229	0.552	0.878	0.863	0.672	0.577	0.556	0.468	0.329	0.278	0.409	0.340	0.268	0.689	0.655	0.633
> \$250	0.446	0.088	0.596	0.957	0.880	0.733	0.647	0.692	0.391	0.362	0.242	0.278	0.254	0.188	0.754	0.754	0.692
> \$250	0.573	0.245	0.509	0.963	0.909	0.673	0.750	0.667	0.464	0.348	0.327	0.392	0.400	0.167	0.756	0.750	0.758

Group 1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

The significance of this consideration of monthly collection effort is set forth in Illustration 2 below. The data in Illustration 2 shows a real difference between accounts without January 2008 arrears and accounts with January 2008 arrears, irrespective of the level of those arrears. In contrast to the 2.2 and 2.8 collection months for the no-arrears program participants, according to Illustration 2, by the end of the study period, Citizens Gas had directed:

- 6.3 and 7.2 collection months toward each account with between \$101 and \$250 in arrears for Group 1 and Group 2 respectively during the study period;

- 7.7 and 6.9 collection months toward each account with more than \$250 in arrears for Group 1 and Group 2 respectively in the study period.¹⁰

In light of this data, two related conclusions become evident. First, while the USP participants with high January arrears generate reasonably high payment coverage ratios (whether measured with or without subtracting the January 2008) arrears, these payment results come at a cost. Illustration 2 below compares the payment coverage ratios and the collection months per account in arrears for three different levels of January 2008 arrears: (1) <less than \$1; (2) between \$101 and \$250; and (3) more than \$250.

A payment coverage ratio of 0.852 generated with 2.2 collection months per account is simply not the functional equivalent to a payment coverage ratio of 0.858 generated with 7.7 collection months per account. A payment coverage ratio of 0.864 with 2.8 collection months per account is not the functional equivalent of a payment coverage ratio of 0.848 with 7.2 collection months per account.

Second, reducing the arrears on a USP customer’s account will reduce the number of collection months over a long-term period. As is shown in Illustration 2 below, while the payment coverage ratios of accounts with no January 2008 arrears is virtually the same as the payment coverage ratios for accounts with higher arrears, the payment coverage ratio for the no-arrears accounts is generated with a collection effort that is one-third that of the other accounts.

Illustration 2 (CGCU)						
Payment Coverage Ratios and Cumulative Collection months per Account in Arrears (by selected levels of January 2008 arrears)						
	\$< 1 Arrears		\$101 - \$250 Arrears		> \$250 Arrears	
	Coverage Ratio	Collection Mos/Account	Coverage Ratio	Collection Mos/Account	Coverage Ratio	Collection Mos/Account
Group 1	0.852	2.2	0.873	6.3	0.858	7.7
Group 2	0.864	2.8	0.848	7.2	0.792	6.9

Finally, while the Tables above examine the level of collection interventions indexed to the number of bills, Table 7 (CGCU) examines the level of collection interventions indexed to the number of payments received. Table 7 documents that Citizens Gas engages in fewer collection months for each payment that it generates from its USP participants when USP participants have been on the program for two years. For the USP population as a whole, as well as at each level of

¹⁰ This lack of distinction between accounts in arrears is consistent with previous critiques that Indiana utilities need to “sharpen” their collection decision rules. Previous research has found that Indiana utilities tend to “over-notice” service terminations.

January 2008 arrears, Group 1 customers (i.e., those on USP for both 2007 and 2008) had fewer collection months per payment received than Group 2 customers had.

Otherwise, the payment data is reflective and confirmatory of the data regarding collections and bills. Customers with no January 2008 arrears, over the course of the 17-month study period, had substantially fewer collection months than did customers with a positive January 2008 arrears. While a reduction in the level of January 2008 arrears reduced the level of collection efforts, the discontinuity between arrearage levels was not as great as between those accounts with arrears in January 2008 and those accounts without.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.287	0.067	0.457	0.725	0.664	0.569	0.409	0.394	0.297	0.248	0.219	0.310	0.297	0.148	0.578	0.514	0.460
Group Total	0.434	0.202	0.579	0.978	0.931	0.788	0.546	0.533	0.376	0.270	0.287	0.500	0.457	0.271	0.630	0.562	0.566
< \$1	0.046	0.016	0.221	0.383	0.349	0.301	0.205	0.187	0.133	0.131	0.104	0.156	0.164	0.087	0.332	0.282	0.266
< \$1	0.036	0.063	0.347	0.570	0.495	0.417	0.293	0.290	0.178	0.142	0.114	0.266	0.287	0.178	0.383	0.377	0.330
\$1 - \$100	0.317	0.065	0.779	1.068	0.942	0.851	0.630	0.663	0.632	0.460	0.389	0.511	0.429	0.167	0.926	0.831	0.851
\$1 - \$100	0.383	0.181	0.639	1.178	1.080	0.956	0.788	0.750	0.507	0.451	0.596	0.630	0.688	0.283	0.943	0.841	0.900
\$101 - \$250	0.944	0.183	0.710	1.273	1.212	0.956	0.811	0.747	0.580	0.500	0.528	0.625	0.538	0.271	0.887	0.930	0.728
\$101 - \$250	1.163	0.347	0.863	1.368	1.528	1.362	0.815	0.938	0.720	0.457	0.452	0.870	0.635	0.526	0.884	0.724	0.821
> \$250	1.139	0.140	0.869	1.313	1.373	1.167	0.846	0.978	0.500	0.467	0.308	0.588	0.486	0.317	1.065	0.878	0.818
> \$250	1.000	0.375	0.714	1.600	1.639	1.388	1.143	0.884	0.743	0.400	0.531	0.800	0.690	0.308	1.107	0.794	1.042
Group1 (Continuing Participants) is in Blue. Group 2 (New Participants) is in White.																	

It is important to note the dual impact of USP on the level of collection activity identified in Tables 5, 6 and 7. There can be no question but that participation in USP will reduce the need for collection interventions directed by the company toward accounts in arrears. This participation reduces the need for collection interventions in that:

- It reduces the rate of collection interventions holding the level of arrears constant; and
- It reduces the number of customers in the higher level of arrears where the rate of collection interventions is highest.

The combined reduction in collections interventions created by these two results is greater than the impact of either impact examined and measured separately.

Vectren Energy Delivery

Participation in the Vectren Energy USP initiative helps low-income customers reduce the level of collection effort required by the company to generate customer payments. As will become evident from a review of the data below, while the reduction in collection activity is less for those customers that carried lower arrears in January 2008, the improvement in customer payment patterns, and the reduced level of effort needed to attain and maintain those patterns, is evident not only for the population as a whole but for each stratification of customers defined by the level of January 2008 arrears.

While the payment coverage ratios of Vectren's Group 1 and Group 2 USP participants were similar in pattern and extent, Vectren's Group 1 participants imposed a considerably greater collection burden on the company. Table 4 begins by presenting the cumulative collection months directed toward Vectren's customers through the study period. By May 2009, Vectren's Group 1 customers had experienced nearly 40% more collection activity months (3,476 vs. 2,511) than had their Group 2 counterparts.

The difference arises in the treatment of accounts having January 2008 arrears of greater than \$0. By May 2009, while Group 1 accounts with arrears greater than \$250 had experienced 259 collection activity months, their Group 2 counterparts had experienced only 67. While Group 1 accounts with arrears between \$101 and \$250 had experienced 407 collection activity months, their Group 2 counterparts had experienced only 148. While Group 1 accounts with arrears of \$1 to \$100 had experienced 299 collection activity months, Group 2 accounts had experienced only 92.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	149	204	406	606	937	1,221	1,405	1,615	1,829	1,956	2,098	2,199	2,387	2,661	2,990	3,237	3,476
Group Total	47	82	177	260	551	805	961	1,144	1,308	1,415	1,536	1,627	1,793	1,995	2,219	2,364	2,511
< \$1	0	10	111	234	494	717	861	1,032	1,204	1,306	1,418	1,497	1,640	1,857	2,117	2,322	2,511
< \$1	0	19	83	147	415	652	795	968	1,119	1,217	1,332	1,410	1,561	1,742	1,940	2,071	2,204
\$1 - \$100	36	47	79	109	135	154	170	180	187	192	198	206	218	237	260	279	299
\$1 - \$100	10	16	29	36	45	54	58	60	65	67	68	73	74	80	88	90	92
\$101 - \$250	84	100	139	174	204	226	243	259	275	288	298	307	326	348	372	390	407
\$101 - \$250	29	36	48	57	67	73	79	84	90	94	97	103	112	122	133	141	148
> \$250	29	47	77	89	104	124	131	144	163	170	184	189	203	219	241	246	259
> \$250	8	11	17	20	24	26	29	32	34	37	39	41	46	51	58	62	67

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

Group 1 customers with \$0 in January arrears actually somewhat outperformed their Group 2 counterparts. They contributed a substantially lower proportionate share of the total cumulative collection activity months. While Group 1 customers with \$0 in January arrears comprised 91% of the total population, they contributed only 72% of the cumulative collection events. In contrast, Group 2 customers with \$0 in January arrears contributed more than their proportion of collection events. While Group 2 customers with \$0 in January arrears comprised 82% of the total population, they contributed 88% of the cumulative collection events.

	Group 1		Group 2	
	Population	Cumulative Collection Months	Population	Cumulative Collection Months
100% of population	482	3,476	693	2,511
Total with \$0 January arrears	441	2,511	567	2,204
Proportion of total population	91%	72%	82%	88%

Based on the data in Illustration 3, while it may be accurate to observe that Vectren devotes more resources to collections, it does not necessarily follow that Vectren works harder on a per account basis to collect money from Group 1 customers. Table 5 sets forth the data.

Table 5 reports the number of collection months per each \$1,000 in USP bills issued on a monthly cumulative basis. For the populations as a whole, as well as for the sub-population of customers demarcated by \$0 in January 2008 arrears, Vectren exerted more collection effort per \$1,000 in bills issued toward its Group 2 (New participation) customers. For the population as a whole, while Vectren engaged in 3.01 collection months per \$1,000 in bills issued by May 2009 for Group 2, the company generated only 2.71 collection months per \$1,000 of Group 1 bills. For the customers with \$0 in January arrears, Vectren exerted 3.06 collection months of activity for Group 2 customers compared to 2.53 collection months for Group 1 customers.

The level of effort reversed itself for customers with positive levels of January 2008 arrears. In each sub-population with January 2008 arrears greater than \$1, Vectren devoted more cumulative collection months of activity on a per \$1,000 of bill basis to its Group 1 customers than to its Group 2 customers.

Table 5 (Vectren)
Cumulative Collection Activity Months per Cumulative Bills (\$000s)

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	1.28	1.34	1.66	2.04	2.60	2.90	3.03	3.08	3.16	3.20	3.07	2.82	2.52	2.44	2.50	2.60	2.71
Group Total	1.80	1.71	2.10	2.43	3.43	3.77	3.84	3.81	3.80	3.82	3.64	3.30	2.96	2.84	2.87	2.92	3.01
< \$1	0.00	0.11	0.75	1.28	2.11	2.51	2.70	2.79	2.90	2.96	2.83	2.58	2.28	2.22	2.30	2.41	2.53
< \$1	0.00	0.70	1.58	2.13	3.52	3.93	3.99	3.96	3.95	3.97	3.78	3.38	3.01	2.88	2.91	2.97	3.06
\$1 - \$100	2.26	2.54	2.86	3.23	3.64	3.92	4.13	4.18	4.20	4.18	4.06	3.76	3.42	3.30	3.35	3.47	3.64
\$1 - \$100	2.28	2.47	2.88	3.05	3.39	3.56	3.57	3.30	3.14	3.13	2.93	2.95	2.67	2.62	2.66	2.64	2.64
\$101 - \$250	4.25	4.01	3.75	3.89	4.13	4.22	4.25	4.25	4.27	4.28	4.19	3.95	3.68	3.57	3.55	3.59	3.65
\$101 - \$250	4.45	4.00	3.58	3.47	3.61	3.56	3.60	3.51	3.49	3.47	3.34	3.18	2.99	2.90	2.90	2.97	3.03
> \$250	2.94	2.48	2.45	2.55	2.70	2.89	2.88	2.88	2.95	2.97	2.93	2.84	2.71	2.63	2.65	2.65	2.72
> \$250	2.23	2.01	2.02	2.07	2.22	2.19	2.29	2.35	2.30	2.41	2.26	2.14	2.03	1.97	2.03	2.10	2.20

Group 1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

The increase in collection activities directed toward Group 1 flows from the fact that Vectren is finding it necessary more often to exert *some* type of collection activity toward Group 2 participants who receive a positive bill for service. Table 6 presents the month-by-month data on the number of collection activity months as indexed to the number of monthly bills issued with a positive balance. For the Group 1 and Group 2 populations as a whole, Vectren directs collection activity toward Group 2 participants more frequently than it directs some type of collection activity toward Group 1 participants. For every month of the study period, Vectren’s Group 2 USP participants required more collection attention than the company’s Group 1 participants did.

The same pattern exists for the accounts with \$0 in January 2008 arrears. In every month of the study period (except January 2008), Vectren exerted more collection activity toward its Group 2 customers with \$0 in January arrears than it did toward its similarly situated Group 1 customers. The difference in collection efforts increased during the cold weather months (to a differential of 0.2 or more) and decreased during the warmer weather months (to a differential of between 0.10 and 0.15).

Vectren differs from Citizens Gas in the impact that USP had on its USP participants overall. USP did not lead Vectren to reduce the collection efforts that it exerted toward program participants. Table 6 presents month-by-month data on the collections months as a function of the number of bills issued. Particularly for the accounts with highest levels of January 2008 arrears (>\$250), Vectren appears to have directed an increased level of collection efforts in March, April and May 2009 than it did in March, April and May 2008.

**Table 6 (Vectren)
Collection Months per Each Bill Issued with Balance > \$0 by Month**

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.259	0.410	0.444	0.499	0.503	0.413	0.347	0.340	0.345	0.271	0.234	0.217	0.338	0.514	0.590	0.546	0.496
Group Total	0.381	0.479	0.563	0.557	0.625	0.524	0.412	0.446	0.446	0.378	0.351	0.326	0.519	0.664	0.700	0.566	0.564
< \$1	0.000	0.120	0.317	0.427	0.478	0.391	0.327	0.325	0.333	0.259	0.220	0.204	0.302	0.486	0.566	0.550	0.467
< \$1	0.000	0.365	0.514	0.547	0.625	0.536	0.408	0.459	0.456	0.381	0.369	0.308	0.525	0.665	0.702	0.567	0.571
\$1 - \$100	0.420	1.000	0.633	0.625	0.553	0.463	0.410	0.270	0.212	0.167	0.147	0.235	0.343	0.528	0.629	0.543	0.667
\$1 - \$100	0.438	0.750	0.667	0.636	0.692	0.538	0.444	0.167	0.364	0.286	0.100	0.714	0.100	0.600	0.600	0.250	0.222
\$101 - \$250	1.000	0.800	0.750	0.714	0.638	0.500	0.459	0.432	0.471	0.382	0.294	0.273	0.559	0.647	0.686	0.529	0.531
\$101 - \$250	1.000	0.778	0.667	0.529	0.556	0.294	0.400	0.313	0.313	0.267	0.188	0.400	0.563	0.625	0.625	0.615	0.538
> \$250	1.000	0.900	0.917	0.750	0.750	0.737	0.538	0.684	0.667	0.636	0.667	0.455	0.824	0.941	0.941	0.500	0.867
> \$250	1.000	0.750	0.833	0.750	0.667	0.333	0.750	0.600	0.400	0.750	0.333	0.500	0.833	0.833	1.000	1.000	0.833

Group 1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

A decreasing rate of collection months per 1,000 payments can be attributed to one of two alternative patterns by the company and its customers. Either the utility is keeping its level of collection activity constant and the number of payments is increasing (so the collection activity per each payment decreases), or the company is increasing its collection activity while at the same time receiving an increase in payments that exceeds its increase in collection activity (again, with a decrease in the collection activity per payment). A decreasing rate of collection months per 1,000 payments represents an improved collection performance. A decreasing rate indicates that each payment to the utility requires less collection activity to generate.

The change in the number of collection activity months directed toward Vectren's USP populations cannot be attributed to a drop in the number of payments that USP customers were making. While it is evident from Table 6, as discussed immediately above, that the number of collection months of activity that Vectren in which is engaging is increasing rather than decreasing for accounts with higher January 2008 arrears, Table 7 data indicates that these increased collection activities have a mixed impact. Table 7 reports the number of collection months per 1,000 payments each month. Like Table 6, Table 7 presents month-by-month data rather than cumulative data.

For the Group 1 and Group 2 populations as a whole, Vectren's increased collection activity has not resulted in improved collection performance when viewed from a perspective based on customer payments. A comparison of 2008 data from March, April and May to 2009 data from March, April and May shows a consistent increase in the number of collection months per 1,000 payments for the groups as a whole. Consider that for Group 1 accounts as a whole, while the company engaged in 0.425 collection months for each 1,000 payments it received in April 2008,

it engaged in 0.578 collection months for each 1,000 payments it received in April 2009. For Group 2 accounts as a whole, while Vectren engaged in 0.711 collection months per each 1,000 payments it received in May 2008, it engaged in 1.066 collection months in May 2009. The increased collection activity that the company is pursuing is not resulting in a corresponding increase in the number of payments.

The same patterns do not hold true for all sub-populations of accounts defined by the level of January arrears. The decreased collection activity per 1,000 payments occurs primary in the group of accounts that had more than \$250 in arrears in January 2008. With accounts that had \$0 arrears in January 2008, however, the March, April and May level of collection activities per 1,000 payments indicates a deteriorating collections performance. In those months, even while the company’s collection activities per 1,000 bills increased, the company’s collection activities per 1,000 payments increased as well.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.300	0.325	0.551	0.425	0.561	0.655	0.491	0.526	0.532	0.314	0.512	0.248	0.397	0.599	0.648	0.578	0.988
Group Total	0.416	0.565	0.764	0.379	0.711	0.912	0.698	0.849	0.776	0.469	0.704	0.394	0.647	0.808	0.816	0.656	1.066
< \$1	0.000	0.093	0.391	0.345	0.528	0.605	0.447	0.494	0.518	0.297	0.490	0.224	0.359	0.567	0.624	0.573	0.896
< \$1	0.000	0.442	0.684	0.352	0.706	0.929	0.706	0.891	0.797	0.483	0.763	0.375	0.655	0.808	0.830	0.662	1.100
\$1 - \$100	0.583	0.688	0.756	0.638	0.667	1.056	0.762	0.667	0.333	0.250	0.294	0.364	0.375	0.594	0.710	0.704	1.429
\$1 - \$100	0.583	1.000	0.909	0.538	0.900	0.700	0.500	0.286	0.800	0.250	0.143	0.625	0.143	0.750	0.600	0.222	0.400
\$101 - \$250	1.625	0.615	1.054	0.795	0.698	0.917	0.810	0.667	0.640	0.520	0.556	0.409	0.655	0.786	0.727	0.621	1.308
\$101 - \$250	2.375	0.875	0.923	0.500	0.714	0.833	0.667	0.556	0.500	0.333	0.429	0.462	0.692	0.769	0.667	0.889	0.700
> \$250	1.200	0.947	1.048	0.522	0.938	0.875	0.636	0.867	1.000	0.412	1.333	0.455	0.875	1.067	0.941	0.385	3.250
> \$250	1.500	0.600	1.667	0.500	0.667	0.500	0.750	0.600	0.500	0.600	0.333	1.000	0.833	1.000	1.000	0.800	2.500

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

Given the difference in payment patterns experienced by Citizens Gas and Vectren Energy, the next section moves to a direct measurement of the effectiveness and efficiency of the collection efforts directed toward USP participants.

EFFECTIVENESS OF COLLECTIONS

The third section of this evaluation examines the effectiveness of the utility collection activities. A utility can engage in a large number of collection activities irrespective of the effectiveness of those activities. The over-noticing of service disconnections for nonpayment, for example, represents one collection activity that is likely to impede rather than to promote the collection of bills. The payment coverage ratio discussed above, while indirectly related to collection

effectiveness, does not directly address the effectiveness of collection interventions. The effectiveness of collection interventions can be measured by examining the relationship between the use of collection activities and the receipt of payments.

Improvements in the effectiveness of collection activities can occur in either of two ways:

- the need for collection interventions can be reduced thus allowing an increased payment per each collection intervention performed; in the first instance, improvement can be seen even if total dollars collected remains the same (but the interventions needed to generate those dollars decreases); or
- the customer response to the collection activity can improve thus allowing an increased payment per each collection intervention performed. In this second instance, improvement can be seen if the total number of collections activities remains the same but the dollars generated by those activities increase.

In the discussion below, the effectiveness of collection activities directed toward the USP participant populations is measured by reference to the following metrics:

- The average payment per collection month by month;
- The number of collection months associated with the number of payments by month;
- The average cumulative payments by the cumulative number of collection months; and
- The average cumulative number of collection months associated with the cumulative dollars of payments.

In essence, this evaluation considers the effectiveness and efficiency of collection activities from two different but related perspectives. On the one hand, it examines at how much revenue is generated by each collection intervention. On the other hand, it examines how many collection activities are associated with the generation of the revenue. From the first perspective, the number of collection interventions is taken as the “given”; from the second, the amount of revenue is taken as the given. The two perspectives are examined both on a month-by-month, and on a cumulative, basis.

Citizens Gas and Coke Utilities

Citizens Gas collects more money for each collection activity in which it engages from low-income customers who have participated in the USP for a longer period of time. This impact can be largely attributed to the fact that more customers who participated in USP for both 2007 and 2008 make more payments without need for collection interventions than is true for customers who began their USP participation in 2008. The lower overall level of collection efforts directed toward Group 1 participants (both 2007 and 2008) was discussed in detail above. Given that there are more payments that do not require collection interventions, the dollar level of payments

per collection activity is higher. In addition, Group 1 participants make higher payments when collection activity is directed to them.

The higher level of payments per collection month is set forth in Table 8 below. Table 8 documents, on a month-by-month basis, the payments per collection month. In each season of the year, Group 1 participants out-perform their Group 2 counterparts. While Group 1 participants as a whole paid \$550 per collection month in January 2008, Group 2 participants paid \$353. The gap between the two groups narrowed by the warm weather months, but nonetheless stayed at a rate where Group 1 participants paid roughly \$50 to \$60 more per collection month throughout the months of May through October 2008. In November through February, the rate at which Group 1 participants paid more than ranged from more than \$200 per collection month (January 2009: Group 1: \$674 per collection month vs. Group 2: \$440 per collection month) to more than \$600 (February 2009: Group 1: \$1,448 payment per collection month vs. Group 2: \$821 payment per collection month).

The pattern holds true for customers of both Group 1 and Group 2 that had \$0 in arrears in January 2008. In each month, customers that had participated in USP for both 2007 and 2008 (Group 1) paid more per collection month than did customers that began their USP participation in 2008.

The pattern holds true for customers with small arrears (i.e., less than \$100) as well, with some exceptions beginning to appear. In March and September 2008, Group 2 made higher payments, while in May 2009, the payments were virtually identical.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$550	\$2,676	\$400	\$162	\$203	\$190	\$247	\$240	\$303	\$628	\$968	\$708	\$676	\$1,448	\$403	\$330	\$275
Group Total	\$353	\$996	\$378	\$143	\$156	\$139	\$197	\$182	\$264	\$582	\$597	\$373	\$440	\$821	\$379	\$346	\$245
< \$1	\$3,983	\$8,335	\$587	\$250	\$313	\$289	\$432	\$440	\$633	\$1,156	\$1,930	\$1,371	\$1,183	\$2,146	\$551	\$485	\$407
< \$1	\$5,344	\$2,177	\$407	\$192	\$247	\$228	\$334	\$314	\$509	\$1,075	\$1,354	\$692	\$656	\$1,107	\$515	\$440	\$371
\$1 - \$100	\$520	\$2,447	\$245	\$125	\$161	\$133	\$173	\$160	\$122	\$351	\$645	\$363	\$451	\$1,344	\$263	\$219	\$152
\$1 - \$100	\$379	\$905	\$293	\$110	\$119	\$102	\$121	\$113	\$195	\$339	\$272	\$265	\$268	\$832	\$242	\$210	\$155
\$101 - \$250	\$153	\$1,320	\$370	\$117	\$143	\$132	\$138	\$154	\$163	\$347	\$368	\$365	\$373	\$996	\$312	\$244	\$214
\$101 - \$250	\$124	\$720	\$324	\$129	\$110	\$93	\$150	\$118	\$166	\$348	\$459	\$230	\$345	\$469	\$336	\$297	\$203
> \$250	\$134	\$2,530	\$398	\$143	\$155	\$183	\$197	\$139	\$300	\$318	\$851	\$497	\$511	\$900	\$446	\$314	\$258
> \$250	\$166	\$948	\$573	\$130	\$149	\$128	\$141	\$142	\$145	\$474	\$389	\$251	\$380	\$1,133	\$376	\$464	\$184

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

As the beginning arrears become bigger, the pattern increasingly breaks down. For customers with January 2008 arrears of between \$100 and \$250, the Group 1 participants made larger payments on a month by month basis in each of the seventeen study month but four (April 2008, November 2008, March 2009, April 2009), with September 2008 being virtually identical. So, too, did Group 1 accounts having January 2008 arrears of greater than \$250 make higher payments in all months but five (January 2008, March 2008, October 2008, February 2009, April 2009), with one month being virtually identical (August 2008).

Table 9 measures the extent to which Citizens Gas needed to engage in collection efforts to gain a customer payment of some amount toward the customer bills. Table 9 examines the effectiveness of the collection initiative in generating some payment, without assessing what the level of payment was. A partial payment is counted the same as a full payment. A \$10 payment is counted the same as a \$100 payment. The metric in Table 9 assesses the effectiveness of Citizen’s collection interventions in keeping customers engage in making a monthly payment each month whether or not that payment clears the account of arrears.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	1.820	0.370	2.500	6.160	4.930	5.260	4.040	4.170	3.300	1.590	1.030	1.410	1.480	0.690	2.480	3.030	3.630
Group Total	2.830	1.000	2.640	7.000	6.420	7.200	5.070	5.480	3.790	1.720	1.670	2.680	2.270	1.220	2.640	2.890	4.080
< \$1	0.250	0.120	1.700	4.000	3.190	3.460	2.310	2.270	1.580	0.870	0.520	0.730	0.850	0.470	1.820	2.060	2.460
< \$1	0.190	0.460	2.450	5.210	4.050	4.390	2.990	3.180	1.970	0.930	0.740	1.450	1.520	0.900	1.940	2.280	2.700
\$1 - \$100	1.920	0.410	4.080	8.010	6.190	7.500	5.780	6.270	8.220	2.850	1.550	2.760	2.220	0.740	3.800	4.570	6.580
\$1 - \$100	2.640	1.100	3.410	9.060	8.420	9.820	8.270	8.810	5.130	2.950	3.680	3.780	3.730	1.200	4.130	4.770	6.460
\$101 - \$250	6.530	0.760	2.710	8.550	6.980	7.550	7.230	6.490	6.140	2.880	2.710	2.740	2.680	1.000	3.210	4.100	4.670
\$101 - \$250	8.080	1.390	3.090	7.730	9.130	10.75 0	6.690	8.450	6.010	2.870	2.180	4.350	2.900	2.130	2.980	3.360	4.930
> \$250	7.460	0.400	2.510	6.970	6.440	5.480	5.080	7.180	3.330	3.140	1.180	2.010	1.960	1.110	2.240	3.180	3.880
> \$250	6.030	1.050	1.740	7.690	6.720	7.790	7.110	7.030	6.910	2.110	2.570	3.990	2.630	0.880	2.660	2.160	5.430

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

In all months (but April 2009) presented in Table 9, Group 2 customers experience more collection months per payment than do their Group 1 counterparts. The difference dips in October 2008 to 0.13 collection months per 1,000 payments and to 0.49 in September. In October 2008, in other words, had Citizens received 1,000 payments from customers who had participated in both 2007 and 2008, and 1,000 payments from customers who participated in 2008 (but not 2007), the former group would have generated 1,590 collection months of activity while the latter group would have generated 1,720, or 130 more.

The pattern holds for all levels of arrears, particularly at higher levels of arrears. Table 9 shows that at the end of the first winter heating season (April 2008), for accounts with January 2008 arrears of greater than \$250, while Group 2 customers generated 7.69 collection months per 1,000 payments, Group 1 customers (with January 2008 arrears greater than \$250) generated only 6.97. Immediately before the heating season, while Group 2 customers generated 2.57 collection months per 1,000 payments, Group 1 customers generated only 1.18. In the middle of the second heating season (January 2009), while Group 2 customers generated 2.63 collection months per 1,000 payments, Group 1 customers generated only 1.96. At the end of the study period (May 2009), while Group 2 customers generated 5.43 collection months per 1,000 payments, Group 1 customers generated only 3.88.

The conclusion flowing from the data is that Citizens Gas works harder to generate payments from the customers who participated in USP in 2008 (but not 2007) than it does to generate payments from customers who had participated in USP in both 2007 and 2008.

What is shown on a month-by-month basis above is confirmed on a cumulative basis for the total 17-month study period by Table 10 below. Table 10 presents the average cumulative payment by Group 1 and Group 2 customers, both for the populations as a whole and for those populations disaggregated by the size of the arrears on an account in January 2008. Table 10 shows that Group 1 customers make greater payments for each collection month than do their Group 2 counterparts. On a cumulative basis, by the end of the study period:

- While Group 1 customers as a whole had made a \$366 payment for each collection month, Group 2 customers had made only a \$291 payment;
- While Group 1 customers with no January 2008 arrears had made a \$633 payment for each collection month, Group 2 customers had made only a \$480 payment;
- While Group 1 customers with mid-level January 2008 arrears (\$1 - \$100) had made a \$235 payment per collection month, Group 2 customers had made only a \$206 payment;
- While Group 1 customers with a high January 2008 arrears (>\$250) had made a \$294 payment per collection month, Group 2 customers had made only a \$255 payment.

Table 10 (CGCU)
Average (Cumulative) Payments by Cumulative Collection Months

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$550	\$956	\$611	\$359	\$313	\$291	\$285	\$281	\$282	\$300	\$326	\$340	\$352	\$373	\$375	\$372	\$366
Group Total	\$350	\$526	\$459	\$300	\$260	\$240	\$235	\$231	\$233	\$247	\$258	\$263	\$270	\$285	\$291	\$294	\$291
< \$1	\$3983	\$5061	\$1416	\$664	\$546	\$493	\$485	\$480	\$490	\$533	\$588	\$621	\$642	\$679	\$665	\$651	\$633
< \$1	\$5340	\$3458	\$1088	\$513	\$426	\$386	\$380	\$373	\$381	\$414	\$441	\$454	\$465	\$489	\$491	\$487	\$480
\$1 - \$100	\$520	\$983	\$408	\$245	\$220	\$204	\$200	\$196	\$188	\$198	\$215	\$220	\$226	\$241	\$242	\$241	\$235
\$1 - \$100	\$366	\$511	\$391	\$237	\$204	\$185	\$177	\$172	\$173	\$181	\$186	\$189	\$193	\$207	\$210	\$210	\$206
\$101 - \$250	\$153	\$388	\$379	\$243	\$216	\$202	\$194	\$191	\$189	\$196	\$203	\$210	\$216	\$230	\$237	\$237	\$236
\$101 - \$250	\$124	\$273	\$292	\$222	\$194	\$178	\$176	\$172	\$171	\$178	\$186	\$188	\$194	\$201	\$208	\$212	\$212
> \$250	\$134	\$459	\$430	\$283	\$250	\$239	\$234	\$225	\$229	\$233	\$251	\$260	\$268	\$282	\$294	\$296	\$294
> \$250	\$162	\$355	\$428	\$288	\$253	\$235	\$226	\$221	\$217	\$224	\$229	\$229	\$233	\$244	\$250	\$258	\$255

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

For the population as a whole, the pattern did not vary over time. While the average payment per cumulative collection month was higher in the early months—this pattern is consistent with the observation that not all customers who first joined USP in 2008 would have joined in January—the difference in the level of payments per collection month (on a cumulative basis) narrowed and remained in the range of \$50 to \$100 per collection month for the remainder of the study period.

One primary cause for the higher dollars of payments per collection month for Group 1 customers is that those customers simply required the company to engage in fewer collection months for each payment that was received. Table 11 shows the number of collection months that Citizens Gas had to invoke in order to generate each \$1,000 in payments from its USP participants. For the population as a whole, by the end of the study period, customers who had participated in USP only in 2008 required 0.70 more collection months for each \$1,000 of payments received than did customers who had participated in USP for both 2007 and 2008. While Group 2 required 3.43 collection months for each \$1,000 of payments it made, Group 1 required only 2.73 collection months for each \$1,000 of payments received.¹¹

This pattern (of needing fewer collection months per each \$1,000 of payments) holds true not only for the population as a whole, but for customers with no January 2008 arrears as well as for each level of January 2008 arrears.

¹¹ The higher payment per collection month is attributable to the lower number of collections, not to a higher payment amount. A discussion of the levels of bills and payments is presented later in this evaluation.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	1.82	1.05	1.64	2.79	3.19	3.44	3.51	3.56	3.55	3.33	3.07	2.94	2.84	2.68	2.66	2.69	2.73
Group Total	2.85	1.90	2.18	3.33	3.84	4.17	4.25	4.33	4.29	4.05	3.87	3.80	3.70	3.51	3.44	3.40	3.43
< \$1	0.25	0.20	0.71	1.51	1.83	2.03	2.06	2.08	2.04	1.88	1.70	1.61	1.56	1.47	1.50	1.54	1.58
< \$1	0.19	0.29	0.92	1.95	2.35	2.59	2.63	2.68	2.62	2.42	2.27	2.20	2.15	2.05	2.04	2.05	2.08
\$1 - \$100	1.92	1.02	2.45	4.08	4.55	4.90	5.00	5.10	5.31	5.05	4.64	4.55	4.42	4.16	4.12	4.16	4.26
\$1 - \$100	2.73	1.96	2.56	4.21	4.90	5.40	5.63	5.82	5.77	5.51	5.39	5.28	5.19	4.84	4.77	4.77	4.84
\$101 - \$250	6.53	2.58	2.64	4.12	4.63	4.96	5.15	5.24	5.29	5.09	4.92	4.76	4.64	4.34	4.23	4.22	4.24
\$101 - \$250	8.08	3.66	3.42	4.50	5.16	5.61	5.69	5.83	5.84	5.63	5.37	5.32	5.16	4.98	4.80	4.71	4.72
> \$250	7.46	2.18	2.33	3.54	4.00	4.19	4.27	4.44	4.37	4.30	3.98	3.85	3.73	3.54	3.40	3.38	3.41
> \$250	6.19	2.82	2.34	3.47	3.96	4.26	4.42	4.53	4.60	4.46	4.37	4.37	4.29	4.10	4.00	3.88	3.92

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

The level of payment received from each USP participant represents one way to measure the payment performance of a low-income customer. However, that level of payment –whether measured by payment coverage ratios, level of arrears, or absolute dollars of payments—standing alone can present an incomplete picture of payment performance. If two customers each pay \$100 to a utility, they nonetheless still do not have identical payment performance if the utility requires substantially greater collection efforts to generate that payment from one of those customers.

When measured by different collections metrics, one result of the USP operated by Citizens Gas is to make it easier to collect money from low-income customers. The data and discussion above make clear that continuing participation in USP enhances the effectiveness of collection interventions.

Vectren Energy Delivery

Vectren exhibits the ability to generate greater payment advantage for its longer-term USP participants. Table 8 sets forth the data. As shown in Table 8, in eleven of the seventeen study months, customers who had participated in USP for both 2007 and 2008 paid more per collection month than did customers who began their USP participation in 2008.

It appears as though the participation in USP helps customers increase their payments relative to collection months.¹² Of the five months in which the New participants paid more (Group 2), three occurred in the first five months of data (January, April, May 2008). By September 2008, USP participants who had participated for two consecutive years consistently paid more in response to collections on a month-by-month basis.

The pattern which emerges shows that the higher payments occur particularly for the population with a \$0 of January 2008 arrears. In 12 months of the 17-month study period, Group 1 customers generated higher dollar payments per collection activity month than did their Group 2 counterparts. In contrast, for customers with positive levels of January 2008 arrears, no pattern emerges, either on a seasonal basis, on a basis as between earlier/later in the program, or as between the arrearage levels.

The increased level of Vectren collection activity directed toward USP participants identified in earlier tables is reflected in this documentation of the payment responses. One impact of the company's increased collection efforts—the earlier discussion found both an increase in the number of collections per bills issued and an increase in the number of collections per payments received—is a reduction in the payment amount per collection month.

The implication of this is that USP payments tend to be made without utility recourse to collection interventions. As Vectren increases its collection interventions, it does not generate additional payments. Since Vectren is engaging in more collection months without generating increased payment revenue, the payments per collection month show a downward shift in many of the study months, particularly for customers with beginning arrears.

The effectiveness of continuing participation in improving payment patterns is more evident in the data reflecting the number of collection months indexed to the number of payments. In measuring this metric, a lower number reflects better performance. A lower number means that the company engaged the collections process, to some extent, a fewer number of times for each payment it received. Table 9 presents the data. As Table 9 documents, Group 1 (Continuing participants) consistently made more payments in response to fewer collection activity months. In only five months did Group 2 participants out-perform the Continuing participants in this respect; of those five months, three were early in the program year.

¹² Remember, an increased payment might mean that in response to a collection month, customers paid more. It might also mean that customers pay more without need for the company to resort to collection months, thus increasing the payment per each collection intervention that is invoked.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$396	\$605	\$266	\$520	\$381	\$240	\$278	\$256	\$234	\$833	\$391	\$797	\$395	\$299	\$444	\$336	\$107
Group Total	\$542	\$574	\$195	\$771	\$408	\$236	\$251	\$256	\$225	\$567	\$370	\$515	\$283	\$289	\$416	\$370	\$154
< \$1	\$0	\$1,981	\$315	\$605	\$401	\$252	\$299	\$253	\$237	\$876	\$386	\$925	\$411	\$315	\$443	\$334	\$125
< \$1	\$0	\$657	\$175	\$798	\$424	\$234	\$249	\$242	\$217	\$543	\$359	\$530	\$265	\$286	\$412	\$374	\$143
\$1 - \$100	\$139	\$212	\$252	\$264	\$229	\$95	\$154	\$118	\$337	\$572	\$832	\$340	\$474	\$229	\$378	\$195	\$32
\$1 - \$100	\$144	\$368	\$231	\$426	\$83	\$284	\$337	\$1,176	\$267	\$1,127	\$894	\$489	\$1,372	\$239	\$369	\$842	\$407
\$101 - \$250	\$67	\$396	\$202	\$327	\$323	\$216	\$166	\$291	\$275	\$386	\$385	\$398	\$365	\$235	\$461	\$280	\$44
\$101 - \$250	\$65	\$465	\$201	\$872	\$221	\$186	\$261	\$321	\$337	\$740	\$260	\$436	\$280	\$259	\$409	\$198	\$344
> \$250	\$186	\$268	\$198	\$849	\$408	\$280	\$404	\$370	\$139	\$1,219	\$247	\$229	\$204	\$250	\$509	\$1,182	\$32
> \$250	\$213	\$722	\$316	\$699	\$553	\$364	\$205	\$339	\$424	\$759	\$896	\$205	\$612	\$485	\$598	\$330	\$104

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

Table 9 also supports the conclusion that USP helps customers who have lesser arrears make an increased number of unprompted payments. When looking at the payment patterns disaggregated by the level of the January 2008 arrears, Table 9 shows:

- A lower number of collection activity months per payment in 12 of the seventeen study months for Group 1 customers with \$0 of January 2008 arrears;
- A lower number of collection activity months per payment in seven of the 17 study months for Group 1 customers with between \$100 and \$250 in January 2008 arrears;
- A lower number of collection activity months per payment in six of the 17 study months for Group 1 customers with more than \$250 in January 2008 arrears.

Measuring the number of collection months for each payment made helps to document the extent of unprompted payments by USP participants. The data from Vectren shows that extending the time of participation in USP enhances the ability and/or willingness of USP participants to make unprompted payments. Customers who have participated in USP for a longer period of time (Group 1) make a greater number of unprompted payments than customers who have participated in USP for a shorter period of time. This result is particularly evident for Vectren customers who can clear their accounts of arrears early in the program, and continue through their program participation making unprompted payments.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	2.520	1.650	3.760	1.920	2.630	4.160	3.590	3.900	4.270	1.200	2.560	1.250	2.530	3.350	2.250	2.970	9.380
Group Total	1.850	1.740	5.140	1.300	2.450	4.240	3.990	3.910	4.440	1.760	2.700	1.940	3.530	3.460	2.400	2.710	6.470
< \$1	0.000	0.500	3.170	1.650	2.490	3.970	3.340	3.960	4.220	1.140	2.590	1.080	2.430	3.170	2.260	3.000	7.980
< \$1	0.000	1.520	5.730	1.250	2.360	4.270	4.020	4.130	4.610	1.840	2.790	1.890	3.770	3.490	2.430	2.670	7.010
\$1 - \$100	7.210	4.720	3.960	3.790	4.360	10.55	6.500	8.510	2.970	1.750	1.200	2.940	2.110	4.360	2.640	5.140	30.95
\$1 - \$100	6.940	2.720	4.340	2.350	12.02	3.530	2.970	0.850	3.740	0.890	1.120	2.050	0.730	4.190	2.710	1.190	2.460
\$101 - \$250	14.87	2.530	4.950	3.060	3.090	4.630	6.010	3.430	3.640	2.590	2.600	2.510	2.740	4.260	2.170	3.580	22.82
\$101 - \$250	15.30	2.150	4.970	1.150	4.530	5.370	3.830	3.120	2.970	1.350	3.840	2.290	3.580	3.870	2.450	5.060	2.910
> \$250	5.380	3.740	5.040	1.180	2.450	3.580	2.480	2.700	7.200	0.820	4.050	4.360	4.890	4.000	1.960	0.850	31.08
> \$250	4.690	1.390	3.170	1.430	1.810	2.750	4.880	2.950	2.360	1.320	1.120	4.880	1.630	2.060	1.670	3.030	9.610

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

In addition to making a greater number of unprompted payments, Vectren's USP participants as a whole appear to make larger payments as well in response to the collection efforts that the company directs toward them. Table 10 presents the dollars of cumulative payments by the cumulative number of collection months. Beginning in October 2008 and continuing through the remainder of the study period, Group 1 (Continuing) USP customers made higher payments than did their Group 2 counterparts. Table 10 presents data on a cumulative basis. For the last eight months of the study period, Vectren was, for the study period as a whole, exerting less collection effort to collect more dollars from its Group 1 participants.

The change in relative payments between Group 1 and Group 2 customers in October 2008 is not readily subject to explanation. Since both sets of customers (Group 1 and Group 2) were USP participants in 2008, no clear reason is evident for the change in payment patterns in September/October 2008.

Finally, as has been found in other metrics, the best performance for Vectren's USP population occurred within that group of customers with \$0 in January 2008 arrears.¹³ In every month except January 2008, the Group 1 USP participants paid more per collection month of activity than did their Group 2 counterparts. The pattern breaks down with account in arrears. On a cumulative basis, Group 2 customers with a positive January 2008 arrears pay more per collection activity month.

¹³ As reported above, the Group 1 accounts with \$0 of January 2008 arrears comprised 82% of Vectren's total Group 1 USP population. The Group 2 accounts with \$0 of January 2008 arrears comprised 91% of the total Group 2 USP population.

Table 10 (Vectren)
Average Cumulative Payments by Cumulative Collection Months

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$396	\$452	\$360	\$413	\$401	\$363	\$352	\$340	\$328	\$360	\$362	\$382	\$383	\$374	\$382	\$379	\$360
Group Total	\$542	\$556	\$362	\$492	\$447	\$380	\$359	\$342	\$328	\$346	\$348	\$357	\$350	\$344	\$351	\$352	\$341
< \$1	\$0	\$6280	\$853	\$722	\$553	\$459	\$432	\$402	\$379	\$418	\$415	\$442	\$439	\$424	\$427	\$418	\$396
< \$1	\$0	\$1731	\$531	\$647	\$502	\$404	\$376	\$352	\$334	\$351	\$351	\$361	\$352	\$345	\$352	\$353	\$341
\$1 - \$100	\$139	\$156	\$195	\$214	\$217	\$202	\$197	\$193	\$198	\$208	\$227	\$231	\$245	\$243	\$255	\$251	\$237
\$1 - \$100	\$144	\$228	\$229	\$267	\$230	\$239	\$246	\$277	\$276	\$302	\$310	\$323	\$337	\$329	\$333	\$344	\$346
\$101 - \$250	\$67	\$120	\$143	\$180	\$201	\$203	\$200	\$206	\$210	\$218	\$223	\$228	\$236	\$236	\$251	\$252	\$243
\$101 - \$250	\$65	\$143	\$158	\$270	\$263	\$257	\$257	\$261	\$266	\$286	\$285	\$294	\$293	\$290	\$300	\$294	\$296
> \$250	\$186	\$217	\$210	\$296	\$312	\$307	\$312	\$317	\$296	\$334	\$328	\$325	\$317	\$312	\$330	\$347	\$331
> \$250	\$213	\$352	\$339	\$393	\$420	\$416	\$394	\$389	\$391	\$421	\$445	\$433	\$453	\$456	\$473	\$464	\$437

Group1 (Continuing Participants) is in Yellow.
 Group 2 (New Participants) is in White.

Merely because Vectren received higher payments per each collection month does not mean that the utility was generating sufficient additional payments to “keep up” with its increased collections. While Table 8 documented that the company received somewhat higher payments per collection month in each month, and Table 10 documented that the company was receiving higher payments per collection activity on a cumulative basis, nonetheless, the utility exerted greater and greater collection effort to generate each additional dollar of payment. Table 11 shows the cumulative number of collection months per each \$1,000 of payments, beginning in January 2008 and continuing through May 2009. Table 11 shows that, for the two groups as a whole, the incremental effort to generate each additional \$1,000 in payments through an increase in collection efforts directed toward USP customers gets moderately higher. While the dollars of payments may increase, the number of collection efforts needed to generate those dollars increases even more. This pattern also held true for those Group 1 and Group 2 customers that had \$0 of January arrears.

For the to groups as a whole, as well as for the accounts with \$0 arrears, the pattern which emerges from Table 11 is that in each month, on a cumulative basis, with isolated exceptions, the number of collection months needed to generate \$1,000 in payments increased relative to the preceding year for the two groups as a whole. In the five comparison months of January through May, the number of collection months per \$1,000 payments was higher in January 2009 than in January 2008; higher in February 2009 than in February 2008; higher in March 2009 than in March 2008; higher in April 2009 than in April 2008; and higher in May 2009 than in May 2008.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	2.52	2.21	2.78	2.42	2.49	2.75	2.84	2.94	3.05	2.78	2.76	2.61	2.61	2.67	2.62	2.64	2.78
Group Total	1.85	1.80	2.76	2.03	2.24	2.63	2.79	2.92	3.05	2.89	2.88	2.80	2.86	2.91	2.85	2.84	2.94
< \$1	0.00	0.16	1.17	1.38	1.81	2.18	2.31	2.49	2.64	2.39	2.41	2.26	2.28	2.36	2.34	2.39	2.52
< \$1	0.00	0.58	1.88	1.55	1.99	2.48	2.66	2.84	3.00	2.85	2.85	2.77	2.84	2.90	2.84	2.83	2.94
\$1 - \$100	7.21	6.42	5.13	4.68	4.61	4.96	5.07	5.19	5.05	4.81	4.41	4.32	4.09	4.11	3.92	3.98	4.23
\$1 - \$100	6.94	4.39	4.37	3.74	4.34	4.18	4.06	3.61	3.62	3.31	3.22	3.10	2.97	3.04	3.00	2.90	2.89
\$101 - \$250	14.87	8.35	7.00	5.56	4.97	4.94	5.00	4.86	4.77	4.60	4.48	4.38	4.23	4.23	3.99	3.97	4.11
\$101 - \$250	15.30	6.99	6.34	3.70	3.80	3.90	3.89	3.83	3.76	3.50	3.51	3.40	3.41	3.45	3.33	3.40	3.37
> \$250	5.38	4.60	4.77	3.38	3.21	3.26	3.21	3.15	3.37	2.99	3.05	3.08	3.16	3.21	3.03	2.88	3.02
> \$250	4.69	2.84	2.95	2.54	2.38	2.41	2.54	2.57	2.56	2.38	2.25	2.31	2.21	2.19	2.11	2.16	2.29

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

The pattern reverses itself for accounts with positive levels of January 2008 arrears. In each month during 2009, the level of collection months per \$1,000 of payments for those accounts with beginning arrears was lower than the level in the corresponding month in 2008. Again, it is important to remember that Table 11 presents *cumulative* data rather than point in time data. May 2009, in other words, represents the sum of all payments from January 2008 to the end of the study period divided by the sum of all collection events from 2008 to the end of the study period. The conclusion flowing from Table 11 is that, by the end of the study period, while Vectren was working moderately harder to maintain payments from those with no beginning arrears, it was working substantially less hard to generate payments from accounts with positive levels of beginning arrears.

ARREARS AND PAYMENTS

One standard measure of payment performance by utility customers involves an examination of the payments that those customers make and the unpaid bills that those customers carry over time. One expectation of a low-income program such as USP is that it will help place participants in a position where they will be more likely to retire their pre-existing arrears in whole or part and avoid incurring arrears in the future.

The analysis of arrears and payments below considers the impact of USP on the arrears and payments of program participants using the following metrics:

- The percentage of accounts in arrears (and the change in that percentage over time);

- The aggregate dollars of arrears by month over all accounts;
- The average dollars of bills and payments by month;
- The average number of payments received relative to the number of bills issued each month; and
- The percentage of accounts that have bills, arrears and collection activity in a given month.

Citizens Gas and Coke Utilities

Participation in USP place customers in the position of being able to reduce their arrears. For customers who do not have arrears, program participation helps customers to remain current on their bills. The arrearage reduction impact of program participation is most noticeable in the first year of program participation. These conclusions flow from an examination of Table 12 below looking at the percentage of USP participants that have arrears by month.

According to Table 12, USP participants reduced their arrears over the course of the study period. Customers who participated in USP for 2008 but not 2007 (Group 2) experienced a greater reduction of arrears than did customers who had participated in USP for both 2007 and 2008. For the population as a whole, while the percentage of Group 2 accounts in arrears dropped from 52% in January 2008 to 26% in May 2009 (a decrease of 50%), the percentage of total Group 1 accounts in arrears dropped from 42% in January 2008 to 31% in May 2009.

Not all customer payment patterns were “perfect.” Of those customers who had \$0 in arrears in January 2008 (both Group 1 and Group 2), 21% had fallen into arrears by the end of the study period. Nonetheless, improvements did occur:

- Of Group 1 accounts with between \$1 and \$100 in January 2008 arrears, only 46% still had arrears in Month 15; only 40% of Group 2 accounts having January 2008 arrears of between \$1 and \$100 were still in arrears in May 2009;
- While 29% of Group 2 accounts having January 2008 arrears of between \$101 and \$250 were still in arrears in May 2009, 43% of Group 1 accounts with such arrears were;
- While 24% of Group 2 accounts having January 2008 arrears of more than \$250 were still in arrears in May 2009, 46% of Group 1 accounts with such arrears were.

Comparing May arrears to January arrears may not present the most accurate picture of any change in arrears. Even under the USP, a distinct seasonal pattern of arrears emerges. The percentage of accounts in arrears appears to reach its maximum in the springs months of April and May, before beginning to recede through the following December. For the Group 1 population as a whole, roughly 56% to 57% of all accounts were in arrears in April/May, before receding to 21% in December; for the Group 2 population as a whole, roughly two-thirds of accounts were in arrears in April/May, before receding to 26% in December.

Accepting the presence of this seasonal variation, rather than comparing the percentage of accounts in arrears in May 2009 to the percentage in January 2008, a more accurate picture might involve comparing each month of 2009 to the corresponding month in 2008. This comparison shows that for the population as a whole, the percentage of accounts in arrears for each 2009 month was lower than the percentage of accounts in arrears for the corresponding 2008 month. Moreover:

- For each month except January, the percentage of accounts in arrears in 2009 was lower than the percentage in the corresponding 2008 month for accounts having \$0 of arrears in January; and
- For each month, the percentage of accounts in arrears in 2009 was lower than the percentage in the corresponding 2008 month for accounts at every level of January 2008 arrears.

When accounts are compared from year-to-year, the percentage of accounts in arrears appears to be decreasing within both USP population groups.

The USP appears to have a greater impact on arrearage reduction in the first year of participation than in the second year. The first year participants outperformed the two year participants at each level of January 2008 arrears. While the number of Group 1 accounts in arrears was lower with which to begin (with more Group 1 participants lacking January 2008 arrears and fewer Group 1 customers having arrears greater than \$100), and while Group 1 arrearage reduction continued to occur throughout the study period, the proportion of Group 2 accounts moving out of arrears was higher than the Group 1 counterparts.

This outcome is consistent with what one might expect. Moving from a regiment of unaffordable bills to a regiment of more affordable bills (the experience of Group 2) would have a greater arrearage reduction impact than moving from one year of more affordable bills to a second year of similar bills. Group 2 customers would have received their first year of discount in 2008, in other words, while Group 1 customers would have seen a continuation of their discount.

Table 12 (CGCU)
Percent of Accounts with Arrears of Accounts with Bills by Month

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	42%	50%	52%	57%	56%	53%	46%	48%	43%	40%	32%	25%	38%	46%	46%	44%	44%
Group Total	52%	59%	61%	66%	67%	62%	58%	54%	48%	47%	42%	38%	46%	52%	51%	50%	50%
< \$1	0%	23%	27%	34%	34%	34%	27%	31%	26%	26%	20%	13%	19%	27%	27%	26%	27%
< \$1	0%	28%	37%	42%	45%	40%	41%	37%	31%	31%	30%	24%	30%	35%	34%	33%	33%
\$1 - \$100	100%	80%	85%	86%	83%	74%	72%	69%	74%	66%	52%	33%	58%	69%	80%	73%	72%
\$1 - \$100	100%	83%	78%	81%	83%	75%	75%	68%	66%	69%	56%	49%	61%	68%	74%	79%	77%
\$101 - \$250	100%	91%	86%	87%	88%	82%	73%	76%	66%	62%	55%	48%	67%	79%	76%	78%	72%
\$101 - \$250	100%	86%	85%	91%	88%	86%	77%	77%	68%	62%	56%	53%	62%	73%	70%	68%	70%
> \$250	100%	95%	96%	95%	92%	85%	79%	83%	61%	55%	45%	46%	76%	78%	77%	81%	81%
> \$250	100%	97%	92%	96%	91%	87%	89%	81%	66%	67%	50%	59%	76%	75%	76%	78%	82%

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

The impact of the USP on the reduction of the dollars in arrears is even more dramatic than the impact of USP on the number of accounts in arrears. This is particularly so with those accounts that are further in arrears. The Group 1 population with January arrears greater than \$250, for example, reduced their total arrears from \$30,600 to \$15,300, a reduction of 50%, while the Group 2 population with January 2008 arrears over \$250 reduced their total arrears from \$40,700 to \$7,500. Similarly, the Group 1 population with January 2008 arrears between \$100 and \$250 reduced their arrears from \$43,500 to \$16,100, while the corresponding Group 1 population reduced their arrears from \$28,900 to \$17,900.

These results are consistent with prior year evaluation findings. The arrearage reduction impact of USP falls primarily within the population of customers beginning the program year with higher arrears. Those low-income customers in the deepest payment trouble starting the program experience the greatest arrearage reduction.

As with the percentage of accounts in arrears, when the comparison of the total dollars of arrears is made between corresponding months of 2008 and 2009 (e.g., April 2008 to April 2009), the total dollars of arrears appears to be decreasing. Also similar to the percentage of accounts in arrears, the decrease appears to be greatest within the accounts with the largest beginning arrears. The decrease appears to be greater within the population of customers first beginning their USP participation in 2008 (as compared to those customers who participated in USP in both 2007 and 2008).

**Table 13 (CGCU)
Aggregate Dollars of Arrears (\$000) by Month**

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$67.8	\$115	\$124	\$155	\$151	\$124	\$61.1	\$54.9	\$44.8	\$26.9	\$21.5	\$26.8	\$61.9	\$119	\$118	\$84.9	\$63.1
Group Total	\$91.0	\$140	\$153	\$192	\$197	\$170	\$74.3	\$53.3	\$40.4	\$21.9	\$20.6	\$30.5	\$63.4	\$106.6	\$94.5	\$65.3	\$50.7
< \$1	\$0.0	\$13.0	\$19.3	\$31.9	\$32.7	\$29.7	\$15.4	\$16.6	\$13.3	\$12.5	\$6.9	\$8.0	\$17.7	\$33.3	\$35.7	\$26.5	\$19.3
< \$1	\$0.0	\$15.6	\$28.0	\$41.8	\$41.4	\$38.2	\$23.5	\$18.1	\$14.0	\$9.4	\$8.0	\$9.8	\$17.1	\$29.5	\$25.0	\$20.1	\$18.3
\$1 - \$100	\$8.3	\$22.2	\$24.3	\$28.5	\$26.4	\$20.3	\$11.2	\$8.8	\$8.3	\$5.8	\$4.6	\$4.9	\$10.0	\$21.7	\$20.4	\$14.0	\$10.6
\$1 - \$100	\$6.8	\$19.0	\$19.8	\$24.1	\$24.7	\$21.8	\$9.9	\$6.9	\$6.0	\$4.3	\$4.1	\$5.2	\$10.5	\$17.9	\$17.9	\$13.4	\$8.7
\$101 - \$250	\$28.9	\$42.0	\$41.6	\$49.3	\$46.0	\$37.9	\$20.6	\$17.8	\$14.5	\$6.1	\$5.8	\$9.3	\$19.9	\$35.7	\$34.0	\$24.1	\$17.9
\$101 - \$250	\$43.5	\$58.4	\$58.6	\$73.0	\$73.9	\$62.2	\$24.4	\$18.4	\$12.8	\$5.3	\$5.8	\$10.4	\$23.6	\$38.9	\$34.0	\$21.1	\$16.1
> \$250	\$30.6	\$37.8	\$39.3	\$45.2	\$45.4	\$36.2	\$13.9	\$11.8	\$8.8	\$2.5	\$4.1	\$4.5	\$14.3	\$28.2	\$28.0	\$20.3	\$15.3
> \$250	\$40.7	\$47.1	\$46.5	\$53.5	\$57.0	\$47.7	\$16.4	\$9.9	\$7.5	\$2.9	\$2.6	\$5.2	\$12.1	\$20.3	\$17.6	\$10.8	\$7.5

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

Larger arrears appear to be associated with higher bills for the USP participants of Citizens Gas. The monthly bills of Group 1 and Group 2 USP participants appear to closely track each other. The average monthly bills of Group 1 participants are virtually identical to the average monthly bills of Group 2 participants. Differences in payments between those customers who participated in USP for 2008 and 2007 (Group 1) and those customers who participated in USP for 2008 but not 2007 (Group 2) cannot be attributed to any substantial difference in bills.

The lack of difference between bills is true for both the population as a whole and for each level of January 2008 arrears (including for accounts with no January 2008 arrears). The one exception involves the 2008 winter monthly bills. The 2008 winter monthly bills for Group 2 customers (those who participated in USP in 2008 but not 2007) are higher than the Group 1 bills for the corresponding 2008 months (January, February, March). This difference disappears as the study period progresses.

In contrast to the comparison between the Group 1 and Group 2 populations, there are notable differences in bills between accounts with different levels of January 2008 arrears. Three “tiers” of bills appear to exist within the Citizens Gas USP population. Accounts with few (less than \$100) or no arrears (\$0) fall into one tier of bills, with winter monthly bills falling between \$130 and \$160 in 2008. Accounts with mid-level January 2008 arrears (\$101 - \$250) fall into a second level of bills, while accounts with high January 2008 arrears (>\$250) fall into a third (and highest) level of monthly bills.

Moreover, the accounts with lower levels of January 2008 arrears appear to have experienced a lower increase in bills between 2008 and 2009. The winter monthly USP bills for 2009 are noticeably higher than for the corresponding months in 2008. Table 14 documents that:

- The accounts with no January 2008 arrears (and lower 2008 winter bills) experienced a bill increase in the range of \$30 to \$40 during the 2009 winter;
- Accounts with January 2008 arrears in the range of \$1 to \$100 experienced a bill increase in the range of \$50 to \$80 in the 2009 winter;
- Accounts with January arrears in the range of \$101 to \$250 experienced a bill increase in the range of \$50 to \$90 in the 2009 winter; and
- Accounts with January arrears exceeding \$250 experienced a bill increase in the range of more than \$100 in the 2009 winter.

Despite the higher increase in bills between 2008 and 2009, the accounts with high January 2008 arrears experienced the greatest decrease in arrears relative to January 2008. As discussed previously, however, they did so only after generating the highest level of collection activity.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$171	\$163	\$142	\$96	\$67	\$61	\$61	\$59	\$57	\$69	\$108	\$187	\$223	\$205	\$135	\$100	\$69
Group Total	\$182	\$178	\$153	\$99	\$64	\$56	\$57	\$54	\$54	\$63	\$108	\$192	\$235	\$213	\$141	\$102	\$71
< \$1	\$154	\$150	\$133	\$90	\$64	\$59	\$67	\$68	\$64	\$79	\$104	\$154	\$181	\$168	\$123	\$98	\$77
< \$1	\$161	\$158	\$140	\$94	\$62	\$55	\$63	\$61	\$61	\$70	\$104	\$162	\$197	\$184	\$133	\$106	\$82
\$1 - \$100	\$155	\$145	\$133	\$97	\$70	\$62	\$52	\$47	\$43	\$50	\$97	\$191	\$235	\$215	\$132	\$86	\$54
\$1 - \$100	\$152	\$153	\$131	\$84	\$52	\$47	\$45	\$43	\$46	\$45	\$87	\$180	\$225	\$204	\$132	\$75	\$47
\$101 - \$250	\$197	\$185	\$153	\$105	\$69	\$62	\$52	\$43	\$46	\$49	\$115	\$239	\$286	\$253	\$150	\$101	\$54
\$101 - \$250	\$200	\$192	\$160	\$107	\$65	\$59	\$49	\$45	\$45	\$58	\$117	\$232	\$278	\$244	\$153	\$104	\$58
> \$250	\$254	\$237	\$197	\$120	\$80	\$65	\$59	\$51	\$55	\$65	\$151	\$304	\$379	\$365	\$207	\$132	\$62
> \$250	\$272	\$266	\$224	\$127	\$89	\$69	\$56	\$58	\$49	\$59	\$148	\$306	\$380	\$350	\$192	\$126	\$62

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White.

In contrast to the presentation of bills immediately above, Table 15 presents the average monthly payments by Group 1 and Group 2 customers over the study period. This report of payments spreads payments over all customers receiving bills (not merely over customers making

payments). Customers receiving bills but making no payment in a month are factored into the data as a \$0 payment.

Both USP Groups made increased payments in response to the higher bills experienced in 2009 relative to 2008. Even under the USP, however, the increase in payments was insufficient to match the increase in bills between the two years. For the Group 1 population as a whole, for example, while January 2009 bills were higher than January 2008 bills by \$52 and \$53 respectively, February 2009 payments (assuming payments lag bills by a month) increased by only \$15 and \$14 respectively. For customers with \$0 of January 2008 arrears, while January 2009 bills increased by \$27 and \$36 respectively, February 2009 payments increased by \$31 and \$50 respectively.

These higher payments, however, did not hold true for the accounts with January 2008 arrears. For accounts with \$1 to \$100 in January 2008 arrears, while January 2009 bills increased over January 2008 bills by \$80 and \$73 for Groups 1 and 2 respectively, February payments increased by only \$20 and \$52. While payments did not always increase from 2008 to 2009, the pattern tends to hold true throughout the data. While February 2009 bills for accounts with arrears of \$100 to \$250 were \$68 and \$52 higher than February 2008 bills for Groups 1 and 2 respectively, March payments by Group 1 and Group 2 customers with January 2008 arrears of between \$100 and \$250 increased by only \$21 and \$53 respectively.

One notable pattern that is evidenced in a comparison of Tables 14 and 15 comes in the warmer weather months. In contrast to the cold weather winter months, average monthly 2009 bills in the months of March, April and May were lower than the average monthly 2008 bills for those months. Despite this decrease in average bills, USP payments remained higher in the months of March, April and May 2009 relative to the corresponding months in 2008. These higher payments, despite lower bills, occurred generally for the population as a whole for both Groups 1 and 2, and for each arrearage sub-group. Group 1 USP participants (those participating in USP for both 2007 and 2008) had a better payment performance than did Group 2 participants in those warmer weather months.

**Table 15 (CGCU)
Average Payment of Accounts with Bills**

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$88	\$102	\$130	\$109	\$100	\$74	\$80	\$67	\$65	\$116	\$127	\$102	\$90	\$117	\$163	\$127	\$94
Group Total	\$110	\$117	\$137	\$114	\$91	\$64	\$74	\$62	\$66	\$104	\$92	\$86	\$105	\$131	\$179	\$152	\$101
< \$1	\$104	\$72	\$90	\$85	\$84	\$60	\$73	\$63	\$64	\$124	\$131	\$107	\$86	\$103	\$123	\$99	\$80
< \$1	\$123	\$73	\$81	\$87	\$85	\$62	\$71	\$64	\$66	\$117	\$93	\$91	\$102	\$123	\$148	\$122	\$89
\$1 - \$100	\$63	\$94	\$140	\$124	\$120	\$77	\$85	\$64	\$50	\$112	\$128	\$65	\$78	\$114	\$181	\$146	\$95
\$1 - \$100	\$103	\$90	\$134	\$112	\$85	\$60	\$61	\$54	\$58	\$89	\$81	\$85	\$84	\$142	\$172	\$141	\$101
\$101 - \$250	\$66	\$145	\$198	\$137	\$118	\$87	\$79	\$71	\$59	\$100	\$93	\$100	\$100	\$149	\$219	\$181	\$116
\$101 - \$250	\$85	\$165	\$178	\$139	\$91	\$62	\$81	\$54	\$73	\$78	\$93	\$77	\$113	\$125	\$231	\$184	\$126
> \$250	\$74	\$222	\$239	\$186	\$137	\$134	\$127	\$92	\$116	\$85	\$158	\$136	\$120	\$168	\$331	\$228	\$171
> \$250	\$125	\$233	\$288	\$176	\$128	\$86	\$98	\$87	\$64	\$116	\$107	\$74	\$145	\$189	\$278	\$338	\$139

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White

The level of payments and arrears is one way by which to measure the payment performance of low-income customers that participate in the Citizens Gas Universal Service Program. When measured against the starting arrears of January 2008, the payment position of some USP participants deteriorated by the end of the study period (in May 2009). While the percentage of accounts in arrears and the dollars of arrears had improved for the two USP groups as a whole, when the data was disaggregated by the size of the January arrears, the payment position had deteriorated specifically for those accounts that had no January 2008 arrears. For both Group 1 and Group 2, both the percentage of accounts in arrears in May 2009 and the total dollars of arrears had deteriorated for those accounts with no January arrears. In contrast, the payment position of accounts with higher levels of arrears had improved during the same time period for both Group 1 and Group 2 customers.

As discussed earlier in this evaluation, one thing the USP has not accomplished is to eliminate the seasonal variation in arrears. Even under the USP initiative, low-income customers experience higher arrears during cold weather months and lower arrears in the warm weather months. Given that observation, therefore, comparing January 2008 payment performance to May 2009 payment performance may present a less appropriate comparison. More appropriate might be to compare the payment performance in the available months of 2009 (January through May) to the corresponding months of 2008. When viewed from this perspective, each Group as a whole, in addition to the Groups disaggregated by January 2008 arrears, experienced improved performance. The percentage of accounts in arrears was lower in 2009 as compared to 2008; the total dollars of arrears was lower in 2009 as compared to 2008.

Differences in performance between Group 1 and Group 2 cannot be attributed to the size of participant bills. A comparison of the two groups finds that the bills for these groups are virtually identically on a month-by-month basis. This similarity in bills exists for the population as a whole as well as for each arrearage sub-population. Differences do exist, however, between accounts with the various levels of arrears. Higher arrears in both Group 1 and Group 2 are associated with higher monthly bills.

Monthly arrearages occur when changes in bill payments can not keep up with changes in the underlying bills. A comparison of the winter months of 2009 (January/February) to the winter months of 2008 (January/February) finds that while both bills and payments increased between the two years (January 2009 bills were higher than January 2008 bills; January 2009 payments were higher than January 2008 payments), the change in winter payments simply could not match the change in winter bills. While payments increased in January and February 2009 in response to higher January/February bills, the increase in payments was less than the increase in bills. This distinction, however, disappeared in the warmer weather months. While bills in the warmer weather 2009 months (March, April, May) were lower than the bills in the corresponding months of 2008, USP participants continued to make increased payments.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.496	0.571	0.710	0.735	0.744	0.681	0.794	0.721	0.727	0.763	0.627	0.463	0.449	0.544	0.703	0.751	0.743
Group Total	0.586	0.581	0.625	0.637	0.636	0.586	0.698	0.657	0.690	0.716	0.583	0.479	0.523	0.586	0.747	0.783	0.728
< \$1	0.569	0.547	0.696	0.738	0.769	0.689	0.819	0.772	0.773	0.822	0.660	0.496	0.440	0.552	0.674	0.721	0.740
< \$1	0.639	0.532	0.571	0.639	0.692	0.650	0.733	0.706	0.751	0.777	0.621	0.500	0.541	0.624	0.748	0.744	0.723
\$1 - \$100	0.385	0.596	0.734	0.765	0.781	0.676	0.776	0.605	0.656	0.697	0.556	0.355	0.405	0.508	0.743	0.794	0.727
\$1 - \$100	0.620	0.550	0.719	0.671	0.662	0.616	0.634	0.630	0.606	0.647	0.505	0.500	0.447	0.596	0.753	0.802	0.718
\$101 - \$250	0.410	0.601	0.759	0.699	0.682	0.685	0.730	0.652	0.613	0.625	0.524	0.444	0.492	0.543	0.786	0.796	0.738
\$101 - \$250	0.475	0.659	0.639	0.626	0.557	0.485	0.680	0.549	0.630	0.623	0.556	0.427	0.528	0.503	0.773	0.845	0.752
> \$250	0.391	0.626	0.663	0.728	0.641	0.628	0.765	0.692	0.750	0.672	0.712	0.458	0.507	0.551	0.692	0.842	0.808
> \$250	0.573	0.655	0.704	0.602	0.545	0.485	0.641	0.684	0.607	0.674	0.558	0.451	0.540	0.542	0.634	0.889	0.727

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White

One significant impact arising from the USP participation involves an increase in the number of payments that program participants make for each bill that is rendered to them. A utility does not merely want to receive its complete bill payment over an annual period. The utility instead would like to receive regular monthly payments. A customer making twelve payments in a year is less risky, and less costly, than a customer is when making only two payments in a year.

Table 16 presents the number of bill payments each month indexed to the number of bills issued in that month. Several patterns become evident in this data. First, while Group 1 program participants (Continuing participants) as a whole do not see a continuing improvement in the frequency of their bill payments, Group 2 participants do. The data shows that the New USP participants have a noticeably lower number of payments for each bill issued in the late winter months of the study period. This is true for each Group as a whole and for each sub-population defined by the level of January 2008 arrears.

Over the course of the 17-month study period, the payment performance differential of the two populations narrowed. While the narrowing becomes increasingly evident over the warm weather months of 2008, it is particularly helpful to examine the three post-winter months of 2009 (March, April, May). While the differences in payments in March, April and May 2008 for the Groups as a whole were 0.08, 0.10 and 0.11 respectively, by March, April and May 2009, the difference had narrowed to 0.04, 0.05 and 0.01 respectively.

The increase in number of payments made for each bill issued is particularly evident in the post-winter months for the Group 2 customers having high January 2008 arrears. Both those Group 2 customer populations having between \$100 and \$250 in arrears, and those having more than \$250 of January 2008 arrears, document substantial post-winter payment improvements in 2009 relative to the corresponding months in 2008.

The improvement in post-winter payment patterns between 2008 and 2009 is greater for the new (Group 2) participants than for the Continuing (Group 1) participants.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	13%	4%	32%	52%	50%	39%	32%	29%	22%	20%	14%	15%	13%	8%	41%	39%	35%
Group Total	24%	12%	36%	62%	59%	46%	39%	36%	27%	21%	17%	25%	24%	16%	47%	45%	41%
< \$1	0%	1%	15%	28%	27%	21%	16%	15%	10%	11%	7%	8%	7%	5%	22%	21%	19%
< \$1	0%	3%	20%	35%	34%	27%	22%	21%	14%	11%	8%	14%	16%	12%	29%	28%	23%
\$1 - \$100	12%	4%	57%	78%	74%	58%	50%	42%	42%	34%	23%	19%	17%	8%	69%	68%	64%
\$1 - \$100	24%	10%	45%	79%	72%	59%	51%	47%	32%	31%	32%	33%	32%	17%	70%	66%	65%
\$101 - \$250	39%	11%	54%	87%	83%	66%	60%	51%	37%	34%	30%	30%	27%	15%	74%	73%	56%
\$101 - \$250	56%	23%	54%	87%	84%	66%	57%	54%	47%	32%	25%	41%	34%	27%	69%	66%	63%
> \$250	45%	9%	57%	95%	88%	73%	65%	69%	39%	36%	24%	28%	25%	19%	75%	75%	69%
> \$250	57%	25%	51%	95%	91%	67%	73%	67%	46%	35%	31%	39%	40%	17%	73%	75%	76%

Group1 (Continuing Participants) is in Blue.
Group 2 (New Participants) is in White

One impact of the payment patterns identified above is a reduction in the number of accounts that have such substantial arrears that they prompt the utility to invoke collection activities directed toward responding to those arrears. An account that has an arrears that is either of an age, or an amount, that the utility does *not* exert collection activity is both less risky, and less costly, than an account generating a collection response. Table 17 presents the percentage of Group 1 (Continuing) and Group 2 (New) USP participant accounts that not only carry an arrears, but carry an arrears sufficient to generate a collection intervention in the month of the arrears. Table 17 shows that:

- Group 1 (Continuing) USP participants consistently have a lower percentage of accounts that carry an arrears sufficient to generate a collection intervention. The one exception is that group of customers with arrears between \$1 and \$100.
- An improvement in payment performance occurs in the post-winter months of 2009 relative to the post-winter months of 2008. This improvement in payment patterns is particularly evident for customers with a high January 2008 arrears.
- While customers with a \$0 January 2008 arrears do not have a complete absence of collection activities associated with arrears, not surprisingly, the level of collection activity is less than those customers with high January 2008 arrears. Nonetheless, even customers with a \$0 January arrears have both the potential to reduce collection activity over a continuing USP participation. This continuing improvement is demonstrated both through an improvement in performance between the New and Continuing USP participants and between the 2008 and 2009 payment performance.

Vectren Energy Delivery

Vectren is a company that is facing increasing arrears in the winter months, even within its USP population. Although on average, USP participants are generating payment coverage ratios of at or above 100%, sufficient program participants carry arrears to result in a deterioration of the winter monthly payment performance. Table 12 presents the percentage USP accounts that are in arrears each month. Table 12 distinguishes between neither the age nor the size of the arrears that is carried. The Table examines arrears on an account basis. An account that is \$10 in arrears counts the same as an account that is \$500 in arrears.

While the proportion of accounts having winter arrears on the Vectren system increased from 2008 to 2009, it appears that customers are more able to respond to those arrears in the non-heating months. Both Group 1 and Group 2, when the populations were viewed as a whole, experienced a higher percentage of accounts in arrears in the months of February through April 2009 as compared to the corresponding months of 2008.

- While 59% of Group 1 customers were in arrears in February 2009, only 46% had been in arrears in January 2008; similarly, while 72% of Group 2 customers were in arrears in February 2009, only 56% had been in arrears in February 2008.

- While 68% of Group 1 customers were in arrears in April 2009, only 58% had been in arrears in April 2008; similarly, while 76% of Group 2 customers were in arrears in April 2009, only 68% had been in arrears in April 2008.

The trend, however, reverses itself in May 2009. While 65% of Group 1 customers as a whole were in arrears in May 2008, only 61% of Group 1 customers were in arrears in May 2009. While 76% of Group 2 customers as a whole were in arrears in May 2008, only 74% were in arrears in May 2009. It is not merely the modest reduction in the percentage of accounts in arrears that is significant; it is the reversal of the pattern exhibited in the preceding four months.

The same pattern presents itself for accounts with \$0 in January 2008 arrears. While the percentage of accounts in February through April was higher in 2009 than in 2008, those results reversed themselves in May. For accounts with no beginning arrears, a moderately lower percentage were in arrears in May 2009 than in 2008.

In contrast, a different pattern is evident for accounts that began the study period with arrears. For all months, at all levels of arrears, the proportion of accounts in February through May 2009 was lower than the proportion of accounts in arrears in the corresponding months in 2008.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	34%	46%	50%	58%	65%	63%	62%	64%	61%	56%	41%	33%	40%	59%	65%	68%	61%
Group Total	49%	56%	65%	68%	76%	76%	75%	77%	71%	64%	53%	44%	61%	72%	78%	76%	74%
< \$1	0%	11%	26%	35%	52%	51%	50%	51%	51%	46%	32%	26%	30%	47%	53%	55%	49%
< \$1	0%	33%	44%	53%	70%	72%	70%	72%	66%	60%	49%	40%	55%	64%	70%	69%	66%
\$1 - \$100	13%	8%	8%	9%	5%	5%	5%	5%	3%	4%	3%	3%	3%	5%	5%	6%	5%
\$1 - \$100	19%	8%	8%	5%	2%	2%	2%	2%	2%	1%	1%	2%	1%	3%	2%	1%	2%
\$101 - \$250	14%	13%	11%	10%	6%	5%	5%	5%	4%	4%	3%	3%	4%	4%	5%	5%	4%
\$101 - \$250	23%	11%	9%	7%	3%	2%	2%	3%	2%	2%	3%	2%	4%	4%	4%	4%	3%
> \$250	6%	13%	5%	4%	2%	2%	2%	3%	2%	2%	2%	1%	3%	3%	3%	2%	3%
> \$250	7%	4%	3%	2%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

Table 13 shows that the pattern evident in the dollar level of arrears tends to follow the pattern found in the proportion of accounts in arrears, with two notable exceptions. While the dollar level of arrears for Vectren's USP population increased in the winter 2009 months relative to the winter 2008 months, customers more than proportionately reduced those arrears beginning in May. Consider that:

- The April 2009 arrears for Group 1 customers reached \$107,200, compared to \$63,700 in April 2008. However, the May 2009 arrears reached \$88,300 compared to the May 2008 arrears of \$116,300.
- The April 2009 arrears for Group 2 customers reached \$96,200, compared to \$30,700 in April 2008. However, the May 2009 arrears reached \$76,400 compared to \$115,100 in May 2008.

The same pattern is evident for accounts having had \$0 in January 2008. While the arrears coming out of the winter heating season were higher in 2009 than in the corresponding months of 2008, by May the trend had reversed. While Group 1 accounts with \$0 January 2008 arrears had \$87,500 in April 2009 arrears compared to \$32,100 in April 2008 arrears, it had \$73,100 in May 2009 arrears compared to \$87,900 in May 2008 arrears. While Group 2 accounts with \$0 January 2008 arrears had \$89,500 in April 2009 arrears compared to \$25,100 in April 2008 arrears, this group had \$69,100 in May 2009 arrears compared to 108,200 in May 2008 arrears.

This pattern of reduced May arrears does not hold for the accounts with positive levels of January 2008 arrears. While minor fluctuations occur up and down in arrears for the months of March through May 2009 as compared to March through May 2008, the fluctuations do not present an evident pattern, particularly considering the small numbers of accounts involved.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$21.2	\$21.4	\$56.6	\$63.7	\$116	\$98.2	\$67.4	\$79.3	\$72.6	\$47.0	\$44.5	\$25.2	\$56.1	\$104	\$162	\$107	\$88.3
Group Total	\$6.0	\$9.1	\$25.7	\$30.7	\$115	\$103.2	\$73.5	\$87.2	\$54.9	\$37.2	\$27.6	\$21.7	\$54.1	\$103	\$143	\$96.2	\$76.4
< \$1	\$0.0	\$3.4	\$17.6	\$32.1	\$87.9	\$76.6	\$53.2	\$62.2	\$61.3	\$39.7	\$37.0	\$21.0	\$45.8	\$82.7	\$123	\$87.5	\$73.1
< \$1	\$0.0	\$4.3	\$16.0	\$25.1	\$108	\$98.2	\$70.6	\$83.3	\$50.7	\$35.3	\$26.3	\$19.9	\$50.0	\$96.3	\$130	\$89.5	\$69.1
\$1 - \$100	\$2.3	\$2.2	\$8.8	\$8.0	\$8.2	\$6.7	\$6.4	\$4.4	\$1.9	\$2.2	\$3.2	\$1.6	\$2.0	\$5.5	\$9.9	\$7.2	\$5.0
\$1 - \$100	\$0.8	\$1.3	\$2.7	\$1.3	\$2.2	\$2.0	\$1.0	\$1.7	\$1.6	\$0.2	\$0.2	\$0.6	\$0.2	\$1.2	\$2.8	\$1.3	\$1.5
\$101 - \$250	\$8.5	\$4.9	\$14.4	\$12.9	\$10.1	\$7.9	\$3.9	\$3.9	\$2.8	\$2.4	\$1.6	\$1.3	\$3.9	\$6.4	\$10.0	\$8.4	\$4.0
\$101 - \$250	\$3.3	\$2.0	\$4.6	\$3.4	\$2.7	\$1.6	\$1.3	\$1.4	\$1.9	\$0.8	\$0.5	\$0.6	\$1.7	\$3.5	\$7.2	\$4.4	\$4.4
> \$250	\$10.3	\$10.9	\$15.8	\$10.7	\$10.2	\$7.0	\$3.9	\$8.7	\$6.5	\$2.7	\$2.6	\$1.3	\$4.4	\$9.4	\$18.8	\$4.0	\$6.3
> \$250	\$2.0	\$1.4	\$2.4	\$0.9	\$1.9	\$1.5	\$0.6	\$0.8	\$0.7	\$0.8	\$0.5	\$0.5	\$2.2	\$2.2	\$2.9	\$1.1	\$1.4

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

Changes in arrears within the Vectren USP population cannot be easily attributed to differences in the level of bills. Table 14 presents average bills by month for Group 1 and Group 2 as a

whole, as well as for each sub-population defined by the level of January 2008 arrears. Table 14 shows that Group 1 USP participants have slightly lower bills than do Group 2 participants.

The billing pattern that emerges from Table 14 reveals two regimes of bill levels that exist. On the one hand, accounts that have either \$0 in January 2008 arrears or between \$1 and \$100 in January 2008 arrears fall into one regime. On the other hand, the accounts with arrears above \$100 in January 2008 (whether they fall into the \$101 - \$250 range or into the more than \$250 range) have systematically higher winter bills than do the accounts with the smaller January arrears.

While this pattern does not hold true throughout the warm weather months, except for the accounts with extremely high January 2008 arrears –remember again the small number of accounts at issue here-- the pattern is evident in the winter months for both the Group 1 and Group 2 populations.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$311	\$263	\$224	\$132	\$96	\$98	\$78	\$104	\$100	\$69	\$132	\$207	\$310	\$270	\$202	\$109	\$78
Group Total	\$310	\$300	\$253	\$152	\$115	\$117	\$98	\$127	\$130	\$93	\$161	\$256	\$366	\$317	\$237	\$137	\$99
< \$1	\$286	\$223	\$203	\$123	\$94	\$97	\$75	\$103	\$96	\$67	\$129	\$207	\$307	\$265	\$194	\$110	\$76
< \$1	\$269	\$297	\$243	\$142	\$114	\$115	\$97	\$125	\$125	\$93	\$159	\$255	\$367	\$315	\$232	\$135	\$98
\$1 - \$100	\$318	\$233	\$187	\$127	\$71	\$54	\$49	\$50	\$44	\$46	\$85	\$177	\$255	\$225	\$167	\$80	\$58
\$1 - \$100	\$274	\$261	\$240	\$157	\$114	\$146	\$118	\$163	\$230	\$100	\$174	\$227	\$301	\$280	\$248	\$136	\$77
\$101 - \$250	\$380	\$258	\$234	\$157	\$98	\$95	\$98	\$102	\$101	\$84	\$113	\$204	\$315	\$266	\$206	\$114	\$87
\$101 - \$250	\$343	\$275	\$245	\$178	\$118	\$115	\$95	\$126	\$116	\$84	\$126	\$224	\$316	\$290	\$229	\$133	\$100
> \$250	\$412	\$455	\$520	\$213	\$186	\$228	\$195	\$241	\$293	\$171	\$315	\$329	\$494	\$497	\$456	\$161	\$161
> \$250	\$597	\$477	\$488	\$314	\$189	\$179	\$192	\$193	\$229	\$144	\$325	\$465	\$583	\$538	\$459	\$240	\$154

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White.

Vectren Energy does not sustain its bill payment levels throughout the year. As shown in Table 15, Vectren bill payment experiences a substantial decrease in the warm weather months. While for Group 1, the January, February and March payments were \$145, \$172 and \$130 respectively, the July, August and September payments were \$78, \$92 and \$88 respectively. By December 2008 and January 2009, the payment levels again began to increase and remained higher during the cold weather months

Table 15 further shows that while USP participants increase their winter payments, the increase in payments is simply not sufficient to keep up with increases in winter month bills. While

average bills for the Group 1 as a whole increased from \$132 (November 2008) to \$207 (December 2008) to \$310 (January 2009), for example, average payments for Group 1 during the same months increased from \$95 to \$149 before receding to \$139. While average bills for Group 2 as a whole increased from \$161 (November 2008) to \$256 (December 2008) to \$366 (January 2009), average payments increased from \$130 (November 2008) to \$143 (December 2008) to \$152 (January 2009). While Vectren customers were able to maintain their pre-winter month payments, they were unable to increase their payments sufficient to reflect winter month bills.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	\$145	\$172	\$130	\$176	\$192	\$106	\$78	\$92	\$88	\$165	\$95	\$149	\$139	\$154	\$277	\$150	\$53
Group Total	\$169	\$224	\$128	\$209	\$256	\$132	\$85	\$120	\$108	\$167	\$130	\$143	\$152	\$192	\$313	\$176	\$88
< \$1	\$155	\$161	\$111	\$161	\$192	\$104	\$80	\$88	\$86	\$165	\$92	\$162	\$132	\$154	\$262	\$151	\$58
< \$1	\$214	\$199	\$106	\$174	\$266	\$133	\$85	\$117	\$106	\$168	\$133	\$138	\$144	\$191	\$307	\$184	\$82
\$1 - \$100	\$100	\$130	\$165	\$164	\$127	\$44	\$52	\$32	\$52	\$89	\$82	\$69	\$163	\$121	\$248	\$106	\$22
\$1 - \$100	\$90	\$276	\$200	\$159	\$58	\$196	\$98	\$196	\$122	\$114	\$89	\$298	\$137	\$143	\$295	\$100	\$90
\$101 - \$250	\$109	\$186	\$152	\$229	\$206	\$108	\$75	\$126	\$129	\$146	\$92	\$103	\$204	\$151	\$316	\$148	\$23
\$101 - \$250	\$100	\$280	\$134	\$430	\$123	\$66	\$79	\$100	\$126	\$170	\$49	\$173	\$157	\$162	\$281	\$87	\$185
> \$250	\$225	\$226	\$248	\$318	\$306	\$294	\$102	\$253	\$147	\$423	\$192	\$86	\$168	\$236	\$659	\$261	\$28
> \$250	\$284	\$328	\$316	\$406	\$369	\$121	\$105	\$204	\$170	\$176	\$299	\$102	\$510	\$404	\$698	\$183	\$87

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White

Despite their seeming inability to increase their level of payments consistent with the increase in the level of bills experienced, Vectren USP participants appear to maintain their consistency in making some payment each month, even if such payments are insufficient to cover their entire outstanding bills. Table 16 presents the ratio of the number of payments received each month from USP participants relative to the number of bills rendered to USP participants.

Vectren experiences not only a drop in the average dollar amount of payment by its USP participants during the warm weather months, but experiences a drop in the ratio of payments to bills issued in those months as well. While Group1 customers as a whole made between 0.81 and 0.91 payments per bill issued during the months of January through April 2008, they made 0.63 and 0.65 payments per bill issued in the months of June through September. By the following cold weather months, the ratio of payments to bills had increased back to 0.85 (January 2009), 0.85 (February 2009) and 0.91 (March 2009).

The same pattern held true for Group 2 USP participants. While Group 2 customers as a whole made between 0.71 and 0.86 payments per month during the months of January through April

2008, the warm weather pattern fell to reflect between 0.49 and 0.58 payments per each bill issued. By the cold weather months of 2009, the number of payments per each bill issued had increased back to 0.80 (January 2009), 0.82 (February 2009), and 0.86 (March 2009).

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	0.813	0.881	0.806	0.913	0.897	0.628	0.594	0.646	0.645	0.697	0.445	0.753	0.850	0.853	0.911	0.819	0.502
Group Total	0.714	0.726	0.736	0.859	0.879	0.575	0.492	0.526	0.575	0.668	0.486	0.731	0.803	0.819	0.855	0.746	0.529
< \$1	0.805	0.881	0.778	0.940	0.906	0.665	0.636	0.667	0.666	0.700	0.465	0.772	0.865	0.855	0.913	0.865	0.519
< \$1	0.720	0.800	0.645	0.938	0.894	0.598	0.508	0.506	0.569	0.681	0.457	0.735	0.811	0.822	0.854	0.730	0.550
\$1 - \$100	0.792	1.000	0.811	0.926	0.887	0.451	0.413	0.522	0.512	0.711	0.326	0.610	0.837	0.881	0.929	0.590	0.730
\$1 - \$100	0.778	1.000	0.923	0.923	0.833	0.333	0.700	0.455	0.900	0.556	0.500	0.667	0.500	0.900	0.900	1.000	0.500
\$101 - \$250	0.817	0.870	0.798	0.935	0.911	0.556	0.529	0.583	0.574	0.672	0.397	0.750	0.859	0.847	0.873	0.848	0.431
\$101 - \$250	0.714	0.800	0.750	0.881	0.786	0.487	0.414	0.643	0.630	0.591	0.607	0.625	0.786	0.846	0.880	0.905	0.478
> \$250	0.846	0.839	0.889	0.830	0.831	0.606	0.533	0.673	0.686	0.698	0.464	0.750	0.754	0.821	0.929	0.659	0.289
> \$250	0.636	0.500	0.818	0.739	0.860	0.526	0.308	0.655	0.435	0.643	0.652	0.875	0.870	0.714	0.818	0.583	0.368

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White

It is not unusual to see a seemingly dramatic drop in the number of payments made for each bill issued at some point during the months of October through December for customers receiving federal fuel assistance through the LIHEAP program. That decrease, which is evidenced amongst Vectren’s low-income customers as well (November 2008) generally reflects the receipt of a LIHEAP payment that creates a credit on that monthly bill. Accordingly, while having received a bill, low-income customers frequently make no additional out-of-pocket payment in a month in which they receive a bill credit.

This phenomenon can be seen within the Vectren USP population. Within both Group 1 and group 2 customers with a January arrears of \$0, there is a dramatic drop in the number of payments made for each bill issued. (0.45 and 0.49 for Groups 1 and 2 respectively in November 2008. Despite this low number of payments per bill issued, these customers had a \$0 January arrears. The payment pattern exhibited is tied to the receipt of LIHEAP assistance. Customers that either did not receive a LIHEAP payment, or who continued to have an arrears notwithstanding the receipt of LIHEAP, do not exhibit the same drop-off in the number of payments per each bill issued.¹⁴

¹⁴ To the extent this happens, as has been recommended previously, Indiana utilities may be well-served to apportion LIHEAP payments on a month-by-month basis to prevent low-income customers from making \$0 payments in the month of a bill credit only to be faced with unaffordable bills when the bill credits (and the LIHEAP payment) are exhausted.

**Table 17 (Vectren)
Percent of Accounts with Bills, Arrears and Collection Activity**

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group Total	26%	41%	43%	50%	50%	41%	35%	34%	35%	27%	23%	22%	33%	51%	59%	55%	50%
Group Total	38%	48%	56%	55%	63%	52%	41%	45%	45%	38%	34%	33%	52%	66%	70%	57%	56%
< \$1	0%	8%	22%	31%	40%	33%	27%	27%	28%	22%	18%	17%	25%	41%	47%	45%	39%
< \$1	0%	26%	37%	42%	58%	49%	38%	42%	41%	35%	32%	28%	47%	60%	63%	51%	51%
\$1 - \$100	6%	8%	8%	8%	4%	3%	3%	2%	1%	1%	1%	2%	2%	4%	4%	4%	4%
\$1 - \$100	8%	8%	7%	5%	2%	2%	1%	1%	1%	1%	0%	2%	0%	2%	2%	1%	1%
\$101 - \$250	14%	12%	9%	9%	5%	4%	3%	3%	3%	3%	2%	2%	4%	4%	5%	4%	4%
\$101 - \$250	23%	10%	8%	6%	2%	1%	2%	1%	2%	1%	1%	2%	3%	3%	3%	3%	3%
> \$250	6%	13%	5%	3%	2%	2%	1%	2%	2%	2%	2%	1%	3%	3%	3%	1%	3%
> \$250	7%	4%	4%	2%	1%	0%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%

Group1 (Continuing Participants) is in Yellow.
Group 2 (New Participants) is in White

One substantial difference between customers participating in the Citizens Gas and Vectren USP programs, as observed in other sections of this analysis, is the continuing collection interventions exerted by Vectren toward its low-income population despite the participation of these customers in the low-income discount program. This pattern of collection interventions is evident in Table 17 as well. Table 17 presents data on the number of USP participants who meet all of three criteria: (1) they received a bill in the month; (2) they had an arrears on the bill; and (3) the arrears was sufficient (either in age or amount) to prompt the utility to engage in collection activity directed toward the account.

Vectren low-income customers who participate in USP over a more extended period appear to have fewer arrears that generate collection activities than do more recent USP participants. For the two populations (Group 1 and Group 2) as a whole, as well as for the sub-populations with no January 2008 arrears, customers who had participated in USP for both 2007 and 2008 exhibited a lower percentage of accounts that had both arrears and collection activity directed toward those arrears. As found previously in this evaluation, the Vectren USP appears to help customers that have retired their arrears to maintain their payments, and remain free of collection activity, to a greater extent with continued USP participation.

SUMMARY AND CONCLUSIONS

The impacts of low-income rates such as those incorporated into the Universal Service Programs offered by Citizens Gas and Coke Utility and Vectren Energy Delivery can be measured by objective quantifiable metrics. Unfortunately, in seeking to answer the question, “does this

program work,” it is not possible to reference a single number (or even a set of numbers) for a definitive determination. Rather than looking for such a number, or set of numbers, a program evaluation must consider an array of impacts. Such an inquiry is designed to identify patterns of behavior, both on the part of the customers and on the part of the utility, that reflect the impacts of the program. The purpose of identifying such patterns is not necessarily to determine whether one is “superior” to another, but rather to determine whether they clarify the payment performance of the utilities offering service and the customers consuming such service.

To consider one impact in isolation of others presents the danger of incomplete and incorrect conclusions. The discussion above seeks to balance the various factors involving the payment of bills, the exertion of collection efforts, and the incursion of arrears.

In general, and in broad terms –the pages above present the detailed empirical basis for these conclusions-- this detailed review of the Citizens Gas and Vectren USP initiatives finds that the USP programs help low-income customers pay their bills. The USP programs reduce both the dollar level of arrears and the percentage of accounts in arrears. The USP programs help increase the number and amount of payments. The USP programs help utilities to control the level of their collection efforts and the effectiveness of their collection efforts at generating bill payments.

While as can be expected, not all patterns are consistent, the detailed discussion above supports the conclusion that the positive impacts of USP participation increase with the length of USP participation. The longer a low-income customer remains in the USP, the greater the positive benefits that will be generated. Customers that have participated in USP for two years have greater positive impacts than customers who have participated for only one year do. Moreover, as customers reduce their arrears toward \$0, the USP helps them to maintain those accounts with less intervention on the part of the utilities.

It is possible that a utility could generate the same reductions in arrears, and the same increase in both the number of payments and dollar amount of payment, through an increase in collection activities directed toward low-income customers. The experience of Vectren Energy in 2008-2009, however, clearly supports the conclusion that while the level of collection effort can be increased, such an increase in collection efforts has a lower level of efficiency (e.g., collection activity per bills increases, collection activity per payments increases, number and level of payments per each collection activity exerted decreases) than does the USP program.

Based on these observations and this analysis, the conclusion is that the USP programs have proven their efficacy. They should be continued.

THE “CRISIS” PAYMENT PROGRAM: Citizens Gas

As part of the revisions to its Universal Service Program beginning in 2008, Citizens Gas and Vectren Energy implemented a “crisis” intervention program. The crisis program component provided additional financial assistance to customers that were in danger of having service terminated due to nonpayment. Crisis assistance sufficient to prevent the service disconnection was made available to these vulnerable customers.

As part of this evaluation, a sample of crisis recipients from Citizens Gas was used to assess the impact of the Crisis payments. A sample of customers receiving crisis assistance from Citizens Gas was disaggregated the company’s crisis recipients into two groups. Group 1 included crisis recipients who were also energy assistance (LIHEAP or EAP) recipients. As EAP recipients, these customers also participated in the USP initiative.¹⁵ Group 2 included EAP crisis recipients who did not also receive energy assistance. Accordingly, Group 2 crisis recipients did not also participate in USP.

There is no overlap between the customers who are discussed below in this assessment of the Citizens Gas crisis program and those discussed above relative to the outcomes of the USP program.

Even though the two program components –the proactive USP affordability benefits on the one hand and the reactive shutoff prevention program on the other hand— take distinctly different approaches to delivering benefits to low-income customers, the basic performance inquiries remain the same. The performance queries include an assessment of the following attributes:

- Revenue collection;
- Level of collection effort;
- Collection effectiveness; and
- Arrears and payments.

To the extent that these attributes differ from those discussed above relative to the affordability aspects of USP, they will be noted below. The primary difference in the structure of the evaluation lies with the definition of the study period. Rather than beginning the study period with January 2008, the Crisis assessment below begins the study period with the month in which the Crisis payment is made. Each month discussed below is tied to the month of the crisis payment.

¹⁵ USP participation automatically flows from Energy Assistance Program (EAP) participation.

The evaluation below, in other words, does not relate the payment patterns of crisis participants to a particular month of the year. Instead, the discussion below assesses the payment performance of crisis participants in the months after the receipt of crisis assistance. It is not so important to determine what the payment performance is in May, June and July, for example, as it is to determine the payment performance in Months 3, 4 and 5 after the Crisis payment. Accordingly, to summarize:

- References to “Month 1” or to the “Crisis Month” are references to the month in which a crisis payment is made;
- References to “Month 2” are references to the month *after* a crisis payment is made (Crisis plus one month);
- References to “Month 3” are references to the second month after a crisis payment is made (Crisis plus two months).
- References to “Month 15” are references to the fourteenth month after a crisis payment is made (Crisis plus 14).

The two crisis sample groups for whom payment patterns have been tracked in this evaluation were virtually identical in their beginning status. Both groups had populations of nearly 300 (Group 1: 298; Group 2: 299) with a similar stratification of arrears in the month of the crisis payment.

Group 1 and Group 2 by Arrears in Month of Crisis Payment (CGCU)		
	Group 1	Group 2
<\$1	59	68
\$1 - \$100	28	29
\$101 - \$250	103	116
\$250 or more	108	86
Total	298	299

Group 1: Received crisis payment along with USP and Energy Assistance (EA).
 Group 2: Received crisis payment, but neither USP nor Energy Assistance (EA).

REVENUE COLLECTION

Revenue collection for the crisis component of the Citizens Gas Universal Service Program is viewed from two perspectives. Both perspectives are measured using a “payment coverage ratio.” A “payment coverage ratio” quantifies the extent to which payments made by or on behalf of customers “cover” the bill for current usage. A higher coverage ratio is better than a lower coverage ratio. A payment coverage ratio of 1.0 indicates that a customer has made payment exactly equal to his or her bill for current consumption. A utility with customers in arrears exhibiting a payment coverage ratio of 1.0 is neither worse off nor better off in terms of

whether the customer has retired arrears. A payment coverage ratio of 1.0 means the customer has no greater, but no lesser, level of arrears.

In contrast to a payment coverage ratio of 1.0, a customer who has:

- A payment coverage ratio of more than 1.0 is paying more than his or her current bill. This customer is either retiring arrears or prepaying future bills;
- A payment coverage ratio of more than 0.0 but less than 1.0 is incurring additional arrears. This customer is not paying his or her entire current bill.
- A payment coverage ratio of less than 0.0 (i.e., the coverage ratio is a negative number) is not paying sufficient dollars to reduce his or her arrears to \$0. A negative payment coverage ratio can only occur in those analyses that subtract the beginning arrears from customer payments before applying payments to the current bill. Not all coverage ratios include this step.

Table 1 documents the straight (unadjusted) cumulative payment coverage ratio for Group 1 (EAP recipients) and Group 2 (non-EAP recipients) crisis assistance recipients. Table 1 presents a cumulative ratio in that each month's bill, and each month's payment, is added to the total bills and payments from the immediately preceding month and recalculated. The cumulative payment coverage ratio begins with bills and payments in the Crisis Month (i.e., the month in which a crisis payment is posted to the customer's account).

Customers receiving CGCU crisis payments tend to at least remain current on payment toward their bill for current usage. In looking at payment coverage ratios at various mile-posts after receiving a crisis payment, both Group 1 (EAP) and Group 2 (non-EAP) customers are covering their current bills. Table 1 shows that:

- At Month 3, the coverage ratio is 1.036 and 1.097 for group 1 and Group 2 respectively;
- At Month 6, the coverage ratio is 1.2531 and 1.309 for Group 1 and Group 2 respectively.
- At Month 9, the coverage ratio is 1.395 and 1.292 for Group 1 and Group 2 respectively.

While the payment coverage ratio for both groups drops below 1.0 in months 12 through 14, by month 1, both Groups have payment coverage ratios at or nearly at 1.0.

No pattern exists in distinguishing payment coverage ratios by EAP (Group 1) and non-EAP (Group 2) participants. Group 2 customers have a higher cumulative payment coverage ratio in eight of the 15 study month while Group 1 customers have the higher coverage in the remaining seven months. Moreover, when disaggregated by the level of arrears on the bill in the month in which a crisis payment is received, neither Group 1 nor Group 2 have a consistently higher payment coverage ratio in the crisis month, the first month after the crisis month (Month 2), or at various mileposts (e.g., in Month 3, Month 6, Month 9 or Month 12). While EAP customers

have high coverage ratios in accounts with \$0 or crisis month arrears and in accounts with very high arrears (>\$250) in the crisis month, non-EAP customers have the higher coverage ratios amongst those accounts with the mid-level arrears (\$1 - \$100; \$101 - \$250).

	Crisis Month	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15
Group Total	0.836	1.015	1.036	1.130	1.192	1.253	1.307	1.339	1.395	1.351	1.151	0.984	0.895	0.929	0.955
Group Total	0.750	0.959	1.097	1.224	1.276	1.309	1.317	1.317	1.292	1.119	0.988	0.935	0.948	0.974	1.000
< \$1	2.225	1.307	1.148	1.186	1.163	1.205	1.217	1.259	1.371	1.356	1.138	1.001	0.914	0.933	0.959
< \$1	1.059	0.934	0.975	1.048	1.109	1.122	1.143	1.129	1.135	1.025	0.927	0.921	0.939	0.935	0.963
\$1 - \$100	0.887	0.989	1.004	1.109	1.157	1.181	1.208	1.241	1.175	1.156	0.993	0.888	0.850	0.868	0.881
\$1 - \$100	1.058	0.993	1.127	1.205	1.227	1.255	1.270	1.224	1.222	1.062	0.959	0.915	0.934	0.960	0.964
\$101 - \$250	0.447	0.766	0.838	0.937	0.999	1.050	1.093	1.104	1.186	1.144	0.992	0.857	0.780	0.841	0.872
\$101 - \$250	0.720	1.035	1.121	1.270	1.302	1.335	1.312	1.327	1.285	1.102	0.954	0.914	0.925	0.970	1.005
> \$250	0.519	1.100	1.163	1.276	1.382	1.473	1.567	1.611	1.651	1.586	1.341	1.113	0.999	1.019	1.043
> \$250	0.588	0.892	1.126	1.278	1.353	1.408	1.441	1.453	1.418	1.210	1.068	0.971	0.979	1.006	1.026

Group 1
Group 2 (Non-EAP/USP Participants) is in White.

Table 1 shows that customers with the higher levels of crisis month arrears (\$101 - \$250, >\$250) do not make payments in the month in which a crisis payment is received sufficient to retire their arrears and coverage their entire current monthly bill. Customers with crisis month arrears greater than \$250 have coverage ratios of 0.519 (Group 1) and 0.588 (Group 2) respectively, while customers with crisis month arrears between \$101 and \$250 have coverage ratios of 0.447 (Group 1) and 0.720 (Group 2) respectively. By Month 4, however, each subpopulation in each group has a cumulative coverage ratio in excess of 90% and by Month 5, each sub-population in each Group has a cumulative payment coverage ratio of 100% or more. Customers not receiving EAP (and thus not participating in USP) require modestly longer to increase their cumulative payment coverage ratio than it takes customers receiving EAP (and participating in USP).

Notwithstanding the ability of crisis customers to pay their entire bills for current consumption in the months after receiving a crisis payment, as a group, they do not cover their entire bill (including pre-existing arrears) and keep it covered over time. This total bill coverage is determined by calculating the payment coverage ratio after subtracting the arrears in the month of the crisis payment from the total payments. Table 2 sets out the data.

As a whole, EAP recipients (Group 1) reach a 99% coverage ratio by Month 7 and 100% coverage ratio in Month 8 before falling back to a coverage ratio of 0.838 in Month 15. As a

whole, non-EAP recipients reach a 98% coverage ratio in Month 6 and 100% in Month 7 before falling back to 0.846 in Month 15.

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	(0.292)	0.428	0.591	0.738	0.835	0.923	0.993	1.040	1.119	1.103	0.953	0.827	0.762	0.807	0.838
Group Total	(0.187)	0.408	0.654	0.837	0.923	0.982	1.013	1.042	1.045	0.921	0.831	0.805	0.831	0.866	0.896
< \$1	2.230	1.309	1.150	1.188	1.164	1.207	1.218	1.260	1.372	1.357	1.139	1.002	0.915	0.934	0.959
< \$1	1.059	0.934	0.975	1.048	1.109	1.122	1.143	1.129	1.135	1.025	0.927	0.921	0.939	0.935	0.963
\$1 - \$100	0.545	0.799	0.857	0.980	1.038	1.071	1.102	1.139	1.086	1.075	0.928	0.835	0.804	0.826	0.841
\$1 - \$100	0.674	0.765	0.950	1.057	1.095	1.133	1.155	1.125	1.132	0.988	0.900	0.865	0.889	0.918	0.924
\$101 - \$250	(0.415)	0.309	0.490	0.628	0.717	0.788	0.845	0.870	0.970	0.952	0.839	0.735	0.677	0.747	0.782
\$101 - \$250	(0.228)	0.484	0.678	0.891	0.957	1.015	1.017	1.053	1.038	0.905	0.799	0.786	0.811	0.863	0.902
> \$250	(1.600)	0.012	0.341	0.551	0.724	0.860	0.982	1.055	1.131	1.118	0.968	0.819	0.751	0.793	0.826
> \$250	(0.841)	0.026	0.407	0.612	0.740	0.822	0.891	0.950	0.971	0.855	0.790	0.740	0.774	0.815	0.842

Group 1 (USP/EAP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

The most significant observation, however, lies with the impact of completely retiring arrears in the month of the crisis payment. Table 2 shows that the best performing population involves customers who retired their arrears and participated in EAP/USP. These customers had a cumulative payment coverage ratio of greater than 1.0 through Month 12. After dipping to a low of 0.915 in Month 13, the payment coverage ratio was back up to 0.959 in Month 15.

Similarly, Group 2 customers that completely retired their arrears in the crisis month kept their coverage ratio above 1.0 through Month 10. After dropping to a low of 0.921, they had their coverage ratio back to 0.963 by Month 15. In contrast, Group 1 customers who had crisis month arrears greater than \$250 saw their coverage ratio dip to 0.751 (Month 13) and recover only to 0.826 by Month 15), while group 2 customers with arrears greater than \$250 in the crisis month saw their coverage ratio drop to 0.740 (Month 12) and recover only to 0.842.

Moreover, customers with very high arrears (>\$250) in the crisis month had the consistently lowest cumulative coverage ratios. Group 1 (EAP) customers with these extremely high crisis month arrears had coverage ratios exceeding 1.0 in only three months and coverage ratios exceeding 0.90 in only five of the 15 study months. Group 2 (non-EAP) customers with extremely high arrears had coverage ratios exceeding 1.0 in zero months, while their coverage ratios exceeded 0.90 in only two months.

Improved performance appears to follow sufficient payments made in the crisis month to reduce beginning arrears to \$0. These improved payment patterns are enhanced even further through participation in the EAP/USP programs.

Crisis recipients that also received energy assistance (EAP) and USP discounts (Group 1) paid roughly the same, if not somewhat more, dollars on a cumulative gross basis over the fifteen month study period than did crisis assistance recipients not receiving EAP and USP benefits. Table 3 sets forth the data. The Group 1 customers paid \$557,000 over 15 months compared to the \$544,000 paid by Group 2 customers. Group 1 participants, despite the USP discount which they received, paid, on average, \$50 more per participant (\$1,870: Group 1; \$1,820: Group 2) than did their Group 2 counterparts. Higher payments came in the sub-populations of customers who:

- Had \$0 in Crisis month arrears (\$1,838: Group 1 vs. \$1,538: Group 2); and
- Had crisis month arrears between \$1 and \$100 (\$1,609: Group 1 vs. \$1,542: Group 2).

Customers with larger arrears made higher payments if they were a Group 2 (non-EAP recipient) customer.

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	\$50.3	\$117.6	\$158.1	\$195.8	\$227.3	\$257.4	\$282.4	\$304.3	\$342.9	\$369.9	\$396.1	\$424.3	\$456.4	\$519.5	\$557.1
Group Total	\$45.4	\$98.8	\$140.8	\$179.3	\$205.5	\$226.8	\$245.6	\$271.5	\$297.3	\$320.9	\$358.1	\$407.0	\$463.4	\$510.7	\$544.3
< \$1	\$24.0	\$28.3	\$33.0	\$39.3	\$42.9	\$48.1	\$51.2	\$55.3	\$64.6	\$71.0	\$75.9	\$82.3	\$89.5	\$100.8	\$108.4
< \$1	\$10.6	\$16.8	\$23.2	\$29.6	\$35.0	\$39.4	\$44.0	\$50.2	\$56.5	\$62.5	\$70.1	\$82.6	\$94.2	\$100.4	\$108.0
\$1 - \$100	\$5.3	\$10.7	\$14.0	\$17.7	\$20.0	\$21.9	\$23.4	\$25.0	\$27.0	\$29.3	\$31.3	\$34.7	\$38.2	\$42.4	\$45.0
\$1 - \$100	\$5.1	\$8.1	\$11.8	\$15.0	\$17.3	\$19.1	\$20.5	\$22.7	\$25.2	\$26.6	\$29.8	\$33.7	\$38.7	\$42.6	\$44.7
\$101 - \$250	\$9.3	\$30.0	\$43.1	\$54.3	\$63.5	\$71.8	\$79.0	\$84.7	\$98.6	\$106.5	\$116.2	\$125.7	\$135.6	\$160.2	\$172.6
\$101 - \$250	\$15.5	\$38.4	\$51.8	\$68.6	\$77.2	\$85.5	\$91.0	\$99.1	\$106.6	\$114.5	\$125.9	\$145.6	\$166.1	\$186.2	\$198.9
> \$250	\$11.8	\$48.6	\$68.0	\$84.5	\$101.0	\$115.6	\$128.7	\$139.3	\$152.7	\$163.0	\$172.7	\$181.5	\$193.1	\$216.1	\$231.0
> \$250	\$14.2	\$35.5	\$53.9	\$66.1	\$76.0	\$82.8	\$90.2	\$99.5	\$109.2	\$117.2	\$132.3	\$145.1	\$164.5	\$181.6	\$192.6

Group 1 (USP/EAP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

This payment pattern holds true over the course of the 15-month study period. Group 1 customers, particularly those with lower arrears in the month of the crisis payment, had higher aggregate, as well as higher average, payments at:

- Month 6 (\$864 vs. \$759: total Group 1 and Group 2 respectively; \$816 vs. 579: arrears less than \$1; \$782 vs. \$659: arrears between \$1 and \$100).
- Month 9 (\$1,151 vs. \$994: total Group 1 and Group 2 respectively; \$1,095 vs. \$830: arrears less than \$1; \$963 vs. \$868: arrears between \$1 and \$100); and
- Month 12 (\$1,424 vs. \$1,361: total Group 1 and Group 2 respectively; \$1,395 s. \$1,214: arrears less than \$1; \$1,241 vs. \$1,163: arrears between \$1 and \$100).

These differences in payment patterns arise notwithstanding the observation, discussed below, that Group 1 customers do not have systematically higher bills that may give rise to their higher payments.

Neither can the differences in aggregate and average payments between Group 1 and Group 2 customers be attributed to payments that are made toward pre-existing arrears. Had Group 1 customers had substantially higher pre-existing arrears, it is possible that payments made against those arrears would be reflected in the gross dollar amounts documented above. Table 4 shows, however, that this is not the case. Table 4 sets forth the cumulative payments made after subtracting the total level of arrears in the month of the crisis payment. This process leaves the total payments that are available to pay current monthly bills once arrears have been retired.

As can be seen in Table 4, the aggregate payments for Group 1 and Group 2 as a whole become virtually identical, with a cumulative total of \$489,000 (Group 1) and \$488,000 (Group 2) yielding similar 15-month average payments as well (\$1,642: Group 1 vs. \$1,630: Group 2).

The differences, however, in accounts with no arrears and in accounts with small arrears, as identified above, remain, both at the 15-month mark and at the intervening mile posts (6-month, 9-month, 12-month marks):

- A substantial difference exists for customers with \$0 in crisis month arrears, with a 15-month Group 1 average payment of \$1,839 compared to a 15-month Group 2 payment of \$1,588. Similar differences existed between Group 1 and Group 2 at the 6-month (\$817 vs. \$579), 9-month (\$1,096 vs. \$830), and 12-month (\$1,396 vs. \$1,214) marks for customers with \$0 in crisis month arrears, with Group 1 consistently having the superior performance;
- A substantial difference existed also for the Group 1 population with crisis month arrears of between \$1 and \$100 with a 15-month Group 1 average payment of \$1,535 compared to a 15-month Group 2 average of \$1,478. Similar differences existed at the 6-month (\$709 vs. \$595), 9-month (\$890 vs. \$804) and 12-month (\$1,168 vs. \$1,099) marks, again with Group 1 exhibiting the superior payment performance.

In each case, despite the USP discount, crisis recipients receiving EAP, and participating in USP, made substantially greater average payments in the months in and following receipt of crisis assistance, even after subtracting the pre-existing arrears to eliminate any confounding impact that those arrears might have on the total payments made.

Table 4 (CGCU--Crisis)
Cumulative Payments (minus arrears in Crisis month) (\$000)

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	(\$17.6)	\$49.6	\$90.2	\$127.8	\$159.4	\$189.5	\$214.4	\$236.3	\$274.9	\$302.0	\$328.2	\$356.3	\$388.4	\$451.6	\$489.2
Group Total	(\$11.3)	\$42.1	\$84.0	\$122.5	\$148.8	\$170.0	\$188.9	\$214.8	\$240.6	\$264.1	\$301.3	\$350.2	\$406.7	\$454.0	\$487.5
< \$1	\$24.0	\$28.3	\$33.1	\$39.3	\$43.0	\$48.2	\$51.2	\$55.4	\$64.7	\$71.1	\$75.9	\$82.4	\$89.6	\$100.8	\$108.5
< \$1	\$10.6	\$16.8	\$23.2	\$29.6	\$35.0	\$39.4	\$44.0	\$50.2	\$56.5	\$62.5	\$70.1	\$82.6	\$94.2	\$100.4	\$108.0
\$1 - \$100	\$3.3	\$8.6	\$12.0	\$15.6	\$17.9	\$19.9	\$21.4	\$22.9	\$24.9	\$27.3	\$29.2	\$32.7	\$36.1	\$40.4	\$43.0
\$1 - \$100	\$3.3	\$6.2	\$10.0	\$13.2	\$15.4	\$17.3	\$18.6	\$20.9	\$23.3	\$24.8	\$28.0	\$31.9	\$36.8	\$40.7	\$42.9
\$101 - \$250	(\$8.6)	\$12.1	\$25.2	\$36.4	\$45.6	\$53.9	\$61.1	\$66.8	\$80.7	\$88.6	\$98.3	\$107.8	\$117.7	\$142.3	\$154.7
\$101 - \$250	(\$4.9)	\$18.0	\$31.3	\$48.1	\$56.8	\$65.0	\$70.5	\$78.6	\$86.1	\$94.0	\$105.5	\$125.2	\$145.6	\$165.7	\$178.4
> \$250	(\$36.3)	\$0.5	\$19.9	\$36.5	\$52.9	\$67.5	\$80.7	\$91.3	\$104.6	\$115.0	\$124.7	\$133.5	\$145.0	\$168.0	\$183.0
> \$250	(\$20.3)	\$1.1	\$19.5	\$31.6	\$41.6	\$48.4	\$55.8	\$65.1	\$74.7	\$82.8	\$97.8	\$110.6	\$130.1	\$147.1	\$158.2
Group 1 Group 2 (Non-EAP/USP Participants) is in White.															

LEVEL OF COLLECTION EFFORT

As discussed in more detail in the review of the basic USP programs offered by Citizens Gas and Vectren, the collection of revenue does not come without a cost. This section of the evaluation of the Crisis programs examines the level of collection that Citizens Gas devotes to its USP participants. The level of collection effort is an important constraint on the payment coverage ratios discussed above. Thus, for example, while Group 1 and Group 2 customers may each have made virtually identical dollar amounts of payments net of the pre-existing arrears (\$489,000 vs. \$488,000), the two groups may present substantially different pictures of cost and risk to the utility if one makes payments with little or no collection effort while the other makes the same dollar payment, but only after the utility exerts considerable collection interventions directed toward the customer.

As with the USP discussion above, the level of collections is measured by a metric referred to as the “collection month.” A “collection month” marks a month in which any collection activity occurs.

Not only do crisis recipients participating in the EAP/USP initiatives (Group 1) pay virtually the same dollars as do crisis recipients not participating in EAP/USP (Group 2), but they do so while generating virtually identical collection efforts as well. As Table 5 indicates, by Month 15, the 298 Group 1 crisis sample recipients generated 2,315 collection months of activity, while the 299 Group 2 participants in the same generated the same number (2,315). While during a five-month period after receipt of crisis benefits, there was a modest uptick in collections directed toward

EAP participants (Month 6 through Month 10) relative to the collections directed toward non-EAP participants, by Month 15, the differential between the two groups had disappeared.

The following discussion converts the cumulative data presented in Table 5 into percentages, with 100% representing the total collection months of activity for Group 1 and for Group 2 by month. Not surprisingly, the percentage of collection months of activity directed toward customers with a \$0 arrears in the month in which a crisis payment was received was less than the percentage of those customers within the total population. While 20% of all Group 1 crisis recipients had \$0 in crisis month arrears, 16% of the cumulative collection months were directed toward those customers over the 15 month study period; while 23% of all Group 2 crisis recipients had \$0 in crisis month arrears, 13% of the cumulative collection month activity was directed toward them.

In contrast, high arrears accounts in both Groups 1 and 2 have a disproportionately higher part of the collections accounts relative to their percent of the total population. While 71% of Group 1 customers had crisis month arrears of more than \$100, 77% of the collection activity was directed to this population. While 68% of Group 2 customers had collection month arrears greater than \$100, 78% of the collection activity was directed toward that population.

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	38	278	532	778	1,015	1,225	1,389	1,535	1,625	1,693	1,780	1,860	1,918	2,136	2,315
Group Total	216	415	616	776	920	1,038	1,151	1,251	1,333	1,455	1,629	1,796	1,977	2,159	2,315
< \$1	1	20	53	90	125	156	185	217	233	245	263	281	294	330	360
< \$1	0	17	45	71	89	107	125	142	151	169	197	223	254	285	307
\$1 - \$100	4	24	46	64	82	98	104	109	116	124	130	133	135	152	165
\$1 - \$100	18	39	57	66	80	91	99	107	120	129	143	159	178	194	206
\$101 - \$250	18	112	206	294	377	448	502	549	583	603	637	665	687	769	837
\$101 - \$250	111	200	294	366	432	478	532	576	619	675	759	843	920	1,002	1,080
> \$250	15	122	227	330	431	523	598	660	693	721	750	781	802	885	953
> \$250	87	159	220	273	319	362	395	426	443	482	530	571	625	678	722

Group 1
Group 2 (Non-EAP/USP Participants) is in White.

This level of collection effort directed toward accounts with high crisis month arrears is not entirely bad news. The proportion of collection months of effort generated by these high arrears customers decreased over time. While 86% of the Group 1 collection months of effort were directed toward customers with arrears greater than \$100 in the Crisis Month, that cumulative proportion had decreased to 77% by Month 15. While 91% of the Group 2 collection months of

effort were directed toward customers with arrears greater than \$100, that cumulative proportion had decreased to 78% by Month 15.

Indeed, the customers with \$0 of crisis month arrears were the only sub-populations with a systematic increase in the percentage of collection month activities directed toward them. Group 1 customers with \$0 in crisis month arrears moved from generating 7% of the collection month activities in Month 2, to 13% in Month 6, to 16% in Month 15. Group 2 customers with \$0 in crisis month arrears moved from generating 4% of the collection month activities in Month 2, to 11% in Month 6, to 13% in Month 15.

The increasing percentage of collection months of activity consumed by the low arrears crisis assistance recipients can be attributed to an increase in collection activities directed toward those accounts. Table 6 presents the number of collection months of activity for each \$1,000 in bills issued by month. Table 6 documents the increasing collection activity directed toward those accounts with \$0 in crisis month arrears. While the Group 1 crisis recipients with \$0 in crisis month arrears generated only 0.09 months of collection activity per \$1,000 in bills issued in the crisis month, by Month 15, that population of crisis recipients had generated a cumulative 3.18 collection months of activity per \$1,000 in bills. While the Group 2 crisis recipients with \$0 in crisis month arrears generated 0.0 months of collection activity per \$1,000 in bills issued, they generated 2.74 cumulative collection months of activity per \$1,000 in bills by Month 15.

Table 6 (CGCU--Crisis)
Number of Collection Months per Cumulative Bills (\$000s) by Month

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	0.63	2.40	3.49	4.49	5.32	5.96	6.43	6.75	6.61	6.18	5.17	4.31	3.76	3.82	3.97
Group Total	3.57	4.03	4.80	5.30	5.71	5.99	6.17	6.07	5.79	5.07	4.49	4.13	4.04	4.12	4.25
< \$1	0.09	0.92	1.84	2.72	3.39	3.91	4.40	4.94	4.94	4.68	3.95	3.42	3.00	3.06	3.18
< \$1	0.00	0.94	1.89	2.52	2.82	3.05	3.25	3.20	3.04	2.77	2.60	2.49	2.53	2.66	2.74
\$1 - \$100	0.67	2.23	3.29	4.01	4.75	5.28	5.36	5.42	5.05	4.88	4.13	3.40	3.00	3.11	3.23
\$1 - \$100	3.73	4.81	5.44	5.30	5.69	5.97	6.14	5.77	5.83	5.14	4.60	4.31	4.30	4.37	4.44
\$101 - \$250	0.87	2.86	4.00	5.07	5.93	6.55	6.94	7.15	7.01	6.47	5.44	4.53	3.95	4.04	4.23
\$101 - \$250	5.14	5.39	6.36	6.78	7.28	7.46	7.67	7.71	7.46	6.50	5.75	5.29	5.13	5.22	5.46
> \$250	0.66	2.76	3.88	4.98	5.90	6.66	7.28	7.63	7.49	7.01	5.82	4.79	4.15	4.17	4.30
> \$250	3.61	4.00	4.59	5.28	5.68	6.16	6.31	6.22	5.76	4.97	4.28	3.82	3.72	3.76	3.84

Group 1
Group 2 (Non-EAP/USP Participants) is in White.

Table 6 shows that while payment did not become automatic for customers who reduced their arrears to \$0 in the crisis month, reducing arrears to \$0 was followed by bill payment patterns that required noticeably lower levels of collection activity to maintain. For customers with \$0 of

crisis month arrears, during the 15 month study period, the level of collection activity reached a maximum of 4.94 collection months per \$1,000 in bills for Group 1 (Month 8/Month 9), and 3.25 collection months per \$1,000 in bills for Group 2 (Month 7). In contrast, for customers with crisis month arrears of more than \$250, the level of collection activity reached a maximum of 7.63 collection months per \$1,000 in bills for Group 1 and 6.31 collection months per \$1,000 in bills for Group 2, each before receding to a substantially lower level by Month 15. Clearly, the ability to reduce arrears to \$0 or near \$0 in the month of a crisis payment has an impact on the level of collection activity in subsequent months. As arrears remain high, even after receipt of a crisis payment, the level of ongoing collection activity needed to generate payments increases as well.

In contrast to the cumulative data presented in Table 6, Table 7 follows the ebb and flow of collection activity by month by tracking the number of collection months of activity required for each bill issued in each month. In Table 7, each month stands alone rather than adding that month's data to the preceding months and keeping a running accumulation. No consistent pattern of payment performance appears to exist relating to the collection efforts required in any given month subsequent to the receipt of crisis assistance. While Group 1 collection efforts were higher on a month by month basis for the months early after the crisis month (Month 2 through Month 8), Group 2 collection efforts were higher for subsequent months (Month 9 through Month 13).

The primary pattern that emerges from the collection months required for each bill rendered involves how the pattern disappears after Month 7 for Group 2 (non-EAP) crisis recipients. The level of collection effort for Group 2 customers, for example, reveals a consistent structure from the Crisis Month through Month 7. In each of those months, the amount of collection effort required was lowest (or in a limited number of months, second lowest) for the accounts with \$0 of Crisis Month arrears. Accounts with between \$1 and \$100 in arrears had the next lowest level of required collection effort. Similarly, through Month 7, the accounts with the highest level of Crisis Month arrears (>\$250) had the highest level of required collection activity in each month through Month 7, with the accounts having \$100 to \$250 in Crisis Month arrears requiring the third highest level of collection activity.

Beginning in Month 8, however, the pattern begins to change. In the last eight months of the study period (Month 8 through Month 15), Group 2 accounts with \$0 of Crisis Month arrears were as likely to require the highest level of collection activity as the lowest level. Accounts with Crisis Month arrears of between \$1 and \$100 continued to require low levels of collection activity (relative to accounts with larger Crisis month arrears), while accounts with Crisis Month arrears of more than \$100, while still requiring high levels of collection activity (relative to other beginning arrears) experienced more volatility in the collection efforts required.

In contrast, the pattern of Group 1 collection efforts remained over the 15-month study period. Accounts with \$0 of Crisis Month arrears had the lowest required collection effort in 13 of the 15 months (and second lowest in the other two), while the accounts with arrears of \$1 to \$100 had the second lowest required collection effort in 11 of the 15 months (with the lowest in two more). Group 1 crisis accounts with Crisis Month arrears of \$100 or more (\$101 through \$250; >\$250)

consistently experienced the need for either the highest (or second highest) level of collection activity throughout the 15 month period.

Customers participating in the EAP/USP initiatives, who also received crisis assistance, clearly benefited from greater stability in their bill payments to a greater extent, and for a longer time period, than did customers receiving crisis assistance but not EAP and USP. While the impact of the crisis payment in controlling the need for collection activities (as measured by the number of collection activity months per each bill issued) dissipated for non-EAP (Group 2) customers, it did not have the same dissipation of effect for EAP/USP (Group 1) customers.

While calculating the total number of collection months for accounts in arrears provides insights into the relative level of collection activity, it does not take into account the fact that the number of bills issued may vary by month. Customers may move, or have service terminated, or not receive a bill for some other reason. If they do not, they would not experience any collection activity for nonpayment. By converting collection months into an index (collection months per bill), therefore, Table 7 presents the number of cumulative collection months normalized for the number of bills issued each month. These are presented on a cumulative basis, with the results of each month added to the prior month's results and recalculated.

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	0.131	0.814	0.861	0.851	0.817	0.747	0.624	0.553	0.336	0.298	0.300	0.268	0.201	0.807	0.789
Group Total	0.721	0.706	0.736	0.604	0.537	0.450	0.431	0.347	0.340	0.431	0.586	0.570	0.649	0.674	0.619
< \$1	0.019	0.328	0.579	0.673	0.614	0.564	0.537	0.653	0.300	0.279	0.310	0.305	0.224	0.655	0.667
< \$1	0.000	0.250	0.424	0.406	0.290	0.295	0.295	0.246	0.184	0.277	0.418	0.394	0.492	0.508	0.393
\$1 - \$100	0.143	0.714	0.786	0.643	0.692	0.640	0.273	0.217	0.269	0.421	0.222	0.107	0.077	0.708	0.591
\$1 - \$100	0.621	0.724	0.643	0.333	0.500	0.423	0.308	0.241	0.591	0.333	0.483	0.552	0.679	0.593	0.480
\$101 - \$250	0.176	0.913	0.922	0.880	0.822	0.710	0.587	0.511	0.352	0.244	0.337	0.272	0.222	0.891	0.883
\$101 - \$250	0.957	0.809	0.870	0.673	0.611	0.426	0.500	0.383	0.424	0.514	0.724	0.737	0.706	0.774	0.772
> \$250	0.140	1.009	0.972	0.972	0.953	0.911	0.789	0.622	0.360	0.333	0.279	0.287	0.200	0.838	0.819
> \$250	0.988	0.960	0.859	0.791	0.657	0.642	0.493	0.429	0.250	0.476	0.565	0.488	0.684	0.697	0.629

Group 1 (EAP/USP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

The same conclusion can be drawn from Table 7. Unlike prior tables, which often present cumulative data, Table 7 presents collection months per bill issued each month. This allows a picture to emerge as to the ebb and flow of collection activities by month and by season. The data shows that customers who receive USP and EAP in addition to program crisis payments present a lower collection burden by the end of the study period. While non-EAP customers had

lower collection efforts directed toward them in the early months, the pattern reversed itself around Month 9 and Month 10.

The pattern introduced in Table 7 is even more evident below. The conclusion that, without a supporting program such as EAP or USP, the collections impact of a crisis intervention program dissipates over time is supported by the data relating the number of collection efforts required for each 1,000 payments received in any given month. A lower number of collection months per 1,000 payments is a superior payment performance to a higher number of collection months per 1,000 payment. Table 8 presents the data.

The program providing crisis assistance without the accompanying participation in EAP/USP resulted in lesser collection efforts in the early months of the study period. In six of the first eight months of the study period, Group 2 customers had fewer collection months of activity per 1,000 payments when compared to their Group 2 counterparts. This pattern of reduced collection months of activity existed for the Group 2 population as a whole as well as for each sub-population defined by the level of Crisis Month arrears.

Beginning in Month 9, however, the pattern reversed. In Month 9 through Month 15, the crisis program accompanied by the USP/EAP participation required fewer collection activity months per 1,000 payments. The only exception to the pattern lay with accounts having Crisis Month arrears of more than \$250. For those accounts, the relative level of collection effort alternated between the two program designs.

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	0.75	3.57	6.26	6.53	7.51	6.97	6.58	6.66	2.33	2.50	3.32	2.84	1.80	3.45	4.76
Group Total	4.76	3.73	4.79	4.16	5.48	5.55	5.99	3.86	3.18	5.18	4.68	3.42	3.21	3.85	4.65
< \$1	0.04	4.41	6.97	5.90	9.63	5.94	9.59	7.67	1.72	1.87	3.73	2.79	1.79	3.19	3.93
< \$1	0.00	2.73	4.39	4.08	3.31	4.12	3.92	2.74	1.43	2.97	3.69	2.09	2.67	4.97	2.89
\$1 - \$100	0.75	3.74	6.50	4.95	7.90	8.23	3.94	3.25	3.51	3.38	3.06	0.87	0.58	4.00	4.98
\$1 - \$100	3.53	7.12	4.78	2.81	6.25	5.94	5.94	3.54	5.32	6.09	4.41	4.08	3.86	4.09	5.58
\$101 - \$250	1.94	4.53	7.20	7.85	9.06	8.49	7.48	8.33	2.45	2.48	3.51	2.95	2.22	3.34	5.46
\$101 - \$250	7.14	3.89	7.03	4.30	7.62	5.57	9.80	5.43	5.76	7.06	7.34	4.26	3.76	4.08	6.12
> \$250	1.27	2.91	5.42	6.22	6.13	6.30	5.70	5.87	2.47	2.71	2.98	3.54	1.82	3.61	4.56
> \$250	6.14	3.38	3.31	4.37	4.63	6.34	4.46	3.32	1.77	4.82	3.20	3.20	2.78	3.10	3.98
Group 1 (EAP/USP Participants) is in Pink. Group 2 (Non-EAP/USP Participants) is in White.															

The level of collection effort required as measured by the number of collection activity months indexed to various factors (e.g., total collection activity, per number of payments, per number of bills, per cumulative bills) shows that coupling a crisis intervention program with the EAP and USP programs has a positive longer-term impact on collections than does a crisis intervention program standing alone. For an entire series of metrics measuring the level of collection effort directed toward customers receiving crisis assistance, it appears that while crisis assistance in the short-term positively reduces the need for collection effort without the added intervention of USP and EAP, the reductions associated with such a stand-alone program are not sustainable over the longer-term.

In this regard, the “longer-term” is measured in terms of less than a year. Certainly by the end of a twelve month period subsequent to the payment of crisis intervention assistance, and continuing through the end of the 15-month study period, a program of crisis intervention coupled with energy assistance and USP participation results in a reduction of collection interventions. This result is true both for the population as a whole and for each sub-population as defined by the level of arrears in the Crisis Month, with the exception of those accounts with the highest arrears.

EFFECTIVENESS OF COLLECTIONS

As is discussed in more detail above, the mere fact that a utility engages in collection activities directed toward low-income customers does not mean that those activities are helpful in generating payments or useful in controlling arrears. The rate at which a utility engages in collection activity, as measured above in the discussion of the level of collection effort, and the effectiveness of that collection activity, present a need for two distinctly different inquiries.

The discussion in this section considers the effectiveness of collection activity both in generating an increase in the number of payments and an increase in the level of payment.

Crisis intervention benefits coupled with participation in the EAP/USP generates greater payments over the long-term for each collection month of activity exerted by the utility. This conclusion is based on the payment patterns documented from several different perspectives. Table 9 sets forth the payments generated by each collection month of activity directed by Citizens Gas toward a crisis program participant. A higher dollar figure in Table 9 could indicate either of two potential circumstances: (1) either customers made higher payments; or (2) the utility directed fewer collection months of activity toward the customers (thus increasing the dollars of payments for each collection month exerted).

**Table 9 (CGCU--Crisis)
Payments per Collection Month**

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	\$1,325	\$280	\$160	\$153	\$133	\$143	\$152	\$150	\$429	\$400	\$301	\$352	\$555	\$290	\$210
Group Total	\$210	\$268	\$209	\$240	\$182	\$180	\$167	\$259	\$315	\$193	\$214	\$293	\$312	\$260	\$215
< \$1	\$23,969	\$227	\$144	\$170	\$104	\$168	\$104	\$130	\$581	\$534	\$268	\$359	\$559	\$313	\$254
< \$1	--	\$367	\$228	\$245	\$302	\$243	\$255	\$364	\$698	\$337	\$271	\$479	\$374	\$201	\$346
\$1 - \$100	\$1,330	\$267	\$154	\$202	\$127	\$122	\$254	\$308	\$285	\$296	\$326	\$1,152	\$1,715	\$250	\$201
\$1 - \$100	\$284	\$140	\$209	\$356	\$160	\$168	\$168	\$282	\$188	\$164	\$227	\$245	\$259	\$245	\$179
\$101 - \$250	\$516	\$221	\$139	\$127	\$110	\$118	\$134	\$120	\$409	\$404	\$285	\$339	\$450	\$300	\$183
\$101 - \$250	\$140	\$257	\$142	\$233	\$131	\$179	\$102	\$184	\$174	\$142	\$136	\$235	\$266	\$245	\$163
> \$250	\$785	\$344	\$184	\$161	\$163	\$159	\$175	\$170	\$406	\$368	\$336	\$283	\$551	\$277	\$220
> \$250	\$163	\$296	\$302	\$229	\$216	\$158	\$224	\$301	\$565	\$207	\$313	\$312	\$360	\$322	\$251

Group 1 (USP/USP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

The crisis intervention program coupled with USP/EAP generated substantially greater payments for the amount of collection effort asserted in the month the crisis payment was made (referred to as the Crisis Month). For the Group as a whole, Citizens Gas received \$1,325 for each collection month of activity, compared to only \$210 for the non-EAP/USP customers.

In contrast, modestly increased payments for each month of collection activity exerted occurred for the non-EAP customers in the ensuing months. While the non-EAP crisis program generated \$209 of payment for each collection month of activity in Month 3, the EAP program generated \$160. In Month 4, while the non-EAP crisis program generated \$240 in payment for each collection month exerted, the EAP crisis program generated \$153 of payment.

The pattern reverses itself in the later months of the program. Beginning in Month 10, the EAP crisis program was more effective in generating monthly payments for each collection month of activity.

The same pattern exists when one examines the number of collection months of activity needed to generate each payment. While Table 9 examines the dollars of payment made, Table 10 below examines the count of payments made. A lower number of collection months for each payment received by a crisis program recipient represents a superior performance. In the Crisis Month for the population as a whole, for example, the EAP/USP population exerted 0.224 collection months of activity for each payment received from a crisis recipient. In contrast, in the Crisis Month, Citizens exerted more than four times that amount of collection effort (1.049 collection months) to generate each payment from the non-EAP customers.

**Table 10 (CGCU--Crisis)
Collection Months per Count of Payments**

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	0.224	1.013	1.165	1.128	1.191	1.055	0.872	0.868	0.470	0.496	0.713	0.588	0.472	1.153	1.078
Group Total	1.049	0.896	1.000	0.737	0.791	0.711	0.715	0.495	0.453	0.748	0.935	0.870	0.842	0.948	0.940
< \$1	0.020	0.792	1.031	1.088	1.400	1.000	1.208	1.185	0.417	0.480	0.750	0.643	0.464	1.000	0.909
< \$1	0.000	0.395	0.596	0.542	0.375	0.409	0.429	0.333	0.196	0.391	0.622	0.605	0.660	0.861	0.564
\$1 - \$100	0.200	0.909	1.222	0.783	0.947	0.889	0.353	0.313	0.438	0.471	0.545	0.188	0.154	1.000	0.867
\$1 - \$100	0.857	1.050	0.857	0.375	0.700	0.688	0.500	0.389	0.813	0.818	0.933	0.696	0.792	0.889	0.800
\$101 - \$250	0.340	1.011	1.146	1.143	1.169	1.029	0.794	0.887	0.478	0.417	0.850	0.609	0.611	1.139	1.133
\$101 - \$250	1.405	0.937	1.253	0.766	0.985	0.730	1.000	0.539	0.677	0.836	1.292	1.077	0.963	1.038	1.219
> \$250	0.313	1.092	1.221	1.226	1.202	1.136	0.949	0.859	0.500	0.596	0.617	0.674	0.457	1.297	1.172
> \$250	1.604	1.125	1.052	1.039	0.979	1.000	0.717	0.625	0.309	1.000	0.787	0.854	0.844	0.898	0.917

Group 1 (EAP/USP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

While (with the exception of the Crisis Month itself) the non-EAP crisis program was more effective in generating payments for each collection month of activity (i.e., the non-EAP program required fewer collection months of activity to generate each payment by a crisis recipient), this pattern reversed in the later months of the study period. In Month 10, while Citizens exerted 0.748 collection months of activity for each payment received from the non-EAP crisis recipients, it exerted only 0.496 collection months of activity for each payment received from a Crisis recipient.

The change in payment pattern occurred earlier and to a greater extent for customers that had larger arrears in the Crisis Month. For customers with Crisis Month arrears of between \$101 and \$250, the reversal of the pattern occurred in Month 9. For customers with Crisis Month arrears of greater than \$250, the reversal came in Month 10.

ARREARS AND PAYMENTS

Neither crisis approach adopted by Citizens Gas resulted in the elimination of arrears over the length of the study period, although the crisis program not associated with EAP/USP was more successful. While the percentage of accounts in arrears was reduced over time by both programs, program participants did not retire their arrears and stay out of arrears. Table 11 shows the data. Roughly 80% of program participants (81%: Group 1; 78%: Group 2) reported arrears in the month in which they received a crisis payment. By the end of the 15-month study period, the non-EAP crisis recipients had, as a whole, reduced the proportion of accounts in arrears, while the crisis recipients also receiving EAP had not.

**Table 11 (CGCU--Crisis)
Percentage of Accounts with Arrears**

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	81%	85%	89%	90%	87%	86%	82%	76%	70%	57%	52%	73%	83%	86%	84%
Group Total	78%	74%	77%	72%	69%	70%	70%	64%	66%	60%	68%	72%	72%	71%	69%
< \$1	0%	47%	67%	71%	70%	75%	80%	84%	70%	53%	43%	63%	79%	78%	71%
< \$1	0%	34%	48%	56%	48%	39%	56%	49%	51%	45%	54%	55%	52%	56%	46%
\$1 - \$100	100%	79%	82%	79%	81%	84%	68%	43%	58%	63%	48%	50%	73%	79%	73%
\$1 - \$100	100%	83%	71%	63%	82%	65%	69%	59%	82%	44%	52%	66%	71%	59%	52%
\$101 - \$250	100%	93%	93%	93%	89%	83%	80%	75%	74%	56%	57%	81%	85%	90%	90%
\$101 - \$250	100%	82%	89%	78%	74%	79%	77%	73%	74%	72%	83%	86%	83%	83%	83%
> \$250	100%	100%	98%	99%	96%	97%	88%	82%	70%	60%	53%	77%	87%	87%	88%
> \$250	100%	97%	89%	81%	74%	85%	73%	66%	59%	63%	66%	70%	73%	71%	74%

Group 1 (EAP/USP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

The success of the non-EAP program in reducing the proportion of accounts in arrears is most evident in the populations of customers with lower levels of Crisis Month arrears. By Month 15, fewer than half of non-EAP crisis recipients with \$0 in Crisis Month arrears were in arrears, compared to 71% of EAP crisis recipients. Roughly half (52%) of non-EAP crisis recipients with between \$1 and \$100 in Crisis Month arrears were in arrears by Month 15, while 73% of EAP crisis recipients were. While the greater success of non-EAP crisis recipients in reducing their arrears was evident, also, with the accounts having higher Crisis Month arrears, Table 11 shows that the differential was not as great.

The greater success of the non-EAP crisis program in keeping customers free of arrears is reflected as well in the aggregate dollars of arrears. As shown in Table 12 below, the non-EAP crisis program generated fewer dollars of arrears for the population as a whole in Month 15 of the study period. This lower level of arrears was reasonably consistent throughout the study period. The lower level of arrears can be seen not only for Group 2 as a whole, but also for each sub-population of the two Groups as defined by the level of Crisis Month arrears.

**Table 12 (CGCU--Crisis)
Dollars of Arrears (\$000) by Month**

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	\$67.5	\$67.4	\$77.0	\$75.1	\$64.0	\$49.7	\$39.2	\$30.0	\$24.2	\$14.8	\$20.5	\$51.9	\$91.3	\$95.6	\$60.8
Group Total	\$56.8	\$55.0	\$49.1	\$36.1	\$26.3	\$19.1	\$16.0	\$14.3	\$12.9	\$18.2	\$40.2	\$63.7	\$65.3	\$56.4	\$42.0
< \$1	\$0.0	\$4.8	\$8.7	\$10.9	\$11.5	\$9.6	\$10.2	\$8.6	\$7.9	\$3.2	\$3.3	\$6.8	\$14.7	\$18.0	\$10.1
< \$1	\$0.0	\$4.0	\$5.8	\$5.4	\$4.6	\$3.8	\$3.8	\$3.1	\$2.6	\$3.3	\$7.2	\$10.2	\$10.6	\$9.7	\$5.5
\$1 - \$100	\$2.1	\$3.4	\$4.1	\$3.1	\$2.8	\$2.2	\$1.6	\$0.5	\$0.8	\$1.3	\$1.8	\$3.9	\$5.1	\$4.8	\$3.6
\$1 - \$100	\$1.9	\$4.0	\$2.3	\$1.5	\$1.9	\$1.1	\$1.2	\$1.3	\$1.2	\$1.2	\$2.6	\$4.5	\$4.7	\$3.6	\$2.5
\$101 - \$250	\$17.7	\$17.8	\$20.7	\$18.1	\$15.2	\$12.1	\$9.4	\$7.4	\$7.4	\$4.4	\$7.5	\$19.4	\$33.5	\$31.8	\$19.5
\$101 - \$250	\$20.5	\$18.0	\$18.0	\$11.9	\$8.6	\$6.2	\$5.6	\$4.8	\$4.6	\$6.4	\$16.7	\$24.9	\$26.0	\$21.8	\$15.9
> \$250	\$47.7	\$41.4	\$43.5	\$43.0	\$34.4	\$25.8	\$18.0	\$13.4	\$8.0	\$6.0	\$8.0	\$21.8	\$38.0	\$41.0	\$27.7
> \$250	\$34.4	\$29.0	\$23.0	\$17.4	\$11.2	\$7.9	\$5.5	\$5.1	\$4.5	\$7.3	\$13.8	\$24.2	\$23.9	\$21.3	\$18.0
Group 1 (EAP/USP Participants) is in Pink. Group 2 (Non-EAP/USP Participants) is in White.															

The lower level of arrears within the non-EAP customer population might well be attributable, at least in part, to the lower level of bills received by the non-EAP customers. Despite the USP discount provided to Group 1 customers, as EAP program participants, in nine of the 15 study months, non-EAP crisis recipients had lower bills. The lower bills of non-EAP participants appear to be primarily associated with higher consumption months with higher overall bills. The difference between the two groups when Group 1 had the lower bills (e.g., months 4, 7, 8, 9) was considerably smaller than the difference between the two groups when Group 2 had lower bills (e.g., months 2, 3, 12, 13, 14, 15).

The association between bill levels and the extent of arrears can be seen, also, amongst the accounts distinguished by differing levels of Crisis Month arrears. In the high bill months, particularly for the non-EAP crisis recipients, each level of increasing arrears had a higher average bill than the preceding level of arrears. Accounts with \$0 in Crisis Month arrears had lower bills than did accounts with between \$1 and \$100 in arrears. Accounts with arrears between \$1 and \$100 had lower bills (in the high bill months) than did accounts with arrears between \$101 and \$250. Accounts with arrears between \$101 and \$250 had lower bills than did accounts with Crisis Month arrears of greater than \$250. This pattern, however, did not hold for the EAP crisis recipients.

**Table 13 (CGCU--Crisis)
Average Bills of Accounts with Bills**

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	\$207	\$189	\$125	\$71	\$62	\$52	\$45	\$49	\$73	\$126	\$244	\$292	\$277	\$183	\$110
Group Total	\$204	\$151	\$97	\$75	\$59	\$52	\$52	\$74	\$101	\$200	\$255	\$249	\$194	\$137	\$85
< \$1	\$199	\$187	\$125	\$79	\$67	\$55	\$46	\$46	\$65	\$122	\$246	\$264	\$271	\$183	\$113
< \$1	\$152	\$118	\$88	\$71	\$63	\$63	\$55	\$92	\$108	\$173	\$221	\$212	\$169	\$124	\$89
\$1 - \$100	\$214	\$171	\$115	\$70	\$59	\$52	\$46	\$46	\$109	\$128	\$227	\$273	\$249	\$165	\$101
\$1 - \$100	\$166	\$113	\$85	\$79	\$57	\$45	\$43	\$84	\$93	\$166	\$206	\$199	\$162	\$116	\$84
\$101 - \$250	\$204	\$179	\$120	\$65	\$56	\$49	\$43	\$50	\$71	\$128	\$238	\$286	\$276	\$179	\$100
\$101 - \$250	\$186	\$142	\$84	\$75	\$54	\$47	\$49	\$51	\$84	\$192	\$242	\$240	\$188	\$117	\$66
> \$250	\$212	\$203	\$132	\$73	\$65	\$54	\$45	\$50	\$70	\$126	\$252	\$316	\$289	\$190	\$119
> \$250	\$280	\$209	\$131	\$79	\$65	\$53	\$57	\$87	\$124	\$243	\$317	\$307	\$234	\$183	\$110

Group 1 (EAP/USP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

Neither the EAP crisis participants, nor the non-EAP crisis participants, maintained a level flow of payments over the course of the study period. Despite the presence of arrears with a significant number of both groups of crisis participants, as shown in Table 14, the average payment by each group of participants fluctuated along with the underlying bills. While payments increased during the high bill months for both groups, the increase in average payment did not match the corresponding increase in bills for each Group.

In particular, despite the data (shown above) that bills increased across-the-board as the Crisis Month level of arrears increased for non-EAP customers, Table 14 shows that there is not a corresponding increase in the level of payments. Other than a seasonal fluctuation in payments by the EAP crisis participants (Group 1), no particular pattern of average payment level is evident for these customers. The average payments made by EAP crisis recipients with \$0 in Crisis Month arrears were consistently neither higher nor lower than the average payment for the Group 1 population as a whole, or for the Group 1 customers exhibiting more than \$0 in Crisis Month arrears. Nor did the variation in payments between customers with varying levels of Crisis Month arrears between high bill and low bill months exhibit a particular pattern.

**Table 14 (CGCU--Crisis)
Average Payment of Accounts with Bills**

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	\$168	\$226	\$137	\$127	\$108	\$103	\$86	\$74	\$130	\$83	\$86	\$95	\$112	\$227	\$166
Group Total	\$153	\$185	\$151	\$138	\$98	\$76	\$66	\$80	\$76	\$80	\$124	\$167	\$202	\$175	\$133
< \$1	\$417	\$74	\$83	\$114	\$64	\$95	\$54	\$74	\$158	\$98	\$83	\$110	\$125	\$205	\$170
< \$1	\$161	\$92	\$97	\$95	\$88	\$72	\$68	\$94	\$95	\$89	\$109	\$189	\$184	\$101	\$133
\$1 - \$100	\$190	\$191	\$121	\$130	\$85	\$67	\$56	\$47	\$75	\$76	\$73	\$123	\$132	\$177	\$119
\$1 - \$100	\$176	\$102	\$134	\$116	\$80	\$51	\$45	\$78	\$79	\$52	\$109	\$135	\$176	\$145	\$86
\$101 - \$250	\$91	\$201	\$126	\$111	\$89	\$84	\$69	\$59	\$142	\$58	\$90	\$92	\$100	\$247	\$162
\$101 - \$250	\$134	\$201	\$124	\$150	\$80	\$71	\$51	\$67	\$45	\$69	\$99	\$173	\$188	\$188	\$126
> \$250	\$110	\$343	\$179	\$150	\$155	\$135	\$126	\$93	\$119	\$103	\$87	\$81	\$110	\$232	\$179
> \$250	\$165	\$280	\$249	\$170	\$142	\$97	\$96	\$86	\$104	\$97	\$177	\$152	\$246	\$225	\$158

Group 1 (EAP/USP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

Finally, Table 15 sets forth the ratio of the number of payments to the number of bills. If the number of payments made by crisis recipients exactly equals the number of bills rendered to those recipients, the ratio would be 1.0. If the ratio is less than 1.0, there are fewer payments made than there are bills issued.

Any number of factors can affect the presence of arrears, as well as the level of arrears. Customers might make larger payments, but make fewer payments. While Table 14 measures the former (size of payment), Table 15 below measures the latter (frequency of payment).

Table 15 shows that there is, indeed, an ebb and flow to the number of payments made each month in response to bills issued. For Group 1 crisis recipients (EAP), the ratio of payments to bills ranges from a high of 0.797 (Month 2) down to a low of 0.410 (Month 11). For Group 2 crisis recipients (non-EAP), the ratio of payments to bills ranges from a high of 0.792 (Month 2) to a low of 0.548 (Month 10). The Group 1 (EAP) crisis recipients exhibit three months (Months 11, 12 and 13) in which they generate fewer than 0.50 payments for each bill issued. In contrast, the three months of the lowest ratio for non-EAP crisis recipients generated payments of 0.584 (Month 9), 0.588 (Month 7) and 0.548 (Month 6, Month 10).

**Table 15 (CGCU--Crisis)
Ratio of Number of Payments to Number of Bills**

	<i>Crisis Month</i>	<i>Month 2</i>	<i>Month 3</i>	<i>Month 4</i>	<i>Month 5</i>	<i>Month 6</i>	<i>Month 7</i>	<i>Month 8</i>	<i>Month 9</i>	<i>Month 10</i>	<i>Month 11</i>	<i>Month 12</i>	<i>Month 13</i>	<i>Month 14</i>	<i>Month 15</i>
Group Total	0.577	0.797	0.736	0.740	0.676	0.683	0.643	0.576	0.644	0.465	0.410	0.456	0.427	0.685	0.727
Group Total	0.687	0.773	0.733	0.792	0.679	0.618	0.588	0.657	0.584	0.548	0.623	0.655	0.771	0.704	0.651
< \$1	0.870	0.414	0.561	0.600	0.439	0.564	0.426	0.490	0.640	0.395	0.414	0.475	0.483	0.655	0.733
< \$1	0.773	0.632	0.712	0.734	0.774	0.721	0.672	0.723	0.714	0.677	0.657	0.652	0.746	0.574	0.661
\$1 - \$100	0.714	0.786	0.643	0.821	0.692	0.640	0.636	0.565	0.577	0.684	0.407	0.571	0.500	0.708	0.682
\$1 - \$100	0.724	0.690	0.750	0.852	0.714	0.577	0.577	0.621	0.500	0.370	0.517	0.793	0.857	0.667	0.600
\$101 - \$250	0.520	0.903	0.794	0.760	0.683	0.690	0.663	0.543	0.703	0.451	0.386	0.447	0.364	0.750	0.779
\$101 - \$250	0.681	0.845	0.694	0.860	0.620	0.565	0.500	0.673	0.495	0.578	0.560	0.684	0.734	0.736	0.634
> \$250	0.449	0.906	0.796	0.774	0.792	0.752	0.747	0.653	0.605	0.464	0.433	0.426	0.438	0.636	0.687
> \$250	0.616	0.827	0.803	0.716	0.671	0.627	0.657	0.586	0.647	0.463	0.718	0.571	0.810	0.776	0.686

Group 1 (EAP/USP Participants) is in Pink.
Group 2 (Non-EAP/USP Participants) is in White.

SUMMARY AND CONCLUSIONS

Citizens Gas and Coke Utility offers a “crisis” intervention program in conjunction with its basic Universal Service Program. The “crisis” program offers financial assistance to help low-income customers avoid the disconnection of service due to nonpayment. The crisis program can be coupled with enrolling customers in the broader Energy Assistance Program (EAP or LIHEAP), along with the USP rate discount that accompanies LIHEAP participation, or can be done outside the realm of EAP.

In broad terms –the detailed empirical basis for these conclusions can be found in the multiple tables and narrative discussion above—the following conclusions can be reached. The impact of the crisis intervention program on the long-term payment patterns of low-income customers is less clear than the impact of the basic Universal Service Program. While improvement in payment performance patterns can be found, they are less robust than those found with USP. Moreover, the payment performance is enhanced by the participation of a crisis recipient in the full-scale EAP. While clear patterns of payment performance can be derived from the data on USP participation, the patterns found with the crisis program are murkier, and often seem to be more associated with the EAP participation than with the crisis participation.

Notwithstanding these observations, the need for the crisis program is evident. In particular, the data documents that while customers receiving crisis assistance continue to make payments toward their winter bills, those payments simply are insufficient to cover increases in winter bills. The data documents that customers receiving crisis assistance continue to make payments

in response to the receipt of bills, whether or not those payments are sufficient to retire pre-existing arrears and cover the full bill for current usage (i.e., customers make partial payments).

Based on this data, it is possible to conclude that while the crisis program appears to be an important short-term response to inability to pay, the crisis program is enhanced by the availability of energy assistance. The crisis program is not a substitute for a broadscale payment assistance program.

THE “WINTER WARMTH” PROGRAM: Northern Indiana Public Service Company

The Winter Warmth program offered by Northern Indiana Public Service Company (NIPSCO) presents a distinctly different approach to low-income bill payment assistance as compared to the Citizens Gas and Vectren Universal Service Program (USP). While the USP offers proactive bill payment assistance coupled with the state Energy Assistance Program (EAP), designed to reduce bills for current usage to more affordable levels, the Winter Warmth program is designed to make payments toward pre-existing arrears for accounts that face an imminent disconnection of service for nonpayment. Rather than addressing the ongoing affordability of monthly bills, the Winter Warmth program is designed to leverage customer payments in an effort to retire arrears within a population of severely payment-troubled low-income customers.

This evaluation of the NIPSCO low-income programs will consider the same fundamental attributes of bill payment performance as have been used for the USP programs:

- Revenue collection;
- Level of collection effort;
- Collection effectiveness; and
- Arrears and payments.

NIPSCO’s low-income programs have been divided into the following groups:

- Customers receiving Energy Assistance in 2008;
- Customers not receiving Energy Assistance in 2008;
- Customers who received Winter Warmth assistance while also receiving Energy Assistance in 2008; and
- Customers who received Winter Warmth assistance while *not* also receiving Energy Assistance in 2008.¹⁶

¹⁶ To eliminate the effects of Energy Assistance on Winter Warmth customers, only the Winter Warmth customers not receiving EAP are included in the remainder of this analysis. The “Winter Warmth” population included throughout this evaluation includes only those Winter Warmth customers who did not also participate in the Energy Assistance Program (EAP).

The assessment of the NIPSCO program examines the months of January 2008 through May 2009. In addition to looking at the NIPSCO populations as a whole, each Group is divided into four sub-populations defined by the level of January 2008 arrears. The arrears groupings have been held consistent with the USP groupings:

- January 2008 arrears is less than \$1;
- January 2008 arrears is between \$1 and \$100;
- January 2008 arrears is between \$101 and \$250; and
- January 2008 arrears is more than \$250.

The metrics used for the NIPSCO assessment are the same as those used for the USP assessment above. To the extent that differences arise, they will be explicitly noted. The size and distribution of the groups by the level of their January 2008 arrears is set forth immediately below.

NIPSCO Customers by January 2008 Arrears			
	EA 2008 (Group 1)	No EA 2008 (Group 2)	WW--No EA 2008 (Group 3)
<\$1	202	1,050	455
\$1 - \$100	105	259	219
\$101 - \$250	267	419	503
\$250 or more	504	767	944
Total	1,078	2,495	2,121

As with the USP discussion above, the purpose of the NIPSCO discussion is not to look for a single answer, but rather to identify the existence and significance of *patterns* of outcomes. The identification of patterns, as well as the identification of changes in patterns of payment behavior, are noted as significant when appropriate. The fundamental approach to this evaluation is to identify patterns; to determine whether the patterns among various factors are consistent one with another; and to assess what factors might result in inconsistent patterns should they exist.

REVENUE COLLECTION

The basic measure of revenue collection used in this evaluation involves the “payment coverage ratio.” The payment coverage ratio considers the percent of the bill rendered to a customer that the customer actually pays. A higher payment coverage ratio is better than a lower ratio. A ratio of 1.0 means that the customer’s payments during a prescribed time frame exactly equal the customer’s bills for current usage during that same time frame.

The same observations about payment coverage ratios explained in the USP discussion above apply to the NIPSCO discussion as well.

In this analysis, the following coverage ratios are considered below for each NIPSCO population:

- The cumulative payment coverage ratio for bills for current usage starting in January 2008;
- The cumulative payment coverage ratio starting in April 2008; and
- The cumulative payment coverage ratio after subtracting beginning arrears (starting in January 2008) from the payments.

NIPSCO succeeds in taking low-income customers who owe the utility substantial arrears and allowing those customers to make payments that, at a minimum, cover their current bills for service. In the last month of the study period (May 2009), all three groups of NIPSCO customers had a cumulative payment coverage ratio of at or above 1.0 for the 17-month period (January 2008 through May 2009). This ratio indicates that the NIPSCO customers had paid somewhat their bill for current usage during the 17-month period.

The NIPSCO programs substantially lessen, but do not completely eliminate, the seasonal nature of payment. While Energy Assistance customers carried cumulative payment coverage ratios of between 102% and 104% during the warm weather months of June through October, the coverage ratios dipped somewhat below 100% during December through April. The lowest cumulative coverage ratio for Group 1 in that December (2008) through April (2009) period, however, was 0.904 (payment covered 90.4% of current bill), while the lowest cumulative coverage ratio for Group 2 was 0.943 (payment covered 94.3% of bill), both occurring in January 2009. Winter Warmth customers exhibited the same seasonal pattern.

All three study groups as a whole experienced an improvement in bill payment performance over the course of the study period. The cumulative payment coverage ratio for each month in 2009 (January through May) for both Groups as a whole was higher than the payment coverage ratio in the corresponding month in 2008. The improvement in the Winter Warmth payment coverage ratio for May 2009 (relative to May 2008) was two times greater than the improvement for the EAP population and three times higher than the improvement for the non-EAP population.

Energy Assistance (Group 1) customers experienced a greater improvement in payment coverage ratios than did non-Energy Assistance customers. The customers receiving Energy Assistance consistently (for the population as a whole and for each sub-population defined by January 2008 arrears) began with lower January/February 2008 payment coverage ratios. By the last month of the study period (May 2009), however, the cumulative payment coverage ratios were nearly identical for both Energy Assistance (Group 1) and non-Energy Assistance (Group 2) customers. This was true both for the Groups as a whole and for each sub-population as defined by January 2008 arrears.

The cumulative payment coverage ratios for customers with higher levels of January 2008 arrears were slightly higher than for customers with lower levels of January arrears by May 2009. This is to be expected given the need to make higher payments to retire those January arrears. The distinction between high-arrears payment coverage ratios and low-arrears payment coverage ratios was greater for non-EAP customers than it was for EAP customers.

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	0.436	0.580	0.815	0.886	0.982	1.031	1.034	1.028	1.033	1.037	1.021	0.963	0.904	0.912	0.929	0.970	1.001
Group 2 Total	0.853	0.865	0.832	0.897	1.000	1.035	1.031	1.027	1.033	1.027	1.015	0.985	0.943	0.946	0.951	0.980	1.013
Group 3 Total	0.542	0.610	0.678	0.837	0.951	1.015	1.030	1.023	1.031	1.028	1.008	0.955	0.891	0.881	0.907	0.956	0.990
< \$1 (G1)	0.834	0.877	0.961	0.960	1.002	1.023	1.013	0.996	0.994	0.988	0.993	0.956	0.931	0.935	0.961	0.977	1.009
< \$1 (G2)	0.951	0.865	0.840	0.871	0.966	0.960	0.954	0.958	0.957	0.953	0.959	0.954	0.933	0.938	0.943	0.958	0.993
< \$1 (G3)	0.765	0.734	0.754	0.814	0.892	0.941	0.953	0.953	0.966	0.967	0.957	0.914	0.866	0.862	0.888	0.930	0.966
\$1 - \$100 (G1)	0.672	0.742	0.811	0.922	0.990	1.004	1.000	0.987	1.008	1.001	0.998	0.946	0.876	0.884	0.908	0.935	0.970
\$1 - \$100 (G2)	1.098	0.919	0.839	0.894	0.988	1.031	1.018	1.019	1.017	1.016	1.005	0.971	0.927	0.933	0.937	0.968	0.996
\$1 - \$100 (G3)	0.712	0.651	0.664	0.803	0.924	0.975	0.989	0.992	0.996	0.998	0.983	0.931	0.867	0.860	0.895	0.953	0.983
\$101-\$250 (G1)	0.404	0.562	0.803	0.863	0.963	1.023	1.029	1.026	1.031	1.040	1.025	0.958	0.900	0.908	0.923	0.967	0.994
\$101-\$250 (G2)	0.903	0.925	0.855	0.914	1.012	1.059	1.054	1.043	1.060	1.053	1.037	0.991	0.945	0.954	0.956	0.985	1.016
\$101-\$250 (G3)	0.645	0.629	0.704	0.831	0.944	1.019	1.032	1.023	1.027	1.029	1.015	0.955	0.897	0.889	0.914	0.969	0.994
> \$250 (G1)	0.331	0.490	0.779	0.870	0.982	1.039	1.045	1.043	1.048	1.055	1.032	0.969	0.900	0.909	0.923	0.972	1.004
> \$250 (G2)	0.725	0.836	0.817	0.911	1.023	1.084	1.086	1.079	1.089	1.082	1.058	1.013	0.954	0.952	0.960	1.002	1.034
> \$250 (G3)	0.424	0.560	0.647	0.851	0.977	1.044	1.063	1.052	1.061	1.054	1.027	0.973	0.902	0.888	0.913	0.962	0.998

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

Winter Warmth participants begin with significantly less positive payment patterns than either the EAP or non-EAP population. Recognizing that Table presents cumulative coverage ratios—in each month, the payments for all months-to-date are summed and divided by all bills to date—it is possible to compare Winter Warmth to NIPSCO’s other customers. Recognizing that Winter Warmth is directed toward payment troubled customers, it would be expected that Winter Warmth participants begin with poor performance relative to the other two populations. To the extent the program works, the Winter Warmth customers would be expected to improve their performance.

This is precisely what happens as measured at difference times of the year:

- At the end of the first winter (March 2008), while EAP and non-EAP customers had a cumulative payment coverage ratio of 0.815 and 0.832 respectively, Winter Warmth customers had a cumulative payment coverage ratio of 0.678.

- By the end of the summer (August 2008), the EAP, non-EAP and Winter Warmth customers had virtually identical cumulative payment coverage ratios (1.028, 1.027, 1.023 respectively).
- By the end of the second winter (March 2009), while there was some divergence in cumulative payment coverage ratios, the variance between Winter Warmth customer and both the EAP and non-EAP customers had narrowed considerably (0.929, 0.951, 0.907 respectively).
- By the end of the study period (May 2009), the cumulative payment coverage ratios were within 2.3% of each other (high of 1.013 vs. low of 0.990).

In sum, the Winter Warmth program has taken customer with significant payment-troubles and received 99% of their payment for current bills over the 17-month study period.

The improved seasonal pattern in the cumulative bill payment coverage ratios can be attributable, at least in part, to the use of budget billing plans. The conclusion that the seasonal bill payment shifting can be attributed, at least in substantial part, to leveled budget billing can be derived from Table 2.

Table 2 examines the cumulative bill payment coverage ratio, with the initial month being set as April rather than January. By starting in April, any increased payments made toward January 2008 during the first three months of the study period will be eliminated from the analysis. The first month of billing, as well as the first payment, will be from April.

The cumulative coverage ratio for the Energy Assistance recipient population as a whole dropped to a low of between 96% (January/February 2009) and 98% (March 2009) during the winter months. By April 2009, the cumulative payment coverage ratio for the period as a whole was back in excess of 1.00 (1.083) for the Energy Assistance recipients. The same pattern can be seen for the non-Energy Assistance participants as a whole. The January through March 2009 cumulative payment coverage ratios dropped to a fraction of one-percent over 100%; by April, the payment coverage ratio was back to 1.04. The significance of these figures lie in the observation that, while the cumulative payment coverage ratio for the Energy Assistance and non-Energy Assistance recipients *dropped* during the winter months, it did not fall substantially below 1.00, if at all.

One reason for this involves the prepayment of those winter bills. The prepayment of winter bills is seen particularly in the coverage ratios for May 2008 through November 2008. The cumulative payment coverage ratios for those months consistently fell in the range of 1.2 to 1.5, meaning that NIPSCO's customers were paying between 120% and 150% of their actual year - to-date bill (beginning in April) during those months. In five of those six months (May through November 2008), customers receiving Energy Assistance exhibited a higher rate of prepayment than did non-Energy Assistance customers.¹⁷

¹⁷ The payment coverage ratio exceeding 1.0 cannot be attributed exclusively to pre-existing arrears. Even customers that had a \$0 January 2008 arrears exhibited cumulative payment coverage ratios of greater than 1.0 during these warm weather months. These customers, in other word, were pre-paying part of a future bill.

Winter Warmth customers, too, prepaid their bills for the upcoming winter. During this six month period (May through November 2008), the Winter Warmth customers had cumulative payment coverage ratios of between a low of 1.28 (November) and a high of 1.65 (June). Indeed, the Winter Warmth cumulative payment coverage ratios (beginning in April) were consistently higher than either the EAP or non-EAP populations.

Within both the EAP and non-EAP study populations, the payment coverage ratios for customers with high beginning arrears were consistently higher than customers with lower arrears (and customers with no arrears). However, the cumulative payment coverage ratios (beginning in April) for Winter Warmth customers with high beginning arrears are substantially in excess of either of the other two populations through the first twelve months of the study period. The conclusion is that the Winter Warmth was particularly helpful in allowing high arrears customers pay their entire current bill in addition to making payments toward their pre-existing arrears.

Table 2 particularly documents the positive impact of Winter Warmth on payment-troubled customers. Customers receiving Winter Warmth assistance (Group 3), particularly for the customers with high beginning arrears. Note that the cumulative payment coverage ratio for Winter Warmth customers with lower arrears (<\$1, \$10 - \$100) tend to exceed (but do not always exceed) the cumulative payment coverage ratio for both E AP and non-EAP customers. For customers with higher arrears, however, the Winter Warmth cumulative payments significantly exceed those of the EAP and non-EAP customers. Observe that for customers with arrears of between \$101 and \$250:

- Three months into the study period (June 2008), Winter Warmth cumulative payment coverage ratios exceed those of the EAP and non-EAP customers by 15% (1.465, 1.463 and 1.606 for EAP, non-EAP, and Winter Warmth respectively).
- By the beginning of the next heating season (November 2008), the cumulative payment coverage ratios had converged between the three populations (1.240, 1.198 and 1.275 for EAP, non-EAP and Winter Warmth respectively)
- By the end of the second heating season (March 2009), the cumulative payment coverage ratio was virtually indistinguishable between the three populations (0.979, 1.001, 1.000 for EAP, non-EAP and Winter Warmth respectively).

For the highest arrears customers (>\$250), the difference was even greater. Winter Warmth recipients had cumulative payment coverage ratios in April, May and June 2008 in the range of 20% to 40% higher than both the EAP and non-EAP populations. By November, the payment coverage ratios had begun to converge for these extremely high arrears customers. By the end of the second heating season (March 2009), the cumulative payment coverage ratio for the high arrears Winter Warmth customers was virtually the same as for EAP and non-EAP customers (0.998, 1.033 and 1.029 respectively). Winter Warmth had, in other words, taken customers who were on the verge of service disconnection due to high arrears and made their cumulative payment coverage ratios virtually indistinguishable from other customers over the course of the study period.

The fact that the Winter Warmth customers had “further to go” in reaching this equilibrium is evidenced, as discussed above, by the comparison of the respective payment coverage ratios in the early months to the respective payment coverage ratios in the latter months.

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	x	x	X	1.205	1.466	1.502	1.413	1.334	1.306	1.282	1.224	1.079	0.959	0.964	0.984	1.040	1.083
Group 2 Total	x	x	X	1.171	1.491	1.458	1.355	1.287	1.263	1.220	1.174	1.093	1.006	1.002	1.004	1.042	1.087
Group 3 Total	x	x	X	1.475	1.639	1.648	1.555	1.445	1.405	1.352	1.280	1.139	1.003	0.974	1.000	1.064	1.105
< \$1 (G1)	x	x	x	0.956	1.115	1.147	1.095	1.040	1.030	1.013	1.019	0.952	0.916	0.924	0.962	0.983	1.026
< \$1 (G2)	x	x	x	1.000	1.371	1.214	1.134	1.106	1.081	1.054	1.049	1.024	0.979	0.979	0.983	1.000	1.047
< \$1 (G3)	x	x	x	1.030	1.194	1.238	1.200	1.155	1.153	1.132	1.097	1.003	0.916	0.903	0.934	0.985	1.031
\$1 - \$100 (G1)	x	x	x	1.446	1.534	1.421	1.316	1.228	1.241	1.196	1.168	1.044	0.913	0.919	0.950	0.985	1.033
\$1 - \$100 (G2)	x	x	x	1.126	1.397	1.429	1.309	1.260	1.222	1.193	1.149	1.064	0.976	0.978	0.980	1.021	1.059
\$1 - \$100 (G3)	x	x	x	1.385	1.589	1.579	1.493	1.412	1.360	1.318	1.253	1.111	0.974	0.949	0.989	1.064	1.101
\$101-\$250 (G1)	x	x	x	1.118	1.377	1.465	1.394	1.330	1.308	1.296	1.240	1.077	0.959	0.963	0.979	1.040	1.077
\$101-\$250 (g2)	x	x	x	1.151	1.442	1.463	1.366	1.286	1.294	1.249	1.198	1.088	0.997	1.003	1.001	1.040	1.081
\$101-\$250 (G3)	x	x	x	1.322	1.539	1.606	1.523	1.417	1.373	1.336	1.275	1.124	0.999	0.973	1.000	1.071	1.103
> \$250 (G1)	x	x	x	1.297	1.601	1.635	1.532	1.443	1.406	1.381	1.297	1.129	0.979	0.985	0.998	1.068	1.113
> \$250 (G2)	x	x	x	1.323	1.609	1.647	1.539	1.446	1.422	1.368	1.292	1.170	1.043	1.030	1.033	1.092	1.135
> \$250 (G3)	x	x	x	1.717	1.857	1.838	1.721	1.578	1.526	1.451	1.359	1.204	1.045	1.007	1.029	1.092	1.138

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

From one perspective, a utility offering a low-income program should be interested in generating payments by their program participants that, at a minimum, cover their ongoing bills for current consumption. Tables 1 and 2 above document that the NIPSCO Winter Warmth participants have accomplished that objective. Winter Warmth participants have made payments that, as a cumulative total, equal or exceed 100% of their bills for current usage. Three scenarios can occur:

- So long as customers have a cumulative payment coverage ratio at exactly 1.0, those customers are “no worse off” than they were before receiving their annual bills. They have paid exactly their current bill, but no more (and no less).

- To the extent that customers have a cumulative payment coverage ratio of more than 1.0, they have not only paid their entire current bill, but they have made some payment toward their arrears as well. Customers with a cumulative payment coverage ratio of more than 1.0 are better off in that they have reduced their arrears.
- To the extent that customers have a cumulative payment coverage ratio of less than 1.0, they have not paid their entire current bill. These customers may well have made payments toward arrears. A customer with a current bill of \$100 and an arrears of \$50, who makes a \$50 payment, has retired his or her arrears but would have made no payment toward his or her current bill.¹⁸

Clearly, a utility wants its customers not only to pay their current bills, but wants those customers to retire whatever arrears might exist as well. Tables 1 and 2 do not take those pre-existing arrears into account in calculating the payment coverage ratios. In Tables 1 and 2, all payments are directed toward bills for current usage.

Table 3 presents a somewhat different perspective. In Table 3, all payments are assumed to be used to retire arrears until those arrears reach \$0. January 2008 arrears are used to develop Table 3. Only when payments exceed the January 2008 arrears are those payments then applied against the payment coverage ratio. Table 3 examines the extent to which customers are making the utility whole on the entire payment obligation (current bill plus arrears).

Because of this difference in calculation, the payment coverage ratios in Table 3 are lower than in Tables 1 and 2, since some of the payments have been “diverted” to retiring arrears first. Table 3 can present three scenarios:

- A “negative” payment coverage ratio means that the payments were less than the outstanding arrears. Under a negative coverage ratio, the customer still owes all or part of his or her pre-existing arrears plus his or her entire current bill.
- A payment coverage ratio that is positive, but less than 1.0, means that the customer has completely retired his or her arrears, but has not made payments equal to the current bill. A payment coverage ratio of 0.40, for example, means that a customer has completely retired his or her pre-existing arrears and made additional payments equal to 40% of the customer’s current bill.
- A payment coverage ratio that is positive, and is greater than 1.0, means that the customer has completely retired his or her arrears *and* has made payments that exceed the customer’s current bill. A customer on a levelized budget billing plan, for example, may well pre-pay some portion of the next winter heating season’s monthly bills. A customer who receives a lump-sum LIHEAP payment may well have pre-paid his or her current monthly bill.

¹⁸ A negative payment coverage ratio may occur when the January arrears are subtracted from any payment before calculating the coverage ratio. A negative payment coverage ratio indicates that there are still outstanding arrears. For example, a customer with a \$100 bill and a \$100 pre-existing arrears, making a \$50 payment would have a payment coverage ratio of (0.50) (\$50 payment minus \$100 arrears / \$100 bill).

NIPSCO customers that have participated in the Energy Assistance Program (Group 1) outperform non-EAP participants (Group 2) as measured by the payment coverage ratio (after subtracting the January 2008 arrears). Not surprisingly, the payment coverage ratio (after subtracting the January arrears) for Energy Assistance recipients as a whole narrows during the warm weather months (July 2008 through November 2008) before widening in the winter months (in which energy assistance is received).

By the end of the study period, the Energy Assistance customers exhibited a cumulative payment coverage ratio of 0.877 while the non-Energy Assistance ratio was 0.925. What this means is that by the end of the study period, the EAP participants had completely retired their January 2008 arrears and had paid 87.7% of their current bill in that period. Non-Energy Assistance participants had completely retired their January 2008 arrears and paid 92.5% of their current bill in that same time period.

Winter Warmth (Group 3) participants performed as well as both the Energy Assistance and non-Energy Assistance customers, and better than the EA and non-EA participants amongst those customers with high arrears. While the Winter Warmth participants had cumulative payment coverage ratios that closely tracked the other two populations for both the sub-population with \$1 - \$100 in January arrears and the sub-population with \$101 - \$250 in January arrears, those Winter Warmth customers with arrears greater than \$250 had higher cumulative payment coverage ratios than the EAP and non-EAP populations beginning in April 2008 and continuing through the remainder of the study period. As Table 3 shows, by the end of the study period, the Winter Warmth recipients:

- Who had January 2008 arrears of greater than \$250 had a cumulative payment coverage ratio of 0.839, compared to 0.813 for Energy Assistance recipients and 0.808 for customers having neither Winter Warmth nor Energy Assistance;
- Who had January 2008 arrears of between \$101 and \$250 had a cumulative payment coverage ratio of 0.921, compared to 0.905 for Energy Assistance recipients and 0.920 for customers having neither Winter Warmth nor Energy Assistance;
- Who had January 2008 arrears of between \$1 and \$100 had a cumulative payment coverage ratio of 0.964, compared to 0.936 for Energy Assistance Recipients and 0.968 for customers receiving neither Winter Warmth nor Energy Assistance.

The most improvement in cumulative payment coverage ratios (having subtracted January arrears) came within the Winter Warmth population. In comparing May 2009 results to May 2008 results, the Winter Warmth population with \$0 in January 2008 arrears increased its payment coverage ratio by 5% (compared to decreases in coverage ratios for the Energy Assistance and non-Energy Assistance populations. The Winter Warmth population with between \$1 and \$100 in January arrears improved its payment coverage ratio 9%, compared to 5% and 4% for the Energy Assistance and non-Energy Assistance populations respectively. The rate of improvement began to converge at the \$100 - \$250 population, with the Winter Warmth population having a coverage ratio of 17% compared to 16% and 15% for the Energy Assistance

and non-Energy Assistance populations respectively. For the highest arrears customers, the payment coverage ratios remained converged (27%, 28%, 31% for Winter Warmth, Energy Assistance and non-Energy Assistance respectively).

Table 3 (NIPSCO Winter Warmth)																	
Cumulative Payments (minus January Arrears) / Cumulative Bills																	
January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	(0.6)	(0.0)	0.410	0.556	0.681	0.753	0.777	0.790	0.808	0.824	0.821	0.786	0.749	0.770	0.798	0.843	0.877
Group 2 Total	0.081	0.435	0.529	0.652	0.774	0.830	0.844	0.854	0.871	0.876	0.874	0.860	0.833	0.845	0.858	0.891	0.925
Group 3 Total	(0.4)	0.099	0.324	0.553	0.697	0.783	0.818	0.828	0.849	0.857	0.847	0.813	0.769	0.770	0.804	0.858	0.893
< \$1 (G1)	0.923	0.921	0.991	0.984	1.024	1.043	1.032	1.013	1.010	1.002	1.007	0.967	0.942	0.944	0.970	0.985	1.017
< \$1 (G2)	1.434	1.134	1.029	1.024	1.110	1.088	1.070	1.063	1.054	1.042	1.040	1.026	0.996	0.994	0.996	1.008	1.042
< \$1 (G3)	0.901	0.804	0.801	0.851	0.924	0.970	0.979	0.977	0.988	0.988	0.976	0.931	0.881	0.875	0.900	0.941	0.977
\$1 - \$100 (G1)	0.357	0.570	0.692	0.824	0.900	0.922	0.926	0.919	0.944	0.940	0.942	0.895	0.833	0.846	0.873	0.901	0.936
\$1 - \$100 (G2)	0.823	0.773	0.740	0.814	0.915	0.964	0.957	0.962	0.964	0.967	0.958	0.930	0.891	0.900	0.907	0.939	0.968
\$1 - \$100 (G3)	0.509	0.548	0.595	0.748	0.875	0.930	0.947	0.953	0.960	0.964	0.951	0.904	0.843	0.839	0.876	0.934	0.964
\$101-\$250 (G1)	(0.4)	0.128	0.505	0.623	0.748	0.824	0.844	0.854	0.867	0.885	0.879	0.828	0.786	0.806	0.828	0.876	0.905
\$101-\$250 (g2)	0.004	0.447	0.527	0.651	0.772	0.841	0.853	0.858	0.886	0.889	0.884	0.855	0.826	0.845	0.855	0.888	0.920
\$101-\$250 (G3)	(0.1)	0.232	0.432	0.615	0.751	0.843	0.869	0.873	0.887	0.898	0.892	0.846	0.803	0.804	0.836	0.893	0.921
> \$250 (G1)	(1.1)	(0.3)	0.189	0.382	0.537	0.627	0.664	0.687	0.711	0.735	0.729	0.700	0.664	0.689	0.720	0.776	0.813
> \$250 (G2)	(1.0)	(0.2)	0.107	0.334	0.497	0.603	0.642	0.665	0.698	0.714	0.709	0.699	0.676	0.695	0.721	0.772	0.808
> \$250 (G3)	(1.0)	(0.2)	0.091	0.401	0.572	0.673	0.722	0.738	0.767	0.778	0.768	0.743	0.702	0.705	0.743	0.800	0.839

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

Winter Warmth does not result in perfect payments by program participants. The program does, however, result in a substantial improvement in the payment patterns of program participants. The Winter Warmth program appears to have assisted the customers with the highest arrears the most. While the overall payment ratio was less than 1.0, customers with arrears greater than \$250 nonetheless had retired those arrears and had paid more than 80% of their current bill during the period. At worst, the program takes customers in significant payment trouble and improves their payment performance to reflect, even for the highest arrears customers, the performance of non-payment-troubled customers. Even more frequently, Winter Warmth participants consistently outperform both those customers who participate in only EAP and those customers who participate in neither EAP nor Winter Warmth. These results are particularly significant given the fact that eligibility for Winter Warmth, by definition, is limited to customers with significant payment troubles while the eligibility for the other two groups is not.

LEVEL OF COLLECTION EFFORT

As previously stated, the payment coverage ratio (whether or not adjusted to take into account beginning arrears) does not provide the entire picture with respect to payment performance by low-income customers. One additional important inquiry, which this section of the evaluation provides, examines the level of collection that NIPSCO devotes to its low-income customers.

The level of collection effort is an important constraint on the payment coverage ratios discussed above. Two customers, each of whom have paid 95% of their bills for current usage, present substantially different pictures of cost and risk to the utility if one makes his or her payment with little or no collection effort while the other makes the same dollar payment, but only after the utility exerts considerable collection interventions directed toward the customer.

In assessing the collection efforts, the same populations were considered. Group 1 involves customers who participated in EAP in 2008. Group 2 did not receive either EAP or Winter Warmth in 2008. Group 3 received Winter Warmth in 2008. Each of these groups is again disaggregated by the level of arrears at the beginning of the study period (January 2008).

Collections are measured by the metric referred to as “collection months.” A “collection month” indicates a month in which *any* collection activity occurs. Each calendar month can have only one “collection month” of activity per customer.

Using the groups identified above, the level of collection efforts are considered using the following metrics. The analysis begins by setting out a basic count of the number of collection months and then introduces increasingly refined measures by which to derive the significance of the number of collection months. The metrics include:

- The cumulative number of collection months. This provides a simple count of the amount of collection effort exerted;
- The cumulative number of collection months indexed to the cumulative dollars of bills. Indexing the count of collection months to the count of the dollars of bills allows a comparison between time periods and group sizes since the index eliminates the impact of population size on the metric; and
- The number of collection months per each payment received on a monthly basis. Indexing the count of collection months by the number of payments received provides insight into the level of collection effort associated with generating each payment. If the index is 0.0, then each payment is received with no associated collection activity; if the index is 1.0, then each payment received in a month is associated with some level of collection activity in that month.

While the three populations of NIPSCO low-income customers have similar cumulative payment coverage ratios by May 2009, as described above, they nonetheless impose a substantially different burden on the utility. Table 4 presents the cumulative number of collection months for

the three groups of customers. By May 2009, the non-EAP customers had the fewer number of cumulative collection months (5,786), followed by customers having participated in EAP (7,586). Winter Warmth participants accumulated the greatest number of collection months (9,381).¹⁹

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	619	1,171	1,784	2,391	2,886	3,238	3,679	4,105	4,530	4,921	5,223	5,591	6,022	6,459	6,937	7,299	7,586
Group 2 Total	397	863	1,359	1,812	2,202	2,474	2,812	3,161	3,498	3,789	3,981	4,224	4,533	4,854	5,238	5,530	5,786
Group 3 Total	719	1,424	2,144	2,810	3,368	3,882	4,372	4,902	5,433	5,920	6,311	6,797	7,378	7,940	8,552	9,015	9,381
< \$1 (G1)	16	40	77	126	173	204	234	259	286	316	341	366	402	439	482	522	557
< \$1 (G2)	16	80	167	259	347	408	482	558	626	681	718	759	813	885	972	1,041	1,105
< \$1 (G3)	34	125	218	323	415	500	574	651	731	800	857	937	1,031	1,129	1,248	1,338	1,405
\$1 - \$100 (G1)	64	101	147	203	254	285	337	390	441	483	511	549	594	632	675	706	734
\$1 - \$100 (G2)	45	97	159	216	264	299	340	379	419	455	476	501	538	575	625	663	696
\$1 - \$100 (G3)	74	141	212	282	341	399	447	500	558	609	650	699	752	805	866	916	955
\$101-\$250 (G1)	166	313	488	664	801	901	1,028	1,155	1,271	1,373	1,451	1,550	1,651	1,774	1,911	2,013	2,090
\$101-\$250 (G2)	92	200	305	410	496	561	637	714	792	862	909	967	1,041	1,118	1,204	1,270	1,329
\$101-\$250 (G3)	204	394	575	756	901	1,036	1,167	1,305	1,439	1,569	1,666	1,784	1,932	2,075	2,229	2,350	2,446
> \$250 (G1)	373	717	1,072	1,398	1,658	1,848	2,080	2,301	2,532	2,749	2,920	3,126	3,375	3,614	3,869	4,058	4,205
> \$250 (G2)	244	486	729	927	1,096	1,207	1,354	1,510	1,661	1,790	1,877	1,995	2,138	2,273	2,434	2,553	2,652
> \$250 (G3)	407	764	1,139	1,450	1,712	1,948	2,185	2,447	2,706	2,944	3,140	3,379	3,665	3,933	4,211	4,412	4,576

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

/a/ Collection activity months weighted by number of participants in sample.

Table 4 shows that customers with \$0 in January 2008 arrears presented less of a collection problem for NIPSCO. While the customers with no arrears constituted 19% (EAP), 42% (no-EAP) and 21% (Winter Warmth) customers samples respectively, they represented only 7% (EAP), 19% (no-EAP) and 15% (Winter Warmth) respectively of the cumulative collection months by the end of the study period.

The participation of customers in EAP has a distinctly positive impact on the amount of collection effort required to maintain payment coverage ratios, particularly at lower levels of

¹⁹ This result occurred almost by definition, since eligibility for participation in the Winter Warmth program depends upon a customer being in significant payment trouble.

beginning arrears. One can set the collection efforts directed toward EAP customers as a ratio to the collection efforts directed toward Winter Warmth customers. If the ratio is 1.0, the collection efforts are identical.

As seen through this analysis of Table 4 data, EAP customers with \$0 of January 2008 arrears required only 40% as much cumulative collection effort as Winter Warmth customers did (557 vs. 1,405 yields a ratio 0.40) over the course of the 17-month period, even though the payment coverage ratios of these two groups were not substantially different by the end of the study period. EAP customers with January 2008 arrears of between \$1 and \$100 generated three-quarters the collection cumulative collection efforts through May 2009 that Winter Warmth customers did (734 vs. 955 yields a ratio of 0.77). While, in other words, NIPSCO must exert proportionately more effort to collect from Winter Warmth customers with lower beginning arrears, the Winter Warmth program equalizes the need for collection efforts directed toward customers with higher arrears.

In contrast, the differential in cumulative collection activities narrowed substantially for NIPSCO customers with high January 2008 arrears over the 17-month study period. For customers with a January 2008 arrears of between \$100 and \$250, EAP customers generated 85% of the cumulative collection activities that Winter Warmth customers did by My 2009 (2,090 vs. 2,446 yields ratio of 0.85). For customers with a January arrears of more than \$250, EAP customers generated more than 90% of the collection activities that Winter Warmth customers did (4,205 vs. 4,576 yields a ratio of 0.92).

It would be idiomatic to notice that customers with higher arrears generate a greater number of collection activities. Nonetheless, two conclusions can be drawn from the data and discussion above.

- First, the receipt of Energy Assistance enhances the ability to collect with lesser collection activity. In each instances, when comparing Energy Assistance to Winter Warmth customers (without Energy Assistance), a lower level of collection activities was associated with the Energy Assistance recipients.
- Second, the advantage that Energy Assistance provides dissipates as beginning arrears increase. While still lower at the highest level of arrears, the ratio of EAP collection activities to Winter Warmth collection activities was closer to being the same for customers with January 2008 arrears over \$250 (ratio of 0.92) than for customers with either January arrears of less than \$1 (ratio of 0.40) or January arrears of between \$1 and \$100 (ratio of 0.77).

While EAP appears to succeed not only in retiring arrears, but in reducing the collection activity required to maintain payment levels, so long as the initial arrears can be reduced to \$0, EAP standing alone works less effectively when arrears remain on the account. Just as importantly, Table 4 dramatically shows the shortcoming of using a payment coverage ratio, standing alone, to measure the impact of a low-income rate affordability program. Different populations with very similar payment coverage ratios can impose dramatically different burdens on a utility attributable to the collection effort required to generate those payments.

While calculating the collection activity per January accounts in arrears provides insights into the relative level of collection activity, it does not take into account the fact that the number and size of bills issued may vary by month. By converting collection activity into an index (collection activity per dollars bill), Table 5 presents the amount of collection activity normalized for the level of bills issued each month. This data is presented on a cumulative basis, with the results of each month added to the prior month's results and recalculated.

The index of collection events to the dollars of bills is presented in Table 5 below. As can be seen in Table 5, and as concluded above, the collection effort directed toward customers with no January 2008 arrears is significantly less than the collection efforts directed toward customers that did have January arrears. By May 2009, for EAP and non-EAP customers, while there were fewer than 2.0 collection months generated for each \$1,000 of bills issued to accounts with no arrears in January 2008, there were more than 5.0 collection months generated for each \$1,000 of bills generated for accounts that had arrears of between \$100 and \$250, and roughly 4.0 collection months generated for each \$1,000 of bills on accounts with January 2008 arrears greater than \$250.

While Winter Warmth customers required more collection activity per \$1,000 of bills, the pattern held the same. By May 2009, more than five (5.0) collection months were exerted for each \$1,000 of bills for accounts with January 2008 arrears between \$100 and \$250, while nearly four collection months were asserted per \$1,000 of bills for accounts with January 2008 arrears of more than \$250; in contrast, only 3.0 collection months were exerted for each \$1,000 of bills on accounts with \$0 in January 2008 arrears.

Moreover, from the perspective of the number of collection months per \$1,000 of bills, there is little difference between having low arrears and having high arrears. For all three populations (EAP, no EAP, Winter Warmth/no-EAP), the distinction lies between having no arrears in January 2008 and having *some* level of arrears. It is important to remember in looking at Table 5 that the population studied each month does not involve the accounts with arrears in that month. The disaggregation of arrears is based on the level of arrears appearing on the January 2008 bill. Even accounts with January 2008 arrears of between \$1 and \$100 generated between 5.0 and 6.0 collection events per \$1,000 of bills issued, compared to a substantially lower number of such activities for accounts with \$0 of January 2008 arrears.

In Table 5, by May 2009, the number of cumulative collection months, on a per \$1,000 of bills basis, directed toward the Winter Warmth population was lower than either the EAP or the non-EAP population for accounts having January 2008 arrears of more than \$250. This was true for different mile-posts, including immediately preceding the winter (October 2008), at the immediate end of the winter (March 2009), and at the end of the study period (May 2009). The same pattern did not hold for accounts with \$0 in January 2008 arrears or for accounts with lower levels of January 2008 arrears.

While the delivery of EAP appears to be sufficient to lessen the need for collection activities at lower levels of arrears, or when no arrears exist on an account, EAP standing alone does not appear to be sufficient to lessen the need for collection activities toward accounts with higher

levels of arrears. When NIPSCO began with severely payment-troubled customers, the delivery of benefits through Winter Warmth allowed customers to outperform customers only receiving Energy Assistance.

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	3.00	2.98	3.03	3.27	3.58	3.67	3.89	4.04	4.23	4.33	4.32	4.13	3.88	3.80	3.76	3.79	3.87
Group 2 Total	2.11	2.35	2.59	2.84	3.19	3.24	3.43	3.57	3.72	3.77	3.70	3.52	3.32	3.25	3.24	3.28	3.38
Group 3 Total	3.14	3.12	3.23	3.39	3.63	3.84	4.00	4.13	4.30	4.38	4.38	4.21	3.95	3.85	3.82	3.85	3.91
< \$1 (G1)	0.45	0.62	0.87	1.11	1.40	1.50	1.58	1.57	1.60	1.63	1.64	1.54	1.47	1.43	1.44	1.48	1.56
< \$1 (G2)	0.21	0.68	1.05	1.32	1.65	1.72	1.84	1.92	1.99	1.99	1.92	1.78	1.67	1.64	1.67	1.70	1.78
< \$1 (G3)	0.91	1.65	1.97	2.30	2.58	2.78	2.91	3.00	3.17	3.23	3.22	3.10	2.91	2.86	2.89	2.94	3.01
\$1 - \$100 (G1)	5.12	4.22	4.04	4.63	5.25	5.32	5.86	6.23	6.71	6.90	6.80	6.49	6.00	5.66	5.63	5.62	5.75
\$1 - \$100 (G2)	3.38	3.52	3.84	4.34	4.80	4.97	5.20	5.35	5.50	5.62	5.47	5.10	4.80	4.66	4.67	4.73	4.92
\$1 - \$100 (G3)	4.28	3.81	3.86	4.12	4.42	4.75	4.94	5.09	5.32	5.41	5.39	5.15	4.78	4.59	4.57	4.64	4.74
\$101-\$250 (G1)	4.33	4.08	4.17	4.51	4.86	5.04	5.39	5.67	5.96	6.10	6.09	5.80	5.39	5.21	5.19	5.24	5.35
\$101-\$250 (G2)	3.50	3.73	3.83	4.16	4.63	4.75	5.07	5.32	5.62	5.77	5.73	5.45	5.15	5.04	5.01	5.09	5.23
\$101-\$250 (G3)	4.84	4.43	4.40	4.60	4.90	5.18	5.42	5.57	5.76	5.90	5.87	5.58	5.23	5.05	5.03	5.08	5.16
> \$250 (G1)	2.97	3.11	3.12	3.31	3.55	3.63	3.81	3.94	4.13	4.25	4.24	4.09	3.86	3.83	3.78	3.81	3.86
> \$250 (G2)	2.86	2.93	3.11	3.26	3.52	3.55	3.74	3.92	4.10	4.17	4.15	4.03	3.83	3.76	3.73	3.77	3.83
> \$250 (G3)	3.06	3.00	3.09	3.19	3.38	3.55	3.70	3.83	4.00	4.06	4.08	3.95	3.72	3.64	3.58	3.60	3.64

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

Finally, while the Tables above examine the level of collection interventions indexed to the number and dollar level of bills, Table 6 examines the level of collection interventions indexed to the number of payments received. Table 6 documents that NIPSCO engages in fewer collection months for each payment that it generates from its customers when customers participate in EAP. When compared to customers receiving only Winter Warmth, customers receiving Energy Assistance benefits had fewer collection months for the population as a whole and for each subpopulation disaggregated by the level of January 2008 arrears (with the exception of accounts with \$1 - \$100 in January arrears). The performance of EAP compared to Winter Warmth was compared at the end of the first winter heating season (April 2008), the middle non-heating

²⁰ NIPSCO data differs from Citizens Gas and Vectren data in that NIPSCO provides a count of the actual number of collection events that occur in a month, not merely an indication that some collection occurred.

months (July 2008), immediately preceding the winter heating season (October 2008), and the end of the second heating season (April 2009).

Otherwise, the payment data is reflective and confirmatory of the data regarding collections and bills. Over the course of the 17-month study period, customers with no January 2008 arrears generated substantially fewer collection activities than did customers with a positive January 2008 arrears. While a reduction in the level of January 2008 arrears resulted in a pattern of reduced collection efforts throughout the year, the discontinuity between varying arrearage levels was not as great as the discontinuity between those accounts with some arrears in January 2008 and those accounts with no arrears.

Table 6 (NIPSCO Winter Warmth) Collection Months per Payment by Month																	
January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	1.084	0.840	0.746	0.829	0.701	0.522	0.722	0.708	0.690	0.626	0.623	0.767	0.890	0.802	0.839	0.610	0.534
Group 2 Total	0.511	0.639	0.730	0.592	0.549	0.406	0.531	0.548	0.524	0.446	0.371	0.441	0.572	0.562	0.643	0.472	0.463
Group 3 Total	1.052	1.141	1.055	0.868	0.767	0.710	0.739	0.843	0.837	0.786	0.822	0.949	1.101	1.074	0.949	0.705	0.615
< \$1 (G1)	0.101	0.158	0.268	0.368	0.362	0.218	0.221	0.188	0.179	0.196	0.195	0.195	0.273	0.285	0.307	0.317	0.302
< \$1 (G2)	0.046	0.206	0.275	0.277	0.278	0.209	0.238	0.242	0.216	0.173	0.128	0.139	0.193	0.254	0.297	0.231	0.242
< \$1 (G3)	0.207	0.645	0.629	0.642	0.580	0.506	0.461	0.510	0.536	0.447	0.445	0.602	0.692	0.745	0.804	0.598	0.463
\$1 - \$100 (G1)	0.914	0.587	0.676	0.889	0.761	0.508	0.981	0.964	0.797	0.778	0.560	0.950	1.000	0.704	0.843	0.674	0.718
\$1 - \$100 (G2)	0.502	0.736	0.973	0.751	0.704	0.529	0.660	0.625	0.650	0.542	0.445	0.460	0.711	0.632	0.886	0.620	0.647
\$1 - \$100 (G3)	0.885	0.963	0.993	0.945	0.763	0.760	0.696	0.840	0.919	0.800	0.743	0.890	1.019	0.938	0.924	0.733	0.658
\$101-\$250 (G1)	1.407	0.974	0.825	0.989	0.787	0.606	0.914	0.977	0.823	0.699	0.722	0.917	0.886	0.939	1.022	0.685	0.592
\$101-\$250 (G2)	0.750	0.890	0.984	0.856	0.756	0.610	0.793	0.825	0.853	0.762	0.688	0.758	0.901	0.833	0.990	0.722	0.710
\$101-\$250 (G3)	1.152	1.322	1.109	1.053	0.866	0.836	0.918	0.971	0.957	0.931	0.837	1.009	1.106	1.115	1.031	0.805	0.730
> \$250 (G1)	1.658	1.182	0.879	0.911	0.776	0.621	0.820	0.778	0.888	0.798	0.859	1.010	1.290	1.039	1.041	0.695	0.583
> \$250 (G2)	1.110	1.073	1.260	0.853	0.791	0.544	0.876	0.943	0.866	0.751	0.770	0.958	1.153	0.987	1.003	0.706	0.652
> \$250 (G3)	1.566	1.357	1.251	0.866	0.807	0.742	0.815	0.963	0.919	0.903	1.112	1.154	1.387	1.295	0.987	0.701	0.632

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

It is important to note the dual impact of Winter Warmth on the level of collection activity identified in Tables 5, 6 and 7. There can be little question but that participation in EAP, in addition to receiving Winter Warmth benefits, will reduce the need for collection interventions directed by the company toward accounts in arrears. This participation reduces the need for collection interventions in that it reduces the rate of collection interventions holding the level of arrears constant. EAP also reduces the number of customers in the higher level of arrears where

the rate of collection interventions is highest. The combined reduction in collections interventions created by these two results is greater than the impact of either impact examined and measured separately.

EAP standing alone, however, is not as effective in addressing the severely payment-troubled customers toward which Winter Warmth is directed. With customers experiencing higher levels of beginning arrears generate improved performance through Winter Warmth than through EAP standing alone.

EFFECTIVENESS OF COLLECTIONS

The third section of this Winter Warmth evaluation examines the effectiveness of the utility collection activities. A utility can engage in a large number of collection activities irrespective of the effectiveness of those activities. The over-noticing of service disconnections for nonpayment, for example, represents one collection activity that is likely to impede rather than to promote the collection of bills. The payment coverage ratio discussed above, while related to collection effectiveness, does not directly address the effectiveness of collection interventions. The effectiveness of collection interventions can be measured by examining the relationship between the use of collection activities and the receipt of payments.

Improvements in the effectiveness of collection activities can occur in either of two ways:

- The need for collection interventions can be reduced thus allowing an increased payment per each collection intervention performed; in the first instance, improvement can be seen even if total dollars collected remains the same (but the interventions needed to generate those dollars decreases); or
- The customer response to the collection activity can improve thus allowing an increased payment per each collection intervention performed. In this second instance, improvement can be seen if the total number of collections activities remains the same but the dollars generated by those activities increase.

In the discussion below, the effectiveness of collection activities directed toward the Winter Warmth participant populations is measured by reference to the following metrics:

- The average payment per collection month by month;
- The number of collection months associated with the dollars of payments by month;
- The average cumulative payments by the cumulative number of collection months; and
- The average cumulative number of collection months associated with the cumulative dollars of payments.

In essence, this evaluation considers the effectiveness and efficiency of collection activities from two different but related perspectives. On the one hand, it examines how much revenue is

generated by each collection intervention. On the other hand, it examines how many collection activities are associated with the generation of the revenue. From the first perspective, the number of collection interventions is taken as the “given”; from the second, the amount of revenue is taken as the given. The two perspectives are alternatively examined on a month-by-month and on a cumulative basis.

Whether NIPSCO collects more money per each collection activity in which it engages from customers who participated in the Winter Warmth or from customers who received benefits only from EAP depends upon the season being examined. Table 7 sets forth the data. For the populations as a whole, the Energy Assistance population not surprisingly generates more dollars per collection month than does the Winter Warmth population during the cold weather months; these months are the months in which federal energy assistance is distributed. Of the seven months in which the Energy Assistance population generated higher payment per collection activity month, six of them involve January (2009), February (2008 and 2009), March (2008), October (2008) and November (2008).

The impact of the Energy Assistance distribution is most evident in the months of January through March, where Energy Assistance recipients pay roughly \$1,000 or more for each collection month of activity by NIPSCO. Energy Assistance payments generate a particular benefit in helping customers who had no January 2008 arrears in generating payments without further collection effort. For customers with \$0 in arrears, Energy Assistance recipients generated more dollars of payment per collection activity month than did customers receiving only Winter Warmth in 16 of the 17 study months.

Indeed, in most months, particularly the warm weather months, the amount by which the average payment of the Energy Assistance recipient with \$0 in January arrears exceeded that of the corresponding Winter Warmth recipient was substantial. As shown in Table 7, while in June, the EAP population paid \$504 per collection month, the Winter Warmth population paid \$309; in August, while the EAP population paid \$536 per collection month, the Winter Warmth population paid \$243; in October, while the EAP population paid \$445 per collection month, the Winter Warmth population paid \$239.²¹

In contrast, the fact that non-EAP customers outperform EAP customers in the payments they make for each collection month of activity is also evident in Table 7 below on a month-by-month basis. In each season of the year, non-EAP participants out-perform their EAP counterparts. While non-EAP customers as a whole paid \$406 per collection month in January 2008, EAP participants paid \$146 in that same month. The gap between the two groups narrowed by the warm weather months, but nonetheless stayed at a rate where non-EAP participants paid more per collection month throughout the months of May through October 2008.

²¹ Remember, this does not necessarily mean that the EAP population paid more in gross dollar terms. The data presents an index of the average dollars paid for each collection activity month exerted by NIPSCO in that month. The EAP population could have paid exactly the same amount of dollars while requiring fewer collection activities in making those payment.

**Table 7 (NIPSCO Winter Warmth)
Average Payment by Collection Month by Month**

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	\$146	\$256	\$431	\$279	\$292	\$345	\$164	\$161	\$152	\$185	\$193	\$192	\$231	\$349	\$343	\$435	\$345
Group 2 Total	\$406	\$334	\$238	\$303	\$303	\$367	\$188	\$187	\$195	\$216	\$316	\$358	\$340	\$398	\$325	\$396	\$318
Group 3 Total	\$175	\$223	\$241	\$363	\$343	\$285	\$212	\$170	\$171	\$179	\$162	\$193	\$208	\$276	\$357	\$459	\$374
< \$1 (G1)	\$1879	\$1160	\$811	\$474	\$310	\$804	\$375	\$536	\$505	\$445	\$631	\$827	\$756	\$899	\$795	\$549	\$471
< \$1 (G2)	\$464	\$596	\$407	\$414	\$355	\$398	\$308	\$366	\$352	\$472	\$887	\$1119	\$889	\$714	\$515	\$549	\$426
< \$1 (G3)	\$862	\$290	\$302	\$300	\$316	\$309	\$259	\$243	\$217	\$239	\$266	\$281	\$319	\$352	\$369	\$435	\$426
\$1 - \$100 (G1)	\$133	\$264	\$265	\$195	\$144	\$193	\$84	\$78	\$95	\$93	\$181	\$128	\$152	\$344	\$231	\$294	\$231
\$1 - \$100 (G2)	\$325	\$195	\$148	\$174	\$206	\$222	\$120	\$142	\$131	\$138	\$251	\$310	\$230	\$303	\$209	\$272	\$168
\$1 - \$100 (G3)	\$169	\$177	\$176	\$267	\$283	\$185	\$165	\$148	\$126	\$152	\$150	\$166	\$190	\$272	\$311	\$372	\$268
\$101-\$250 (G1)	\$93	\$194	\$304	\$189	\$228	\$253	\$112	\$101	\$101	\$140	\$134	\$124	\$192	\$287	\$223	\$321	\$219
\$101-\$250 (G2)	\$258	\$238	\$173	\$210	\$217	\$255	\$117	\$110	\$127	\$119	\$160	\$190	\$206	\$270	\$211	\$244	\$208
\$101-\$250 (G3)	\$134	\$154	\$200	\$247	\$257	\$230	\$149	\$127	\$130	\$132	\$150	\$152	\$175	\$241	\$263	\$365	\$239
> \$250 (G1)	\$112	\$214	\$467	\$311	\$355	\$393	\$185	\$178	\$155	\$187	\$157	\$166	\$181	\$297	\$351	\$497	\$410
> \$250 (G2)	\$254	\$327	\$217	\$340	\$348	\$465	\$185	\$159	\$176	\$187	\$170	\$204	\$223	\$328	\$313	\$431	\$373
> \$250 (G3)	\$140	\$250	\$259	\$478	\$416	\$333	\$242	\$174	\$186	\$194	\$140	\$190	\$192	\$268	\$420	\$549	\$463

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

There is an improvement in payment performance for both Winter Warmth and EAP customers from 2008 to 2009. Though not universal, the pattern that exists involves both Winter Warmth and EAP customers paying more per each collection activity engaged in by the company in the months of January through May 2009 as compared to January through May 2008. The improvement in payment is particularly noticeable for Winter Warmth customers having January 2008 arrears of more than \$250. In looking at the EAP and Winter Warmth populations as a whole:

- The EAP participant population improved its January payment from \$146 (2008) to \$231 per collection month of activity, while the Winter Warmth population improved its January payment from \$175 to \$208;
- The EAP participant population improved its February payment from \$256 (2008) to \$349 (2009), while the Winter Warmth population improved its February payment from \$223 (2008) to \$276 (2009);

- The EAP population saw a degradation in its March payments (from \$431 to \$343), while the Winter Warmth population improved its March payment from \$241 (2008) to \$357 (2009);
- The EAP population improved its April payment from \$279 (2008) to \$435 (2009), while the Winter Warmth population improved its April payment from \$363 (2008) to \$459.

As is discussed in more detail below, the increased payments do not reflect higher 2009 bills.

Table 8 presents the flipside of Table 7. While Table 7 considers the average payment for each collection activity month which NIPSCO asserts, Table 8 measures the extent to which NIPSCO needs to engage in collection efforts to gain the level of customer payment it actually received toward the customer bills. A lower figure indicates better performance than a higher figure. A figure of 3.2, for example, means that for each \$1,000 in payments, NIPSCO was required to exert in 3.2 collection months of activity. In contrast, a figure of 1.6 means that NIPSCO would have generated the same \$1,000, but would have required only 1.6 collection months of activity to generate that payment.

As a general rule, EAP makes it easier for NIPSCO to generate payments from customers having \$0 in January 2008 arrears, while Winter Warmth better serves the population that has a beginning arrears. On this metric, examining the population as a whole provides an incomplete story. In seven of the 17 study months, the Winter Warmth population had a higher number of collection activity months per \$1,000 received in payment than did the EAP population, while in the other ten months, the EAP population generated fewer collection activity months. Despite these inconclusive results for the population as a whole, a more evident pattern develops when examining the populations disaggregated by beginning arrears.

- For customers with a \$0 arrears in January 2008, Winter Warmth generated a higher number of collection activity months than did the EAP population in 16 of the 17 study months. Indeed, in most months, the Winter Warmth customers required from two to four times as many collection activities as did the EAP population for each \$1,000 in payments.
- For customers with a January 2008 arrears of more than \$250, however, the opposite pattern appeared. Winter Warmth customers required fewer collection activities than did EAP participants in 12 of the seventeen months. This same pattern existed for other accounts with January 2008 arrears. For customers with between \$100 and \$250 in arrears, Winter Warmth customers required fewer collection activity months in 13 of the 17 study months.

For customers with between \$1 and \$100 in arrears, Winter Warmth customers required fewer collection activity months in 11 of the 17 study months. The months that are the exceptions, however, are significant. Of the six months in which EAP customers required fewer collection activity months per \$1,000 in payments, five were winter months during which Energy

Assistance is distributed. In those months, it is to be expected that the collection activity months for each \$1,000 of payment would be lower for the EAP population.

The lessons learned from Table 8 are consistent with previously discussed observations. While Winter Warmth tends to generate its greatest positive impacts for customers with higher beginning arrears, the Energy Assistance program tends best to help customers who begin with fewer or no arrears.

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	6.84	3.91	2.32	3.59	3.42	2.90	6.11	6.23	6.60	5.42	5.18	5.22	4.33	2.87	2.92	2.30	2.90
Group 2 Total	2.47	3.00	4.21	3.30	3.30	2.72	5.33	5.33	5.12	4.64	3.16	2.79	2.94	2.51	3.08	2.53	3.14
Group 3 Total	5.72	4.49	4.15	2.75	2.92	3.51	4.71	5.90	5.86	5.58	6.16	5.19	4.80	3.62	2.80	2.18	2.67
< \$1 (G1)	0.53	0.86	1.23	2.11	3.22	1.98	2.67	1.87	1.98	2.25	1.58	1.21	1.32	1.11	1.26	1.82	2.12
< \$1 (G2)	0.22	1.68	2.46	2.42	2.82	2.51	3.25	2.73	2.84	2.12	1.13	0.89	1.12	1.40	1.94	1.82	2.35
< \$1 (G3)	1.01	9.69	3.54	6.12	4.61	2.48	4.74	6.42	8.66	8.65	6.16	24.16	9.18	2.64	7.67	2.57	1.55
\$1 - \$100 (G1)	7.53	3.79	3.77	5.13	6.93	5.18	11.93	12.77	10.56	10.78	5.53	7.78	6.59	2.91	4.34	3.40	4.33
\$1 - \$100 (G2)	3.08	5.13	6.74	5.75	4.85	4.50	8.31	7.06	7.61	7.27	3.98	3.22	4.35	3.30	4.79	3.68	5.97
\$1 - \$100 (G3)	5.71	4.56	1.26	4.73	5.18	4.62	7.60	0.00	39.43	9.41	8.36	50.00	24.20	4.34	3.26	0.97	1.27
\$101-\$250 (G1)	10.73	5.16	3.29	5.28	4.38	3.95	8.93	9.87	9.94	7.13	7.48	8.04	5.21	3.49	4.48	3.12	4.56
\$101-\$250 (G2)	3.87	4.20	5.78	4.77	4.61	3.92	8.56	9.09	7.90	8.40	6.27	5.27	4.84	3.70	4.73	4.09	4.81
\$101-\$250 (G3)	6.89	3.48	5.16	4.90	4.23	3.44	5.76	9.12	7.24	4.81	7.07	10.72	5.30	3.59	4.38	2.02	4.13
> \$250 (G1)	8.96	4.67	2.14	3.21	2.82	2.54	5.41	5.62	6.45	5.35	6.38	6.03	5.52	3.37	2.85	2.01	2.44
> \$250 (G2)	3.94	3.06	4.61	2.94	2.87	2.15	5.40	6.30	5.68	5.35	5.89	4.91	4.48	3.05	3.19	2.32	2.68
> \$250 (G3)	4.59	2.78	2.79	2.81	3.08	3.36	5.69	5.45	5.27	5.05	6.30	7.81	4.66	3.03	2.60	1.91	2.53

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

The month-by-month data presented in Tables 7 and 8 are confirmed by the cumulative data presented in Tables 9 and 10. For example, what is shown on a month-by-month basis above regarding average payments per collection activity (Table 7) is confirmed on a cumulative for the total 17-month study period by Table 9 below. Table 9 presents the average cumulative payment for EAP customers, non-EAP customers, and Winter Warmth customers, both for the populations as a whole and for those populations disaggregated by the size of the arrears on an account in January 2008.

Table 9 shows that for the population as a whole, EAP customers and Winter Warmth customers had very similar payment characteristics. By the last month of the study period, on a cumulative basis, while EAP customers had made \$259 in payments for each collection activity month, Winter Warmth customers had made \$253 in payments for each collection activity month; non-EAP customers made somewhat more payments.

Despite this similarity in payments for the populations as a whole, a noticeable difference appears when the groups are broken down by beginning arrears. By May 2009, while EAP participants with \$0 in January 2008 arrears had made \$646 in payments for each collection activity month, Winter Warmth customers had made only \$321. In contrast, by May 2009, Winter Warmth customers made higher cumulative payments per collection activity in each of the sub-populations as defined by the level of January 2008 arrears than had their EAP counterparts. Moreover, by May 2009, the payment performance advantage of non-EAP customers had disappeared in these sub-populations defined by arrearage levels.

Table 9 (NIPSCO Winter Warmth)																	
Average (Cumulative) Payments by Cumulative Collection Months																	
January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	\$145	\$195	\$269	\$271	\$274	\$281	\$266	\$254	\$244	\$239	\$236	\$233	\$233	\$240	\$247	\$256	\$259
Group 2 Total	\$404	\$368	\$321	\$316	\$313	\$319	\$301	\$288	\$278	\$273	\$274	\$280	\$284	\$291	\$294	\$299	\$300
Group 3 Total	\$173	\$196	\$210	\$246	\$262	\$264	\$258	\$248	\$240	\$234	\$230	\$227	\$225	\$229	\$237	\$248	\$253
< \$1 (G1)	\$1858	\$1410	\$1098	\$863	\$714	\$683	\$643	\$634	\$623	\$606	\$607	\$622	\$635	\$655	\$667	\$658	\$646
< \$1 (G2)	\$4619	\$1271	\$799	\$662	\$585	\$558	\$518	\$498	\$480	\$479	\$499	\$535	\$559	\$571	\$566	\$565	\$557
< \$1 (G3)	\$839	\$445	\$383	\$354	\$346	\$338	\$327	\$317	\$305	\$299	\$297	\$295	\$297	\$302	\$308	\$316	\$321
\$1 - \$100 (G1)	\$131	\$176	\$201	\$199	\$188	\$189	\$171	\$159	\$150	\$145	\$147	\$146	\$146	\$156	\$161	\$166	\$169
\$1 - \$100 (G2)	\$325	\$261	\$218	\$206	\$206	\$208	\$196	\$190	\$185	\$181	\$184	\$190	\$193	\$200	\$201	\$204	\$203
\$1 - \$100 (G3)	\$166	\$171	\$172	\$195	\$209	\$206	\$200	\$195	\$187	\$184	\$182	\$181	\$182	\$187	\$196	\$205	\$207
\$101-\$250 (G1)	\$93	\$138	\$193	\$192	\$198	\$203	\$191	\$181	\$173	\$170	\$168	\$165	\$167	\$174	\$178	\$185	\$186
\$101-\$250 (G2)	\$258	\$248	\$223	\$219	\$219	\$223	\$208	\$196	\$189	\$182	\$181	\$182	\$184	\$189	\$191	\$194	\$194
\$101-\$250 (G3)	\$133	\$142	\$160	\$181	\$193	\$197	\$191	\$184	\$178	\$174	\$173	\$171	\$172	\$176	\$182	\$191	\$193
> \$250 (G1)	\$112	\$158	\$250	\$263	\$277	\$286	\$274	\$265	\$254	\$248	\$243	\$237	\$233	\$237	\$244	\$255	\$260
> \$250 (G2)	\$253	\$285	\$263	\$280	\$290	\$306	\$291	\$275	\$266	\$259	\$255	\$251	\$249	\$254	\$257	\$266	\$270
> \$250 (G3)	\$139	\$187	\$209	\$267	\$289	\$294	\$287	\$274	\$265	\$259	\$252	\$247	\$242	\$244	\$255	\$268	\$274
Group 1 (EAP) is in Green. Group 2 (Not EAP) is in White. Group 3 (Winter Warmth) is in Yellow.																	

One primary cause for the higher dollars of payments per collection month for Energy Assistance recipients is that, earlier in the study period, EAP customers required the company to engage in fewer collection months for each payment that was received. That differential, however, dissipated over time.

Table 10 shows the number of cumulative collection months that NIPSCO had to invoke in order to generate each \$1,000 in payments on a cumulative basis from January 2008 through May 2009. For the population as a whole, EAP customers required slightly fewer collection months of activity per \$1,000 in payments for the entire study period, with the exception being the last month. In May 2009, EAP customers required only 0.1 fewer cumulative collection activity months per \$1,000 of payments than did the Winter Warmth customers. While EAP customers required 3.86 cumulative collection activity months per \$1,000 in payments, Winter Warmth customers required 3.95 on a cumulative basis through May 2009 for the populations as a whole. Non-EAP customers had a higher differential (requiring 0.61 fewer collection activity months: 3.34 vs. 3.95).

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	6.88	5.14	3.72	3.69	3.65	3.56	3.77	3.93	4.10	4.18	4.23	4.29	4.29	4.16	4.05	3.91	3.86
Group 2 Total	2.47	2.72	3.12	3.16	3.19	3.14	3.32	3.48	3.60	3.67	3.64	3.57	3.52	3.43	3.41	3.35	3.34
Group 3 Total	5.79	5.11	4.76	4.06	3.82	3.78	3.88	4.04	4.17	4.27	4.35	4.41	4.44	4.37	4.21	4.03	3.95
< \$1 (G1)	0.54	0.71	0.91	1.16	1.40	1.46	1.56	1.58	1.61	1.65	1.65	1.61	1.58	1.53	1.50	1.52	1.55
< \$1 (G2)	0.22	0.79	1.25	1.51	1.71	1.79	1.93	2.01	2.08	2.09	2.00	1.87	1.79	1.75	1.77	1.77	1.80
< \$1 (G3)	1.19	2.25	2.61	2.82	2.89	2.95	3.05	3.15	3.28	3.34	3.37	3.39	3.36	3.32	3.25	3.17	3.12
\$1 - \$100 (G1)	7.62	5.69	4.98	5.02	5.31	5.30	5.85	6.31	6.65	6.89	6.81	6.87	6.85	6.40	6.20	6.01	5.93
\$1 - \$100 (G2)	3.08	3.83	4.58	4.86	4.86	4.81	5.11	5.25	5.41	5.53	5.45	5.26	5.18	5.00	4.99	4.89	4.94
\$1 - \$100 (G3)	6.01	5.85	5.81	5.13	4.78	4.87	4.99	5.13	5.34	5.43	5.49	5.53	5.51	5.34	5.11	4.87	4.83
\$101-\$250 (G1)	10.73	7.26	5.19	5.22	5.05	4.93	5.24	5.53	5.79	5.87	5.94	6.06	6.00	5.73	5.62	5.41	5.38
\$101-\$250 (G2)	3.87	4.03	4.48	4.56	4.57	4.49	4.81	5.10	5.30	5.48	5.52	5.50	5.45	5.28	5.24	5.17	5.15
\$101-\$250 (G3)	7.51	7.04	6.26	5.53	5.19	5.08	5.25	5.45	5.60	5.73	5.78	5.84	5.83	5.68	5.50	5.24	5.19
> \$250 (G1)	8.96	6.34	4.01	3.80	3.61	3.49	3.64	3.78	3.94	4.03	4.11	4.22	4.29	4.22	4.10	3.92	3.85
> \$250 (G2)	3.95	3.51	3.81	3.57	3.44	3.27	3.44	3.63	3.77	3.86	3.92	3.98	4.01	3.94	3.88	3.77	3.71
> \$250 (G3)	7.21	5.36	4.78	3.75	3.46	3.40	3.48	3.64	3.77	3.86	3.97	4.05	4.13	4.10	3.93	3.74	3.64

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

Table 10 further provides at least a partial explanation for the difference in the average payments per collection activity month when the populations are broken down by the level of January 2008 arrears. EAP customers with a \$0 balance in January 2008 required fewer collection activity months to generate each \$1,000 in payments than did Winter Warmth customers (and, as a result, the average payment for each collection activity month was higher). While EAP customers with no January 2008 arrears required 1.55 collection activity months per \$1,000 in payments on a cumulative basis through May 2009, Winter Warmth customers required 3.12. While the Winter Warmth customers with a \$0 balance in January 2008 might have paid the same as the EAP customers, in other words, NIPSCO had to work harder to generate those payments on a per \$1,000 payment basis.

The difference disappeared for the accounts with higher January 2008 arrears. NIPSCO exerted less activity for each \$1,000 in payments it received for Winter Warmth accounts with January 2008 arrears greater than \$0. For accounts with arrears of between \$1 and \$100, NIPSCO was required to exert 4.83 collection months of activity for each \$1,000 in payments for its Winter Warmth customers, compared to 5.93 collection activity months for EAP customers. The difference was closer for accounts with higher January 2008 arrears, with the cumulative May 2009 figure ranging between 0.19 (5.38 vs. 5.19 for EAP and Winter Warmth customers respectively) and 0.21 (3.85 and 3.64 for EAP and Winter Warmth customers respectively).

The level of payment received from each Winter Warmth participant represents one way to measure the payment performance of a low-income customer. However, that level of payment – whether measured by payment coverage ratios, level of arrears, or absolute dollars of payments—standing alone presents an incomplete picture of payment performance and is insufficient, by itself, to judge the performance of a program such as either EAP or Winter Warmth. In addition to looking at the level of payment, it is necessary to consider the level of collection effort exerted to generate that payment from one of those customers.

When viewed from the perspective of the efficiency and effectiveness of collections, a consistent picture that emerges is that while EAP may be more effective at taking customers not in arrears and keeping them out of arrears, that effectiveness dissipates as beginning arrears increase. Winter Warmth operates more effectively for those accounts with higher arrears.

ARREARS AND PAYMENTS

One standard measure of payment performance by utility customers involves an examination of the payments that those customers make and the unpaid bills that those customers carry over time. One expectation of a low-income program such as Winter Warmth is that it will help place participants in a position where they will be more likely to retire their pre-existing arrears in whole or part and avoid incurring arrears in the future.

The analysis of arrears and payments below considers the impact of Winter Warmth on the arrears and payments of program participants using the following metrics:

- The percentage of accounts in arrears (and the change in that percentage over time);

- The aggregate dollars of arrears by month;
- The average dollars of bills and payments by month;
- The average number of payments received relative to the number of bills issued each month; and
- The percentage of bills that have both arrears and collection activity in a given month.

While participation in Winter Warmth helps participating customers to reduce their arrears, participation in the Energy Assistance Program (EAP) has a more significant impact on completely retiring arrears. Similarly, for customers who do not have arrears, EAP participation better helps customers to remain current on their bills. This conclusion flows from an examination of Table 11 below looking at the percentage of customers in arrears each month as disaggregated by the level of January 2008 arrears.

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	82%	80%	73%	76%	75%	69%	63%	63%	65%	65%	63%	64%	72%	72%	71%	68%	63%
Group 2 Total	59%	57%	56%	60%	62%	55%	50%	53%	51%	51%	49%	51%	55%	56%	54%	54%	55%
Group 3 Total	81%	82%	81%	83%	82%	78%	73%	73%	74%	73%	69%	74%	81%	82%	83%	81%	78%
< \$1 (G1)	0%	7%	7%	7%	7%	5%	5%	5%	5%	7%	6%	6%	7%	9%	8%	8%	7%
< \$1 (G2)	0%	9%	11%	12%	13%	12%	11%	12%	11%	11%	11%	11%	12%	14%	13%	14%	13%
< \$1 (G3)	0%	10%	10%	12%	13%	12%	11%	11%	12%	11%	11%	12%	13%	16%	16%	15%	14%
\$1 - \$100 (G1)	10%	8%	6%	7%	7%	6%	6%	7%	7%	7%	6%	7%	7%	7%	6%	6%	6%
\$1 - \$100 (G2)	10%	7%	7%	7%	8%	7%	6%	7%	6%	7%	6%	6%	7%	7%	6%	7%	7%
\$1 - \$100 (G3)	11%	8%	9%	9%	9%	8%	7%	7%	8%	8%	7%	8%	8%	8%	9%	8%	8%
\$101-\$250 (G1)	25%	23%	21%	21%	22%	19%	17%	17%	19%	17%	17%	17%	19%	21%	20%	19%	17%
\$101-\$250 (G2)	17%	13%	12%	13%	13%	12%	11%	12%	11%	12%	11%	12%	12%	13%	13%	12%	13%
\$101-\$250 (G3)	25%	22%	22%	22%	21%	20%	18%	19%	19%	18%	18%	19%	21%	21%	21%	20%	19%
> \$250 (G1)	47%	43%	40%	41%	40%	38%	35%	33%	34%	35%	34%	35%	39%	34%	37%	35%	33%
> \$250 (G2)	31%	28%	26%	27%	28%	25%	22%	23%	22%	22%	19%	21%	23%	21%	23%	21%	23%
> \$250 (G3)	46%	41%	41%	41%	40%	38%	36%	36%	35%	36%	34%	35%	39%	36%	38%	37%	37%

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

According to Table 11, more NIPSCO customers who participated in EAP eliminated their arrears entirely over the course of the study period than did customers who participated only in Winter Warmth. For the population as a whole, while the percentage of EAP accounts in arrears dropped from 82% in January 2008 to 63% in May 2009, the percentage of Winter Warmth accounts in arrears dropped from 81% in January 2008 to 78% in May 2009.

Not all customer payment patterns were “perfect.” Of those EAP customers who had \$0 in arrears in January 2008, 7% had fallen into arrears by the end of the study period. Similarly, of those Winter Warmth customers who had \$0 arrears in January 2008, 14% had fallen into arrears by May 2009. Nonetheless, improvements did occur:

- While the percentage of EAP accounts having arrears of between \$1 and \$100 was 10% in January 2008, only 6% had arrears of any size in May 2009; the percentage of Winter Warmth accounts with arrears fell from 11% to 8%;
- While the percentage of EAP accounts having arrears of between \$101 and \$250 was 25% in January 2008, only 17% had any arrears in May 2009; the percentage of Winter Warmth accounts with arrears fell from 25% to 19%;
- While the percentage of EAP accounts having arrears of more than \$250 was 47% in January 2008, only 33% had any arrears in May 2009; the percentage of Winter Warmth accounts with arrears fell from 46% to 37%.

For both groups as a whole, as well as for each sub-population as defined by January 2008 arrears, the percentage of customers having arrears declined over the study period. Customers participating in EAP experienced a greater decline. While the no-EAP accounts also improved their payment performance (measured by percent of accounts in arrears), fewer no-EAP accounts began the study period with arrears (January 2008) and the level of percentage reduction was lower, particularly in the populations with higher beginning arrears. For example, while the no-EAP population began with 31% of the accounts having arrears over \$250, it ended with 23%. While the no-EAP population began with 17% of the accounts having arrears between \$101 and \$250, it ended with 13%. The EAP and Winter Warmth populations both outperformed the non-EAP population in terms of payment performance in this regard.

Comparing May arrears to January arrears may not present the most accurate picture of any change in arrears. Even under the Winter Warmth, a distinct seasonal pattern of arrears emerges. The percentage of accounts in arrears appears to reach its maximum in the spring months of April and May, before beginning to recede through the following November/December.

Accepting the presence of this seasonal variation, rather than comparing the percentage of accounts in arrears in May 2009 to the percentage in January 2008, a more accurate picture might involve comparing each month of 2009 to the corresponding month in 2008. This comparison shows that for the population as a whole, the percentage of EAP and no-EAP accounts in arrears for each 2009 month was lower than the percentage of accounts in arrears for the corresponding 2008 month, with the reductions greater within the EAP population. For

Winter Warmth only accounts, the percentage of accounts in arrears in April and May 2009 was lower than in the corresponding months in 2008.

As previously found with various metrics, the impact of the Winter Warmth program was greatest for those accounts with the highest level of January 2008 arrears. The reduction in the percentage of accounts in arrears for accounts with January 2008 arrears greater than \$250 was greater than the reduction for accounts having lesser levels of January 2008 arrears.

The impact of the Winter Warmth on the reduction of the dollars in arrears is even more dramatic than the impact of Winter Warmth on the number of accounts in arrears. This is particularly so with those accounts that have the highest beginning arrears. The EAP population with January arrears greater than \$250, for example, reduced their total arrears from \$270,000 to \$100,000, a reduction of 63%, while the Winter Warmth population with January 2008 arrears over \$250 reduced their total arrears from \$506,000 to \$280,000, a reduction of 45%. Similarly, the EAP population with January 2008 arrears between \$100 and \$250 reduced its arrears from \$47,000 to \$32,000 (32%), while the corresponding Winter Warmth population reduced its arrears from \$91,000 to \$83,000 (10%). The no-EAP population performed better than the Winter Warmth population.

In contrast, for all three groups (EAP, no-EAP, Winter Warmth), customers with either \$0 in January 2008 arrears, or with January 2008 arrears of between \$1 and \$100, increased the dollars of arrears from over the course of the 17-month study period. As indicated by the discussion above, this does not indicate that all customers in these sub-populations increased their arrears; rather, of those accounts that exhibited an increase in arrears, the dollars of increase are reflected in Table 12.²²

These results are consistent with prior year evaluation findings. The arrearage reduction impact of Winter Warmth falls primarily within the population of customers beginning the program year with higher arrears. Those low-income customers in the deepest payment trouble starting the program experience the greatest arrearage reduction. Only customers with \$0 in arrears, or arrears less than \$100 appeared to increase their arrears, and then only slightly.

As with the percentage of accounts in arrears, when the comparison of the total dollars of arrears is made between corresponding months of 2008 and 2009 (e.g., April 2008 to April 2009), the total dollars of arrears appears to be decreasing. Also similar to the percentage of accounts in arrears, the decrease appears to be greatest within the accounts with the largest beginning arrears. The decrease appears to be greater within the population of customers receiving EAP benefits.

²² Table 12 reflects arrearages, not account balances. Accordingly, if a customer has an account credit, it does *not* get subtracted from the level of arrearages, but is viewed as an arrears of \$0.

**Table 12 (NIPSCO Winter Warmth)
Aggregate Dollars of Arrears (\$000) by Month**

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	\$322	\$361	\$349	\$357	\$264	\$180	\$111	\$111	\$114	\$114	\$82	\$116	\$218	\$252	\$320	\$239	\$159
Group 2 Total	\$546	\$496	\$557	\$665	\$494	\$327	\$226	\$230	\$215	\$219	\$162	\$231	\$360	\$411	\$506	\$413	\$279
Group 3 Total	\$607	\$714	\$856	\$932	\$670	\$474	\$341	\$326	\$307	\$333	\$249	\$336	\$605	\$750	\$918	\$685	\$465
< \$1 (G1)	\$0	\$15	\$21	\$16	\$14	\$14	\$5	\$6	\$7	\$9	\$6	\$7	\$15	\$24	\$23	\$21	\$14
< \$1 (G2)	\$0	\$26	\$45	\$68	\$64	\$39	\$29	\$25	\$27	\$35	\$23	\$35	\$55	\$70	\$79	\$72	\$43
< \$1 (G3)	\$0	\$44	\$60	\$87	\$87	\$58	\$46	\$42	\$40	\$49	\$30	\$47	\$76	\$113	\$139	\$102	\$70
\$1 - \$100 (G1)	\$6	\$15	\$15	\$15	\$11	\$10	\$7	\$7	\$8	\$8	\$6	\$8	\$15	\$18	\$25	\$19	\$12
\$1 - \$100 (G2)	\$12	\$26	\$39	\$43	\$38	\$25	\$15	\$17	\$16	\$17	\$14	\$19	\$25	\$37	\$42	\$38	\$24
\$1 - \$100 (G3)	\$10	\$35	\$54	\$63	\$50	\$36	\$24	\$22	\$25	\$23	\$18	\$24	\$41	\$59	\$74	\$54	\$32
\$101-\$250 (G1)	\$47	\$69	\$65	\$70	\$58	\$38	\$24	\$21	\$25	\$22	\$16	\$23	\$44	\$55	\$69	\$51	\$32
\$101-\$250 (G2)	\$73	\$78	\$84	\$106	\$76	\$55	\$39	\$40	\$40	\$40	\$30	\$42	\$68	\$77	\$93	\$74	\$57
\$101-\$250 (G3)	\$91	\$128	\$155	\$174	\$132	\$91	\$65	\$63	\$64	\$69	\$51	\$66	\$110	\$161	\$184	\$138	\$83
> \$250 (G1)	\$270	\$262	\$249	\$256	\$181	\$117	\$75	\$78	\$74	\$75	\$54	\$78	\$145	\$154	\$203	\$147	\$100
> \$250 (G2)	\$460	\$365	\$389	\$449	\$316	\$209	\$143	\$147	\$131	\$127	\$95	\$135	\$211	\$228	\$293	\$228	\$155
> \$250 (G3)	\$506	\$507	\$587	\$608	\$402	\$288	\$207	\$199	\$177	\$192	\$150	\$200	\$378	\$417	\$521	\$392	\$280

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

Larger arrears appear to be associated with higher bills for the Winter Warmth participants of NIPSCO. Table 13 presents the data. The monthly bills of EAP and non-EAP customers appear to closely track each other (though not identical), with Winter Warmth customer bills being somewhat larger. The average monthly bills of EAP participants are virtually identical to the average monthly bills of non-EAP participants during the warm weather months, while slightly larger for the cold weather months.

Differences in the absolute level of payments between customers who participate in EAP and those customers who do not cannot be attributed to any substantial difference in bills. An exception lies with accounts having \$0 in January 2008 arrears. For these two groups, the \$0 arrears population receiving EAP has a consistently higher bill than does the non-EAP population with \$0 arrears.

Contrary to the comparison of the EAP and non-EAP populations, the Winter Warmth population consistently exhibits larger bills. The difference between Winter Warmth and EAP bills ranges from a high of \$52 (January 2009) to a low of \$17/\$18 (May 2008/May 2009). Even

during the warm weather months of June through October, Winter Warmth bills are consistently \$30 higher than the EAP bills in the same month. As observed immediately above, non-EAP bills are lower than EAP bills.

In contrast to the comparison between the EAP and non-EAP populations, there are notable differences in bills between accounts with different levels of January 2008 arrears. Two “tiers” of bills appear to exist within the NIPSCO customer population for all three customer groups (EAP, no-EAP, Winter Warmth). As shown in Table 13, accounts with extremely high January 2008 arrears (>\$250) have substantially higher bills than do accounts with lower arrears.

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	\$285	\$244	\$240	\$185	\$126	\$113	\$114	\$116	\$103	\$111	\$137	\$257	\$335	\$263	\$213	\$145	\$99
Group 2 Total	\$245	\$206	\$202	\$165	\$110	\$109	\$108	\$112	\$98	\$114	\$131	\$216	\$272	\$221	\$195	\$126	\$86
Group 3 Total	\$315	\$283	\$272	\$224	\$144	\$139	\$140	\$144	\$132	\$140	\$157	\$292	\$387	\$308	\$272	\$172	\$116
< \$1 (G1)	\$220	\$226	\$208	\$167	\$120	\$104	\$99	\$107	\$100	\$115	\$127	\$234	\$296	\$263	\$212	\$142	\$100
< \$1 (G2)	\$197	\$166	\$157	\$127	\$86	\$89	\$90	\$93	\$88	\$103	\$122	\$186	\$223	\$188	\$159	\$111	\$72
< \$1 (G3)	\$262	\$248	\$235	\$197	\$136	\$132	\$131	\$134	\$119	\$133	\$145	\$264	\$354	\$280	\$251	\$157	\$108
\$1 - \$100 (G1)	\$177	\$147	\$153	\$112	\$79	\$75	\$77	\$75	\$73	\$83	\$98	\$173	\$260	\$219	\$165	\$118	\$61
\$1 - \$100 (G2)	\$184	\$164	\$172	\$133	\$96	\$84	\$86	\$87	\$78	\$86	\$104	\$179	\$228	\$185	\$159	\$112	\$67
\$1 - \$100 (G3)	\$232	\$227	\$231	\$169	\$108	\$110	\$106	\$109	\$106	\$99	\$128	\$252	\$338	\$287	\$218	\$145	\$94
\$101-\$250 (G1)	\$211	\$198	\$200	\$157	\$109	\$88	\$93	\$90	\$78	\$85	\$107	\$209	\$268	\$230	\$183	\$118	\$78
\$101-\$250 (G2)	\$201	\$184	\$188	\$152	\$103	\$104	\$96	\$98	\$88	\$96	\$112	\$206	\$250	\$214	\$186	\$110	\$75
\$101-\$250 (G3)	\$238	\$238	\$230	\$195	\$120	\$112	\$110	\$116	\$109	\$111	\$125	\$240	\$318	\$266	\$222	\$140	\$91
> \$250 (G1)	\$372	\$298	\$294	\$222	\$147	\$140	\$142	\$144	\$126	\$130	\$169	\$315	\$407	\$293	\$285	\$167	\$118
> \$250 (G2)	\$352	\$289	\$284	\$237	\$149	\$153	\$151	\$159	\$130	\$154	\$171	\$289	\$387	\$302	\$278	\$170	\$122
> \$250 (G3)	\$399	\$338	\$323	\$265	\$171	\$164	\$169	\$174	\$159	\$169	\$189	\$347	\$456	\$356	\$324	\$204	\$139

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

Finally, Table 13 shows that the decreasing arrears within the Winter Warmth population arose despite increasing bills. For all three groups (EAP, no-EAP, Winter Warmth), nearly across-the-board for the population as a whole and for each sub-population as defined by January 2008 arrears experienced a higher winter (January through April) bill in 2009 than in the corresponding months in 2008. Despite this increase in bills between the winter of 2008 and

2009, most accounts (except those with few if any January arrears) experienced a decrease in arrears in that time period.

In contrast to the presentation of bills immediately above, Table 14 presents the average monthly payments over the study period. This report of payments spreads payments over all customers receiving bills (not merely over customers making payments). Customers receiving bills but making no payment in a month are factored into the data as a \$0 payment.

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	\$124	\$175	\$309	\$209	\$199	\$161	\$115	\$106	\$105	\$112	\$85	\$126	\$164	\$230	\$261	\$256	\$188
Group 2 Total	\$204	\$169	\$141	\$182	\$167	\$129	\$100	\$100	\$104	\$100	\$94	\$155	\$172	\$197	\$194	\$190	\$148
Group 3 Total	\$167	\$183	\$213	\$312	\$249	\$203	\$155	\$128	\$139	\$126	\$92	\$155	\$187	\$225	\$322	\$325	\$225
< \$1 (G1)	\$184	\$199	\$231	\$160	\$110	\$106	\$87	\$87	\$95	\$102	\$112	\$159	\$224	\$234	\$270	\$175	\$160
< \$1 (G2)	\$182	\$115	\$116	\$123	\$103	\$75	\$78	\$88	\$85	\$88	\$112	\$169	\$174	\$173	\$157	\$130	\$104
< \$1 (G3)	\$199	\$163	\$176	\$194	\$182	\$169	\$131	\$119	\$123	\$112	\$105	\$160	\$207	\$219	\$293	\$262	\$210
\$1 - \$100 (G1)	\$120	\$122	\$145	\$150	\$111	\$82	\$74	\$61	\$89	\$63	\$79	\$85	\$107	\$302	\$191	\$164	\$145
\$1 - \$100 (G2)	\$192	\$114	\$109	\$141	\$139	\$105	\$75	\$81	\$73	\$83	\$74	\$124	\$142	\$165	\$151	\$164	\$110
\$1 - \$100 (G3)	\$161	\$131	\$158	\$231	\$201	\$139	\$113	\$105	\$110	\$102	\$79	\$134	\$158	\$220	\$287	\$270	\$179
\$101-\$250 (G1)	\$85	\$142	\$249	\$167	\$176	\$138	\$96	\$82	\$79	\$91	\$66	\$92	\$129	\$212	\$200	\$220	\$137
\$101-\$250 (G2)	\$176	\$163	\$126	\$166	\$148	\$127	\$89	\$86	\$103	\$85	\$71	\$121	\$150	\$205	\$174	\$168	\$135
\$101-\$250 (G3)	\$150	\$144	\$190	\$246	\$204	\$183	\$122	\$104	\$107	\$105	\$87	\$120	\$167	\$206	\$257	\$287	\$161
> \$250 (G1)	\$122	\$195	\$408	\$265	\$265	\$217	\$148	\$138	\$129	\$139	\$83	\$138	\$167	\$245	\$307	\$338	\$239
> \$250 (G2)	\$252	\$266	\$196	\$289	\$269	\$224	\$150	\$136	\$149	\$137	\$82	\$163	\$191	\$250	\$284	\$321	\$237
> \$250 (G3)	\$164	\$228	\$257	\$426	\$318	\$248	\$198	\$153	\$173	\$149	\$92	\$178	\$194	\$241	\$381	\$395	\$282

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

Table 14 shows that NIPSCO’s low-income continue to make payments year round irrespective of the program in which they are participating. For all three populations –EAP, non-EAP and Winter Warmth-- populations as a whole, the average payment (spread over all customers, not simply over those customers making payments) remains at or above \$100 per month even during the warm weather months. The reduction in payments is not attributable to a reduction in the number of payments (with each nonpayment factored in at \$0). Table 15 shows that the number of payments per bill issued actually increases during the warm weather.

Customers in all three groups increase the dollar level of their payments during the winter months. Table 14 shows, for example, that while EAP customers have payments in July, August and September of \$115, \$106 and \$105 respectively, those same customers had payments in January, February and March (2009) of \$164, \$230 and \$261. While Winter Warmth customers had payments in July, August and September of \$155, \$128 and \$139 respectively, they had January, February and March payments of \$187, \$225 and \$322 respectively. Non-EAP customers exhibit the same pattern. While payments increase in the winter months, the ability of the customers in these three groups to increase their payments is outstripped by the increase in winter bills.

Customers with extremely high arrears (>\$250) exhibit the same pattern of increased winter payments as exhibited by customers with lower arrears. EAP customers with a January 2008 arrears greater than \$250 exhibited average payments of \$148, \$138 and \$129 in July, August and September, while exhibiting average payments of \$167, \$245 and \$307 in January, February and March. Winter Warmth customers exhibited payments of \$198, \$153 and \$173 in July, August and September, compared to payments of \$194, \$241 and \$381 in January, February and March. The non-EAP population exhibited the same pattern.

The level of payments is not the only relevant consideration in payment performance by utility customers. A utility does not merely want to receive its complete bill payment over an annual period. The utility instead would like to receive regular monthly payments. A customer making twelve payments in a year is less risky, and less costly, than a customer making only two payments in a year, even if they make the same dollar payments and/or have the same bill payment coverage ratio.

Table 15 presents the number of bill payments each month indexed to the number of bills issued in that month. Several patterns become evident in this data. Winter Warmth appears to result in an increase in payment frequency by program participants. In comparing the ratio of payments to bills for the months of January through May 2009 to the ratio of payments to bills for the months of January through May 2008, Winter Warmth customers made a higher number of payments relative to the number of bills issued in four of the five months. In contrast, for EAP and non-EAP customers, no systematic change in bill frequency appears.

Even within the sub-populations having larger January arrears, which experienced the greatest decrease in arrears, while Winter Warmth customers increase the frequency of their bills payments in each month (January through May 2009 compared to January through May 2008), for the EAP and no-EAP populations, while some months exhibit higher bill payment frequency (measured in terms of the number of payments made for each bill issued), others did not.

Moreover, bill payment frequency appears to exhibit only a mild seasonal pattern. While the ratio of payments to bills somewhat declined in the months of January and February, as a general rule, for the total populations for all groups, as well as for each sub-population as defined by January 2008 arrears, the ratio of payments to bills rendered varies in a very narrow range.

Overall, other than the greater improvement over time by Winter Warmth participants, no substantive difference in patterns in the ratio of payments to bills is readily evident between the three groups (EAP, no-EAP, Winter Warmth), or within each group for populations as defined by the level of January 2008 arrears.

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	0.536	0.613	0.776	0.716	0.745	0.733	0.699	0.700	0.729	0.739	0.585	0.584	0.591	0.672	0.715	0.790	0.743
Group 2 Total	0.730	0.694	0.669	0.772	0.764	0.727	0.717	0.738	0.757	0.773	0.618	0.656	0.654	0.701	0.734	0.785	0.728
Group 3 Total	0.659	0.597	0.672	0.766	0.745	0.753	0.710	0.682	0.708	0.693	0.549	0.579	0.604	0.613	0.761	0.798	0.750
< \$1 (G1)	0.818	0.763	0.691	0.679	0.711	0.768	0.753	0.743	0.851	0.852	0.719	0.734	0.765	0.752	0.833	0.770	0.748
< \$1 (G2)	0.782	0.705	0.742	0.788	0.789	0.722	0.778	0.808	0.813	0.832	0.750	0.761	0.735	0.746	0.781	0.800	0.758
< \$1 (G3)	0.804	0.678	0.696	0.758	0.754	0.793	0.764	0.730	0.742	0.773	0.670	0.667	0.688	0.671	0.767	0.792	0.802
\$1 - \$100 (G1)	0.667	0.606	0.677	0.629	0.744	0.659	0.602	0.614	0.750	0.634	0.625	0.494	0.532	0.693	0.671	0.682	0.629
\$1 - \$100 (G2)	0.802	0.653	0.598	0.739	0.708	0.711	0.688	0.704	0.700	0.764	0.544	0.621	0.609	0.681	0.665	0.738	0.667
\$1 - \$100 (G3)	0.765	0.638	0.673	0.693	0.725	0.758	0.711	0.651	0.674	0.665	0.592	0.599	0.590	0.663	0.765	0.799	0.735
\$101-\$250 (G1)	0.440	0.568	0.801	0.714	0.725	0.714	0.657	0.616	0.697	0.715	0.523	0.548	0.563	0.647	0.673	0.801	0.721
\$101-\$250 (G2)	0.679	0.682	0.620	0.740	0.724	0.684	0.661	0.673	0.670	0.672	0.496	0.561	0.610	0.700	0.654	0.745	0.673
\$101-\$250 (G3)	0.704	0.578	0.669	0.722	0.710	0.716	0.641	0.650	0.654	0.654	0.550	0.549	0.627	0.611	0.729	0.768	0.680
> \$250 (G1)	0.452	0.579	0.818	0.752	0.769	0.746	0.719	0.745	0.684	0.721	0.544	0.553	0.537	0.639	0.691	0.816	0.777
> \$250 (G2)	0.665	0.701	0.619	0.779	0.772	0.765	0.662	0.676	0.734	0.737	0.479	0.543	0.558	0.626	0.727	0.801	0.737
> \$250 (G3)	0.548	0.560	0.662	0.810	0.764	0.753	0.721	0.682	0.730	0.681	0.476	0.545	0.552	0.569	0.774	0.819	0.765

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

One impact of the payment patterns identified above is a reduction in the number of accounts that have such substantial arrears that they prompt the utility to invoke collection activities directed toward responding to those arrears. An account that has an arrears that is either of an age, or an amount, that the utility does *not* exert collection activity is both less risky, and less costly, than an account generating a collection response.

Table 16 presents the percentage of accounts that not only carry an arrears, but carry an arrears sufficient to generate a collection intervention in the month of the arrears. Table 16 shows that the proportion of accounts with arrears sufficient to prompt collection activity decreases through the warm weather months, particularly for customers participating in Winter Warmth and in EAP. For these two groups (EAP, Winter Warmth) while an uptick in collection activity occurs

in January through March 2009 (relative to the pre-cold weather months), both groups of customers (when the population is viewed as a whole) enter the 2009 warm weather months in better position than in 2008. Certainly by April and May 2009, these two groups have both improved their position relative to one-year earlier.

- While 56% of EAP accounts had both arrears and collection activity in April 2008, only 44% did in April 2009; similarly, the percentage of EAP accounts with both arrears and collection activity in May decreased from 49% to 35%;
- While 63% of Winter Warmth accounts had both arrears and collection activity in April 2008, only 53% did in April 2009; similarly, the percentage of Winter Warmth accounts with both arrears and collection activity decreased from 54% in May 2008 to 41% in May 2009.

While the non-EAP customers also exhibited an improved payment position from 2008 to 2009, in that they had fewer accounts with bills, arrears and collection activities, the pattern exhibited by these customers was substantively different than the EAP and Winter Warmth populations. The non-EAP accounts began with a lower percentage of accounts in arrears with collection activity (36% in January 2008, compared to 56% and 66% for EAP and Winter Warmth respectively). The payment position of the non-EAP accounts improved (with the percentage of accounts with both arrears and collection activity decreasing from 42% to 34% between April 2008 and April 2009; and decreasing from 39% to 32% between May 2008 and May 2009). The level of the decrease for the non-EAP accounts for both months was substantively less than for either the EAP or Winter Warmth accounts.

Moreover, the pattern is different for the non-EAP accounts. The EAP and Winter Warmth accounts began with a considerable percentage of accounts having sufficient arrears to have collection activity (56% and 66% in January 2008 respectively), dropped substantially during the warm weather months (to 35% in November for EAP; to 42% in November for Winter Warmth), before increasing to a level higher than the warm weather months, but nonetheless noticeably lower than the previous year (51% in January for EAP; 63% in January for Winter Warmth). In contrast, the proportion of non-EAP accounts in arrears sufficient to have collection activity dropped much more modestly in the warm weather months (to a low of 21% in November), before increasing more rapidly in the cold weather months of 2009 to the same level they were at the prior year. While a drop occurred in the percentage of non-EAP accounts with both arrears and collection activity from May 2008 to May 2009 (39% to 32%), the drop was much less than the drop for either the EAP or Winter Warmth populations. The same moderation in the decrease in the non-EAP accounts with arrears and collection activity is evident in both the non-EAP population with January 2008 arrears of between \$1 and \$100 and in the non-EAP population with January 2008 arrears of between \$101 and \$250.

The positive impacts of EAP and Winter Warmth on high arrears customers, as previously discussed, are evident in this data on the percentage of accounts with arrears and collection activity. Table 16 shows that for the EAP population, the population of accounts with January arrears of more than \$250 dropped from 55% in May 2008 to 38% in May 2009; the proportion dropped from 57% to 42% for the Winter Warmth population. While the non-EAP population

experienced a drop, it was less than either the EAP or Winter Warmth populations. Similar improvements, and similar differences in payment performance between the EAP/Winter Warmth and non-EAP populations, are evident in a comparison of April 2008 to April 2009.

January Arrears	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09
Group 1 Total	56%	50%	55%	56%	49%	36%	44%	44%	47%	44%	35%	40%	51%	50%	56%	44%	35%
Group 2 Total	36%	43%	45%	42%	39%	28%	32%	36%	35%	32%	21%	27%	36%	37%	44%	34%	32%
Group 3 Total	66%	66%	67%	63%	54%	49%	47%	51%	55%	52%	42%	50%	63%	61%	69%	53%	41%
< \$1 (G1)	0%	9%	15%	23%	25%	15%	12%	11%	11%	16%	12%	12%	19%	22%	24%	22%	23%
< \$1 (G2)	0%	13%	18%	19%	21%	14%	14%	16%	15%	13%	8%	9%	13%	18%	20%	17%	18%
< \$1 (G3)	0%	38%	38%	43%	41%	36%	30%	32%	35%	33%	26%	34%	41%	45%	57%	45%	32%
\$1 - \$100 (G1)	61%	34%	39%	54%	47%	30%	50%	55%	57%	46%	32%	38%	53%	43%	51%	36%	34%
\$1 - \$100 (G2)	40%	44%	52%	52%	47%	36%	40%	38%	40%	40%	26%	26%	42%	43%	53%	44%	39%
\$1 - \$100 (G3)	68%	60%	61%	62%	53%	52%	42%	47%	59%	51%	38%	49%	56%	59%	68%	60%	46%
\$101-\$250 (G1)	62%	53%	64%	67%	55%	40%	53%	52%	54%	46%	40%	43%	47%	59%	65%	50%	38%
\$101-\$250 (G2)	52%	61%	57%	60%	49%	40%	47%	49%	51%	48%	33%	40%	53%	56%	63%	50%	45%
\$101-\$250 (G3)	81%	74%	71%	73%	59%	56%	54%	57%	58%	58%	42%	50%	66%	66%	74%	57%	45%
> \$250 (G1)	74%	69%	70%	65%	55%	45%	53%	53%	58%	55%	45%	52%	67%	62%	67%	52%	39%
> \$250 (G2)	74%	74%	75%	62%	56%	40%	49%	60%	59%	52%	37%	49%	63%	57%	70%	53%	44%
> \$250 (G3)	86%	75%	79%	67%	57%	52%	53%	59%	63%	59%	50%	59%	74%	66%	74%	53%	42%

Group 1 (EAP) is in Green.
Group 2 (Not EAP) is in White.
Group 3 (Winter Warmth) is in Yellow.

SUMMARY AND CONCLUSIONS

The NIPSCO Winter Warmth program offers direct financial assistance to customers that are in imminent danger of a disconnection of service for nonpayment. The purpose of NIPSCO's Winter Warmth program is not to offer long-term bill payment affordability assistance. To that extent, Winter Warmth differs from the USP initiatives of Citizens Gas and Vectren. Moreover, the Winter Warmth program differs from USP in that it is focused on the high-arrears, extremely payment-troubled customers, those customers that are in danger of losing service due to nonpayment. Unlike the USP initiatives, in other words, that offer assistance to all low-income customers receiving energy assistance, customers that exhibit good bill payment patterns are never enrolled in the NIPSCO program.

Accordingly, it is inappropriate for comparisons to be made between the impacts of the USP initiatives and the impacts of Winter Warmth.

In general, and in broad terms –the pages above present the detailed empirical basis for these conclusions-- this detailed review of the NIPSCO Winter Warmth program finds that Winter Warmth helps low-income customers reduce their arrears. NIPSCO takes customers that are in severe payment trouble and places them in the position of being able to retire their arrears and make substantial, even if not always complete, payments toward their ongoing bills for current usage.

Moreover, the Winter Warmth program helps NIPSCO reduce its collection efforts, and improve its collection efficiency and effectiveness. An important caveat on this conclusion, however, is that the program generates these outcomes most clearly when it addresses severely payment-troubled customers.

In contrast, the benefits of the EAP program, standing alone, arise more frequently and to a greater extent with customers who can enter the program year with no arrears or low arrears. NIPSCO customers, not surprisingly, perform best when they can receive additional energy assistance benefits to apply against their current bills. Customers receiving EAP frequently improve their bill payment coverage ratios and reduced their arrears to a greater extent than did non-EAP customers.

Particularly within the severely payment-troubled population, the Winter Warmth program reduced both the dollar level of arrears and the percentage of accounts in arrears. The Winter Warmth program helped increase the number and amount of payments. The Winter Warmth program helped NIPSCO to control the level of its collection efforts by reducing the proportion of accounts having arrears sufficient to trigger collection activity.

Based on these observations and this analysis, the conclusion is that the Winter Warmth program has proven its efficacy in addressing the payment problems that NIPSCO faces. It should be continued. It should, however, be coordinated with the existing Energy Assistance Program to the maximum extent practicable.

SUMMARY OF FINDINGS:

Based on the data and analysis presented above, the following findings regarding the Universal Service Program implemented by Citizens Gas and Coke Utility and Vectren Energy, the crisis program implemented by Citizens Gas and Coke Utility, and the Winter Warmth program implemented by Northern Indiana Public Service Company (NIPSCO) are appropriate. The findings below are based on the detailed discussion above. Each finding does not seek to re-iterate the empirical basis for the finding. That empirical basis can be found in the narrative discussion above.

The fundamental finding of this report is that both the Universal Service Program and the Winter Warmth program are effective at what they seek to do. Both programs should be continued.

- The Universal Service Program has enhanced effectiveness as customers participate in it longer. Participation in the Universal Service Program generates outcomes that a lack of participation does not, and cannot, generate.
- The Winter Warmth program is effective in generating bill payment, at reducing collection efforts, and improving the effectiveness of collection efforts. The outcomes of Winter Warmth are enhanced through its combination with Energy Assistance.
- While the crisis program implemented in collaboration with the broader USP programs service a collection function, the crisis program is enhanced by participation in the broader USP/EAP initiatives. A crisis program in the absence of the broader program is less effective.

Given those general overviews, the more detailed findings are set forth below.

THE BASIC UNIVERSAL SERVICE PROGRAM

Revenue Collection

Citizens Gas

1. As measured by January 2008 arrears, there were more customers having participated in USP in both 2007 and 2008 with no arrears than there were of customers who had not previously participated in USP. There were fewer customers with high beginning arrears.
2. The Universal Service Program offered by Citizens Gas does not appear to eliminate seasonal differences in payment patterns for USP participants.
3. Citizens Gas USP program participants, including those with beginning arrears, tend to pay nearly their entire current bill over the course of twelve months. By December 2008,

both Groups as a whole had paid between 94% and 95% of their current bill. Each population with arrears but one had a payment coverage ratio of greater than 1.0 (meaning they had paid their entire current bill and retired all or some of their arrears).

4. The payment coverage ratios for Citizens Gas customers with high beginning arrears (in this instance, high April arrears) were consistently higher than customers with lower arrears (and customers with no arrears). The conclusion flowing from these observations is that the USP was particularly helpful in allowing high arrears customers pay their entire current bill in addition to making payments toward their pre-existing arrears.
5. After subtracting beginning arrears, Citizens Gas customers that have participated in the USP program for more than one year (Group 1) have a payment performance that closely tracks the payment performance of first-year participants (Group 2). In May 2009, for the total population within each group of participants, the payment coverage ratio (after subtracting the January arrears) is virtually identical for Group 1 and Group 2 program participants.

Vectren Energy

1. As measured by January 2008 arrears, there were more customers having participated in USP in both 2007 and 2008 with no arrears than there were of customers who had not previously participated in USP. There were fewer customers with very high arrears.
2. USP Vectren's USP program appears to have succeeded in eliminating most of the seasonal variation in payment patterns. Unlike the seasonal pattern with many utilities, when winter payments decline relative to the size of the winter bills, Vectren's USP participants maintain a cumulative payment coverage ratio of nearly 1.0 year-round. By April 2009, the payment coverage ratios were at or above 100% (99% for Group 1 and 103% for Group 2).
3. Group 2 Vectren participants (New participants) do not appear to have a payment pattern relative to payment coverage ratios that is substantively different from Group 1 Vectren participants (Continuing participants).
4. Vectren's USP participants pay not only their complete current bill, but do so after making payments sufficient to retire their January 2008 arrears. Vectren USP customers require roughly three to four months to retire their January 2008 arrears.

Level of Collection Effort

Citizens Gas

1. While Group 2 USP participants (those who participated in 2008 but not in 2007) have very similar payment coverage ratios to Group 1 participants, they nonetheless impose a substantially greater burden on the utility than does Group 1 (the Continuing

participants). By May 2009, Group 2 USP participants had experienced nearly 14% more collection months (4,808 vs. 4,207) than had their Group 1 counterparts.

2. The collection effort directed toward customers with no January 2008 arrears is significantly less than the collection efforts directed toward customers that did have January arrears. From the perspective of the number of collection months per 1,000 bills, there is little difference between having low arrears and having high arrears. The distinction lies between having no arrears in January 2008 and having some level of arrears.
3. Across the board, customers that had participated in USP for two years required less collection effort than customers who began their USP participation in 2008 (but had not participated in 2007). For each level of arrears, the Continuing (Group 1) USP participants required substantively fewer collection months per 1,000 bills than did those customers who had not participated in USP for both years (Group 2). While payment coverage ratios for the two populations may have been roughly the same, in other words, the populations in the two groups did not present identical collection outcomes.

Vectren Energy

1. While the payment coverage ratios of Vectren's Group 1 and Group 2 USP participants were similar in pattern and extent, Vectren's Group 2 participants imposed a considerably greater collection burden on the company. For the Group 1 and Group 2 populations as a whole, as well as for the sub-population demarcated by a \$0 January 2008 arrears, Vectren exerted more collection effort per 1,000 bills issued.
2. For the Group 1 and Group 2 populations as a whole, Vectren's increased collection activity has not resulted in improved collection performance. Even while the company's collection activities per 1,000 bills increased, the company's collection activities per 1,000 payments increased at a faster rate.
3. Vectren's 2009 collections patterns are consistent with the decline in payment coverage ratios. While Vectren's payment coverage ratios (minus the January 2008 arrears) were well in excess of 1.0 through the 2008 months, and remain at or nearly 1.0 in the first five months of 2009, nonetheless, those ratios noticeably declined in the first five months of 2009 relative to one year earlier.

Effectiveness of Collections

Citizens Gas

1. Citizens Gas collects more money for each collection activity in which it engages from low-income customers who have participated in the USP for a longer period of time. This impact can be largely attributed to the fact that more customers who participated in USP for both 2007 and 2008 make more payments without need for collection interventions than is true for customers who began their USP participation in 2008.

2. Given that there are more payments that do not require collection interventions for longer-term USP participants (Group 1), the dollar level of payments per collection activity is higher. In addition, Group 1 participants make higher payments when collection activity is directed to them.
3. In all months (but one) in the study period, Group 2 customers experience more collection months per payment than do their Group 1 counterparts.
4. Over the 17-month study period, the customers who had participated in USP in only 2008 experienced more collection months per participant than did the customer who participated in USP for two years. The pattern holds for all levels of arrears, albeit to a lesser degree at higher levels of arrears. Citizens Gas must work harder to generate payments from the customers who participated in USP in 2008 (but not 2007) than it does to generate payments from customers who had participated in USP in both 2007 and 2008.
5. Group 1 customers make greater payments for each collection month than do their Group 2 counterparts. The difference in the level of payments per collection month (on a cumulative basis) narrowed and remained in the range of \$50 to \$100 per collection month for the remainder of the study period.
6. One primary cause for the higher dollars of payments per collection month for Group 1 customers is that those customers required the company to engage in fewer collection months for each payment that was received. This pattern (of needing fewer collection months per each \$1,000 of payments) holds true not only for the population as a whole, but for customers with no January 2008 arrears as well as for each level of January 2008 arrears.

Vectren Energy

1. Vectren exhibits the ability to generate greater payment advantage for its longer-term USP participants. In eleven of the seventeen study months, customers who had participated in USP for both 2007 and 2008 paid more per collection month than did customers who began their USP participation in 2008
2. One impact of the increased level of Vectren collection activity directed toward USP participants as identified in earlier tables is a reduction in the payment amount per collection month. The implication of this is that USP payments tend to be made without utility recourse to collection interventions. As the company increases its collection interventions, it does not generate additional payments. Since the utility is engaging in more collection months without generating increased payment revenue, the payments per collection month show a downward shift.
3. Despite the overall decline in collections effectiveness, Group 1 (Continuing participants) consistently made more payments in response to fewer collection activity months.

4. For Vectren, USP helps customers who have lesser arrears make an increased number of unprompted payments. Customers who have participated in USP for a longer period of time (Group 1) make a greater number of unprompted payments than customers who have participated in USP for a shorter period of time.
5. In addition to making a greater number of unprompted payments, Vectren's USP participants appear to make larger payments as well in response to the collection efforts that the company directs toward them.

Arrears and Payments

Citizens Gas

1. Participation in USP place customers in the position of being able to reduce their arrears. For customers who do not have arrears, program participation helps customers to remain current on their bills. The arrearage reduction impact of program participation is most noticeable in the first year of program participation.
2. USP participants reduced their arrears over the course of the study period. Customers who participated in USP for 2008 but not 2007 (Group 2) experienced a greater reduction of arrears than did customers who had participated in USP for both 2007 and 2008.
3. Not all customer payment patterns were "perfect." Of those customers who had \$0 in arrears in January 2008 (both Group 1 and Group 2), 21% had fallen into arrears by the end of the study period. Nonetheless, improvements did occur for accounts beginning with arrears.
4. Comparing each month of 2009 to the corresponding month in 2008 shows that for the population as a whole, the percentage of accounts in arrears for each 2009 month was lower than the percentage of accounts in arrears for the corresponding 2008 month.
5. The USP appears to have a greater impact on arrearage reduction in the first year of participation than in the second year. The first year participants outperformed the two year participants at each level of January 2008 arrears.
6. The impact of the USP on the reduction of the dollars in arrears is even more dramatic than the impact of USP on the number of accounts in arrears. This is particularly so with those accounts that are further in arrears. These results are consistent with prior year evaluation findings. The arrearage reduction impact of USP falls primarily within the population of customers beginning the program year with higher arrears. Those low-income customers in the deepest payment trouble starting the program experience the greatest arrearage reduction.
7. One impact of the payment patterns identified above is a reduction in the number of accounts that have such substantial arrears that they prompt the utility to invoke

collection activities directed toward responding to those arrears. An account that has an arrears that is either of an age, or an amount, that the utility does *not* exert collection activity is both less risky, and less costly, than an account generating a collection response.

Vectren Energy

1. Vectren is a company that is facing increasing arrears in the winter months, even within its USP population. Although on average, USP participants are generating payment coverage ratios of at or above 100%, sufficient program participants carry arrears to result in a deterioration of the winter monthly payment performance. While the proportion of accounts having winter arrears on the Vectren system increased from 2008 to 2009, it appears that customers are more able to respond to those arrears in the non-heating months.
2. Vectren Energy does not sustain its bill payment levels throughout the year. Vectren bill payment experiences a substantial decrease in the warm weather months. Sustaining bill payments across seasonal bill variations is an important mechanism for controlling arrears.
3. While USP participants increase their winter payments, the increase in payments is simply not sufficient to keep up with increases in winter month bills. While Vectren customers were able to maintain their pre-winter month payments, they were unable to increase their payments sufficient to reflect winter month bills.
4. Despite their seeming inability to increase their level of payments consistent with the increase in the level of bills experienced, Vectren USP participants appear to maintain their consistency in making some payment each month, even if such payments are insufficient to cover their entire outstanding bills.
5. Vectren exerts continuing collection interventions toward its low-income population despite the participation of these customers in the low-income discount program. Data shows an increase in Vectren USP participants who meet all of three criteria: (1) they received a bill in the month; (2) they had an arrears on the bill; and (3) the arrears was sufficient (either in age or amount) to prompt the utility to engage in collection activity directed toward the account. This increase occurs despite the failure of the increased collection efforts to generate corresponding increases in the number or amount of payments.
6. Vectren customers who participate in USP over a more extended period appear to have fewer arrears that generate collection activities than do more recent USP participants. For the two populations (Group 1 and Group 2) as a whole, as well as for the sub-populations with lower January 2008 arrears, customers who had participated in USP for both 2007 and 2008 exhibited a lower percentage of accounts that had both arrears and collection activity directed toward those arrears.

THE CRISIS PAYMENT PROGRAM

Revenue Collection

1. Customers receiving CGCU crisis payments tend to at least remain current on payment toward their bill for current usage. In looking at payment coverage ratios at various mileposts after receiving a crisis payment, both Group 1 (EAP) and Group 2 (non-EAP) customers are covering their current bills.
2. No pattern exists in distinguishing payment coverage ratios by EAP (Group 1) and non-EAP (Group 2) participants. Group 2 customers have a higher cumulative payment coverage ratio in eight of the 15 study months while Group 1 customers have the higher coverage in the remaining seven months.
3. When disaggregated by the level of arrears on the bill in the month in which a crisis payment is received, neither Group 1 nor Group 2 have a consistently higher payment coverage ratio in the crisis month, the first month after the crisis month (Month 2), or at various mileposts (e.g., in Month 3, Month 6, Month 9 or Month 12).
4. Notwithstanding the ability of crisis customers to pay their entire bills for current consumption in the months after receiving a crisis payment, as a group, they do not cover their entire bill (including pre-existing arrears) and keep it covered over time. This total bill coverage is determined by calculating the payment coverage ratio after subtracting the arrears in the month of the crisis payment from the total payments.
5. The best performing population involves customers who retired their arrears and participated in EAP/USP. Customers with very high arrears (>\$250) in the crisis month had the consistently lowest cumulative coverage ratios. Improved performance appears to follow sufficient payments made in the crisis month to reduce beginning arrears to \$0.
6. These improved payment patterns are enhanced even further through participation in the EAP/USP programs. Crisis recipients also receiving EAP/USP, particularly those with lower arrears in the month of the crisis payment, had higher aggregate, as well as higher average, payments. These differences in payment patterns arise notwithstanding the observation, discussed below, that these EAP/USP customers do not have systematically higher bills that may give rise to their higher payments.
7. The differences in aggregate and average payments between Group 1 and Group 2 customers cannot be attributed to payments that are made toward pre-existing arrears. Subtracting the total level of arrears in the month of the crisis payment leaves the total payments that are available to pay current monthly bills once arrears have been retired. For EAP/USP customers with low arrears (<\$1, \$1 - \$100), despite the USP discount, crisis recipients who receive EAP and thus also participate in USP, made greater payments in the months in and following receipt of crisis assistance.

Level of Collection Effort

1. Not only do crisis recipients participating in the EAP/USP initiatives (Group 1) pay virtually the same dollars as do crisis recipients not participating in EAP/USP (Group 2), but they do so while generating virtually identical collection efforts as well when the groups are viewed as a whole.
2. When disaggregated by the level of the Crisis Month arrears, a different pattern appears. While payment did not become automatic for customers who reduced their arrears to \$0 in the crisis month, reducing arrears to \$0 was followed by bill payment patterns that required noticeably lower levels of collection activity to maintain than did recipients with higher arrears in the Crisis Month. The ability to reduce arrears to \$0 or near \$0 in the month of a crisis payment has an impact on the level of collection activity in subsequent months. As arrears remain high, even after receipt of a crisis payment, the level of ongoing collection activity needed to generate payments in the post-crisis months increases as well.
3. Crisis customers also participating in EAP/USP benefited from greater stability in their bill payments to a greater extent, and for a longer time period, than did customers receiving crisis assistance but not EAP and USP. While the impact of the crisis payment in controlling the need for collection activities (as measured by the number of collection activity months per each bill issued) dissipated for non-EAP (Group 2) customers, it did not have the same dissipation of effect for EAP/USP (Group 1) customers. This occurred at all levels of Crisis Month arrears.
4. The conclusion that, without a supporting program such as EAP or USP, the collections impact of a crisis intervention program dissipates over time is supported by the data relating the number of collection efforts required for each 1,000 payments received in any given month. The program providing crisis assistance without the accompanying participation in EAP/USP resulted in lesser collection efforts in the early months of the study period. Beginning in Month 9, however, the pattern reversed.
5. The level of collection effort required as measured by the number of collection activity months indexed to various factors (e.g., total collection activity, per number of payments, per number of bills, per cumulative bills) shows that coupling a crisis intervention program with the EAP and USP programs has a positive longer-term impact on collections than does a crisis intervention program standing alone. For an entire series of metrics measuring the level of collection effort directed toward customers receiving crisis assistance, it appears that while crisis assistance in the short-term positively reduces the need for collection effort without the added intervention of USP and EAP, the reductions associated with such a stand-alone program are not sustainable over the longer-term. In this regard, the “longer-term” is measured in terms of less than a year.

Effectiveness of Collections

1. Crisis intervention benefits coupled with participation in the EAP/USP generates greater payments over the long-term for each collection month of activity exerted by the utility.
2. Modestly increased payments for each month of collection activity exerted occurred for the non-EAP customers in the months immediately after the Crisis Month. The pattern reverses itself in the later months of the program. Beginning in Month 9, the EAP crisis program was more effective in generating monthly payments for each collection month of activity.
3. The same pattern exists when one examines the number of collection months of activity needed to generate each payment. While (with the exception of the Crisis Month itself) the non-EAP crisis program was more effective in generating payments for each collection month of activity (i.e., the non-EAP program required fewer collection months of activity to generate each payment by a crisis recipient), this pattern reversed in the later months of the study period.

Arrears and Payments

1. Neither crisis approach adopted by Citizens Gas resulted in the elimination of arrears over the length of the study period, although the crisis program not associated with EAP/USP was more successful. While the percentage of accounts in arrears was reduced over time by both programs, program participants did not retire their arrears and stay out of arrears.
2. The greater success of the non-EAP crisis program in keeping customers free of arrears is reflected as well in the aggregate dollars of arrears. The non-EAP crisis program generated fewer dollars of arrears for the population as a whole in Month 15 of the study period. This lower level of arrears was reasonably consistent throughout the study period. The lower level of arrears can be seen not only for Group 2 as a whole, but for each sub-population of the two Groups as defined by the level of Crisis Month arrears.
3. The lower level of arrears within the non-EAP customer population might well be attributable, at least in part, to the lower level of bills received by the non-EAP customers. Despite the USP discount provided to Group 1 customers, as EAP program participants, in nine of the 15 study months, non-EAP crisis recipients had lower bills. The lower bills of non-EAP participants appear to be primarily associated with higher consumption months with higher overall bills.
4. The association between bill levels and the extent of arrears can be seen, also, amongst the accounts distinguished by differing levels of Crisis Month arrears. In the high bill months, particularly for the non-EAP crisis recipients, each level of increasing arrears had a higher average bill than the preceding level of arrears.

5. Neither the EAP crisis participants, nor the non-EAP crisis participants, maintained a level flow of payments over the course of the study period. Despite the presence of arrears with a significant number of both groups of crisis participants, the average payment by each group of participants fluctuated along with the underlying bills. While payments increased during the high bill months for both groups, the increase in average payment did not match the corresponding increase in bills for each Group.

THE WINTER WARMTH PROGRAM

Revenue Collection

1. NIPSCO appears to succeed in taking customers who owe the utility substantial arrears and allowing those customers to make payments that, at a minimum, cover their current bills for service. The Winter Warmth program has taken customer with significant payment-troubles and received 99% of their payment for current bills over the 17-month study period.
2. The EAP, non-EAP and Winter Warmth groups as a whole experienced an improvement in bill payment performance over the course of the study period. The cumulative payment coverage ratio for each month in 2009 (January through May) for each Group as a whole was higher than the payment coverage ratio in the corresponding month in 2008. The improvement in the Winter Warmth payment coverage ratio for May 2009 (relative to May 2008) was two times greater than the improvement for the EAP population and three times higher than the improvement for the non-EAP population.
3. The payment coverage ratios for customers with high beginning arrears were consistently higher than customers with lower arrears (and customers with no arrears). Winter Warmth was particularly helpful in allowing high arrears customers pay their entire current bill in addition to making payments toward their pre-existing arrears. Recognizing that Winter Warmth is directed toward payment troubled customers, it would be expected that Winter Warmth participants begin with poor performance relative to the other two populations. To the extent the program works, the Winter Warmth customers would be expected to improve their performance. This is precisely what occurs.
4. After subtracting beginning arrears from payments, while Winter Warmth participants had cumulative payment coverage ratios that closely tracked the other two populations for both the sub-population with \$1 - \$100 in January arrears and the sub-population with \$101 - \$250 in January arrears. Those Winter Warmth customers with arrears greater than \$250 had higher cumulative payment coverage ratios than the EAP and non-EAP populations beginning in April 2008 and continuing through the remainder of the study period.
5. The Winter Warmth and EAP program substantially lessen, but do not completely eliminate, the seasonal nature of payment. The improved seasonal pattern in the cumulative bill payment coverage ratios can be attributable, at least in part, to the use of budget billing plans.

6. The most improvement in cumulative payment coverage ratios (having subtracted January arrears) from May 2008 to May 2009 came within the Winter Warmth population.

Level of Collection Effort

1. While NIPSCO must exert proportionately more effort to collect from Winter Warmth customers with lower beginning arrears, the Winter Warmth program equalizes the need for collection efforts directed toward customers with higher arrears. While EAP appears to succeed not only in retiring arrears, but in reducing the collection activity required to maintain payment levels so long as the initial arrears can be reduced to \$0, when arrears remain on the account, EAP standing alone works less effectively than Winter Warmth.
2. The participation of customers in EAP has a distinctly different impact on the amount of collection effort required to maintain payment coverage ratios depending on the level of the January 2008 arrears. When measured by the number of collection activity months needed to generate each \$1,000 in payments, as a general rule, EAP makes it easier for NIPSCO to generate payments from customers having \$0 in January 2008 arrears, while Winter Warmth better serves the population that has a beginning arrears. The difference disappeared for the accounts with higher January 2008 arrears. NIPSCO exerted less activity for each \$1,000 in payments it received for Winter Warmth accounts with January 2008 arrears greater than \$0.
3. By May 2009, the number of cumulative collection months, on a per \$1,000 of bills basis, directed toward the Winter Warmth population was lower than either the EAP or the non-EAP population for accounts having January 2008 arrears of more than \$250. This was true for different mile-posts, including immediately preceding the winter (October 2008), at the immediate end of the winter (March 2009), and at the end of the study period (May 2009). The same pattern did not hold for accounts with \$0 in January 2008 arrears or for accounts with lower levels of January 2008 arrears.
4. While the delivery of EAP appears to be sufficient to lessen the need for collection activities at lower levels of arrears, or when no arrears exist on an account, EAP standing alone does not appear to be sufficient to lessen the need for collection activities toward accounts with higher levels of arrears. When NIPSCO began with severely payment-troubled customers, the delivery of benefits through Winter Warmth allowed customers to outperform customers only receiving Energy Assistance.

Effectiveness of Collections

1. NIPSCO engages in fewer collection months for each payment that it generates from its Winter Warmth participants. The number of cumulative collection months, on a per 1000 bill basis, directed toward the Winter Warmth population was lower than either the EAP or non-EAP populations. This pattern of fewer collection efforts per 1,000 bills held for

the Winter Warmth population as a whole, as well as at each level of January 2008 arrears

2. While the delivery of EAP appears to be sufficient to lessen the need for collection activities at lower levels of arrears, or when no arrears exist on an account, EAP standing alone does not appear to be sufficient to lessen the need for collection activities for accounts with higher levels of arrears. With severely payment-troubled customers, the delivery of Winter Warmth benefits allowed customers to outperform customers receiving only EAP.
3. NIPSCO collected more money for each collection activity in which it engages from low-income customers who participated in the Winter Warmth and EAP than from customers who do not participate in EAP. EAP makes it easier for NIPSCO to generate payments from customers having a \$0 arrears in January, while Winter Warmth better serves the population that has a higher beginning arrears.

Arrears and Payments

1. While participation in Winter Warmth helps participating customers to reduce their arrears, participation in the Energy Assistance Program (EAP) has a more significant impact on completely retiring arrears. Similarly, for customers who do not have arrears, EAP participation better helps customers to remain current on their bills.
2. More NIPSCO customers who participated in EAP eliminated their arrears entirely over the course of the study period than did customers who participated only in Winter Warmth. The EAP and Winter Warmth populations both outperformed the non-EAP population in terms of payment performance in this regard.
3. The impact of the Winter Warmth program was greatest for those accounts with the highest level of January 2008 arrears. The reduction in the percentage of accounts in arrears for accounts with January 2008 arrears greater than \$250 was greater than the reduction for accounts having lesser levels of January 2008 arrears.
4. The impact of the Winter Warmth on the reduction of the dollars in arrears is even more dramatic than the impact of Winter Warmth on the number of accounts in arrears. This is particularly so with those accounts that have the highest beginning arrears. Those low-income customers in the deepest payment trouble starting the program experience the greatest arrearage reduction. Only customers with \$0 in arrears, or arrears less than \$100 appeared to increase their arrears, and then only slightly.
5. EAP and non-EAP customers carry reasonably similar bills. Differences in the absolute level of payments between customers who participate in EAP and those customers who do not cannot be attributed to any substantial difference in bills.
6. In contrast, larger arrears appear to be associated with higher bills for the Winter Warmth participants of NIPSCO. Contrary to the comparison of the EAP and non-EAP populations, the Winter Warmth population consistently exhibits larger bills.
7. Two “tiers” of bills appear to exist within the NIPSCO customer population for all three customer groups (EAP, no-EAP, Winter Warmth). For all three groups (EAP, non-EAP, Winter Warmth), accounts with extremely high January 2008 arrears (>\$250) have substantially higher bills than do accounts with lower arrears.
8. NIPSCO’s low-income continue to make payments year round irrespective of the program in which they are participating. For all three populations (EAP, non-EAP and Winter Warmth), the average payment for the group as a whole (spread over all customers, not simply over those customers making payments) remains at or above \$100 per month even during the warm weather months.
9. The reduction in payments in the warm weather months is not attributable to a reduction in the number of payments (with each nonpayment factored in at \$0). The number of payments per bill issued actually increases during the warm weather.

10. Customers in all three groups increase the dollar level of their payments during the winter months. Customers with extremely high arrears (>\$250) exhibit the same pattern of increased winter payments as exhibited by customers with lower arrears.
11. Winter Warmth appears to result in an increase in payment frequency by program participants. In comparing the ratio of payments to bills for the months of January through May 2009 to the ratio of payments to bills for the months of January through May 2008, Winter Warmth customers made a higher number of payments relative to the number of bills issued in four of the five months. In contrast, for EAP and non-EAP customers, no systematic change in bill frequency appears.
12. The proportion of accounts with arrears sufficient to prompt collection activity decreases through the warm weather months, particularly for customers participating in Winter Warmth and in EAP. For these two groups (EAP, Winter Warmth) while an uptick in collection activity occurs in January through March 2009 (relative to the pre-cold weather months), both groups of customers (when the population is viewed as a whole) enter the 2009 warm weather months in better position than in 2008. By April and May 2009, these two groups have both improved their position relative to one-year earlier.
13. The positive impacts of EAP and Winter Warmth on high arrears customers are evident in this data on the percentage of accounts with arrears and collection activity. While the non-EAP population also experienced a drop, the drop was less than for both the EAP or Winter Warmth populations.