



# Low Income Customer Assistance Program

## Impacts on Payments and Arrearages

Prepared for Niagara Mohawk

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## Table of Contents

Executive Summary .....	i
I. Introduction .....	1
A. Afford/Ability Plan Description .....	1
B. Population Studied .....	4
C. Analyses Performed .....	4
D. Layout of the Report .....	5
II. Data Quality .....	7
III. Account Status and Plan Participation .....	9
IV. Payments and Coverage Rates .....	12
V. Arrearages .....	16
VI. Findings .....	25

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## Executive Summary

Approximately one third of Niagara Mohawk's customers are low-income<sup>1</sup>. These customers have had increasing problems paying their bills, and Niagara Mohawk has seen an increasing level of arrears and write-offs from this population. Niagara Mohawk initiated the Low-Income Customer Assistance Program (LICAP) in November 1993 to address the business problems associated with serving low-income payment-troubled customers. The goal of the LICAP Afford/Ability program is to provide cost-effective solutions to the substantial "inability to pay" problem among Niagara Mohawk's low-income customers. The program couples a reduced payment with energy services that are designed to reduce usage and increase affordability.

The LICAP Program was designed to address the problems of low-income customers who are unable to pay their full energy bills. Payment-troubled customers may receive, as appropriate, any or all of the following LICAP services: a) an affordable payment arrangement, b) energy use management education, c) a variety of energy efficiency services including weatherization and energy efficient appliance replacements. By increasing the overall amount of cash payments, as a result of being on an affordable payment arrangement, and by reducing household energy usage, as a result of any energy use management education and/or energy efficiency services received, payment troubled LICAP customers can substantially increase bill payment coverage rates.

The current report and previous reports comprise a "cohort study". The population examined in this study is all households that enrolled in the Afford/Ability program between October 26, 1998 and December 31, 1998. There were 704 households enrolled in the program during this time period. Households differ widely in terms of the number of days of billing data available. All analyses are presented initially with the full set of households. Subsequent analyses restrict the households to those with at least 6 actual bills and at least 2 actual bills during the heating season.

The analyses that are performed in this report are:

- Analysis of data quality: There were 704 households who enrolled in the LICAP program in the fall of 1998. However,

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<sup>1</sup> Source: 1990 Census.

all analyses cannot be performed on this full set of households, due to missing data items. This section of the report describes the set of households with data available to conduct analysis, and the data that are missing for households that are not included in the analysis.

- Analysis of account status and plan participation: This section of the report analyzes the account status (active, final, or written off), LICAP status, and collection status of the original 704 households in the cohort studied in this report.
- Analysis of payments and coverage rates: This section of the report compares baseline and follow-up number of payments, level of cash payments, level of assistance payments, and total payments. Bill coverage rates are also analyzed.
- Analysis of arrearages: This section of the report analyzes the level and change in arrearages since program enrollment. Arrearages are analyzed by level of negotiated payment and type of energy services received. Analysis of arrearage forgiveness is also conducted.

### **Data Quality**

This report analyzes data for the 704 households that enrolled in the LICAP program between October 26, 1998 and December 31, 1998. The baseline period for data analysis was January 1, 1998 through December 31, 1998. The follow-up period for data analysis was June 1, 1999 through June 30, 2000. Due to conversion to a new billing system in February, 1999, problems with billing and data were experienced during this time period.

The table below shows that there were 704 households that enrolled in the LICAP program in the fall of 1998. Of these households, 702 were able to be matched with the premise number from the new data management system, and 687 were able to be matched with the follow-up data.

### Households with Account Information

Number in Cohort	704
Number with New Premise Number	702
Number with Follow-up Account Information Matched	687

While 687 of the LICAP households were found in the follow-up data, many of these households did not have usage information available. Of the original 702 households, 621 had usage data available in the baseline year. Of the 621 households with usage data in the baseline year, 447 had usage data available in the follow-up year. This is the sample designated as “full sample” in this report. The sample designated as “restricted sample” in this report had at least 6 non-estimated usage periods and at least 2 non-estimated heating periods. The table below shows that 428 households had at least 6 usage periods, but only 198 had at least 6 non-estimated usage periods. Of these households, 120 had at least 2 non-estimated heating periods.

### Households with Usage Information

Baseline	621
Follow-up: "Full Sample"	447
Baseline and follow-up usage data with at least 6 usage periods	428
Baseline and follow-up usage data with at least 6 non-estimated bills	198
Baseline and follow-up usage data with at least 6 non-estimated bills at least 2 non-estimated heating bills: "Restricted Sample"	120

### Account Status and Plan Participation

Follow-up data were downloaded in the summer of 2000. The table below shows that at this time, 86 percent of the full sample and 92 percent of the restricted sample had active accounts.

### Account Status

	All Participants		Full Sample		Restricted Sample	
	#	%	#	%	#	%
<b>Active</b>	434	62%	383	86%	110	92%
<b>Final</b>	107	15%	63	14%	9	8%
<b>Written Off</b>	146	21%	1	0%	1	1%
<b>Unknown</b>	17	2%	0	0%	0	0%
<b>Total</b>	704	100%	447	100%	120	100%

Approximately 30 percent of all original participants and 40 percent of the analysis sample were actively participating in LICAP at the time these data were downloaded in the summer of 2000. The table below shows the cohort's LICAP plan status.

### Most Recent LICAP Plan Status

	All Participants		Full Sample		Restricted Sample	
	#	%	#	%	#	%
<b>Active</b>	208	30%	182	41%	43	36%
<b>Completed</b>	81	12%	65	15%	21	18%
<b>Cancelled</b>	208	30%	179	40%	42	35%
<b>Defaulted</b>	4	1%	4	1%	0	0%
<b>Unknown</b>	203	29%	17	4%	14	12%
<b>Total</b>	704	100%	447	100%	120	100%

### Payments and Coverage Rates

The goal of Niagara Mohawk's LICAP program is to address the "inability to pay" problem among their low-income customers. This report analyzes changes in payment behavior and bill payment coverage rates from the baseline to the follow-up period.

The table below displays annualized payment data. The annualized change in the number of payments is an increase of 2.3 payments, significant at the 99 percent level. The annualized increase in total cash payments is

\$140, significant at the 99 percent level. Total assistance payments declined by \$29, due to the fact that payment plan participants are not eligible to receive emergency LIHEAP assistance. Total payments increased by \$111 (significant at the 99 percent level).

**Annualized Data**  
**Change in Number and Size of Payments**  
**Full Sample**

	Baseline	Follow-Up	Change
<b>Number of Payments</b>	4.9	7.2	+2.3
<b>Size of Individual Payments</b>	\$139	\$124	-\$15
<b>Total Cash Payments</b>	\$659	\$799	+\$140
<b>Total Assistance Payments</b>	\$337	\$308	-\$29
<b>Total Payments</b>	\$996	\$1107	+\$111
<b>Number of Days of Payment Data</b>	349	294	-56

As the total bill declined and the total cash payments increased, cash coverage rates increased. The table below shows that the cash coverage rate increased by 12 percentage points (significant at the 99 percent level), and the overall coverage rate increased by 9 percentage points (also significant at the 99 percent level).

**Coverage Rates**  
**Full Sample**  
**Annualized Data**

	Baseline	Follow-Up	Change
<b>Annualized Total Bill</b>	\$1350	\$1388	\$38
<b>Annualized Total Cash Payments</b>	\$659	\$799	\$140
<b>Cash Coverage Rate</b>	52%	64%	12%
<b>Total Payments</b>	\$997	\$1107	\$111
<b>Coverage Rate</b>	77%	85%	9%

The LICAP program provides targeted efficiency services to participants in order to reduce their energy usage and make energy bills more

affordable. The table below shows that households that received AEP services had an 26 percentage point increase in cash coverage rates (significant at the 99 percent level), households that received weatherization services had a 16 percentage point increase in cash coverage rates (not statistically significant) and households that only received education had a 8 to 9 percentage point increase in cash coverage rates (statistically significant at the 95 percent level.) Total coverage rates increased significantly for households that received AEP services.

### Coverage Rates Full Sample

Service Received	Cash Coverage Rates			Total Coverage Rates		
	Baseline	Follow-Up	Change	Baseline	Follow-Up	Change
<b>Weatherization</b>	54%	69%	16%	75%	87%	12%
<b>AEP</b>	57%	83%	26%	77%	97%	20%
<b>Workshop Only</b>	48%	57%	9%	75%	80%	5%
<b>Video Only</b>	52%	60%	8%	78%	83%	5%

### Arrearages

The Niagara Mohawk LICAP program provides participants with a reduced payment in order to make monthly bills more affordable. The difference between the household's actual bill and the reduced monthly payment increases the household's level of arrears. However, total arrears should decline if the household is a successful LICAP participant because: 1)The total bill, and the difference between the negotiated payment and the total bill, should decline due to energy services and energy education, 2)LIHEAP assistance is applied to arrearages, and 3)Households that successfully pay their bills over the LICAP plan year will receive an arrearage forgiveness up to a maximum of \$250 or half of accumulated arrearages.

The table below shows that mean arrears at program enrollment are \$921 for the full sample and \$1022 for the restricted sample. Follow-up arrears are \$1134 for the full sample and \$1363 for the restricted sample. Difference in means for both samples are statistically significant at the 99 percent level. On average, arrears have increased by between 23 and 33 percent. The distribution of arrears is also displayed. These statistics suggest that there is a group of households who are succeeding on the



plan, those who started out with the lowest level of arrears, and a group who need more assistance, those who started out with the highest level of arrears.

### Arrears at Program Enrollment and Follow-Up

	Mean	Minimum	Percentile			Maximum
			25	50	75	
Full Sample						
Pre	\$921	\$0	\$363	\$659	\$1116	\$8486
Post	\$1134	\$0	\$155	\$644	\$1616	\$8106
Restricted Sample						
Pre	\$1022	\$0	\$376	\$654	\$1196	\$8486
Post	\$1363	\$0	\$243	\$751	\$2001	\$6328

Further analysis conducted in this report show that there are several factors that are correlated with the change in arrears. Households that receive AEP or weatherization services, that have significant energy savings, and that have higher negotiated coverage rates are more likely to experience a decrease in arrears and are less likely to experience a large increase in arrears.

The Niagara Mohawk LICAP program provides arrearage forgiveness to households that pay their monthly negotiated payments or that make up missed payments. The next table shows that 46 percent of households in the full sample and 42 percent of households in the restricted sample received arrearage forgiveness. The level of arrearage forgiveness is the smaller of \$250 or half of current arrears. The mean level of arrearage forgiveness was approximately \$220.

### Percent of Households Receiving Arrearage Forgiveness And Mean Level of Forgiveness

	Full Sample	Restricted Sample
<b>Percentage Receiving Forgiveness</b>	46%	42%
<b>Mean Level of Arrearage Forgiveness</b>	\$218	\$220

The table below shows that households that receive arrearage forgiveness are more likely to have a reduction in arrears of \$100 or more.

**Distribution of Change in Arrears  
By Whether Arrearage Forgiveness was Received  
Full Sample**

Change in Arrears	Arrearage Forgiveness Received	
	Yes	No
< -\$100	50%	34%
-\$100 to \$100	17%	11%
+\$100 to +\$500	23%	14%
> +\$500	11%	41%
<b>Total</b>	100%	100%

**Recommendations**

The findings in this report suggest that some customers are not successful on the partial payment arrangement. Many participants do not remain on the program, and some experience large increases in arrears. The following changes may result in a more successful program for all customers:

- **LICAP participation:** A significant number of plan participants had dropped out of the payment arrangement one year later. This suggests that there may be a role for increased intervention when customers are at special risk or appear to be having problems meeting their obligations.
- **Arrears:** The segment of customers with high baseline arrears, did not appear to be successful on the program. As those households who received AEP or weatherization services, had significant energy savings, had higher negotiated coverage rates, and that received arrearage forgiveness were more likely to experience a decrease in arrears, these are potential avenues to increase program success:
  - ✓ Households with high pre-program arrears could be targeted for receipt of energy efficiency services.

- ✓ Households with high pre-program arrears could be targeted for more intensive energy efficiency services.
- ✓ Households with high pre-program arrears could be targeted for higher negotiated coverage rates if it appears that these payments could be affordable for the household. These households could have additional assistance in obtaining other resources to assist the household in meeting financial obligations. Additionally, these households could be targeted for increased monitoring and follow-up to ensure that they are able to keep up with their bills.
- ✓ Households with high pre-preprogram arrears could be directed toward a staff member specializing in advocacy. This staff member could work with the customer and social service agencies to ensure that the customer received all benefits to which she was entitled.
- ✓ Households with high pre-program arrears could receive additional assistance to ensure that they receive LIHEAP benefits. If these households are not put on the payment plan, they can receive additional assistance to ensure that they receive emergency LIHEAP assistance.
- ✓ Households with high pre-program arrears could be given a less stringent standard for receiving arrearage forgiveness. If the usual standard is to pay 100 percent of negotiated payments, these households may receive arrearage forgiveness if they make 90 percent of their negotiated payment total for the year.

## I. Introduction

Approximately one third of Niagara Mohawk's customers are low-income<sup>2</sup>. These customers have had increasing problems paying their bills, and Niagara Mohawk has seen an increasing level of arrears and write-offs from this population. Niagara Mohawk initiated the Low-Income Customer Assistance Program (LICAP) in November 1993 to address the business problems associated with serving low-income payment-troubled customers. The goal of the LICAP Afford/Ability program is to provide cost-effective solutions to the substantial "inability to pay" problem among Niagara Mohawk's low-income customers. The program couples a reduced payment with energy services that are designed to reduce usage and increase affordability.

### *A. Afford/Ability Plan Description*

The LICAP Program was designed to address the problems of low-income customers who are unable to pay their full energy bills. Payment-troubled customers may receive, as appropriate, any or all of the following LICAP services: a) an affordable payment arrangement, b) energy use management education, c) a variety of energy efficiency services including weatherization and energy efficient appliance replacements. By increasing the overall amount of cash payments, as a result of being on an affordable payment arrangement, and by reducing household energy usage, as a result of any energy use management education and/or energy efficiency services received, payment-troubled LICAP customers can substantially increase bill payment coverage rates.

#### **1. Target Customers, Eligibility Criteria, and Program Requirements**

The overall goal of the Afford/Ability program is to furnish non-PA low-income payment-troubled LIHEAP-recipient customers with a long-term solution to payment problems in a way that is cost-effective for Niagara Mohawk. Another objective of the program is to interrupt the troubled payment cycle of broken agreements, shutoff, partial payment, resumption of service, further broken agreement, and shutoff once again. The program

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<sup>2</sup> Source: 1990 Census.

is available to customers who are eligible for HEAP but are above the Public Assistance Need Standard.

Eligibility requirements are:

- **Income Limit:** Customers must have income that is not above the LIHEAP standard.
- **Cash Flow:** Monthly income must not exceed monthly expenses by more than \$100. Negative cash flow cannot be greater than 50 percent of monthly income.
- **Public Assistance:** Customers must not be on cash Public Assistance. (The exception is the Child Assistance Program.)
- **Payment-Troubled Status:** The applicant must have a payment-troubled history. The normal criterion is two broken agreements in the past 12 months, but exceptions are sometimes made.

To remain on the payment arrangement, participants are required to:

- Make the negotiated affordable payment every month. If a participant falls behind by two payments, program dismissal procedures are implemented.
- Receive HEAP regular assistance. The program requires that customers have applied for and been deemed eligible to receive LIHEAP benefits prior to enrollment.
- Return for recertification at the end of one year.

## **2. Overview of Afford/Ability Program Design**

The Afford/Ability design consists of four basic implementation components: (1) referral of all eligible customers for enrollment; (2) confirmation of customer eligibility and enrollment; (3) delivery of energy management services; and (4) follow-up and monitoring of participant payment activity throughout the program period. Each of the components is described below.

### 1. Referral

The goal of the referral process is to direct payment-troubled customers who are potentially eligible for the Afford/Ability Plan to the intake representatives. The referral process is successful if it generates an adequate number of screened and eligible referrals for the intake representatives. A longer-term objective is that the referral process ensures that all customers who are eligible be offered the opportunity to enroll in the program. Referrals for potential participants come from a variety of sources including Collections Services representatives and consumer advocates.

### 2. Enrollment

The purpose of the enrollment process is to confirm the customer's eligibility status, to work with the customer to negotiate an affordable payment amount for those customers going on the affordable payment arrangement, to identify the best EMS option, and to explain the various program requirements to the customer. Enrollment is a key contact with the customer. The intake representative must simultaneously change the customer's attitude toward Niagara Mohawk, negotiate aggressively with the customer to ensure that the customer is meeting his or her responsibility, and explain complex program procedures.

### 3. Energy Management Services

Energy services are an integral part of the Afford/Ability program and of the affordability strategy. The Afford/Ability program is targeted to those customers who cannot pay their utility bills. A prior study found that over half of Niagara Mohawk's HEAP customers had moderate to high usage that contributed to the inability to pay. The goal of the negotiated partial payment is to obtain more frequent and higher total payments from customers. The aim is to reduce the gap between usage and payment. By providing customers with energy management services, Niagara Mohawk hopes to further decrease payment shortfalls to the point where customers can afford their entire bill. There are two parts to the energy services component of the program:

- Energy Use Management Education works with customers to identify their usage patterns and potential areas for saving.
- Energy Efficiency Services offer customers the opportunity to improve their housing stock and update appliances in ways that will reduce their energy consumption.

#### 4. Follow-up

Through the computerized participant tracking system, payment activity is monitored, contacts are made to encourage payment or to notify participants of program defaults, and program dismissal and service termination actions are initiated for defaulting customers. The purpose of these follow-up activities is to maintain a two-way communication with participants and to keep them informed of their status (reinforcing those who pay as scheduled and reminding those in default of their payment obligations.)

### ***B. Population Studied***

The current report and previous reports comprise a “cohort study”. The population examined in this study is all households that enrolled in the Afford/Ability program between October 26, 1998 and December 31, 1998. There were 704 households enrolled in the program during this time period.

Households differ widely in terms of the number of days of billing data available. All analyses are presented initially with the full set of households, the "Full Sample". Subsequent analyses restrict the households to those with at least 6 actual bills and at least 2 actual bills during the heating season, the "Restricted Sample".

### ***C. Analyses Performed***

The analyses that are performed in this report are described below:

- Analysis of data quality: There were 704 households who enrolled in the LICAP program in the fall of 1998. However, all analyses cannot be performed on this full set of households, due to missing data items. This section of the report describes

the set of households with data available to conduct analysis, and the data that are missing for households that are not included in the analysis.

- Analysis of account status and plan participation: This section of the report analyzes the account status (active, final, or written off), LICAP status, and collection status of the original 704 households in the cohort studied in this report.
- Analysis of payments and coverage rates: This section of the report compares baseline and follow-up number of payments, level of cash payments, level of assistance payments, and total payments. Bill coverage rates are also analyzed.
- Analysis of arrearages: This section of the report analyzes the level and change in arrearages since program enrollment. Arrearages are analyzed by level of negotiated payment and type of energy services received. Analysis of arrearage forgiveness is also conducted.
- Impacts of energy services: The accompanying report, Impacts on Energy Usage, analyzes changes in energy usage by the type of energy services received. This report calculates the cost-effectiveness of these services based on the estimated savings and the cost of providing the services.
- Analysis of baseline data: The Baseline Analysis Report examined baseline customer characteristics, negotiated payments and coverage rates, baseline usage and bills, baseline payments, and projected program outcomes.
- Predicted impacts of energy services: The Energy Services Analysis Report examined the energy services that were received through the LICAP program, the projected savings from these services, and the impact of predicted usage reductions on bills, negotiated coverage rates, and actual coverage rates.

#### *D. Layout of the Report*

This report is comprised of six parts. Section II describes the number of households with data available to be analyzed. Section III



describes the account status, LICAP plan status, and collection status of households in the original cohort. Section IV describes payments and coverage rates made during the follow-up period. Section V discusses changes in arrearages from the baseline, as well as the impact of negotiated coverage rates, energy services received, and arrearage forgiveness on arrears. Section VI summarizes the findings from the analysis of follow-up data.

## II. Data Quality

This report analyzes data for the 704 households that enrolled in the LICAP program between October 26, 1998 and December 31, 1998. The baseline period for data analysis was January 1, 1998 through December 31, 1998. The follow-up period for data analysis was June 1, 1999 through June 30, 2000. Due to conversion to a new billing system in February, 1999, problems with billing and data were experienced during this time period. This section of the report analyzes the level of data available for the cohort studied.<sup>3</sup>

Table II-1 shows that there were 704 households that enrolled in the LICAP program in the fall of 1998. Of these households, 702 were able to be matched with the premise number from the new billing system, and 687 were able to be matched with the follow-up data.

**Table II-1**  
**Households with Account Information**

Number in Cohort	704
Number with New Premise Number	702
Number with Follow-up Account Information Matched	687

While 687 of the LICAP households were found in the follow-up data, many of these households did not have usage information available. Of the original 702 households, 621 had usage data available in the baseline year. Of the 621 households with usage data in the baseline year, 447 had usage data available in the follow-up year. This is the sample designated as “full sample” in this report. The sample designated as “restricted sample” in this report had at least 6 non-estimated usage periods and at least 2 non-estimated heating periods. Table II-2 shows that 428 households had at least 6 usage periods, but only 198 had at least 6 non-estimated usage periods. Of these households, 120 had at least 2 non-estimated heating periods.

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<sup>3</sup> Data problems that were experienced were due largely to the transition to the new data systems.

**Table II-2**  
**Households with Usage Information**

Baseline	621
Follow-up: "Full Sample"	447
Baseline and follow-up usage data with at least 6 usage periods	428
Baseline and follow-up usage data with at least 6 non-estimated bills	198
Baseline and follow-up usage data with at least 6 non-estimated bills at least 2 non-estimated heating bills: "Restricted Sample"	120

### III. Account Status and Plan Participation

This section of the report analyzes the status of customers at the time follow-up data were downloaded in the summer of 2000. Account status describes whether customers were still active, LICAP plan status describes whether customers were still participating in the program, and collections status indicates whether customers were in collections due to a failure to meet bill obligations.

Table III-1 displays the household's account status. Eighty-six percent of the full sample and 92 percent of the restricted sample had active accounts at the time the data were downloaded in the summer of 2000. This represents 62 percent of the initial cohort.

**Table III-1**  
**Account Status**

	All Participants		Full Sample		Restricted Sample	
	#	%	#	%	#	%
<b>Active</b>	434	62%	383	86%	110	92%
<b>Final</b>	107	15%	63	14%	9	8%
<b>Written Off</b>	146	21%	1	0%	1	1%
<b>Unknown</b>	17	2%	0	0%	0	0%
<b>Total</b>	704	100%	447	100%	120	100%

This report analyzes all households who enrolled in the LICAP program in the fall of 1998. Many households had participated in more than one LICAP plan agreement because they had completed their first payment agreement, the first payment agreement had been terminated, or the payment amount had been changed. However, many households were not still active in the reduced payment plan at the time of follow-up.

Table III-2 displays the original cohort's most recent reduced payment plan status. Approximately 30 percent of all original participants and 40 percent of the analysis sample were actively participating in LICAP at the time these data were downloaded in the summer of 2000. Another 30

percent of the original participants and 40 percent of the analysis sample had their plans cancelled, most likely due to failure to meet payment obligations. Of those with cancelled plans, approximately 25 percent had a final account status and 75 percent had an active account status. Approximately 15 percent of participants completed their payment plans.

Nearly one third of original plan participants did not have information available as to their reduced payment plan status. Information on LICAP payment plan status was obtained from a download of the payment plan information screen that included information on payment plan status and negotiated payment level. Many households for whom data were downloaded in the summer of 2000 did not have this information available. Of the 203 households that did not have this information available, 75 percent had been written off, and an additional 13 percent had a final account status.

**Table III-2**  
**Most Recent LICAP Payment Plan Status**

	All Participants		Full Sample		Restricted Sample	
	#	%	#	%	#	%
<b>Active</b>	208	30%	182	41%	43	36%
<b>Completed</b>	81	12%	65	15%	21	18%
<b>Cancelled</b>	208	30%	179	40%	42	35%
<b>Defaulted</b>	4	1%	4	1%	0	0%
<b>Unknown</b>	203	29%	17	4%	14	12%
<b>Total</b>	704	100%	447	100%	120	100%

Table III-3 displays the households' collection status at the time the data were downloaded in the summer of 2000. Approximately 43 percent of all participants and 60 percent of the participants in the analysis samples were not subject to collections due to a payment agreement. Approximately 15 percent of all participants and 20 percent in the analysis sample were in active collections, and approximately 15 to 20 percent were not in collections. (More than 50 percent of those households who are not in collections have no arrears, but 25 percent have arrears over \$800.)

**Table III-3**  
**Collection Status**

	<b>All Participants</b>		<b>Full Sample</b>		<b>Restricted Sample</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
<b>Payment Agreement or Pending</b>	296	42%	255	57%	70	58%
• <b>Active Collections</b>	106	15%	91	20%	24	20%
• <b>Final Collections</b>	30	4%	20	4%	2	2%
• <b>Collections Arrangement</b>	6	1%	6	1%	2	2%
<b>Cut-out for Nonpay</b>	3	0%	3	1%	1	1%
<b>Not in Collections</b>	140	20%	71	16%	20	17%
<b>Charged Off</b>	106	15%	1	0%	1	1%
<b>Unknown</b>	17	2%	0	0%	0	0%
<b>Total</b>	704	100%	447	100%	120	100%

## IV. Payments and Coverage Rates

The goal of Niagara Mohawk's LICAP program is to address the "inability to pay" problem among their low-income customers. This section of the report analyzes changes in payment behavior and bill payment coverage rates from the baseline to the follow-up period. Both cash and assistance payments are analyzed. Additionally, coverage rates are analyzed by type of energy services received.

Table IV-1 displays the number of payments made, the average size of these payments, and the total cash payments made in the baseline and follow-up periods. While households in the baseline period made an average of 4.8 payments, households in the follow-up period made an average of 5.9 payments. This change is statistically significant at the 99 percent level. The size of individual payments decreased by an average of \$15, a change also significant at the 99 percent level. Total cash payments did not increase significantly. Total assistance payments decreased by an average of \$77, significant at the 99 percent level, probably due to the fact that payment plan participants are not eligible to receive emergency LIHEAP assistance. Total payments decreased by \$61, significant at the 95 percent level.

**Table IV-1**  
**Change in Number and Size of Payments**  
**Full Sample**

	<b>Baseline</b>	<b>Follow-Up</b>	<b>Change</b>
<b>Number of Payments</b>	4.8	5.9	+1.1
<b>Size of Individual Payments</b>	\$139	\$124	-\$15
<b>Total Cash Payments</b>	\$651	\$667	+\$16
<b>Total Assistance Payments</b>	\$324	\$247	-\$77
<b>Total Payments</b>	\$975	\$914	-\$61
<b>Number of Days of Payment Data</b>	349	294	-56

When examining the number of payments made and the total payments made, it is important to take into account the number of days of billing data that are available. Table IV-2 displays the days of payment data

available for the baseline and follow-up periods. This table shows that there are fewer days of data available in the follow-up period. The majority of households have 300 to 324 days of payment data available in the follow-up period, as compared to the majority of households having 325 to 375 days of data for the baseline period.

**Table IV-2**  
**Availability of Payment Data**

Days of Billing Data Available	Baseline Data		Follow-Up Data	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
<200	2%	0%	6%	0%
200-299	6%	8%	7%	5%
300-324	9%	3%	76%	84%
325-349	16%	23%	7%	7%
350-374	54%	57%	4%	4%
375 or more	14%	10%	0%	0%

Table IV-3 displays annualized payment data. When number of payments and total cash payments are annualized for the number of payment days available, the increase in payments in the follow-up period appears to be much larger. Table IV-3 shows that the annualized change in the number of payments is an increase of 2.3 payments, significant at the 99 percent level. The annualized increase in total cash payments is \$140, significant at the 99 percent level. Total assistance payments declined by \$29 and total payments increased by \$111 (significant at the 99 percent level).

**Table IV-3**  
**Annualized Data**  
**Change in Number and Size of Payments**  
**Full Sample**

	Baseline	Follow-Up	Change
Number of Payments	4.9	7.2	2.3
Size of Individual Payments	\$139	\$124	-\$15
Total Cash Payments	\$659	\$799	+\$140



	<b>Baseline</b>	<b>Follow-Up</b>	<b>Change</b>
<b>Total Assistance Payments</b>	\$337	\$308	-\$29
<b>Total Payments</b>	\$996	\$1107	\$111
<b>Number of Days of Payment Data</b>	349	294	-56

Table IV-4 displays bills, payments, and coverage rates for the full sample. As the total bill declined, as a result of the energy services received, and the total cash payments increased, cash coverage rates increased. The cash coverage rate increased by 12 percentage points (significant at the 99 percent level). The overall coverage rate increased by 9 percentage points (also significant at the 99 percent level).

**Table IV-4**  
**Coverage Rates**  
**Full Sample**

	<b>Baseline</b>	<b>Follow-Up</b>	<b>Change</b>
<b>Total Bill</b>	\$1312	\$1137	-\$175
<b>Total Cash Payments</b>	\$651	\$667	\$16
<b>Cash Coverage Rate</b>	52%	64%	12%
<b>Total Payments</b>	\$975	\$914	-\$61
<b>Coverage Rate</b>	77%	85%	9%

Table IV-5 displays annualized bills and payments. Coverage rates do not require annualization, as changes in data availability for bills and payments balance out. This table shows that the annualized total bill increased slightly, but the larger annualized increase in payments leads to an increased coverage rate.

**Table IV-5**  
**Coverage Rates**  
**Full Sample**  
**Annualized Data**

	<b>Baseline</b>	<b>Follow-Up</b>	<b>Change</b>
<b>Annualized Total Bill</b>	\$1350	\$1388	\$38
<b>Annualized Total Cash Payments</b>	\$659	\$799	\$140

	<b>Baseline</b>	<b>Follow-Up</b>	<b>Change</b>
<b>Cash Coverage Rate</b>	52%	64%	12%
<b>Total Payments</b>	\$997	\$1107	\$111
<b>Coverage Rate</b>	77%	85%	9%

The LICAP program provides targeted efficiency services to participants in order to reduce their energy usage and make energy bills more affordable. Table IV-6 displays cash and total coverage rates in the baseline and follow-up periods by type of service received. This table shows that households that received AEP services had a 26 percentage point increase in cash coverage rates (significant at the 99 percent level), households that received weatherization services had a 16 percentage point increase in cash coverage rates<sup>4</sup> and households that only received education had a 8 to 9 percentage point increase in cash coverage rates (statistically significant at the 95 percent level.) Total coverage rates increased significantly for households that received AEP services.

**Table IV-6**  
**Coverage Rates**  
**Full Sample**

<b>Service Received</b>	<b>Cash Coverage Rates</b>			<b>Total Coverage Rates</b>		
	<b>Baseline</b>	<b>Follow-Up</b>	<b>Change</b>	<b>Baseline</b>	<b>Follow-Up</b>	<b>Change</b>
<b>Weatherization</b>	54%	69%	16%	75%	87%	12%
<b>AEP</b>	57%	83%	26%	77%	97%	20%
<b>Workshop Only</b>	48%	57%	9%	75%	80%	5%
<b>Video Only</b>	52%	60%	8%	78%	83%	5%

<sup>4</sup> This difference is not statistically significant due to the small sample size. Development of data on a larger number of cases would be needed to confirm this finding.

## V. Arrearages

The Niagara Mohawk LICAP program provides participants with a reduced payment in order to make monthly bills more affordable. The difference between the household's actual bill and the reduced monthly payment increases the household's level of arrears. However, total arrears should decline if the household is a successful LICAP participant because: 1)The total bill, and the difference between the negotiated payment and the total bill, should decline due to energy services and energy education, 2)LIHEAP assistance is applied to arrearages, and 3)Households that successfully pay their bills over the LICAP plan year will receive an arrearage forgiveness up to a maximum of \$250 or half of accumulated arrearages.

Table V-1 displays participant arrears at program enrollment and at follow-up. Mean arrears at program enrollment are \$921 for the full sample and \$1022 for the restricted sample. Follow-up arrears are \$1134 for the full sample and \$1363 for the restricted sample. Difference in means for both samples are statistically significant at the 99 percent level. On average, arrears have increased by between 23 and 33 percent.

Table V-1 also displays the distribution of arrears. The percentiles in this table show the percentage of households with arrears below each level. For example, this table shows that for households in the full sample in the baseline period, 25 percent of households had arrears below \$363, 50 percent of households had arrears below \$659, and 75 percent of households had arrears below \$1116.

Therefore, this table shows that while in the baseline period 25 percent of households had arrears below \$363, in the follow-up period, 25 percent of households had arrears of only \$155 or less. However, while in the baseline period, 75 percent of households had arrears below \$1116, in the follow-up period, 75 percent of households had arrears below \$1616. These results suggest that there is a group of households who are succeeding on the plan, those who started out with the lowest level of arrears, and a group who need more assistance, those who started out with the highest level of arrears.

**Table V-1**  
**Arrears at Program Enrollment and Follow-Up**

	Mean	Minimum	Percentile			Maximum
			25	50	75	
Full Sample						
Pre	\$921	\$0	\$363	\$659	\$1116	\$8486
Post	\$1134	\$0	\$155	\$644	\$1616	\$8106
Restricted Sample						
Pre	\$1022	\$0	\$376	\$654	\$1196	\$8486
Post	\$1363	\$0	\$243	\$751	\$2001	\$6328

Table V-2 displays heating customer arrears at program enrollment and at follow-up. Mean arrears at program enrollment are \$1219 for the full sample and \$1242 for the restricted sample. Follow-up arrears are \$1567 for the full sample and \$1745 for the restricted sample. Difference in means for both samples are statistically significant at the 99 percent level. The average level of arrears for heating customers has increased by between 29 and 40 percent. However, customers beginning the program with the lowest arrears experience a decrease in arrears, and those beginning the program with the highest arrears experience an increase in arrears.

**Table V-2**  
**Arrears at Program Enrollment and Follow-Up**  
**Heating Customers**

	Mean	Minimum	Percentile			Maximum
			25	50	75	
Full Sample						
Pre	\$1219	\$82	\$516	\$835	\$1619	\$8486
Post	\$1567	\$0	\$212	\$1026	\$2438	\$8106
Restricted Sample						
Pre	\$1242	\$94	\$430	\$818	\$1755	\$8486
Post	\$1745	\$0	\$391	\$1073	\$2728	\$6328

Table V-3 displays non-heating customer arrears at program enrollment and at follow-up. Mean arrears at program enrollment are \$686 for the full sample and \$547 for the restricted sample. Follow-up arrears are \$792 for the full sample and \$539 for the restricted sample. The increase in mean arrears for the full sample is statistically significant at the 95 percent level. The decrease in mean arrears for the restricted sample is not statistically significant. Again, these results show that those customers starting the program with low levels of arrears are able to decrease their arrears, and those starting with higher levels of arrears, experience increases.

**Table V-3**  
**Arrears at Program Enrollment and Follow-Up**  
**Non-Heating Customers**

	Mean	Minimum	Percentile			Maximum
			25	50	75	
Full Sample						
Pre	\$686	\$0	\$322	\$540	\$866	\$4491
Post	\$792	\$0	\$120	\$541	\$1125	\$4784
Restricted Sample						
Pre	\$547	\$0	\$306	\$469	\$664	\$2040
Post	\$539	\$0	\$97	\$301	\$675	\$4410

Table V-4 displays the distribution of arrears for the full sample and the restricted sample at program enrollment and at follow-up. In the follow-up period, a greater percentage of customers have no arrears. However, a greater percentage of households in the follow-up period have arrears of \$2000 or more. In the baseline period, recipients are more likely to have arrears between \$500 and \$1000. This analysis reinforces the findings from the table above, that those households that begin the program with low arrears are successful, while those households that begin the program with high arrears experience increases in their arrearage levels.

**Table V-4**  
**Arrears Distribution at Enrollment and Follow-up**

Level of Arrears	Full Sample		Restricted Sample	
	Pre	Post	Pre	Post
<b>No Arrears</b>	0%	16%	1%	9%
<b>&lt;\$500</b>	35%	28%	36%	33%
<b>\$500-\$999</b>	36%	17%	35%	14%
<b>\$1,000-\$1,499</b>	12%	12%	8%	12%
<b>\$1,500-\$1,999</b>	8%	7%	76%	7%
<b>\$2000 or more</b>	9%	20%	13%	25%

In order to determine more precisely which households are experiencing decreases in arrears and which households are experiencing large increases in arrears, Table V-5 examines the distribution of the baseline and follow-up arrears by the change in arrears. This table shows that the majority of the households that experienced a decline in arrears or an increase in arrears of less than \$500 had baseline arrears of less than \$1000. However, of those households that experienced a \$500 or greater increase in arrears, half had baseline level arrears of over \$1000. As expected, the majority of households that experienced the greatest increase in arrears, had the highest follow-up arrears. Nearly 60 percent of households that experienced an increase in arrears of \$500 or more, had follow-up arrears of \$2000 or more.

**Table V-5**  
**Distribution of Baseline and Follow-up Arrears**  
**By Change in Arrears**  
**Full Sample**

Level of Arrears	Change In Arrears							
	< -\$100		-\$100 to \$100		+\$100 to +\$500		> +\$500	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
<b>No Arrears</b>	0%	37%	2%	7%	0%	0%	0%	0%
<b>&lt;\$500</b>	38%	42%	61%	54%	39%	15%	16%	0%
<b>\$500-\$999</b>	38%	9%	36%	36%	35%	38%	35%	7%
<b>\$1,000-\$1,499</b>	11%	6%	0%	2%	13%	30%	18%	16%
<b>\$1,500-\$1,999</b>	6%	3%	2%	0%	9%	6%	12%	19%
<b>\$2000 or more</b>	8%	3%	0%	2%	5%	11%	18%	59%
<b>Total</b>	100%	100%	100%	100%	100%	100%	100%	100%

The receipt of energy services and energy education should help participant households to reduce their arrears, as these services should reduce energy usage and the total bill. Table V-6 displays the distribution of the change in arrears by the level of energy services received. This table shows that households that received weatherization or AEP services are more likely to have a decrease in arrears of \$100 or more than those households that only received energy education. While 46 percent of households that received weatherization and 56 percent of households that received AEP services experienced a \$100 or more decline in arrears, only 36 percent of households that only received the workshop and 37 percent of households that only received the video experienced this decline. Additionally, households that received weatherization or AEP services are less likely to experience an increase of \$500 or more in arrears.

**Table V-6**  
**Distribution of Change in Arrears**  
**By Level of Service Received**  
**Full Sample**

Change in Arrears	Energy Services Received			
	Weatherization	AEP	Workshop Only	Video Only
< -\$100	46%	56%	36%	37%
-\$100 to \$100	8%	16%	14%	13%
+\$100 to +\$500	25%	13%	20%	18%
> +\$500	21%	16%	30%	32%
<b>Total</b>	100%	100%	100%	100%

Table V-7 displays the distribution of the change in arrears by whether the household had energy savings of at least 10 percent.<sup>5</sup> This table shows that households that experience significant energy savings are more likely to experience a decline of \$100 or more in arrears. While over half of households with significant energy savings have their arrears decline by \$100 or more, only one third of households that did not experience significant energy savings see their arrears decline by this amount. Households with significant energy savings are also less likely to experience a \$500 or more increase in arrears.

<sup>5</sup> Combination households are defined to have significant energy savings if they experience gas or electric savings of at least 10 percent.



**Table V-7**  
**Distribution of Change in Arrears**  
**By Whether the Household Had Significant Energy Savings**  
**Full Sample**

Change in Arrears	Significant Energy Savings	
	Yes	No
< -\$100	53%	33%
-\$100 to \$100	16%	13%
+\$100 to +\$500	17%	20%
> +\$500	15%	34%
<b>Total</b>	100%	100%

The LICAP program provides households with a reduced payment in order to make energy bills more affordable. The difference between the negotiated payment and the full bill, however, is added to the household's arrears. Table V-8 displays the distribution of the change in arrears, by the level of negotiated coverage rates. Households with higher levels of negotiated coverage rates are more likely to have a reduction in arrears of \$100 or more. This is due to the fact that these households have a smaller coverage shortfall added to their arrears each month. While over half of the households with coverage rates of 90 percent or more have arrearages decline by \$100 or more, only one third of households with coverage rates of under 75 percent experience this decline in arrears. Households with the lowest negotiated coverage rates are also most likely to have arrears increase by \$500 or more.

**Table V-8**  
**Distribution of Change in Arrears**  
**By Level of Negotiated Payment**  
**Full Sample**

Change in Arrears	Negotiated Coverage Rate			
	<75%	75% - 90%	90% - 100%	>100%
< -\$100	34%	38%	52%	55%
-\$100 to \$100	12%	18%	4%	12%
+\$100 to +\$500	17%	20%	22%	16%
> +\$500	37%	24%	22%	18%
<b>Total</b>	100%	100%	100%	100%

The Niagara Mohawk LICAP program provides arrearage forgiveness to households that pay their monthly negotiated payments or that make up missed payments. Table V-9 shows that 46 percent of households in the full sample and 42 percent of households in the restricted sample received arrearage forgiveness. The level of arrearage forgiveness is the smaller of \$250 or half of current arrears. The mean level of arrearage forgiveness was approximately \$220.

**Table V-9**  
**Percent of Households Receiving Arrearage Forgiveness**  
**And Mean Level of Forgiveness**

	Full Sample	Restricted Sample
<b>Percentage Receiving Forgiveness</b>	46%	42%
<b>Mean Level of Arrearage Forgiveness</b>	\$218	\$220

Table V-10 displays the distribution of the change in arrears by whether the household received arrearage forgiveness. This table shows that households that receive arrearage forgiveness are more likely to have a reduction in arrears of \$100 or more. While half of those households that receive arrearage forgiveness have a decline in arrears of at least \$100, only one third of households that do not receive arrearage forgiveness experience a decline of \$100 or more in arrears. While only 11% of households that received arrearage forgiveness experienced an increase in

arrears of \$500 or more, 41 percent of households that did not receive arrearage forgiveness experienced this increase.

**Table V-10**  
**Distribution of Change in Arrears**  
**By Whether Arrearage Forgiveness was Received**  
**Full Sample**

Change in Arrears	Arrearage Forgiveness Received	
	Yes	No
< -\$100	50%	34%
-\$100 to \$100	17%	11%
+\$100 to +\$500	23%	14%
> +\$500	11%	41%
Total	100%	100%

## VI. Findings

This report examined the impact of the Niagara Mohawk LICAP program on a cohort of households that enrolled in the program in the fall of 1998. This report focused on the effect of the program on the number and size of cash payments made, receipt of LIHEAP assistance, coverage rates, and arrearages. The main findings were as follows:

1. Data quality: The original cohort consisted of 704 households who had enrolled in LICAP in the fall of 1998. The analysis groups in this report were 447 households who had usage data for the baseline and follow-up periods, and 120 households who had at least 6 non-estimated bills and at least 2 non-estimated heating bills. There are two main causes of sample attrition. The first is the lack of availability of usage data for many participants in the follow-up period. The second is the large number of estimated bills.
2. Plan status: Approximately 40 percent of those with known LICAP plan status are still active reduced payment plan participants in the follow-up period, 20 percent have completed their plans, and 40 percent have had their plans cancelled due to missed payments.
3. Payments/coverage rates: Total cash payments increased, total assistance payments declined due to restrictions on receipt of emergency LIHEAP assistance for customers on payment plans, and total payments of any type increased for program participants. Increases in total payments resulted in an increased cash and total bill coverage rate. Households that receive AEP and weatherization services have the greatest increases in coverage rates.
4. Arrears: Overall, mean arrears have increased. However, households that have lower levels of arrears in the baseline period are more likely to experience a decrease in arrears, and households that have higher levels of arrears in the baseline period are more likely to experience a large increase in arrears. There are several factors that are correlated with arrears. Households that receive AEP or weatherization services, that have significant energy savings, and that have higher negotiated coverage rates are more likely to experience a decrease in arrears and are less likely to experience a large increase in arrears.

5. Arrearage forgiveness: Just under half of the households participating in the program received arrearage forgiveness. The mean level of arrearage forgiveness was \$220. Households that received arrearage forgiveness were more likely to experience a decrease in their level of arrears.
6. Program Goals: On average, the LICAP program appears to be achieving its goals. Participation in the program results in an increased consistency of payments, and increased affordability for low-income customers.

However, these findings suggest that there is a group of customers that is not being fully served by the partial payment arrangement program, and that the following changes may result in a more successful program for all customers:

- LICAP participation: A significant number of plan participants had dropped out of the partial payment plan one year later. This suggests that there may be a role for increased intervention when participants appear to be at greater risk for program failure or appear to be having problems meeting their obligations.
- Arrears: The segment of customers with high baseline arrears, did not appear to be successful on the program. As those households who received AEP or weatherization services, had significant energy savings, had higher negotiated coverage rates, and that received arrearage forgiveness were more likely to experience a decrease in arrears, these are potential avenues to increase program success:
  - ✓ Households with high pre-program arrears could be targeted for receipt of energy efficiency services.
  - ✓ Households with high pre-program arrears could be targeted for more intensive energy efficiency services.
  - ✓ Households with high pre-program arrears could be targeted for higher negotiated coverage rates if it appears that these payments could be affordable for the household. These households could have additional assistance in obtaining other resources to assist the household in meeting financial obligations.

Additionally, these households could be targeted for increased monitoring and follow-up to ensure that they are able to keep up with their bills.

- ✓ Households with high pre-preprogram arrears could be directed toward a staff member specializing in advocacy. This staff member could work with the customer and social service agencies to ensure that the customer received all benefits to which she was entitled.
- ✓ Households with high pre-program arrears could receive additional assistance to ensure that they receive LIHEAP benefits. If these households are not put on the payment plan, they can receive additional assistance to ensure that they receive emergency LIHEAP assistance.
- ✓ Households with high pre-program arrears could be given a less stringent standard for receiving arrearage forgiveness. If the usual standard is to pay 100 percent of negotiated payments, these households may receive arrearage forgiveness if they make 90 percent of their negotiated payment total for the year.

