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Energy Efficiency Program

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Rider 29
Energy Efficiency Program
Final Report

Program Period May 1, 2010 to May 31, 2011
Pursuant to ICC Docket No. 08-0363

PREPARED BY:

WECC
wisconsin energy
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Executive Summary

Wisconsin Energy Conservation Corporation (WECC) is pleased to present this Final Report for the Nicor Gas Rider 29 Energy Efficiency Program (EEP) implemented between May 1, 2010 and May 31, 2011. This report will provide a recap of the objectives for the Rider 29 EEP and summarize the results of each program, including the actual participation, estimated net Therm savings, program expenses, total resource cost results, and recommended changes to improve cost-effectiveness and customer satisfaction.

The programs were designed using best practices from other programs WECC had implemented for utilities in the Midwest. Having never implemented natural gas efficiency programs in Illinois, several lessons were learned and will be used to improve performance for future programs.

The Nicor Gas Rider 29 Energy Efficiency Program (EEP) was approved by the Illinois Commerce Commission (ICC) in Docket 08-0363 on March 25, 2009. The final order called for Nicor to create an independent Energy Efficiency Program Advisory Board (Advisory Board) to advise Nicor in the initial EEP program offerings. The Advisory Board included representatives from the Citizens Utility Board, Illinois Attorney General's Office, National Resources Defense Council, North American Insulation Manufacturers Association, Commonwealth Edison and Nicor Gas. Additionally, ICC staff were a regular guest participant in the monthly Advisory Board meetings. The inaugural meeting of the Advisory Board was held on July 21, 2009.

In the final order of Docket 08-363, Nicor was directed to hire a Plan Administrator who was to be selected through a competitive bid process. WECC was selected following a competitive bid process and was approved by the Advisory Board in November, 2009. WECC developed a proposed portfolio design, which was approved by the Advisory Board in December, 2009. Following approval of the of efficiency program design, WECC developed an Operating Plan for each of the Rider 29 efficiency programs that was approved by the Advisory Board on February 24, 2010.

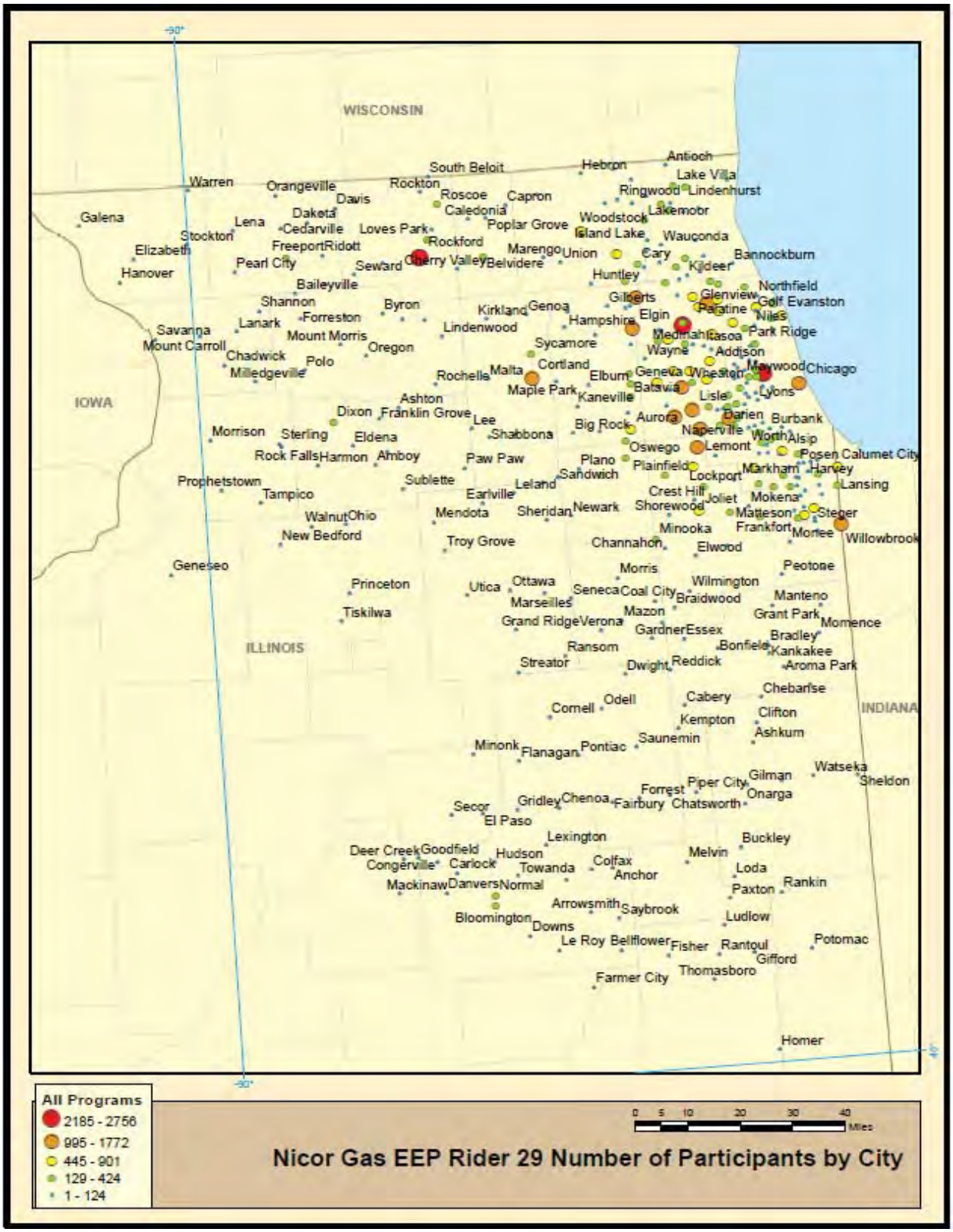
In parallel with the development of the Operating Plan, WECC worked with Nicor and the Advisory Board to select implementation contractors for each of the efficiency programs. The implementation contractor for the Residential Prescriptive, Business Prescriptive and Custom Business programs was selected through a competitive bid process. In an effort to launch the remaining programs as quickly as possible, the direct install implementation contractors (Existing Home Retrofit, Low-to-Moderate Income Weatherization, Elementary Energy Education, and Multi-Family) were selected on the basis of WECC's prior experience. The implementers that WECC recommended had proved the merit of their performance during previous competitive selections with other utilities. Nicor contracted directly with all program implementers. Ultimately, the Advisory Board approved the selection of all implementation contractors.

Rider 29 EEP Objectives

The program objectives, as established by the Board, are listed below and WECC believes all of them were met.

1. Portfolio must be cost effective as defined by the Total Resource Cost (TRC) test. **Result:** Overall Portfolio TRC was 1.9. See Appendix 1 for program and measure benefit cost information.
2. Programs must provide a wide range of consumers with opportunities to improve their efficiency. **Result:** Residential and business customers both had access to multiple programs and energy-saving technologies within each program and actual participation spanned a wide geographic range with actual participation in 408 out of the 643 communities served by Nicor. See portfolio participation map on the following page.
3. Programs must provide reliable and trustworthy information to consumers and contractors. **Result:** Customer and trade ally participation was substantial, engaging over 2,000 trade allies territory-wide. Website and call center activity along with positive customer evaluations from the direct install programs are indicative of customer confidence in the programs.
4. The portfolio of programs must strike a balance between savings from low-hanging fruit and market transformation efforts. **Result:** Balance between the two has been achieved. Low-hanging fruit programs include Multi-Family and K-12 education and certain measures in the prescriptive programs. Market transformation efforts were targeted at getting contractors to offer energy efficient products as their standard offering. Market transformation activities educating trade allies on best installation and maintenance practices along with the benefits of promoting energy efficiency.
5. Programs must provide incentives for both efficient technologies and home weatherization. **Result:** Prescriptive measures provide incentives for efficient technologies and Low-to-Moderate Income and Home Retrofit addresses home weatherization.
6. Coordination where possible with Chicagoland, ComEd, and Ameren is preferred. **Result:** Coordination with Chicagoland was achieved as qualifying efficiency levels and incentives were established for high volume measures. Nicor and ComEd jointly delivered the Multi Family and Existing Home Retrofit programs. Nicor customers saved more than $500,000 as a result of this joint effort.
7. Actual residential and commercial expenditures were within the confines of the 70 percent residential and 30 percent commercial spending limits as prescribed by the ICC.
8. Actual residential expenses were $8,900,774 or 62.1 percent of the final Rider 29 budget of $14,330,963. Similarly the actual commercial expenses of $2,718,050 were 19.0 percent of the total budget.

Territory Saturation Map – Nicor Gas, Rider 29 Energy Efficiency Program



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Highlighted Results

Overall, the portfolio delivered higher net benefits and an improved TRC compared to the original operating plan in spite of participation and net Therm savings being less than planned. Table 1 below shows the differences between the original plan and the final results for key portfolio metrics. Table 2 provides portfolio results by measure, participation, and costs.

Table 1. Portfolio Results—Plan vs. Final

Metric	April 30, 2010 Operating Plan	Final Results	Difference
Net Benefits – Gas Only	$12,564,226	$15,682,736	+25%
TRC – Gas Only	1.6	1.9	+19%
Net Benefits – Gas and Electric	$15,389,967	$20,345,294	+32%
TRC – Gas and Electric	1.7	2.2	+29%
Expenses	$14,278,753	$11,618,824	-19%
Participants*	65,169	58,832	-10%
Net Therm Savings	5,700,054	4,819,550	-16%
Cost/Net Therm	$2.51	$2.41	-4%

*Customers may have participated in more than one measure. The actual number of customers served by this portfolio of programs is 56,304.

Table 2. Portfolio Results—Costs, Participation, and Energy Savings by Measure

Programs	Participation*			Net Annual Therms Saved			Costs		
	Residential Rate 1	Non-Res Rates 4 & 74	Total	Residential Rate 1	Non-Res Rates 4 & 74	Total	Residential Rate 1	Non-Res Rates 4 & 74	Total
Residential Prescriptive									
High Efficiency Boilers >= 90% AFUE	79	-	79	8,888	-	8,888	$ 27,650	$ -	$ 27,650
High Efficiency Boilers >= 95% AFUE	212	-	212	40,640	-	40,640	$ 84,800	$ -	$ 84,800
High Efficiency Furnace >= 92% AFUE	860	-	860	61,920	-	61,920	$ 172,000	$ -	$ 172,000
High Efficiency Furnace >= 95% AFUE	19,052	-	19,052	1,695,628	-	1,695,628	$ 4,763,000	$ -	$ 4,763,000
Storage Water Heater >= .62 EF	134	-	134	1,910	-	1,910	$ 6,700	$ -	$ 6,700
Storage Water Heater >= .67 EF	129	-	129	3,580	-	3,580	$ 12,900	$ -	$ 12,900
Incentive Costs							$ 5,067,050	$ -	$ 5,067,050
Program Development & Mgmt. Costs							$ 1,141,606	$ -	$ 1,141,606
Total Program Summary:	20,466	-	20,466	1,812,565	-	1,812,565	$ 6,208,656	$ -	$ 6,208,656
Low-to-Moderate Income Weatherization									
Incentive Costs							$ 173,247	$ -	$ 173,247
Program Development & Mgmt. Costs							$ 31,026	$ -	$ 31,026
Total Program Summary:	43	-	43	12,693	-	12,693	$ 204,273	$ -	$ 204,273
Existing Home Retrofit									
Audits	1,373	-	1,373	41,901	-	41,901	$ 10,930	$ -	$ 10,930
Retrofits	413	-	413	117,433	-	117,433	$ 402,666	$ -	$ 402,666
Incentive Costs							$ 413,596	$ -	$ 413,596
Program Development & Mgmt. Costs							$ 569,508	$ -	$ 569,508
Total Program Summary:	1,786	-	1,786	159,334	-	159,334	$ 983,105	$ -	$ 983,105
Elementary Energy Education									
Incentive Costs							$ 220,000	$ -	$ 220,000
Program Development & Mgmt. Costs							$ 57,750	$ -	$ 57,750
Total Program Summary:	4,997	-	4,997	123,034	-	123,034	$ 277,750	$ -	$ 277,750
Multi-Family Direct Install									
Incentive Costs							$ 65,069	$ 195,207	$ 260,276
Program Development & Mgmt. Costs							$ 165,035	$ 495,105	$ 660,140
Total Program Summary:	7,412	22,440	29,852	442,151	1,607,279	2,049,430	$ 230,104	$ 690,312	$ 920,416
Business Prescriptive									
Boiler Reset Control	-	20	20	-	4,220	4,220	$ -	$ 5,000	$ 5,000
Boiler Tune-Up	-	110	110	-	54,696	54,696	$ -	$ 33,580	$ 33,580
High Efficiency Boilers >= 90% AFUE	-	10	10	-	28,470	28,470	$ -	$ 60,000	$ 60,000
High Efficiency Boilers >= 95% AFUE	-	78	78	-	127,062	127,062	$ -	$ 231,876	$ 231,876
High Efficiency Furnace >= 92% AFUE	-	41	41	-	3,113	3,113	$ -	$ 8,200	$ 8,200
High Efficiency Furnace >= 95% AFUE	-	68	68	-	6,198	6,198	$ -	$ 17,000	$ 17,000
Low-Flow Pre-Rinse Sprayer	-	92	92	-	19,283	19,283	$ -	$ 2,300	$ 2,300
Steam Trap	-	919	919	-	149,246	149,246	$ -	$ 43,743	$ 43,743
Storage Water Heater >= 88% TE	-	16	16	-	1,641	1,641	$ -	$ 2,400	$ 2,400
Storage Water Heater >= .62 EF	-	1	1	-	38	38	$ -	$ 50	$ 50
Storage Water Heater >= .67 EF	-	1	1	-	45	45	$ -	$ 100	$ 100
Rockford Small Business Pilot	-	323	323	-	32,059	32,059	$ -	$ 17,331	$ 17,331
Incentive Costs							$ -	$ 421,580	$ 421,580
Program Development & Mgmt. Costs							$ -	$ 803,793	$ 803,793
Total Program Summary:	-	1,679	1,679	-	426,071	426,071	$ -	$ 1,225,373	$ 1,225,373
Business Custom									
Incentive Costs							$ -	$ 205,824	$ 205,824
Program Development & Mgmt. Costs							$ -	$ 169,304	$ 169,304
Total Program Summary:	-	9	9	-	236,423	236,423	$ -	$ 375,128	$ 375,128
Summary of Incentive Costs							$ 5,938,963	$ 822,611	$ 6,761,574
Summary of Program Development & Mgmt. Costs							$ 1,964,925	$ 1,468,202	$ 3,433,127
Summary of Total Program Costs:							$ 7,903,888	$ 2,290,813	$ 10,194,701
Umbrella Marketing							$ 58,601	$ 25,115	$ 83,716
Program Evaluation							$ 157,500	$ 67,500	$ 225,000
Program Administration							$ 780,785	$ 334,622	$ 1,115,408
Summary of Other Portfolio Costs:							$ 996,887	$ 427,237	$ 1,424,124
GRAND TOTALS	**34,704**	**24,128**	**58,832**	**2,549,777**	**2,269,773**	**4,819,550**	**$ 8,900,774**	**$ 2,718,050**	**$ 11,618,824**

*Customers may have participated in more than one measure. Actual customers served is 56,304 (33,522 Residential and 22,782 Non-Residential).

Chart 1. Total Net Therm Allocation by Program

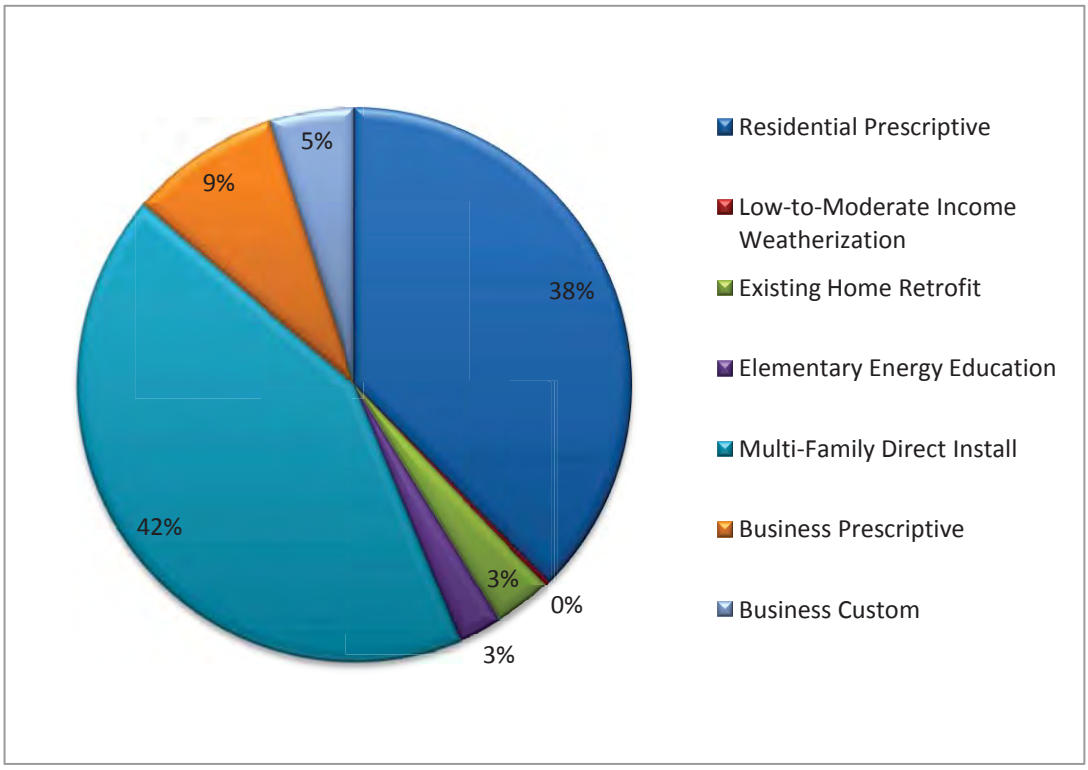


Chart 2. Total Incentive ($) Allocation by Program

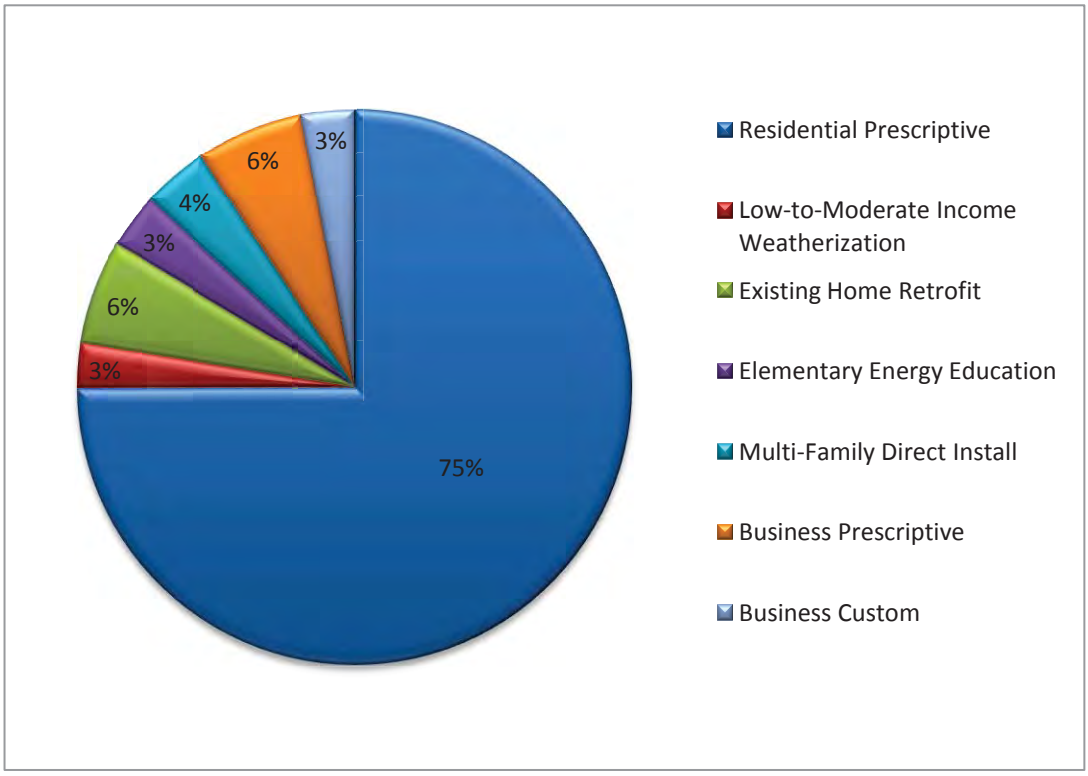
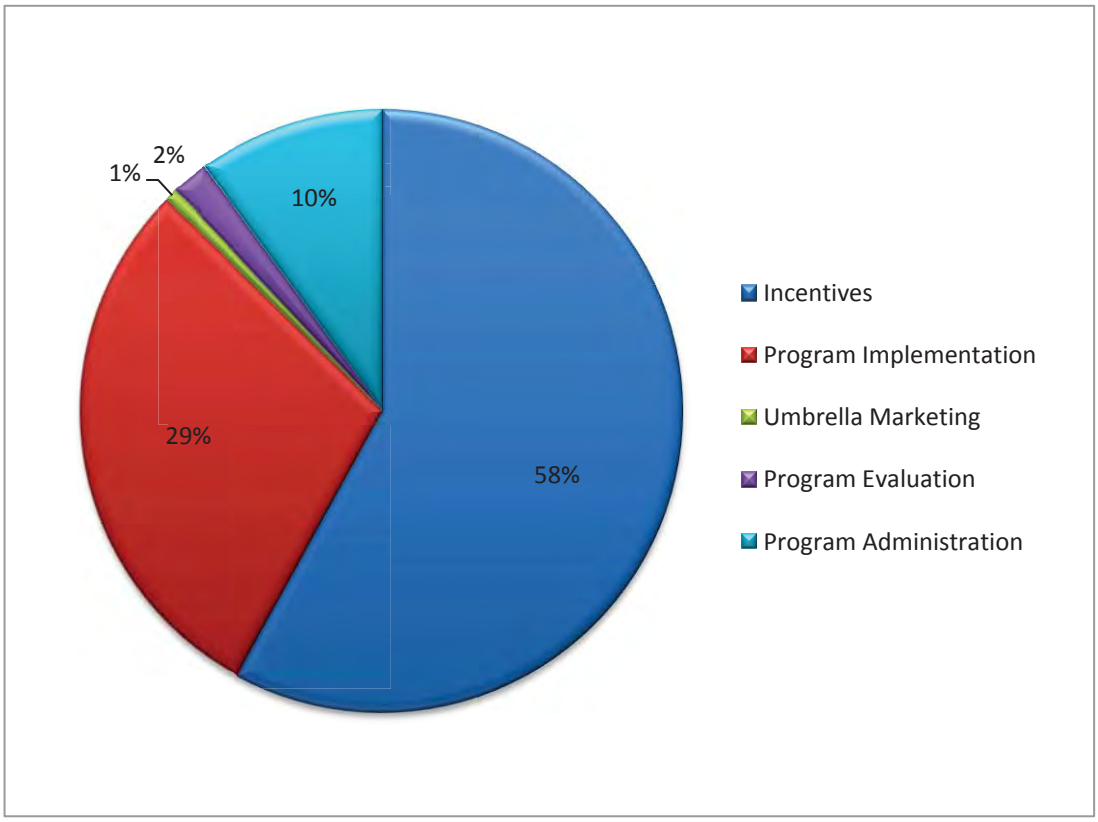


Chart 3. Portfolio Budget ($) Allocation



Program Successes

In addition to achieving the Rider 29 objectives, notable program successes include:

1. Collaboration with ComEd to jointly deliver programs resulted in savings of $515,000 for Nicor Gas customers.
2. The residential prescriptive program design (which was created prior to the details of American Recovery and Reinvestment Act, ARRA, being known) allowed federal tax credits to be leveraged and ultimately exceeded the aggressive residential prescriptive Therm savings goals. When it became apparent late in 2010 that goals and budgets would be exceeded, the WECC implementation team adeptly scaled back outreach efforts to curtail budget. The result of these early efforts was that the program only went over budget by $80,286 or 1.3 percent. As other residential programs were under budget, this overage was not a problem.
3. The Multi-Family Direct Install program was a successful program, delivering the greatest amount of savings of any program with the highest TRC ratio and largest net benefits. Additionally, expenses were reduced by nearly $450,000 compared to the original operating plan as a result of jointly delivering this program with ComEd.

4. Established a strong base of over 2,000 participating residential contractors who are informed about the benefits of energy efficiency resulting in a foundation for future program success.
5. Created consumer awareness across multiple sectors about the Nicor Gas EEP and the benefits of energy efficiency.
6. WECC developed, launched, and delivered two new programs, which were not included in the original operating plan at the start of Rider 29. The two programs include the My Home EQ (which tested new approaches to recruit customers into the Existing Home Retrofit Program) and the Rockford Small Business Pilot (which tested new approaches to access this hard to reach customer segment).
7. Customer satisfaction with program services was consistently rated ~~"~~excellent," as evidenced by customer survey results which averaged 4.7, with 5.0 being the ~~"~~most satisfied."

Lessons Learned

Significant lessons learned from the Rider 29 EEP include:

1. WECC did not anticipate the longer ramp-up time needed for business customers and contractors to understand and accept the value of energy-efficiency programs, especially in a slow economy. Energy-saving goals for the Business Prescriptive Program were likely too aggressive.
2. The Community Action Agencies in Illinois need to further develop their processes and capabilities to meet the higher standards required by utility-sponsored efficiency programs.
3. Custom Business projects have long decision making cycles and it is often hard to predict when projects in the pipeline will actually be completed.

WECC has appreciated the opportunity to work with Nicor Gas to deliver these quality programs and to capture energy savings for Nicor Gas customers.

Residential Prescriptive Program

Program Objectives

The Residential Prescriptive Rebate Program offered cash-back incentives to residential customers for installing new natural gas heating and/or water-heating equipment. The objective was to increase the installation rate of high-efficiency equipment in the market. To stimulate market activity, the program provided contractors with the tools to more effectively sell high-efficiency equipment to their customers. Secondarily, the program intended to stimulate market activity by increasing customer demand for high-efficiency equipment by raising awareness of the program's rebates through community events and providing education about the benefits associated with efficient products. Further, the program intended that the mere existence of cash-back incentives would elevate contractor interest to a competitive level that would naturally motivate market providers to stock and promote targeted products.

The incentives for each technology are listed below in Table 3.

Table 3. Residential Prescriptive Measures and Incentives

Measure	Efficiency Standard	Incentive	Attribution*	Gross Therms**	Net Therms
Boiler	90%-94.9% Annual Fuel Utilization Efficiency (AFUE)	$350	75%	150	112
	95%+ AFUE	$400	90%	213	192
Furnace	92%-94.9% AFUE	$200	50%	144	72
	95%+ AFUE	$250	50%	178	89
Water Heater	0.62 Energy Factor (EF) (ended August 31, 2010)	$50	75%	19	14
	0.67 EF (new ENERGY STAR® standard September 1, 2010)	$100	75%	37	28

* From April 2010 Operating Plan
** Savings used reflect savings calculated by the Implementation Contractor

Marketing Strategy

Nicor Gas residential customers were the target market for the program; however the bulk of the program's marketing and outreach efforts were directed to local contractors and retailers, who are the most direct influencers of customer purchase decisions and can "push" the products into the market. The program created collateral materials that contractors could use with customers during the sales process to increase their sales of qualified equipment. Additionally, the program employed a top-down communication strategy involving the recruitment of HVAC equipment manufacturer and distributor representatives to support the program by passing information on to the contractors they serve.

Program materials and outreach directed customers and allies to the Nicor Gas Energy Efficiency Program website, nicorgasrebates.com, where they could access program guidelines, program materials, and a rebate status tracking tool. In the 13-month program duration, the residential customer page of the website tracked nearly 232,000 visitors and the residential contractor page tracked 17,750 visits. Additionally, 30% of the rebate applications were submitted using the online application that was available on the program website.

The program made regular efforts to keep trade allies engaged in the program and updated on its status. Efforts included:

- Training series events, in which program staff could provide an overview of the program offerings in preface to an educational meeting about sales techniques or equipment installation.
- Contractor newsletters, which maintained allies' awareness of the program and provided a venue for the program to notify them of updates and status.

At the onset of the program, several marketing efforts were generated to help "pull" the qualified products out of the market channel. These efforts were primarily achieved via press releases, interviews, program information on the website, program presence at community events, and Nicor Gas bill inserts.

Mid-year Program Changes

The Residential Prescriptive Program implemented various programmatic and procedural changes throughout Rider 29 in response to the market and program activity. Major changes included:

- Updating of savings values by the program implementer, Resource Solutions Group (RSG). Preliminary savings were estimated in the Rider 29 Operating Plan with the requirement that the program implementer would develop work papers to substantiate and refine the actual savings. The program finalized the new savings in October and applied them to activity for the entire 13-month program.
- The planned elimination of Tier 1 water heaters (0.62 EF) in response to the ENERGY STAR standard increase to 0.67 EF on September 1, 2010.
- Adjustment to participation forecast for both tiers of water heaters to account for an unresponsive market. WECC estimates that it was not able to move this market because the incentive did not cover the relatively high incremental cost ($100 incentive, $400 incremental cost).

- Adjustment to participation forecast for all measures in January 2011, especially Tier 2 furnaces (95 percent AFUE) to account for unexpectedly high activity. The catalyst of this activity was the end of the federal tax credits in December 2010, for which the Tier 2 furnaces qualified. However, the market maintained the heightened activity into 2011 and original program forecasts did not account for this continuance.
- Near elimination of marketing and outreach efforts in January 2011 as a means to manage budget in response to the unexpectedly high activity.
- Shifting of budget from implementation labor to financial incentives to account for the unexpected high activity level and the low outreach that was required to maintain program activity.

Table 4. Changes to Participation Goals, Budgets, and Savings Goals by Measure

Measure	Participation Goals		Incentive Budget		Savings (Net)	
	Original (April 2010)	Revised (January 2011)	Original (April 2010)	Revised (January 2011)	Original (April 2010)	Revised (January 2011)
Furnace – 92-94.9% AFUE	12,060	793	$2,412,000	$158,600	826,110	57,096
Furnace – 95%+ AFUE	8,041	18,262	$2,010,250	$4,565,500	603,075	1,625,318
Water Heater – 0.62 EF	1,739	149	$86,950	$7,450	24,781	2,123
Water Heater – 0.67 EF	261	63	$26,100	$6,300	7,243	1,748
Boiler – 90-94.9% AFUE	141	96	$49,350	$33,600	13,536	7,416
Boiler – 95%+ AFUE	35	221	$14,000	$88,400	4,725	32,023
Total Program	22,277	19,584	$4,598,650	$4,859,850	1,479,470	1,725,724

Program Results

As noted above, the number of Tier 2 furnace rebates far exceeded the program's forecast, being 237 percent above the original participation goal. Tier 2 boilers (95 percent or greater AFUE) also saw a significantly higher activity than expected: 606 percent over the original participation goal. As these furnaces and boilers produce the highest savings in the program (89 and 192 net Therms respectively), the program ended above original goals for participation, incentives, and net Therms. Conversely, the low incidence of water heater measures did not have a detrimental effect on the program because water heaters offer low savings (28 net Therms).

Several factors led to the success of the program, including:

- End of the federal tax credit, which heightened the purchase activity of qualified equipment at the end of 2010.
- Successful marketing and outreach campaigns, which directly engaged contractors and resulted in more than 2,000 participating contractors using the program.
- Trade Ally Focus Groups, which provided a venue for open discussion between the program implementer and market actors so that each side could gain valuable information on how to make the program more successful.
- Streamlined rebate processing payments, which promised customers a quick turnaround on rebate payments, and made contractors comfortable promoting the program.

Table 5. Residential Prescriptive Participation Results

	Actual Participation	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Furnace – 92-94.9% AFUE	860	12,060	7%	793	108%
Furnace – 95%+ AFUE	19,052	8,041	237%	18,262	104%
Water Heater – 0.62 EF	134	1,739	8%	149	90%
Water Heater – 0.67 EF	129	261	49%	63	205%
Boiler – 90-94.9% AFUE	79	141	56%	96	82%
Boiler – 95%+ AFUE	212	35	606%	221	96%
Total Program	20,466	22,277	92%	19,584	105%

Table 6. Residential Prescriptive Incentives Paid

	Actual Incentives Paid	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Furnace – 92-94.9% AFUE	$172,000	$2,412,000	7%	$158,600	108%
Furnace – 95%+ AFUE	$4,763,000	$2,010,250	237%	$4,565,500	104%
Water Heater – 0.62 EF	$6,700	$86,950	8%	$7,450	90%
Water Heater – 0.67 EF	$12,900	$26,100	49%	$6,300	205%
Boiler – 90-94.9% AFUE	$27,650	$49,350	56%	$33,600	82%
Boiler – 95%+ AFUE	$84,800	$14,000	606%	$88,400	96%
Total Program	$5,067,050	$4,598,650	110%	$4,859,850	104%

Table 7. Residential Prescriptive Therm Savings

	Actual Therms Achieved (Net)	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Furnace – 92-94.9% AFUE	61,920	826,110	7%	57,096	108%
Furnace – 95%+ AFUE	1,695,628	603,075	281%	1,625,318	104%
Water Heater – 0.62 EF	1,910	24,781	8%	2.123	90%
Water Heater – 0.67 EF	3,580	7,243	50%	1,748	205%
Boiler – 90-94.9% AFUE	8,888	13,536	66%	7,416	120%
Boiler – 95%+ AFUE	40,640	4,725	860%	32,023	127%
Total Program	1,812,565	1,479,470	123%	1,725,724	105%

Quality Control

To ensure quality control (QC) of the program, the program administrator subcontracted with Center for Neighborhood Technologies (CNT) to conduct random, on-site inspections of equipment installed through the program. CNT was tasked with verifying that 3 percent of measures installed through the program were actually installed. This QC model confirmed that installed model and serial numbers matched what was provided on the applications. While at the customer's home, CNT filled out an inspection spreadsheet for each home and piece of equipment, and also took photographs of both the new equipment and the front of the home as proof of their own work. By June 1, CNT had inspected 3.39 percent of the measures installed through the residential program through April 30, 2011. All of the installations matched the information provided on the customers' rebate applications.

Other program achievements in relation to customer satisfaction were less immediate, but no less valuable to the ultimate success of the program. The Electric & Gas Industries Association (EGIA) was subcontracted by RSG to perform call center and fulfillment services for the program. EGIA was tasked with upholding high customer service standards that would be an immediate reflection of the program in the eyes of customers and contractors. These standards included call center responsiveness and application payment timeliness. At the close of the program, EGIA was regularly paying applications under the 14-day goal set in their scope of work, including incomplete applications that required more time for fulfillment. Also by the end of the program, EGIA was consistently delivering an average time to answer calls in less than the 30-second goal also defined in their scope of work.

Territory Saturation

The program realized activity in 418 cities around the Nicor Gas service territory. While the majority of installations occurred in the Chicago suburbs, the map on the following page shows that the program touched nearly all regions of Nicor Gas' service territory.

Territory Saturation Map – Residential Prescriptive Program

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Lessons Learned

Although it experienced a very successful pilot year, we see numerous opportunities to expand on the solid foundation that was created in Rider 29. The majority of these changes focus on continuing to grow and strengthen the contractor network, enhancing the customer experience, and re-evaluating the measures and incentives that were available in Rider 29. Together, these changes will lead to a more recognized, desirable, and robust program.

Planned and potential changes include:

- Maintaining ally awareness and engagement in a ~~"~~non-tax-credit" market by strengthening the contractor network. This will be accomplished via an extended outreach plan that includes dedicated outreach staff who will work across both the residential and business prescriptive programs. Contractors will also be given more access to program materials and status through a new contractor portal on the Nicor Gas Energy Efficiency Program website. Finally, the program will enhance successful efforts from Rider 29, including expanding the training and seminar series and offering a residential Trade Ally Focus Groups.

- Providing more value to customers through a revitalized website that will provide additional program materials and a more user-friendly online application. Social media will be introduced to help customers stay in touch with the program and help educate them about energy-efficient equipment and practices. Additionally, the program is looking into paying rebates more frequently than once a week, which will increase customer satisfaction.

- Reevaluating measures and incentive levels to determine how to best address the market needs and barriers. For example the water heater measure, which saw little activity in Rider 29, will have an increased rebate amount to off-set the high incremental cost. The program will also work with water heater manufacturers to collaborate and push qualified products into the market. New measures will also be evaluated, such as window replacement initiatives, to determine if there is a market need for an incentive and if it would be in the program's best interest to offer such incentives.

Residential Multi-Family Direct Install Program

Program Objectives

The Residential Multi-Family Direct Install Program offered multi-family property owners free direct installation of low-cost, energy-efficient water-saving measures (i.e., showerheads and faucet aerators), resulting in natural gas energy savings in individually metered units or through master metered central domestic hot-water systems. As this program was delivered jointly with Commonwealth Edison (ComEd), direct installation measures also included CFLs. The program educated residents about low-cost measures and behaviors that would have a lasting impact on their energy and water consumption. This was accomplished through interaction with residents that were home during the installations and with leave-behind educational materials.

Marketing Strategy

Multi-family properties with eight units or more were targeted and each unit or building was required to have a natural gas-fueled storage water heater to qualify for the program. Recruitment was geared toward property management companies as well as property owners to secure agreements to treat multiple properties through a single point of contact. The master-metered multi-family sector is hard to reach and challenged by the split-incentive barrier; therefore, a free-ridership of 0 percent was assumed for this program. Two implementation contractors were contracted for the program and were responsible for customer recruitment—Honeywell Utility Solutions and Water and Energy Solutions. The results stated herein include work performed by both contractors.

Program Results

Nicor terminated Water and Energy Solutions' contract three months into the program year, with only 3,023 units completed. Consequently, the majority of the work noted herein was performed by Honeywell Utility Solutions.

Table 8. Residential Multi-Family Direct Install Participation Results

Unit Type	Program Participation	Participation Goal	% to Goal
Master	22,440	22,500	99.7%
Individual	7,412	7,500	98.8%
Total	**29,852**	**30,000**	**99.5%**

Table 9. Residential Multi-Family Direct Install Program Incentives Paid

Unit Type	Incentives Paid	Incentive Budget	% to Goal*
Master	$195,207	$157,500	124%
Individual	$65,069	$52,500	124%
Total	**$260,276**	**$210,000**	**124%**
***Incentive $'s not broken out by unit type.**			

Table 10. Residential Multi-Family Direct Install Program Therm Savings

Unit Type	Therm Savings Achieved	Therm Savings Goal	% to Goal
Master	1,607,279	1,687,500	95%
Individual	442,151	450,000	98%
Total	**2,049,430**	**2,137,500**	**96%**

The incentives paid total above includes the costs for additional shower heads and bathroom aerators that were installed in units with additional bathrooms. These costs were not accounted for in the original budget, which explains the overage in the incentive budget.

The decision to jointly deliver this program with ComEd resulted in significant cost savings for Nicor Gas customers. The start-up fees, monthly management fees, and unit installation rates paid to the implementation contractors were reduced 40 percent by sharing the total costs with ComEd. The final Therm savings for the program were 4 percent below goal. Higher Therm savings/unit were achieved for individually-metered units because this unit type typically had more than one bathroom and the implementation contractors were able to install additional devices. On the other hand, lower Therm savings/unit were achieved for master-metered units due to a high incidence of senior apartment complexes signing up for the program, who typically have handheld shower heads, and the program did not offer low-flow handheld replacements. Below is a summary of the installation counts for each type of measure installed:

Table 11. Individual Measure Statistics for Residential Multi-Family Direct Install Program

Measures Installed	Total Installed In Master-Metered Units	Total Installed In Individually-Metered Units	Total Installed	Installation Rate
Water-Saving Massage Shower Heads	20,483	6,670	27,153	90.5%
High-Efficiency Swivel Kitchen Aerators	20,617	6,667	27,284	90.9%
High-Efficiency Bathroom Aerators	21,637	7,122	28,759	95.9%
—Extra" Shower Heads Installed	1,844	1,519	3,363	11.2%
—Extra" Bathroom Aerators Installed	2,936	2,631	5,567	18.6%

Table 12. Summary of Measures for Residential Multi-Family Direct Install Program

Measures Installed	Total Installed	Therm Savings by Device
Shower Heads	30,516	1,338,595.5
Kitchen Faucet Aerators	27,284	443,627.0
Bathroom Faucet Aerators	34,326	267,007.5
Total Measures Installed	92,126	2,049,430

The results for CFL installations (all wattages) were 152,768 total CFLs installed in 29,628 units, for an installation rate of 5.2 bulbs/unit (the target was 6/unit).

Additional key performance indicators for the implementation contractors included achieving a customer survey response rate between 5 and 10 percent and completing QC checks on a minimum of 5 percent of the installations. With 9,834 surveys distributed to residents who were home at the time of installation and 1,313 surveys returned by customers, the final customer survey response rate was 13.35 percent. Additional surveys that have come in after the program ended are being tracked separately. The average overall rating achieved was 4.8, with 5 being —Very Satisfied."

Five percent (5.02%) total QC checks of the installations were completed. The QC checks were conducted in one of three ways:

1. An implementation contractor field supervisor reviewed the work while on-site during the installation.

2. An implementation contractor field supervisor went back to a property and reviewed the installation work.

3. A call was made by an implementation contractor representative to customers to ask if the devices were still installed and if there were any issues with any of them.

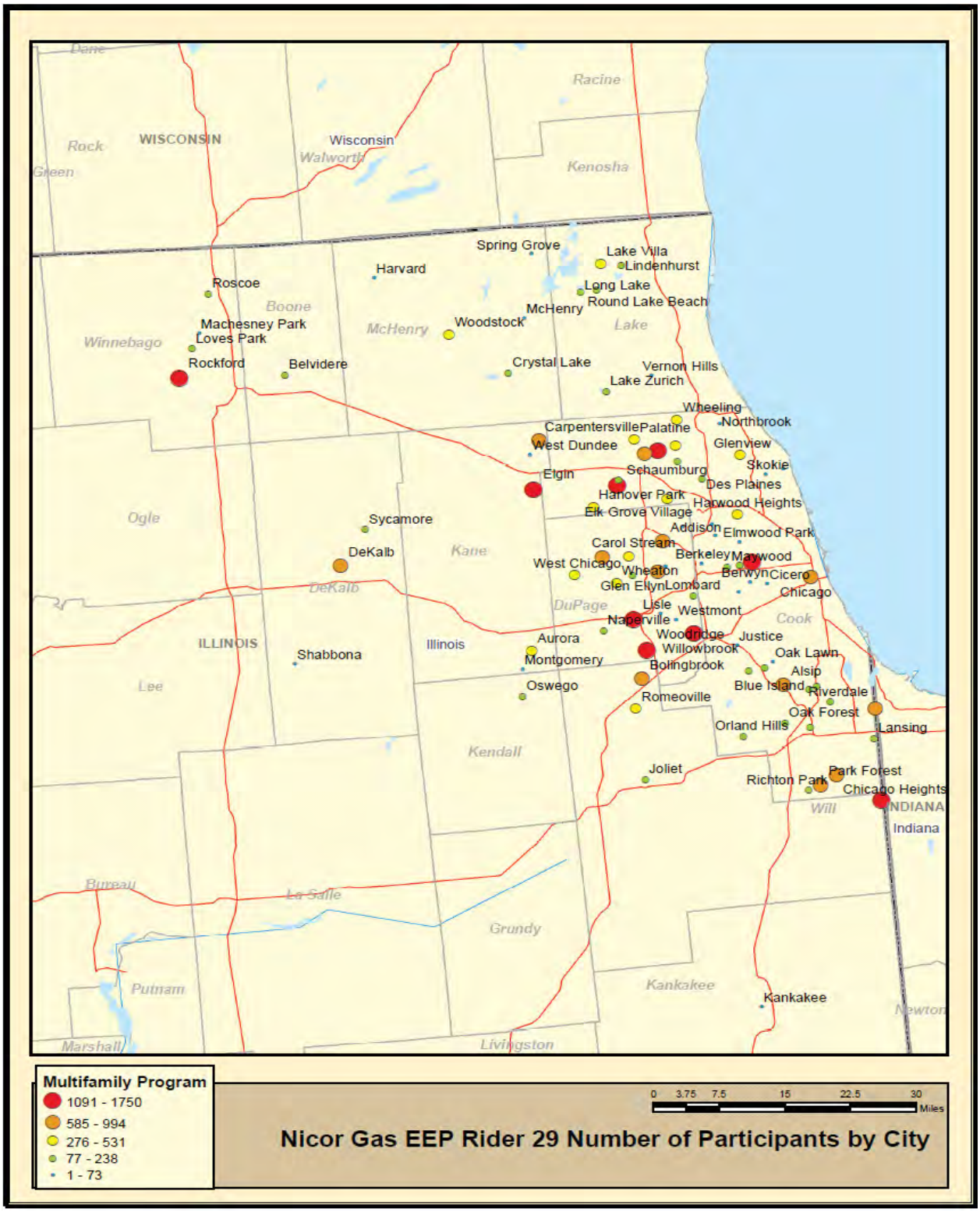
Lastly, a minimum of one unit per building was required to be tested for flow rates of each fixture, recording the pre- and post-flow rates. Testing was to be completed on approximately 4 percent of the total unit installations, which was achieved with a 4.83 percent of units tested.

The results of the water flow rate testing showed that the average existing fixtures (shower head, kitchen faucet aerator, and bath faucet aerator) had a flow rate of 2.5, 2.2, and 2.1 respectively. The average for the new low-flow fixtures supported the specified flow rates of 1.5, 1.5, and 1.0 respectively. Therefore, the average reduction for each of the three fixture types was 1.0 for the shower head, 0.8 for the kitchen aerator, and 1.1 for the bath aerator. These are close to the typical flow rate reductions that we expect to see. The total water savings for this program are estimated at 438,000,000 gallons.

Territory Saturation

Multi-family installations were completed in 91 cities throughout the Nicor Gas's and ComEd's service territories. The following map shows specific cities, with larger circles corresponding to areas with a higher number of installations.

Territory Saturation Map - Residential Multi-Family Direct Install Program



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Lessons Learned

When scheduling installations in the future, the goal should be finished far enough in advance to avoid any last-minute scheduling problems, which occurred in Rider 29 and resulted in not reaching the total unit goal.

In Rider 29, it was anticipated that each unit would received one shower head, one kitchen faucet aerator, and one bathroom aerator, and implementation contractors were paid in full for labor and materials regardless of whether all three devices were installed. To try and minimize the impact this had on the budget and the total savings, it was required that two out of the three devices had to be installed in a unit to be eligible, with one of those devices having to be a shower head. Also, additional shower heads and bath aerators could be installed if the fixtures were present and acceptable, and the contractors were paid an additional labor-and-materials cost for each additional device. However, funds were not included in the original budget to cover these additional expenditures. For future programs, the implementation contractor should be directed to replace all existing fixtures in a unit with a low-flow device (except for handheld shower heads), and then paid only for the devices that are installed. This means that prequalifying a property by taking a sampling of the units prior to signing them on will be crucial if the implementation contractor is to achieve the desired Therm savings goal.

Another issue that arose, which resulted in lower Therm savings/unit for master-metered units, was the high incidence of senior apartment complexes that signed up for the program, where there is typically a larger percentage of handheld shower heads. Handheld shower heads were not offered in the program due to their higher cost, and the implementation contractors were instructed not to replace a handheld shower head without permission from the resident. In these instances, if there was a hand-held shower head in the primary bathroom, the low-flow showerhead could be installed in an alternate bathroom. If no alternate bathroom was available, the unit would still be eligible if both faucet aerators could be installed. Going forward, the implementation contractor should have the right to refuse further installations at a property if the unit sampling did not reveal a high incidence of handheld shower heads, but more than 30 percent of the units are found to have handhelds on the first day of installations.

Implementation contractors were asked to make good faith efforts to acquire historical water bills for buildings with master meters, as well as gain agreement from property managers to provide water usage bills post installation for the purposes of determining actual water savings. This was a major challenge in Rider 29, with only one water bill obtained. This is still a major challenge that will need to be addressed in future programs.

When enrolling a property in the future, the implementation contractor should attempt to capture pertinent building information (i.e., age of building, building materials, pitch of roof, etc.) that could be used to develop a future Multi-Family whole-building energy-efficiency program.

Other than promoting the incentives available for boiler tune-ups and steam trap replacement services to the maintenance or facility managers of master-metered properties, these incentives ended up not being captured in the Rider 29 program as there was no way to accurately track work performed by other Nicor Gas EEP implementation contractors. WECC recommends developing tools (i.e., a Central Plant Survey form) and processes to capture this important information and to use as a lead generator for other programs. It is also expected that the new Nicor Project Management Tool will be able to cross reference account numbers to see who took advantage of these additional program offerings.

Existing Home Retrofit Program

Program Objectives

The Existing Home Retrofit Program was designed to produce long-term, cost-effective energy savings through comprehensive air sealing and professional insulation services, and through the installation of direct-install measures (shower head and aerators). Key objectives included:

- Helping customers identify opportunities to reduce their energy use.
- Maximizing cost-effective savings via effective targeting of customers and measures.
- Minimizing lost opportunities by affecting comprehensive improvements that were designed to keep the heat within the building envelope.
- Offering a seamless delivery process from audit through weatherization completion.

Program Description

Thermo-Scan Inspections, Inc. (TSI) was selected as the implementation contractor for the Rider 29 pilot program due to their extensive experience throughout the Midwest on residential energy audit and retrofit programs.

This program provided a professional walk-thru audit of each home by a BPI-trained auditor with a Building Analyst Certification, and included an assessment of health and safety issues in the home such as identifying potential moisture problems and electrical safety conditions such as knob and tube wiring, and conducting combustion safety tests per BPI standards on gas-fueled appliances.

To ensure that every audit yielded energy savings and to offset Nicor's portion of the audit cost, the auditor directly installed water-saving devices such as shower heads and faucet aerators at no charge to the customer. As this program was delivered jointly with ComEd, and under a separate contract, the auditor also installed up to 10 CFLs per audit.

Information captured during the audit was entered into WECC's proprietary modeling tool, which allowed the auditor to present a detailed air sealing and insulation proposal to the homeowner at the conclusion of the audit. This proposal was customized and tailored to the homeowner's usage patterns and existing conditions, and included a list of recommendations for energy efficiency improvements. The cost-effective measures selected for the program focused on the building shell and were meant to reduce energy consumption and increase comfort. These measures included attic air sealing and insulation, duct sealing, insulation, foundation air sealing, and wall and targeted floor insulation. Nicor Gas EEP provided a 50% contribution (up to $1,250) for the customer to purchase a ~~"p~~ackage" of measures. In an effort to capture all improvement opportunities in a home, customers were required to implement the entire package to receive the incentive, and could not choose to implement only specific items within the package.

> Note: It was determined early on in the program that due to the high incidence of brick and stucco houses in the targeted areas, which required more expensive methods to add insulation in the walls, homeowners had the option to take out wall insulation to make the project more affordable. This option was utilized in two proposals that were presented to homeowners at the end of the audit.

Once the homeowner returned a signed proposal to TSI, a work order was developed and sent to a pre-screened, BPI-certified subcontractor that was competitively selected through an RFP process. Subcontractors residing within targeted geographic areas were given preference in keeping with promoting economic development within the Nicor Gas service territory. After the subcontractor received the work order, they scheduled a time convenient with the homeowner to complete the installation of the insulation and air-sealing package, with a goal of reducing air infiltration by 25%. Pre- and post-blower door tests were conducted to quantify the actual air leakage reduction in the home.

In order to participate, each subcontractor had to agree to the program QA practices. This meant that the first five projects, and 25% of all additional projects completed by each subcontractor were inspected by TSI to reinforce program standards. In addition, each home was visited by a TSI QA person upon completion, and combustion safety tests were again conducted on all gas-fueled appliances per BPI standard.

Marketing Strategy

Nicor Gas customers in targeted geographic areas were recruited via various marketing outreach efforts, primarily via a direct mail campaign, encouraging their participation in the on-site audit and explaining the incentives available for weatherizing their home. Homeowners were required to pay $50 towards the in-home audit in order to participate.

Targeted areas were selected first on the age of the housing stock in these areas and then further targeted by mailing to homes with an above-average Nicor gas consumption of 1,200 Therms or more. The limited geography was also meant to reduce travel time and thus cost for homes receiving audits and those undergoing improvements. Homes built prior to the implementation of uniform building energy codes (prior to 1960) were also targeted as studies have shown that these homes have significantly more efficiency improvement opportunities than those built after code adoption.

Several events held throughout the program year provided an opportunity to obtain additional audit commitments through the offering of an in-home audit with the $50 fee waived. Depending on the type of event, these outreach opportunities proved to be relatively successful, and in some cases, resulted in a lower overall recruitment cost/customer.

As this program's direct-mail outreach within a targeted geography maximizes the likelihood that those customers taking action do so as a direct result of the program and not because they are in the market for upgrading the overall performance of their home, such as increasing insulation levels and reducing infiltration, we assumed a free ridership rate of 5 percent. We estimated a low free ridership rate because it is unlikely customers would have participated without the direct solicitation and the high incentive levels.

MyHomeEQ Pilot Program

A brief pilot program was conducted in Riverside, Illinois (not one of the communities targeted in the direct mail campaign) through the Center for Neighborhood Technology to test a new approach to acquire customers. With the aid of CNT's MyHomeEQ web-based tool and a specific marketing strategy (i.e., neighborhood outreach and targeted advertising), the pilot was designed to determine if this different customer acquisition strategy would attract additional single-family homeowners into the Existing Home Retrofit Program at a lower cost/participant. The pilot launched on March 15, 2011, which was near the end of the program year.

In 45 days, 527 unique visitors landed on the MyHomeEQ website—275 of them from Riverside. Fifteen (15) people signed up for a home energy audit (unfortunately, one signed up too late to get an audit). This small pilot program achieved a high visitation rate (9 percent of Riverside homeowners) and a high participation rate (more than 5 percent of the Riverside visitors signed up for an audit) in a very short period of time. Out of the 14 people that had an audit done, six of those homeowners submitted signed proposals for retrofit work (that's a 43 percent conversion rate, which is notably higher than the program-wide average of 30%). To explore the true impact and benefits of the pilot, a larger sample size would be needed.

The following is a summary of the customer acquisition costs for both methods:

- Direct Mailing: $93.26
- MyHomeEQ: $105.40

Program Results

A total of 153,261 mailings were sent to Nicor Gas customers in 69 different communities. With 1,373 audits completed, the conversion rate from mailings to audits was low at 0.90 percent (the target was >1.25 percent). Filling the pipeline with participants was a major challenge and suggested that supplemental ways to recruit customers beyond traditional direct mailings might improve results in the future.

Table 13. Existing Home Retrofit Program Results

Work Completed	Program Participation	Goal	% to Goal	Incentives Paid	Incentive Budget	% to Goal	Net Therm Savings Achieved	Net Therm Savings Goal	% to Goal
Audits	1,373	2,000	69%	$10,930	$20,000	55%	41,901	114,000	37%
Retrofits	413	600	69%	$402,666	$750,000*	54%	117,433	171,000	69%
			Total	**$413,596**	**$770,000***	**54%**	**159,334**	**285,000**	**56%**
*The original retrofit incentive budget assumed no ComEd participation.									

As mentioned previously, this program was delivered jointly with ComEd, which provided cost savings for Nicor Gas customers with respect to the cost of both the energy audit and the home weatherization, as many of the heating-related improvements also resulted in reduced cooling loads and saving electricity. ComEd contributed $30 towards the utility's portion of the audit cost, and $0.20/kWh saved on weatherization as determined by the computer model simulations, which was about 7.2 percent of the total utility incentive.

It was assumed that 100 percent of the low-flow water-saving devices would be installed during the audit, but only 80 percent of the homes audited (1,093) took advantage of this free offer, with the following average installation rates occurring: shower heads (76 percent), kitchen aerators (38 percent), and bath aerators (75 percent). This explains why the Therm savings achieved by the direct installs during the audit were well below the expected goal.

While the total audit goal was not achieved, the conversion rate from audit to retrofit work was at 30 percent, which is where it was expected to be. Had the audit goal been achieved, there was no doubt that the retrofit goal would have been achieved as well. The number of signed proposals received was a respectable 484 (80.7 percent to goal), but due to cancellations and health and safety issues with the existing home (i.e., moisture problems or knob and tube wiring) which rendered the signed proposal ~~-o~~n hold," the actual homes completed was much lower. In addition, customers that received an on-site audit and accepted the proposal too late in the program year to receive retrofit services (16 customers) had to be carried over to Rider 30 to be completed. The carry-over customers were not included in the Rider 29 retrofit results reported herein.

Based on the computer model simulations, the savings achieved was 299 gross Therms per home (284 net), which was close to the plan goal of 300 gross Therms per home. See the overall results by measure in the following tables.

Table 14. Miscellaneous Retrofit Statistics by Measure

Measures	Incidence	% of Total	Annual Gross Therm Savings Achieved	Average Annual Gross Therm Savings Achieved per Home
Air Sealing	403	97.58%	62,220	151
Attic Insulation	346	83.78%	32,386	78
Floored Attic Insulation	133	32.20%	11.779	29
Sloped Insulation	30	7.26%	2,114	5
Exterior Wall Insulation	28	6.78%	6,648	16
Kneewall Insulation	168	40.68%	3,010	7
Crawl Space Insulation	79	19.13%	767	2
Rim Joist Insulation	252	61.02%	2,279	6
Duct Insulation	38	9.20%	2,157	5
Duct Sealing	8	1.94%	254	1
		Total Gross Therm Savings:	**123,614**	**299**

Table 15. Additional Retrofit Measures Paid 100% by Customer

Measures	Incidence	% of Total
Extend Bath Exhaust*	45	10.9%
Extend Dryer Vent	3	0.73%
Door Weather Stripping or Sweeps*	173	41.89%
Other**	11	2.66%

*One incidence per measure per home, even if multiple installations done in home.
**"Other" includes roof vents and kitchen exhaust extensions.

The average conditioned square footage of the homes was 3,314 SF, and the average annual consumption was 1,671 Therms, well over the marketing target criteria of 1,200 Therms per home. The goal of a 25 percent reduction in air leakage per home was nearly achieved at 23.8 percent with reports from 98 percent of the homes received (or 404 homes).

Nearly 86 percent of the homes received a QA/QC inspection after completion of the retrofit work to verify the weatherization subcontractors were conforming to BPI standards and that the measures were properly installed. In addition, with two customer satisfaction survey cards distributed to customers (one evaluating the auditor and one evaluating the weatherization subcontractor), the response rates were high at 15.95 percent and 20 percent respectively, with an average overall response of 4.76 for the auditor and 4.71 for the weatherization subcontractor, with 5 being ―Very Satisfied".

Territory Saturation

Audits were completed in 64 cities throughout the Nicor Gas's and ComEd's service territories, with retrofits performed in 51 cities. The map on the following page shows the limited geography which kept the program more cost effective. The larger circles correspond to areas with a higher number of audits and retrofits.

Territory Saturation Map – Existing Home Retrofit Program

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Lessons Learned

As mentioned previously, traditional direct mail campaigns may need to be supplemented with other methods to recruit customers. New approaches beyond direct mail that are developed to recruit customers into the program should not sacrifice the ability to target high-use/high-opportunity homes. Increasing the frequency of the information provided to the utilities on marketing results will allow the program to more quickly adjust program design and goals based on market conditions.

Nicor Gas and ComEd were not expected to actively promote the program due to the desire to perform targeted marketing. Based on the direct mail response rates during the pilot, however, the utilities should more actively promote the program, and at a minimum, include information on their portfolio websites and in portfolio brochures. Also, it is recommended that the joint nature of the program is expanded to include both utilities funding a portion of all program elements. During the pilot, ComEd did not fund the marketing or subcontractor management, which limited the collaboration of the utilities during the pilot.

Attending outreach events and forming partnerships with municipalities and local energy organizations is recommended for Rider 30. This is especially important at the start-up of a program to set the groundwork and get buy-in for supporting the program. In addition, participating weatherization subcontractors should be more involved in actively promoting the program to their customer base. This will expand the marketing efforts without additional program costs and develop the subcontractors for an open-market program design.

Due to the reduced install rates of direct install measures, the program should consider offering a higher-end low flow shower head and kitchen faucet aerator that would have higher acceptance by homeowners. This might include simply offering different finishes for each device.

It would be beneficial also to develop methods that characterize the propensity of a customer to proceed with weatherization improvements prior to performing an audit. Attending outreach events that are geared towards sustainability would help with this as attendance in the Evanston Green Living Festival in 2010 showed. This event resulted in scheduling an audit for 63 percent of those that signed up and a conversion rate of 31 percent from audits to weatherization.

The report/proposal provided to the customer should be a sales tool for the auditor. The report should be modified to increase customer-specific information, including a narrative of specific findings and on-site photos. This should increase the perceived value of the program and convert more proposals to completed projects. A new implementation contractor has been selected for Rider 30. Using their proprietary audit tool, additional information will be captured and reported to the customer. Infrared scanning has also been added during the audit to help sell the retrofit work to the customer.

The report should also be expanded to include other utility program incentives and rebates that apply to that particular customer, which would help to develop the program into a whole-house approach and improve customer satisfaction.

The number of participating weatherization subcontractor should be increased in Rider 30 to prepare the program for an open-market design within the Nicor Gas's and ComEd's service territory. It is important to develop the local infrastructure by building contractor capacity and competency. In addition, performance metrics should be established for the implementation contractor that requires them and their weatherization contractors to serve customers within a specified period of time following a request for an audit or receipt of a signed weatherization proposal.

Due to the difficulty of scheduling another visit to a home after weatherization services were installed in order to perform a QA/QC inspection and as a means to reduce cost and improve cost effectiveness, the utilities should consider reducing the percentage of homes that are required to receive an inspection.

Elementary Energy Education Program

Program Objectives

The Elementary Energy Education Program was designed to influence students and their families to take actions to reduce their home energy use and increase efficiency. This was accomplished through the installation of energy efficient devices and an educational program intended to prompt student and educator behavior changes.

The participation goal for this program was 5,000 students and teachers. All educational materials and the take-home efficiency kits were provided at no cost to the participants.

Program Description

Students participated in an educational presentation at their school and were then given a Take Action Kit to take home that complimented the classroom energy curriculum. A guide was provided to help the students install the energy-efficient products contained in the kit, such as a water-saving shower head and faucet aerators. Students were instructed to work with their parents to measure water flow rates before and after the installation of water saving devices, as well as gather information such as water heater temperature set points and daily shower and faucet use. The direct installation of these devices resulted in natural gas energy savings in homes.

The program was also intended to educate students and their parents about low-cost measures and behavior changes that will have a lasting impact on their energy and water consumption, which was accomplished in both the classroom presentation and with the take-home educational materials (i.e., using the shower timer from the kit to reduce the length of time spent in the shower, turning off lights, and unplugging unused chargers, to name a few). The presentation meets fifth grade curriculum standards for Illinois.

National Energy Foundation (NEF) was selected as the implementation contractor for this program and it was their responsibility to gather and report measurable Therm savings from the distribution and installation of the energy-efficiency kits, as well as accompanying kWh and water savings. Their results were based on the Household Report Cards (Scantron forms) the students returned to their teachers, and ultimately to NEF.

Marketing Strategy

The THINK! Energy program, a registered trademark of NEF, was targeted to fifth grade classrooms throughout the Nicor Gas service territory. NEF was responsible for marketing and promotion, and recruiting school districts into the program.

In an effort to narrow down the list of elementary schools located in Nicor Gas' service territory, WECC developed a density map using customer consumption data. The map showed areas of high gas water heater saturation (> 5 Therms in July 2010), and was used to develop a list of possible target communities with 85 percent or higher gas water heater saturation. This list was prioritized by community and then NEF sent invitations to the fifth grade teachers at elementary schools in those target communities. The invitations instructed teachers about participation requirements and how to register their classroom online.

Program Results

An interactive, hands-on presentation totaling 45-60 minutes in length was conducted in 55 schools during November 1 through November 12, 2010. A total of 203 teachers and 4,794 fifth grade students participated in the program. The interactive exercises reinforced the educational concepts and vocabulary that were presented. The educational presentation was prepared in correlation with the Illinois Education Academic Standards.

Table 16. Elementary Energy Education Program Results

Program Participation (Students & Teachers)	Goal	% to Goal	Incentives Paid	Incentive Budget	% to Budget	Net Therm Savings Achieved	Net Therm Savings Goal	% to Goal
4,997	5,000	99.9%	$220,000	$220,000	100%	123,034	68,000	181%

The final costs for NEF's program administration and call center support totaled an additional $57,750 for a total program cost of $277,750.

The operating plan assumed 13.6 Therms savings per kit, but the results showed that the Therm savings were closer to 31 Therms per kit. The saturation of gas water heaters as reported by the returned Household Report Cards was 86 percent, with the remaining 14 percent related to electric water heaters.

The estimated annual savings from each low-flow device reported to have been installed are noted below:

Table 17. Reported Annual Savings

Measure	Total Therm Savings	Total Gallons of Water Savings	Total kWh Savings	Installation/ Participation Rate
Shower Head	81,681	16,218,994	252,208	47%
Kitchen Faucet Aerator	38,571	7,761,156	120,744	55%
Bathroom Faucet Aerator	33,540	6,573,840	102,297	55%
Total Gross Savings:	153,792	30,553,990	475,249	
Total Net Savings:	123,034	24,443,193	380,199	
Gross Savings/ Household	**31**	**6,113**	**96**	

Note: Total savings based on homes that returned Household Report Card and the installation rate for each device.

Scantron forms were received from 61 percent of the program participants with 147 of the 203 (72 percent) participating teachers qualifying for a mini-grant. To receive the maximum mini-grant of $100, 80 percent of the completed Household Report Cards were required to be returned.

Some of the behavior changes reported by participants in the Household Report Cards are summarized below:

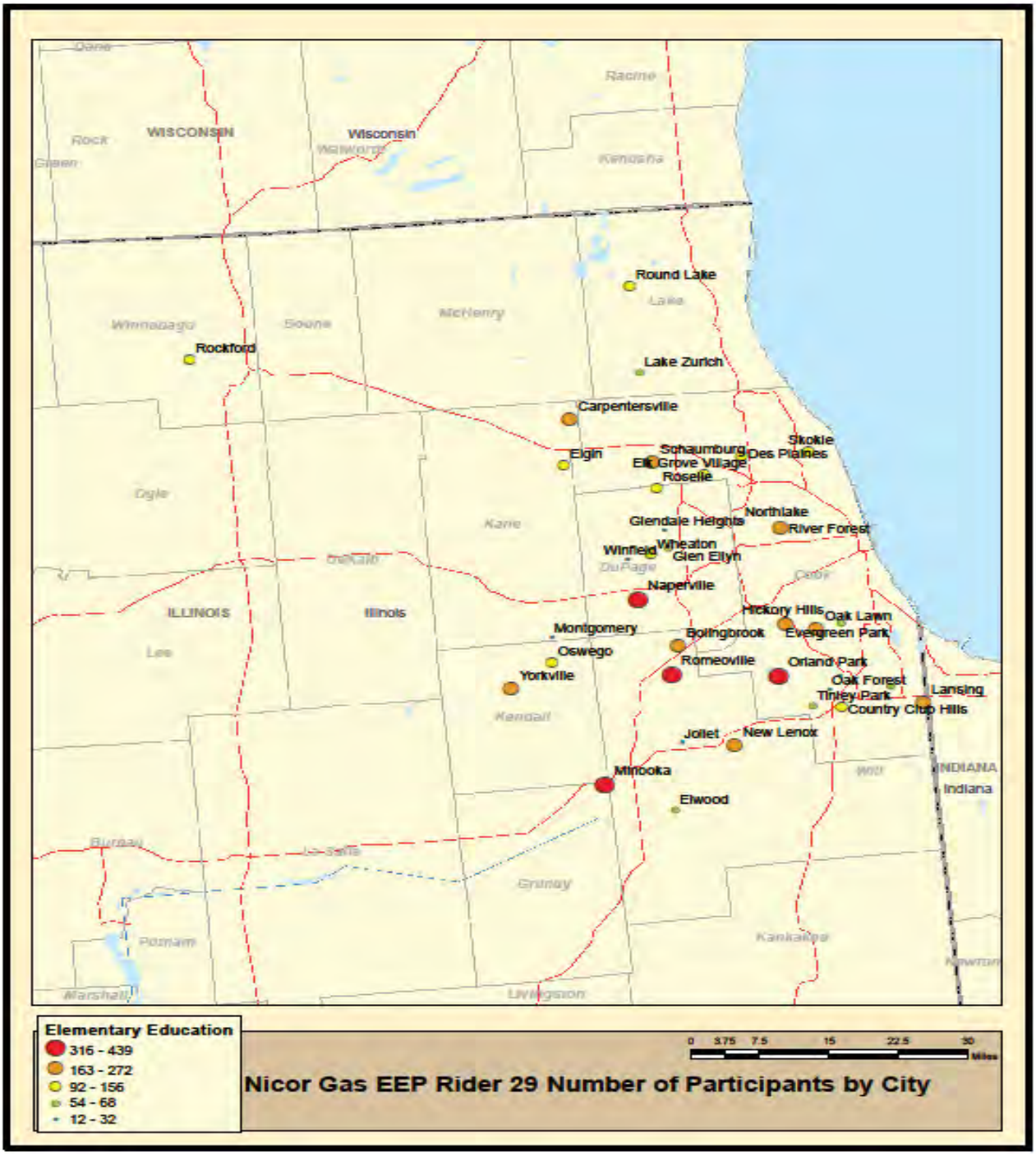
1. Seventy-eight (78) percent of respondents said that they have used the shower timer. Assuming they used the timer correctly, participants reduced their time in the shower from an average of 8 minutes to 5 minutes.
2. Fifty (50) percent of respondents lowered their water heater settings and more than 33 percent of that group claimed they adjusted the setting at least 6 degrees.
3. Thirty-four (34) percent of respondents increased their thermostat by 3-4 degrees in the summer for cooling.

It is hoped that the increase in household awareness will result in long-term energy conservation and savings.

Territory Saturation

The 4,997 students and teachers who participated were from 55 schools in 37 communities. The following map below shows specific communities, with larger circles corresponding to areas with a higher number of participants.

Territory Saturation Map – Elementary Energy Education Program



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Lessons Learned

Some of the referenced data used in the report, such as average shower length, came from a study done in 2001 in Southern California, which is a different demographic and climate from Northern Illinois. The Household Report Card should be revised to include recommendations from EM&V contractor and additional usage questions in order to capture true program participant behavior.

With 61 percent of Household Report Cards returned for the incentive of a mini grant up to $100, it might be valuable to look at other ways to increase the return rate.

This program provides an excellent opportunity for collaboration with ComEd and the inclusion of CFLs in the kits.

Low-to-Moderate Income Weatherization Program

Program Objectives

The Low-to-Moderate Income Weatherization Program was designed to provide access to weatherization and energy-efficiency services for customers who could not afford these services through Nicor's Existing Home Retrofit Program and who did not qualify for traditional Low-Income Heating Assistance and Weatherization Assistance. Weatherization services were provided to low-to-moderate income customers (200-300 percent of the federal poverty guidelines) within the Nicor Gas service territory, by working with the Illinois Association of Community Action Agencies (IACAA) through their local agencies to deliver these services.

Nicor Gas EEP provided funding for 90 percent of the weatherization improvements and 80 percent of the furnace repairs/replacements, with the remaining balance paid by the homeowner. Participants in this program would not have been able to afford these services without the program. Therefore, no free-ridership was estimated for this program.

Marketing Strategy

Low-income families contacted their local Community Action Agencies (CAAs) to apply for the Illinois Home Weatherization Assistance Program (IHWAP). WECC determined the CAAs were in the best position to refer over-income and ineligible applicants to the Nicor program.

Those families denied eligibility for the IHWAP program, as identified through an application process with the local agency, would receive a Nicor Gas EEP Low-to-Moderate Income Program brochure with their denial letter and told how to apply for the program. In addition, a one-page flier was developed for posting in the agencies' offices or at organizations that serve the low-income population.

Program Results

The overall program goal was to weatherize 203 homes and repair or replace 101 furnaces for Nicor natural gas customers. A number of issues related to contract requirements, local agency start-up, increased agency workload from ARRA funding, and customer recruitment delayed the implementation of this program, resulting in only 43 homes receiving services through the program as of May 31, 2011. The results of this program are presented below.

Table 18. Low-to-Moderate Income Weatherization Participation

Measures	Program Participation	Participation Goal	% to Goal
Weatherized Homes	43	203	21%
Furnace Replacements	28	101	28%
Total	**43**	**203**	**21%**

Table 19. Low-to-Moderate Income Weatherization Incentives

Measures	Incentives Paid	Incentive Budget	% to Budget
Weatherized Homes	$80,208	$532,875	15%
Furnace Replacements	$93,039	$235,734	40%
Total	**$173,247**	**$768,609**	**23%**

Table 20. Low-to-Moderate Income Weatherization Therm Savings

Measures	Therms Achieved (Net)	Therm Goal (Net)	% to Goal
Weatherized Homes	8,776	50,750	17%
Furnace Replacements	3,918	14,544	27%
Total	**12,693**	**65,294**	**19%**

The maximum project cost allowed per household was $6,838, which included the $5,200 maximum allowable project expenditure for labor and materials, as well as the agency program support and administrative fees. The average total project cost for the 43 homes was $5,359.83, which included all of the agency's fees.

The agency's program support and administrative fees, along with IACAA's administrative fee and the costs for marketing and call center support, totaled an additional $31,025.82, for a total program cost of $204,273.05.

The per-home energy savings are as follows:

Table 21. Low-to-Moderate Income Weatherization Savings per Home

	Est. Gross Therm Savings Per Home	Actual Gross Therm Savings per Home
Weatherized Homes	250	204
Furnace Replacements	144	91

Initially seven local community action agencies agreed to participate in the program, but due to difficulty with customer recruitment, three of the agencies dropped out halfway through the program year. The agencies cited the major barrier to customer participation as customers not being able to pay the unfunded 10 or 20 percent portion of the project cost. However, WECC believes a lack of agency salesmanship may have contributed as well. A summary of agency participation is shown below:

Table 22. Low-to-Moderate Income Weatherization Participation by Agency

Community Action Agency	No. of Homes Completed
Community and Economic Development of Cook County (CEDA)	21
Rockford Human Services Department	11
Will County Center for Community Concerns	9
Kendall-Grundy Community Action	2
Community Contacts, Inc. (Dekalb & Kane County)	0
Champaign County Regional Planning Commission	0
Community Action Partnership of Lake County	0

IACAA and the participating CAAs had difficulty adapting to a program objective and scope that differed from their standard Illinois Home Weatherization Assistance Program (IHWAP). The expectation was that all weatherization measures would contribute to gas savings, but there was some confusion created in the agencies' scope of work when it referenced the IHWAP Program Operations Manual for defining eligible measures.

As a result, the agencies and their staff took that literally and did not take into account the other scope of work requirements, which were covered in detail during a kick-off meeting with all agency participants, and included the following:

1. Only installing measures with a Savings-to-Investment Ratio (SIR) >1.
2. Not allowing measures that saved both natural gas and electricity unless the primary purpose of the improvement was to reduce natural gas use.
3. Not allowing measures that were structural in nature or intended to repair the exterior envelope of the home (i.e., roof, shingles, siding, doors and windows, etc.).

The agencies' reliance on the IHWAP manual led to numerous measures being installed that were not allowed and therefore not reimbursed, such as compact fluorescent lamps (CFLs), fire extinguishers, new windows, gutter and downspout extensions, and new air conditioning units, to name a few.

WECC performed QA/QC inspections on 11 of the 43 homes. The majority of the homes inspected required re-work to correct deficiencies or poor workmanship. WECC requested and has received documentation of the re-work and WECC's QA/QC inspector has approved the final documentation.

After discovering numerous post-weatherization combustion safety issues at homes completed by one agency, it was determined that this agency should conduct and document combustion safety tests for the 14 remaining homes this agency worked on. WECC believes that the agency's energy assessors were either not adequately trained or did not have enough field experience in this type of testing. Consequently, the agency offered and WECC accepted the requirement that the re-tests were conducted by someone from the agency's training department. The agency was required to provide combustion safety test documentation showing that each house had passed the test.

Territory Saturation

Forty-three homes were completed in 27 cities throughout the Nicor Gas service territory, with Rockford and Joliet having the largest number of homes, as shown in the map on the following page.

Territory Saturation Map – Low-to-Moderate Income Weatherization Program

Lessons Learned

It took longer than expected for the agencies to find and provide staff and weatherization contractors who could meet Nicor's contract requirements for drug testing and background checks. The agencies also took a long time in getting their staff up to speed about the program, which was a source of dissatisfaction for some Nicor Gas customers who were aware of the program, but could not be served quickly following their program inquiry. WECC's program manager served as the single point of contact in these instances, which proved to be helpful in managing customers' expectations and minimizing frustration.

This delay appeared to have affected the recruitment of customers by not having staff trained in the Nicor program during the peak months of applications to steer customers toward this program if they were denied for the IHWAP program. This program is not part of Nicor Gas EEP portfolio going forward, but should a similar-type program be developed, the scope of work and expectations for the program should be more clearly defined. All energy assessors working for the local CAAs and their weatherization subcontractors should be trained on the program's requirements as well.

WECC was not provided direct access to the WeatherWorks program as promised early on by IACAA and the state agency responsible for WeatherWorks, which made it impossible to monitor work orders and activity on a timely basis. WECC unfortunately discovered when summarizing program results that the WeatherWorks software had substantially overestimated savings. In some instances, final savings were not provided in the reports received from the CAAs, and when WECC asked the CAA agents to go back and get those, the program could not reproduce them. Access to the auditing software upfront to assess its modeling and reporting capabilities would be advantageous in the future.

> Note: After working with the developer of the WeatherWorks program, WECC was able to adjust the savings estimates to a more realistic level. For homes that received a furnace replacement, WECC used the deemed savings for a furnace from the Residential Prescriptive program (144 Therms). For homes that received weatherization, WECC applied the estimated percentage of savings (as estimated by WeatherWorks) to the actual Nicor consumption data (less the furnace savings if appropriate). The final adjusted Therm savings were reviewed and verified by the EM&V contractor, along with the methodology for making the adjustments.

WECC received scanned copies of outputs from the WeatherWorks program, requiring manual entry into an Excel spreadsheet, which was not only more costly, but led to human errors in program tracking. This too made it extremely difficult to provide real-time reporting. Only cost information was provided monthly as it was needed to produce monthly accruals. In addition, the cost information changed significantly by the time final cost breakdowns were received for each home as part of the invoicing process. Again, having access to the audit software's reporting capabilities would determine how program tracking occurs.

In the future, QA/QC inspections should occur at specific milestones throughout the process. Each weatherization subcontractor should be evaluated at the start of his or her first project until the QA/QC inspector is satisfied that the contractor is meeting the required quality of workmanship goals for this program. This additional upfront cost will save on costs at the back-end, preventing extra inspections.

Other than questions asked during the QA/QC inspections, no formal survey was prepared to capture customer feedback. WECC strongly recommends a formal evaluation survey be a part of a future program.

Business Prescriptive Program

Program Objectives

Similar to the Residential Prescriptive Program, the Business Prescriptive Program offered a pre-designed format for business customers to receive financial incentives for installing energy-efficient heating and/or water heating equipment, or improving the efficiency of the high-energy use equipment that they were not ready to replace. The primary objective of the program was to increase the installation rate of qualified equipment and to increase and improve the maintenance practices for existing equipment. The program was designed to work through the existing, proven market channels to affect the installation and maintenance of targeted technologies.

Primary efforts to stimulate market activity were focused on providing effective tools and trainings to trade allies, which would allow the allies to ―push" the program into the market. The ―pull" side of the program was affected by increasing customer demand for high-efficiency equipment through program awareness via outreach and marketing. Further, the program logic included the assumption that the mere existence of cash-back incentives would elevate contractor interest to a competitive level that would naturally motivate market providers to stock and promote targeted products.

The incentives for each technology are listed below in Table 23.

Table 23. Business Prescriptive Measures and Incentives

Measure	Efficiency Standard/Equipment Requirements	Incentive	Attribution	Gross Therms*	Net Therms*
Boiler	85-90% Thermal efficiency	$2/MBH	65%	1,460	949
	90%+ Thermal efficiency	$4/MBH	80%	2,750	2,200
Boiler Tune-Up	≥100 MBH, ≥2 Years old	$350	80%	368	294
Boiler reset control	Retrofit, ≥100 MBH	$250	80%	262	210
Furnace	92-94.9% AFUE	$200	50%	208	104
	95% + AFUE	$250	50%	245	123
Sprayer	Low flow pre-rinse	$25	80%	262	210
Steam Trap	Replacement	$50	80%	203	162
Water Heater	0.62 EF) ended August 31, 2010)	$50	75%	51	38
	0.67 EF (new ENERGY STAR® standard September 1, 2010)	$100	80%	159	127
	88% TE	$150	80%	243	194

*Savings vary by business type. The Therms listed are the estimated average Therms.

Marketing Strategy

The target customers of the Business Prescriptive Program were Nicor Gas business customers served under Rates 4 and 74. However, marketing strategies for the program were largely directed toward contractors, distributors, and manufacturers within the market channel, which is the primary influence on customers' purchase decisions. As noted above, the marketing was designed to -push" the program to the market by providing trade allies with collateral materials that they could use as sales tools when working with potential customers. The program also provided a training series to increase the allies' sales skills and technical knowledge of qualified products and services, which provided the contractors' an improved skill set to sell the benefits of energy-efficient equipment.

The program's website acted as a resource of program information for trade allies and customers. Program collateral materials directed customers to the website, where they could find specific equipment and qualification details. Materials also included instruction for properly completing and submitting a rebate application in response to the initially high number of incomplete applications. Website tracking showed more than 20,000 visits to the business customer page of the website and nearly 10,000 visits to the business contractor page.

The program made regular efforts to keep trade allies engaged in the program and updated on its status. Efforts included:

- Training series events, in which program staff could provide an overview of the program offerings in preface to an educational meeting about sales techniques or equipment installation.
- Contractor newsletters, which maintained allies' awareness of the program and provided a venue for the program to notify them of updates and status.
- Media campaigns to heighten allies' interest and increase their participation in the program, such as the March Madness event in which top-producing contractors in four categories were given a cash prize.
- General public relations efforts, including press releases, interviews, and bill inserts.

Direct outreach was also used to increase program awareness. However, as discussed further in the *Program Results* section below, additional outreach was needed to raise a higher level of program awareness and to more effectively motivate the market. The majority of outreach was done via email and phone communication, which are less successful means to grow the personal relationships with allies that are necessary to gain their buy-in and to make the program successful.

Mid-year Program Changes

The Business Prescriptive Program underwent several programmatic changes in response to the market and to an unexpectedly slow uptick of program activity. Changes were primarily focused around correcting gross Therm measure savings and participation rates. Below is a summary of major changes throughout the year.

- Updating of savings values by the program implementer, Resource Solutions Group (RSG). Preliminary savings were estimated in the Rider 29 Operating Plan with the plan that the program implementer would develop work papers to substantiate and refine the actual savings. The program finalized the new savings in December and applied them to activity for the entire 13-month program. As part of the savings re-calculation, RSG applied a savings value to each measure by market sector, based on the estimated energy use of that particular piece of equipment in that type of business (i.e. restaurant, office, hotel, etc).
- The planned elimination of Tier 1 water heaters (0.62 EF) in response to the ENERGY STAR standard increase to 0.67 EF on September 1, 2010.

- Adjustment to participation forecasts for all measures to account for an unresponsive market. Program plans assumed a more rapid acceptance and market penetration than what occurred. Therefore, the implementer's budget did not include enough outreach resources which limited its ability to gain traction in the market.
- Shifting $275,500 and 264,400 gross Therms to the Business Custom Program, which was showing potential for growing beyond its goals in January 2011.
- Pulling out $70,000 and 40,000 gross Therms to create the Rockford Small Business Pilot, which was offered in partnership with ComEd with the goal of learning more about the hard-to-reach small business sector (see more details under Program Results below).
- Establishing the Pre-Rinse Spray Valve Pilot with Go to Green, which was a targeted effort to motivate the spray valve market in the Evanston and Northbrook areas via intensified marketing (see more details under Program Results below).

Table 24 summarizes the adjustment in the incentive budgets and savings and participation goals.

Table 24. Changes to Participation Goals, Budgets, and Savings Goals by Measure

Measure	Participation Goals		Incentive Budget		Savings (Net)	
	Original (April 2010)	Revised (January 2011)	Original (April 2010)	Revised (January 2011)	Original (April 2010)	Revised (January 2011)
Furnace – 92-94.9% AFUE	544	242	$108,800	$48,400	59,296	25,168
Furnace – 95%+ AFUE	362	252	$90,500	$63,000	43,078	30,870
Water Heater – 0.62 EF	215	1	$10,750	$50	3,064	38
Water Heater – 0.67 EF	32	25	$3,200	$2,500	947	3,180
Boiler – 85-89.9% AFUE	156	78	$312,000	$156,000	134,862	74,022
Boiler – 90%+ AFUE	38	67	$152,000	$268,000	42,256	147,400
Boiler Tune Up	1,104	154	$386,400	$53,900	441,600	45,338
Boiler Reset Control	35	54	$8,750	$13,500	19,600	23,890
Water Heater – 88% Thermal Efficiency	172	150	$25,800	$22,500	82,560	29,160
Pre-Rinse Spray Valve	390	100	$9,750	$2,500	134,784	20,960
Steam Trap Buy Down	1,403	2,699	$70,150	$134,950	227,847	438,318
Total Program	4,451	3,822	$1,178,100	$765,300	1,189,894	838,343

Program Results

The Business Prescriptive Program faced numerous challenges throughout Rider 29. Most notably was the program's inability to penetrate the market, which resulted in consistently low participation. This challenge was likely due to three major factors:

1. A market that was unfamiliar with the benefits from a natural gas efficiency program. Although electrical efficiency programs have been available in the Nicor Gas service territory for several years, trade allies and business customers have never benefited from a natural gas program. Neither have these businesses benefited significantly from similar large federal programs (i.e. federal tax credits or American Recovery and Reinvestment Funds) that the residential market has experienced. The result is a market channel that is somewhat skeptical or dismissive of new programs until the program has proven to be a sustainable, beneficial piece of the market.

2. The detrimental combination of a soft economy and low natural gas prices. Our conversations and experience with similar programs around the Midwest uncovered the same responses: the down economy is making business customers hesitant to spend money on upgrades to high-efficiency equipment, especially when low gas prices make the payback for less-efficient seem more palatable.

3. A generally low amount of outreach by program staff. The program implementer underestimated the detachment of the business HVAC channel and was not able to give the necessary attention to the channel to make it truly successful. Because there are such strong parallels between the residential and business ally networks, the program relied too heavily on the success of the residential program to increase activity within the business channel.

Despite these obstacles, the program ended up making relatively large advances by the end of the year, which is expected to provide a strong lead into the Rider 30 program. Persistent efforts to raise program awareness led to more than 100 contractors participating in the program. Much of this activity came in the last months of the program, and their involvement is expected to continue into Rider 30.

The program's successes were largely due to several factors, including:

- Engagement of commercial trade allies through program training sessions, including the Breakfast Series Seminars, ongoing communications and monthly e-newsletters, marketing campaigns, and outreach efforts by program staff

- Partnership with the Nicor Gas Business Customer Service (BCS) team to promote the program to Nicor's largest end-use customers;

- Trade Ally Focus Groups, which engaged residential and commercial trade allies in a discussion about program status, potential updates, and market trends. The program implementer also gained valuable market information from the focus groups.
- Collection of essential market feedback and data from trade allies, end users, and manufacturers, used to improve Rider 29 efforts during the program year, as well as enhance the program's offerings for Rider 30.
- Adjusting outreach efforts and communication strategies to better align with market needs. This included an effort to improve outreach to specific market segments (i.e. small business) where larger, more generic marketing strategies proved unsuccessful. The program achieved this by attending relevant industry events and networking opportunities, leveraging the Nicor Gas BCS team and their relationships with customers, and coordinating more closely with other area-utilities implementing similar outreach strategies for their energy efficiency programs.

Additionally, once the program realized the challenges and reality of the market place, it looked for other major opportunities to capture savings within the business channel. Two targeted efforts resulted, which successfully boosted participation in their markets.

1. Rockford Small Business Pilot. This was a pilot program that teamed Nicor Gas and ComEd to gain insight to the small business market, which is historically a very hard-to-reach market. Overarching goals for the pilot were to increase program penetration into the Nicor Gas business market, and to define the best program design when the program went full-scale in Rider 30. Nicor Gas shifted $70,000 from the Business Prescriptive program to the pilot with the understanding that many of the same measures would be implemented across both programs. The pilot was designed to reach the market via direct install measures, which were installed by program staff, and a trade ally network who agreed to install equipment at a set price. The pilot achieved its savings goals within less than two months of operation, and firmly laid the groundwork for a full-scale joint program to roll out in Rider 30. Results from this pilot can be seen in the tables found on the following pages. Complete results for the pilot can be found in the appendices to this report.
2. Pre-Rinse Spray Valve Promotion. For this effort, the Program Implementer partnered with a third-party to reach restaurant and food service contacts through direct mailing and direct outreach. Their goal was to retrofit 200 low-flow pre-rinse spray valves in the Evanston and Northbrook areas. The Business Prescriptive Program targeted this market as it was a seemingly easy-to-reach market that was inexplicably inactive. In the end, the pilot was not able to gain the amount of traction it hoped to see and achieved less than 50 percent of its goal. Results for this effort are rolled into the Business Prescriptive Program results on the following pages.

The results at the close of the program for overall Therm, unit and budget goals for both the Business Prescriptive and Business Custom Programs are shown in Tables 25, 26, and 27.

Table 25. Business Prescriptive Participation Results

	Actual Participation	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Business Prescriptive Program					
Boiler – 85-89.9% AFUE	10	156	6%	78	13%
Boiler – 90%+ AFUE	78	38	205%	67	116%
Furnace – 92-94.9% AFUE	41	544	8%	242	17%
Furnace – 95%+ AFUE	68	362	19%	252	27%
Water Heater – 0.62 EF	1	215	<1%	1	100%
Water Heater – 0.67 EF (New ENERGY STAR standard September 2010)	1	32	3%	25	4%
Water Heater – 88% Thermal Efficiency	16	172	9%	150	11%
Steam Trap Buy Down	919	1,403	66%	2,699	34%
Boiler Tune Up	110	1,104	10%	154	71%
Boiler Reset Control	20	35	57%	54	37%
Pre-Rinse Spray Valve	92	390	24%	100	92%
Total Prescriptive Program	**1,356**	**4,451**	**30%**	**3,822**	**35%**
Rockford Small Business Pilot					
Direct Install	163	N/A	N/A	N/A	N/A
Trade Ally Installed	160	N/A	N/A	N/A	N/A
Total Rockford Pilot	**323**	N/A	N/A	N/A	N/A
Combined Participation Results: Business Prescriptive and Rockford Small Business Pilot					
Grand Total	**1,679**	**4,451**	**38%**	N/A	N/A

Table 26. Business Prescriptive Incentives Paid

	Actual Incentives Paid	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Business Prescriptive Program					
Boiler – 85-89.9% AFUE	$60,000	$312,000	19%	$156,000	38%
Boiler – 90%+ AFUE	$231,876	$152,000	153%	$268,000	87%
Furnace – 92-94.9% AFUE	$8,200	$108,800	8%	$48,400	17%
Furnace – 95%+ AFUE	$17,000	$90,500	19%	$63,000	27%
Water Heater – 0.62 EF	$50	$10,750	<1%	$50	100%
Water Heater – 0.67 EF (New ENERGY STAR standard September 2010)	$100	$3,200	3%	$2,500	4%
Water Heater – 88% Thermal Efficiency	$2,400	$25,800	9%	$22,500	11%
Steam Trap Buy Down	$43,743	$70,150	62%	$134,950	32%
Boiler Tune Up	$33,580	$386,400	9%	$53,900	62%
Boiler Reset Control	$5,000	$8,750	57%	$13,500	37%
Pre-Rinse Spray Valve	$2,300	$9,750	24%	$2,500	92%
Total Prescriptive Program	**$404,249**	**$1,178,100**	**34%**	**$765,300**	**53%**
Rockford Small Business Pilot					
Direct Install	$2,992	N/A	N/A	$2,992	100%
Trade Ally Installed	$14,399	N/A	N/A	$19,396	75%
Total Rockford Pilot	**$17,331**	N/A	N/A	**22,388**	**77%**
Combined Incentive Results: Business Prescriptive and Rockford Small Business Pilot					
Grand Total	**$421,580**	**$1,178,100**	**36%**	**$787,688**	**54%**

Table 27. Business Prescriptive Therm Savings

	Actual Therms Achieved (Net)	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Business Prescriptive Program					
Boiler – 85-89.9% AFUE	28,470	134,862	21%	74,022	38%
Boiler – 90%+ AFUE	127,062	42,256	301%	147,400	86%
Furnace – 92-94.9% AFUE	3,113	59,296	5%	25,168	12%
Furnace – 95%+ AFUE	6,198	43,078	14%	30,870	20%
Water Heater – 0.62 EF	51	3,064	2%	38	134%
Water Heater – 0.67 EF (New ENERGY STAR standard September 2010)	56	947	6%	3,180	2%
Water Heater – 88% Thermal Efficiency	1,641	82,560	2%	29,160	6%
Steam Trap Buy Down	149,246	227,847	66%	438,318	34%
Boiler Tune Up	54,696	441,600	12%	45,338	121%
Boiler Reset Control	4,220	19,600	22%	23,890	18%
Pre-Rinse Spray Valve	19,283	134,784	14%	20,960	92%
Total Prescriptive Program	**394,012**	**1,189,894**	**33%**	**838,343**	**47%**
Rockford Small Business Pilot					
Direct Install	16,799	N/A	N/A	14,604	115%
Trade Ally Installed	15,260	N/A	N/A	14,008	109%
Total Rockford Pilot	**32,059**	**N/A**	**N/A**	**28,612**	**112%**
Combined Therm Savings Results: Business Prescriptive and Rockford Small Business Pilot					
Grand Total	**426,071**	**1,189,894**	**36%**	**866,955**	**49%**

Quality Control

In conjunction with the Residential Prescriptive Program, the Business Prescriptive Program subcontracted with CNT to perform quality assurance inspections of equipment that was installed through the program. Again, CNT was tasked with inspecting 3 percent of the measures paid by April 30, 2011 because their contract expired May 31, 2011. In the end, CNT inspected 163 measures, or 21 percent of the rebates paid through April 30. All of the inspections confirmed that equipment installed, or equipment maintained in the business matched the measures that were claimed on the rebate application.

Territory Saturation

The map on the following page shows that the program generated a majority of participation in the northeastern portion of the territory. This area was the first logical area for uptick given the higher number of businesses located in the area, compared to the remainder of the territory.

Territory Saturation Map – Business Prescriptive Program

nicor GAS
Energy Efficiency Program
USING ENERGY WISELY FOR A BETTER FUTURE™

Lessons Learned

As noted above, several challenges were noted in Rider 29 that should be address to make the more successful program. The most prevalent changes are noted below.

- Adjusting budget allocation to add a robust trade ally outreach team to the program, which will be able to provide more personal contact to allies in the field. The outreach staff will be designed similar to a sales staff, with each staff member assigned a list of ~~"~~clients" for whom they are responsible, as well as goals attached to their client list. We are confident that this added customer service for the trade allies will stimulate the market.

- Reevaluating the measure mix to determine where incentives need to be adjusted or measures need to be added to better accommodate the needs of Nicor Gas businesses. This effort includes providing new opportunities for market segments that did not benefit directly from Rider 29 offerings. Immediate needs involve measures with faster payback, including a prescriptive measure for smaller boilers, a higher tier for larger steam traps, expanded opportunities for kitchen equipment, and increased incentives for water heaters.

The program will also expand efforts that proved successful in Rider 29, including more frequent training seminar series, and a Trade Ally Focus Group that is concentrated on the business market channel. Combined, these efforts will grow and strengthen the business program market that was defined in Rider 29.

Business Custom Program

Program Objectives

The Business Custom Program was designed with the intention of reaching business customers whose efficiency improvements were not addressed through the Business Prescriptive Program. Unlike the prescriptive program, the Business Custom Program intended to address projects on a case-by-case basis with rebates designed to be dependent on how much energy the new equipment or process improvement saved compared to the old equipment or process.

Program planning assumed that customers who took advantage of this program would typically use more complex mechanical equipment to support facility operations and manufacturing processes. The Business Custom Program was designed to address this complexity and additional issues that are naturally tied to larger businesses, including: access to adequate technical resources, risks associated with emerging technologies, confidence of energy-savings potential, financial hurdles, and company bureaucracy.

As shown below, incentive levels were generically tiered to accommodate customers' larger and smaller projects.

Measure	Therms Saved	Incentive
Tier 1	<7,500 Therms	$0.75/Therm
Tier 2	≥7,500 Therms	$1.00/Therm

Marketing Strategy

Allies and customers who used the Business Custom or the Business Prescriptive Program could also install equipment that was eligible for incentives through the prescriptive program. The natural synergies between the Business Prescriptive and the Business Custom Programs allowed the custom program to leverage its marketing efforts with those from the Business Prescriptive Program. Therefore, marketing materials for the Business Prescriptive Program offered some level of detail on the custom program and nearly all outreach efforts for the prescriptive program presented an opportunity to discuss the custom program with trade allies and/or eligible customers.

A limited number of collateral was developed specifically for the Business Custom Program. These pieces were intended to be training and reference pieces for allies and customers in the absence of outreach staff. The key outcome of these pieces was the handbook that detailed every step of the application process; provided sample applications, calculations and invoices, and answered frequently asked questions from allies and customers.

All collateral materials for the Business Custom Program directed customers and allies to the Nicor Gas Energy Efficiency Program website, which offered a portal of information about the Business Custom Program. The intention was that this portal would help alleviate the questions from customers and allies that would typically be answered by a large number of outreach staff in the field. Key features in the portal included detailed customer and project eligibility, program applications, the program handbook, and contact information for program support.

Additionally, the program attempted to maintain program awareness among trade allies and keep them engaged through Trade Ally Focus Groups and newsletters. Although these venues were primarily directed toward business prescriptive and residential contractors, they regularly included brief updates and reminders about the Business Custom program offerings.

Mid-year Program Changes

Although the program had not paid out any incentives by early January 2011, the program appeared to be gaining significant traction in the market, with nearly $300,000 in incentives pre-approved and in the installation phase. The implementer, RSG, who also implemented the Business Prescriptive Program, suggested that the program could exceed its goal based on work it believed to be in the pipeline from conversations with trade allies and business customers. The administrator recommended shifting money from the Prescriptive Program to the Business Custom Program to: 1) prevent the custom program from going over budget, and 2) ease the goals of the prescriptive program that was having difficulty breaking into the market. To that end, $275,500 and an additional 190,500 net Therms were shifted to the custom program in January 2011.

The following table summarizes the adjustment in the incentive budgets and savings and participation goals.

Table 28. Changes to Participation Goals, Budgets, and Savings Goals by Measure

Participation Goals		Incentive Budget		Savings (Net)	
Original (April 2010)	Revised (January 2011)	Original (April 2010)	Revised (January 2011)	Original (April 2010)	Revised (January 2011)
57	80	$374,500	$650,000	289,500	480,000

Program Results

Despite the promising outlook at the program's midpoint, the Business Custom Program came in below the new goals set in January 2011 and below the original goals set in the April 2010 Operating Plan. The shortcomings were due to two factors:

1. An earlier project cut-off date than the program implementer had originally expected. The implementer's January forecast assumed that all projects that had passed the "approved" phase of the pipeline would be considered in the final Rider 29 program counts. However, the program administrator and Nicor staff later agreed that the program should only count projects that had actually been installed by the May 31 program end date. This pushed over 375,000 gross Therms and nearly $300,000 in incentives into Rider 30. These additional Therms would have pushed the program to over 200 percent of the original Operating Plan goal, and to nearly 130 percent of the January 1 goal.

2. The bureaucracy of some larger companies that installed equipment through the program created larger barriers than the implementers anticipated. Examples of these obstacles included pushing the financial approval for the project through all layers of the company and gaining buy-in for a previously-approved project from new management.

It is important to note that while the program did not reach its Therm goals, the program used a smaller portion of its budget to achieve these savings than it forecasted, using only 32 percent of the budget to reach 49 percent of the goals. Thus, the program was more cost-effective and achieved a lower dollar per Therm target than predicted.

Also noteworthy is the strong pipeline of projects that were not completed in time to be processed in Rider 29, but create a strong foundation for Rider 30. This pipeline includes 6 pre-approved projects totaling over 500,000 gross Therms, all of which are scheduled to be completed by October 2011.

Table 29. Commercial Custom Program Participation Results

	Actual Participation	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Tier 1	5	34	15%	60	8%
Tier 2	4	23	17%	20	20%
Total Participation	9	57	16%	80	11%

Table 30. Commercial Custom Program Incentives Paid

	Actual Incentives	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Tier 1	$9,536	$340,000	3%	$60,000	16%
Tier 2	$196,288	$34,500	569%	$50,000	393%
Total Incentives	$205,824	$374,500	55%	$650,000	32%

Table 31. Commercial Custom Program Therm Savings

	Actual Therms Saved (Net)	Original Goal (April 2010)	% to Original Goal	Revised Goal (January 2011)	% to Revised Goal
Tier 1	16,073	255,000	6%	450,000	4%
Tier 2	220,351	34,500	639%	30,000	735%
Total Therms Saved	236,424	289,500	82%	480,000	49%

Territory Saturation

Considering the limited amount of completed projects in the Business Custom Program, the program reached far into the Nicor Gas service territory. As shown in the following penetration map, the program spanned almost the entire northern territory of Nicor Gas.

Territory Saturation Map – Business Custom Program

Lessons Learned

Lessons learned in Rider 29 define areas where the program can use past successes to grow the program. Key strategies for improvement center around ways to make the program more user-friendly for allies and customers, which will result in an easier program to push through the numerous layers of approval by customers and the program. The end result will be advancing projects to completion faster, which will decrease the customer's upfront financial risk of installing larger projects and result in increased savings for the program.

Potential and planned changes include:

- Evaluation of the application process for allies, customers, and implementation staff. By decreasing the number of milestones and action items required of applicants and providing additional support and improved resources, the program hopes to see an increased number of completed projects at a lower administrative cost.

- Development of an abbreviated application and review process for recurring custom projects that require less engineering analysis. Certain types of projects, such as heat exchanging grease traps, were submitted multiple times in Rider 29. Once basic calculations are established for a particular measure or technology, the calculations can be easily applied to multiple facilities, thus basically creating a ~~"~~prescriptive custom" calculation that will expedite the review and approval process.

- Active involvement with customers and allies. The program will take advantage of opportunities to engage the market on a personal level to increase program participation. Effective almost immediately, the program will use implementers' expanded outreach staff to make office visits to contractors, where the implementer can earn program buy-in from the allies, field questions about the application process, and alleviate concerns about the complexity of the program. The implementation contractor will also explore opportunities to involve energy advocates who can work directly with customers to offer advice on equipment and system improvements.

The program will also continue successes from Rider 29, including leveraging the strong synergy between the Business Prescriptive and the Business Custom Programs, to enhance and develop each program individually.

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

1. Residential Prescriptive

Technologies	Inputs									Net Benefits				
Description	kWh	kW	Therms	Est. Life	Incr. Cost	Incentive % of	Est. Free Rider	Partic Yrs. pb	Total Partic.	Net Therms 1st Year	Gas Value	Total Gas + Electric	Total $15/ton	Total $30/ton
Technologies														
90% - 94.9% AFUE Boiler			150	20	$884	$350	25%	5.1	79	8,888	$28,660	$28,660	$39,208	$49,756
						40%				1.55	**1.5**	**1.5**	**1.7**	**1.9**
										U_BC:	2.9			
.67 EF Water Heater (new standard 9/1/10)			37	13	$400	$100	25%	12.5	129	3,580	($17,119)	($17,119)	($14,082)	($11,045)
						25%				0.56	0.6	0.6	**0.6**	**0.7**
										U_BC:	1.7			
95%+ AFUE Furnace	700		178	20	$857	$250	50%	3.2	19,052	1,695,628	$7,297,165	11,777,274	14,914,669	$18,052,065
						29%				1.89	**1.9**	**2.4**	**2.8**	**3.2**
										U_BC:	4.2			
.62 EF Water Heater			19	13	$70	$50	25%	1.7	134	1,910	$4,477	$4,477	$6,097	$7,717
						71%				1.64	**1.6**	**1.6**	**1.9**	**2.1**
										U_BC:	1.7			
92%-94.9% AFUE Furnace			144	20	$580	$200	50%	3.8	860	61,920	$315,194	$315,194	$388,682	$462,170
						34%				2.26	**2.3**	**2.3**	**2.6**	**2.9**
										U_BC:	3.3			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

1. Residential Prescriptive

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
95%+ AFUE Boiler			213	20	$1,327	$400	10%	6.2	212	40,640	$117,373	$117,373	$165,605	$213,838
						30%				1.46	**1.5**	**1.5**	**1.7**	**1.8**
										U_BC:	4.4			
Implementation														
Implementation Subcontractors			0	1					1	0	($1,141,606)	$1,141,606)	$1,141,606)	($1,141,606)
			Prog. Delivery		$1,141,606					0.00				
										U_BC:	0			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

1. Residential Prescriptive

Technologies	nputs									et Bene its					
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton

ubtotal 1. Residential Prescriptive

kW	kW	herms	etric ons C 2
6,668,200	0	1,812,565	199,177

	as Value	otal as l.	otal . $ 5/ton	otal . $30/ton
et Bene its	$6,604,144	$11,084,253	$14,358,573	$17,632,895
otal B/C	1.7	2.1	2.4	2.8
Utility B/C	2.7	3.4	3.9	4.4
Budget	$6,208,656	$6,208,656	$6,208,656	$6,208,656

	otal rogram Budget	
ncenti es	$5,067,050	81.6%
mpl, Admin, upport	$1,141,606	18.4%
	$6,208,656	00.0 %

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

2. Low / Moderate Income Wx

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Technologies														
Building Shell Retrofits & Furnace Replacements	396		295	25	$2,917	$4,029		-4.6	43	12,685	$7,753	$20,927	$41,910	$62,893
						138%				1.06	**1.1**	**1.2**	**1.3**	**1.5**
										U_BC:	0.8			
Implementation														
Call Center			0	1					1	0	($4,400)	($4,400)	($4,400)	($4,400)
			Prog. Delivery		$4,400					0.00				
										U_BC:	0			
Marketing			0	1					1	0	($2,479)	($2,479)	($2,479)	($2,479)
			Prog. Delivery		$2,479					0.00				
										U_BC:	0			
Program Management & QC Inspections			0	1					1	0	($24,147)	($24,147)	($24,147)	($24,147)
			Prog. Delivery		$24,147					0.00				
										U_BC:	0			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

2. Low / Moderate Income Wx

Technologies	nputs									et Bene its					
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton

ubtotal 2. Low / Moderate Income Wx

kW	kW	herms	etric ons C 2
17,028	0	12,685	2,008

	as Value	otal as l.	otal . $ 5/ton	otal . $30/ton
et Bene its	($23,273)	($10,099)	$10,884	$31,867
otal B/C	0.9	0.9	1.1	1.2
Utility B/C	0.7	0.7	0.8	0.9
Budget	$204,273	$204,273	$204,273	$204,273

otal rogram Budget		
ncenti es	$173,247	84.8%
mpl, Admin, upport	$31,026	15.2%
	$204,273	00.0 %

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

3. Home Retrofit Assessment and Install

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Technologies														
Installed Retrofits			299	25	$2,420	$975	5%	6.9	413	117,433	$283,485	$283,485	$446,610	$609,736
						40%				1.30	**1.3**	**1.3**	**1.5**	**1.6**
										U_BC:	3.1			
Low Flow Direct Install			40	10	$60	$10	5%	1.8	1,093	41,897	$164,812	$164,812	$193,322	$221,833
						17%				3.65	**3.6**	**3.6**	**4.1**	**4.6**
										U_BC:	20.8			
Implementation														
Retrofit Management Fee			0	1					1	0	($91,290)	($91,290)	($91,290)	($91,290)
			Prog. Delivery		$91,290					0.00				
										U_BC:	0			
WECC Call Center & IT Setup			0	1					1	0	($45,042)	($45,042)	($45,042)	($45,042)
			Prog. Delivery		$45,042					0.00				
										U_BC:	0			
Subcontractor Marketing			0	1					1	0	($150,106)	($150,106)	($150,106)	($150,106)
			Prog. Delivery		$150,106					0.00				
										U_BC:	0			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

3. Home Retrofit Assessment and Install

Technologies Description	nputs kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et Bene its et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Assessments & DI Implement			0	1					1	0	($283,071)	($283,071)	($283,071)	($283,071)
			Prog. Delivery		$283,071					0.00				
										U_BC:	0			

ubtotal 3. Home Retrofit Assessment and Install

kW	kW	herms	etric ons C 2
0	0	159,330	16,949

otal rogram Budget		
ncenti es	$413,597	42.1%
mpl, Admin, upport	$569,509	57.9%
	$983,106	00.0 %

	as Value	otal as l.	otal . $ 5/ton	otal . $30/ton
et Bene its	($121,212)	($121,212)	$70,423	$262,060
otal B/C	0.9	0.9	1.0	1.2
Utility B/C	1.5	1.5	1.7	1.9
Budget	$983,106	$983,106	$983,106	$983,106

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

4.Elementary Energy Education

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Technologies														
Kits to Students (61% Participate, 45, 86% gas, 14% Elec.)	96		31	10	$44	$44	20%		4,997	123,034	$425,847	$579,132	$699,977	$820,822
						100%				3.42	**3.4**	**4.3**	**5.0**	**5.7**
										U_BC:	3.4			
Implementation														
Contractor Labor			0	1					1	0	($55,000)	($55,000)	($55,000)	($55,000)
			Prog. Delivery		$55,000					0.00				
										U_BC:	0			
Call Center			0	1					1	0	($2,750)	($2,750)	($2,750)	($2,750)
			Prog. Delivery		$2,750					0.00				
										U_BC:	0			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

4.Elementary Energy Education

Technologies	nputs									et Bene its					
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric		otal $ 5/ton	otal $30/ton

ubtotal 4.Elementary Energy Education

kW	kW	herms	etric ons C 2
383,770	0	123,034	8,136

	as Value	otal as l.	otal . $ 5/ton	otal . $30/ton
et Bene its	$368,097	$521,382	$642,227	$763,072
otal B/C	2.6	3.2	3.7	4.3
Utility B/C	2.2	2.7	3.2	3.6
Budget	$277,618	$277,618	$277,618	$277,618

otal rogram Budget		
ncenti es	$219,868	79.2%
mpl, Admin, upport	$57,750	20.8%
	$277,618	00.0 %

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

5. Multi-family

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Technologies														
Residential Multifamily Direct Install			60	10	$7	$7			7,412	442,151	$2,110,612	$2,110,612	$2,411,486	$2,712,360
						100%				41.68	**41.7**	**41.7**	**47.5**	**53.3**
										U_BC:	41.7			
General service Multifamily Direct Install			72	10	$7	$7			22,440	1,607,279	$7,703,888	$7,703,888	$8,797,605	$9,891,322
						100%				50.04	**50.0**	**50.0**	**57.0**	**64.0**
										U_BC:	50			
Add'l Direct Install Incentives			0	1		$51,311			1	0	$0	$0	$0	$0
										U_BC:	0			
Implementation														
Marketing			0	1					1	0	($14,763)	($14,763)	($14,763)	($14,763)
			Prog. Delivery		$14,763					0.00				
										U_BC:	0			
Call Center			0	1					1	0	($4,400)	($4,400)	($4,400)	($4,400)
			Prog. Delivery		$4,400					0.00				
										U_BC:	0			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

5. Multi-family

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Subcontractor Implementation			0	1					1	0	($640,977)	($640,977)	($640,977)	($640,977)
			Prog. Delivery		$640,977					0.00				
										U_BC:	0			

ubtotal 5. Multi-family

kW	kW	herms	etric ons C 2
0	0	2,049,430	108,992

	as Value	otal as l.	otal . $ 5/ton	otal . $30/ton
et Bene its	$9,154,360	$9,154,360	$10,548,951	$11,943,542
otal B/C	11.5	11.5	13.1	14.7
Utility B/C	10.9	10.9	12.4	13.9
Budget	$920,415	$920,415	$920,415	$920,415

otal	rogram Budget	
ncenti es	$260,275	28.3%
mpl, Admin, upport	$660,140	71.7%
	$920,415	00.0 %

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

6. Business Prescriptive

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Technologies														
Rockford Small Business Pilot			124	5	$54	$54	20%		323	32,059	$72,009	$72,009	$83,721	$95,433
						100%				6.19	**6.2**	**6.2**	**7.0**	**7.9**
										U_BC:	5			
Boiler Reset Control (Retrofit)			264	20	$612	$250	20%	2	20	4,220	$28,686	$28,686	$33,695	$38,703
						41%				3.93	**3.9**	**3.9**	**4.4**	**5.0**
										U_BC:	7.7			
Boiler Tune Up			622	5	$650	$304	20%	0.8	110	54,696	$105,183	$105,183	$125,165	$145,148
						47%				2.84	**2.8**	**2.8**	**3.2**	**3.5**
										U_BC:	4.9			
90%+ (thermal efficiency) Boiler			2036	20	$15,000	$2,973	20%	8.4	78	127,063	$222,573	$222,573	$373,373	$524,173
						20%				1.24	**1.2**	**1.2**	**1.4**	**1.6**
										U_BC:	5			
85% - 90% (thermal efficiency) Boiler			4380	20	$12,000	$6,000	35%	2	10	28,470	$181,593	$181,593	$215,382	$249,170
						50%				3.33	**3.3**	**3.3**	**3.8**	**4.2**
										U_BC:	4.3			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

6. Business Prescriptive

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Low flow Pre-Rinse Sprayer			262	5	$60	$25	20%	0.2	92	19,283	$47,236	$47,236	$54,281	$61,326
						42%				11.70	**11.7**	**11.7**	**13.3**	**14.9**
										U_BC:	22.5			
95%+ AFUE Furnace		700	182	20	$858	$250	50%	3.2	68	6,198	$27,341	$43,331	$54,702	$66,073
						29%				1.94	**1.9**	**2.5**	**2.9**	**3.3**
										U_BC:	4.3			
92%-94.9% AFUE Furnace			152	20	$580	$200	50%	3.6	41	3,113	$16,490	$16,490	$20,184	$23,878
						34%				2.39	**2.4**	**2.4**	**2.7**	**3.0**
										U_BC:	3.5			
Steam Trap Buy down			203	6	$118	$48	20%	0.5	919	149,246	$435,218	$435,218	$499,713	$564,209
						40%				6.02	**6.0**	**6.0**	**6.8**	**7.5**
										U_BC:	11.9			
.62 EF Water Heater			51	15	$213	$50	25%	4.9	1	38	$97	$97	$134	$170
						23%				1.61	**1.6**	**1.6**	**1.8**	**2.1**
										U_BC:	5.1			
.67 EF Water Heater (new standard 9/1/10)			56	15	$369	$100	20%	7.5	2	90	$12	$12	$97	$182
						27%				1.02	**1.0**	**1.0**	**1.2**	**1.3**
										U_BC:	3			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

6. Business Prescriptive

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Contractor Implementation			0	1					1	0	($803,793)	($803,793)	($803,793)	($803,793)
			Prog. Delivery		$803,793					0.00				
										U_BC:	0			
Implementation														
88% TE Water Heater			128	15	$269	$150	20%	1.4	16	1,641	$7,580	$7,580	$9,142	$10,705
						56%				3.20	**3.2**	**3.2**	**3.7**	**4.1**
										U_BC:	4.6			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

6. Business Prescriptive

Technologies	nputs									et Bene its					
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric		otal $ 5/ton	otal $30/ton

ubtotal 6. Business Prescriptive

kW	kW	herms	etric ons C 2
23,800	0	426,116	20,173

	as Value	otal as l.	otal . $ 5/ton	otal . $30/ton
et Bene its	$340,224	$356,215	$665,796	$975,377
otal B/C	1.2	1.2	1.3	1.5
Utility B/C	1.9	2.0	2.2	2.5
Budget	$1,225,376	$1,225,376	$1,225,376	$1,225,376

otal rogram Budget		
ncenti es	$421,583	34.4%
mpl, Admin, upport	$803,793	65.6%
	$1,225,376	00.0 %

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

7. Custom Business

Technologies	nputs									et Bene its				
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton
Technologies														
Custom Measures			35026	10	$30,000	$22,869	25%	0.3	9	236,426	$953,823	$953,823	$1,114,705	$1,275,587
						76%				5.71	**5.7**	**5.7**	**6.5**	**7.3**
										U_BC:	5.6			
Implementation														
Implementation Contractor			0	1					1	0	($169,304)	($169,304)	($169,304)	($169,304)
			Prog. Delivery		$169,304					0.00				
										U_BC:	0			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

7. Custom Business

Technologies	nputs									et Bene its					
Description	kWh	kW	herms	st. i e	ncr. Cost	ncenti e % o	st. ree Rider	artic rs. pb	otal artic.	et herms st ear	as Value	otal as lectric	otal $ 5/ton	otal $30/ton

ubtotal 7. Custom Business

kW	kW	herms	etric ons C 2
0	0	236,426	9,430

	as Value	otal as l.	otal . $ 5/ton	otal . $30/ton
et Bene its	$784,519	$784,519	$945,401	$1,106,283
otal B/C	3.1	3.1	3.5	4.0
Utility B/C	3.1	3.1	3.5	3.9
Budget	$375,125	$375,125	$375,125	$375,125

otal rogram Budget		
ncenti es	$205,821	54.9%
mpl, Admin, upport	$169,304	45.1%
	$375,125	00.0 %

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

8. Program Administrator - WECC, Umbrella Marketing and Program Evaluation

Implementation Description	Inputs: kWh	kW	Therms	Est. Life	Incr. Cost	Incentive % of	Est. Free Rider	Partic Yrs. pb	Total Partic.	Net Benefits: Net Therms 1st Year	Gas Value	Total Gas + Electric	Total $15/ton	Total $30/ton
Implementation														
Program Administrator			0	1					1	0	($1,115,408)	$1,115,408)	$1,115,408)	($1,115,408)
			Prog. Delivery		$1,115,408					0.00				
										U_BC:	0			
Program Evaluation			0	1					1	0	($225,000)	($225,000)	($225,000)	($225,000)
			Prog. Delivery		$225,000					0.00				
										U_BC:	0			
Umbrella Marketing			0	1					1	0	($83,716)	($83,716)	($83,716)	($83,716)
			Prog. Delivery		$83,716					0.00				
										U_BC:	0			

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

8. Program Administrator - WECC, Umbrella Marketing and Program Evaluation

Implementation Description	Inputs									Net Benefits				
	kWh	kW	Therms	Est. Life	Incr. Cost	Incentive % of	Est. Free Rider	Partic Yrs. pb	Total Partic.	Net Therms 1st Year	Gas Value	Total Gas + Electric	Total $15/ton	Total $30/ton

Subtotal - 8. Program Administrator - WECC, Umbrella Marketing and Program Evaluation

kWH	kW	Therms	Metric Tons CO2
0	0	0	0

	Gas Value	Total Gas + El.	Total w. $15/ton	Total w. $30/ton
Net Benefits	($1,424,124)	($1,424,124)	($1,424,124)	($1,424,124)
Total B/C	0.0	0.0	0.0	0.0
Utility B/C	0.0	0.0	0.0	0.0
Budget	$1,424,124	$1,424,124	$1,424,124	$1,424,124

Total Program Budget

Incentives	$0	0.0%
Impl, Admin, Support	$1,424,124	100.0%
	$1,424,124	100.0 %

Nicor Gas Rider 29 Energy Efficiency Program Performance ending May 2011

Total All Measures

kWH	kW	Therms	Metric Tons CO2
7,092,798	0	4,819,586	364,865

Total Program Budget		
Incentives	$6,761,440	58.2%
Impl, Admin, Support	$4,857,252	41.8%
	$11,618,692	100.0 %

	Gas Value	Total Gas + El.	Total $15/Ton	Total $30/Ton
Net Benefits	15,682,736	$20,345,294	$25,818,134	$31,290,973
Total B/C	1.9	2.2	2.6	2.9
Utility B/C	2.8	3.2	3.6	4.1
Budget	$11,618,692	$11,618,692	$11,618,692	$11,618,692

Appendix 2: Rockford Small Business Pilot Final Report

Nicor Small Business Pilot Program

Joint Rockford Pilot with Commonwealth Edison

Final Status Report

May 2011

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Executive Summary

The Small Business Energy Efficiency Services (SBEES) Pilot was a trial program to gather information on customer, trade ally and upstream actor behaviors in this hard-to-reach market. The primary objective of the pilot was to discover market information which would define the scope of a full scale program to be launched in compliance with SB 1918. In an effort to accommodate an ICC directive calling for utility collaboration, the three IOUs, ComEd, Nicor and Integrys combined efforts to fund and execute a small business pilot in two test cities. The outcome would serve as the basis for a joint full scale program to begin on June, 2011, serving small businesses in the combined service territories.

The two pilot cities included Rockford and Chicago, with Nicor and ComEd teaming in the Rockford pilot. This report will detail the successes, challenges and findings of the natural gas initiative in the Rockford pilot, respective to:

- Trade ally recruitment and behavior
- Market pricing
- Goal attainment
- Customer qualification process
- Customer concerns, behavior and general feedback
- Program improvement recommendations

Goal Attainment

On the electric side, the Rockford pilot launched August 28, 2010, using solely trade ally outreach and direct install initiatives to generate leads and drive electric projects. After considering the pilot scope and objectives, Nicor entered the pilot in the third week of December. Using a combination of direct install and trade ally initiated projects, the Nicor goals of 18,255 therms from direct install and 17,510 therms from trade ally installed measures were accomplished by the end of February, 2011. Table 1 below provides a summary of goal attainment by measure type, quantity and corresponding therm savings.

Table 1 Nicor SBEES Pilot Goal Attainment

CUSTOMER	MEASURE TYPE	QTY	THERMS	INC $	$/THERM
Ben Murray Bldg	Furnace Tune-Up: 40-200 MBTUH	3	126		
SMW Local 219	Furnace Tune-Up: 40-200 MBTUH	5	210		
Family Counseling	Furnace Tune-Up: 40-200 MBTUH	1	42		
Custom Apparel	Furnace Tune-Up: 40-200 MBTUH	2	84		
Landmark	Furnace Tune-Up: 40-200 MBTUH	14	588		
Statefarm	Furnace Tune-Up: 40-200 MBTUH	1	42		
Hyzer & Jacobs	Furnace Tune-Up: 40-200 MBTUH	2	84		
Reese & Reese	Furnace Tune-Up: 40-200 MBTUH	2	84		
Central Terrace	Furnace Tune-Up: 40-200 MBTUH	1	42		
Denali's Pizza	Furnace Tune-Up: 40-200 MBTUH	2	84		
Northern Prostetics	Furnace Tune-Up: 40-200 MBTUH	3	126		
Judge & Dolph	Furnace Tune-Up: 40-200 MBTUH	13	546		
Eagle Video	Furnace Tune-Up: 40-200 MBTUH	13	546		
New Fellowship	Furnace Tune-Up: 40-200 MBTUH	4	168		
WPI	Furnace Tune-Up: 40-200 MBTUH	6	252		
	(TA INSTALLED) TOTAL FURNACE TUNE-UPS	**72**	**3,024**	**$6,551**	**$2.16**
Carlson Roofing	Programmable Thermostat - 2-Stage	2	364.8		
Barewood Furn	Programmable Thermostat - 2-Stage	1	182.4		
	(TA INSTALLED) TOTAL 2-STAGE T-STAT INSTALLS	**3**	**547**	**$525**	**$0.96**
Plaza Auto	Programmable Thermostats-1 Stage	3	547.2		
Wiley Biggers	Programmable Thermostats-1 Stage	4	729.6		
Dave's Auto	Programmable Thermostats-1 Stage	4	729.6		
Cad Cam	Programmable Thermostats-1 Stage	1	182.4		
F&F Tire	Programmable Thermostats-1 Stage	3	547.2		
Carlson Roofing	Programmable Thermostats-1 Stage	2	364.8		
Uptown Audio	Programmable Thermostats-1 Stage	3	547.2		
Barewood Furn.	Programmable Thermostats-1 Stage	2	364.8		
Precision Gov.	Programmable Thermostats-1 Stage	1	182.4		
Tire Tracks	Programmable Thermostats-1 Stage	2	364.8		
Action Auto	Programmable Thermostats-1 Stage	7	1276.8		
Rockford Discount	Programmable Thermostats-1 Stage	1	182.4		
Morgans Auto Sales	Programmable Thermostats-1 Stage	2	364.8		
124 Customs	Programmable Thermostats-1 Stage	1	182.4		
Rockford Finishing	Programmable Thermostats-1 Stage	1	182.4		
Adolph Raatz	Programmable Thermostats-1 Stage	2	364.8		
Transmission World	Programmable Thermostats-1 Stage	5	912		
Forest City Scuba	Programmable Thermostats-1 Stage	4	729.6		
Dexter Holmes Jr	Programmable Thermostats-1 Stage	13	2371.2		
Mark Chiodini	Programmable Thermostats-1 Stage	2	364.8		

K O Truck	Programmable Thermostats-1 Stage	9	1641.6		
T&M/Separators	Programmable Thermostats-1 Stage	1	182.4		
Central Terrace	Programmable Thermostats-1 Stage	1	182.4		
Northern Prostetics	Programmable Thermostats-1 Stage	2	364.8		
Judge & Dolph	Programmable Thermostats-1 Stage	8	1459.2		
Eagle Video	Programmable Thermostats-1 Stage	1	182.4		
	(TA INSTALLED) TOTAL 1 STAGE T-STAT INSTALLS	**85**	**15,504**	**$7,437**	**$0.48**
Cad Cam	High Efficiency Faucet Aerator	3	25.5		
Maid Rite	High Efficiency Faucet Aerator	3	25.5		
Super 8 Motel	High Efficiency Faucet Aerator	55	467.5		
JI And PI Corp	High Efficiency Faucet Aerator	8	68		
Carlson Legion	High Efficiency Faucet Aerator	6	51		
	(DI) TOTAL AERATOR INSTALLS	**75**	**638**	**$278**	**$0.44**
Cad Cam	High Efficiency Shower Head	1	16.9		
Super 8 Motel	High Efficiency Shower Head	50	845		
	(DI) TOTAL SHOWERHEAD INSTALLS	**51**	**862**	**$765**	**$0.89**
Maid Rite	Pre-Rinse Sprayer	1	527		
Wendy's	Pre-Rinse Sprayer	1	527		
Lone Star Steak	Pre-Rinse Sprayer	1	527		
Great Wall	Pre-Rinse Sprayer	1	527		
Hacienda Sanjose	Pre-Rinse Sprayer	1	527		
Taco Bell #15591	Pre-Rinse Sprayer	1	527		
Popeye's	Pre-Rinse Sprayer	1	527		
Aunt Marys	Pre-Rinse Sprayer	1	527		
City Buffet	Pre-Rinse Sprayer	1	527		
Vinny Pizza	Pre-Rinse Sprayer	1	527		
Royal Dragon	Pre-Rinse Sprayer	1	527		
Stone Eagle	Pre-Rinse Sprayer	1	527		
JI And PI Corp	Pre-Rinse Sprayer	1	527		
Perkin's	Pre-Rinse Sprayer	1	527		
Mancuso	Pre-Rinse Sprayer	1	527		
Navy Club	Pre-Rinse Sprayer	1	527		
Los Portales	Pre-Rinse Sprayer	1	527		
Da Catch Fish	Pre-Rinse Sprayer	1	527		
Capri Restaurant	Pre-Rinse Sprayer	1	527		
Bamboo Asian	Pre-Rinse Sprayer	1	527		
Irish Rose	Pre-Rinse Sprayer	1	527		
Wired Cafe	Pre-Rinse Sprayer	1	527		
Octane Lounge	Pre-Rinse Sprayer	1	527		
ABC Catering	Pre-Rinse Sprayer	1	527		
Gerry's Pizza	Pre-Rinse Sprayer	1	527		

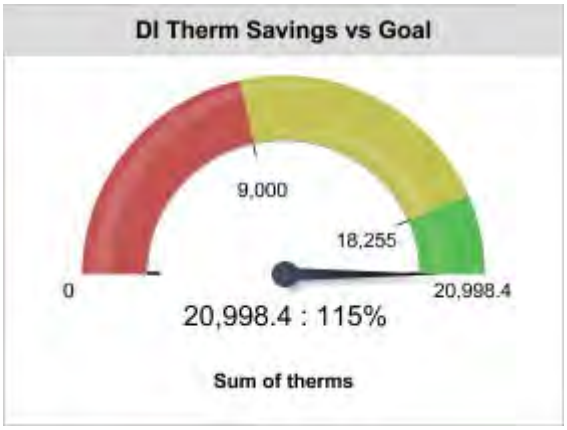
Michael's Rest.	Pre-Rinse Sprayer	1	527		
Swedish Pancake	Pre-Rinse Sprayer	2	1054		
Dog-n-suds	Pre-Rinse Sprayer	2	1054		
China Buffet	Pre-Rinse Sprayer	1	527		
Doughboys	Pre-Rinse Sprayer	1	527		
Whiskey's	Pre-Rinse Sprayer	1	527		
Pinos	Pre-Rinse Sprayer	1	527		
Sammy's Rest	Pre-Rinse Sprayer	1	527		
Tio's Kitchen	Pre-Rinse Sprayer	1	527		
Panino's Rest.	Pre-Rinse Sprayer	1	527		
	(DI) TOTAL PRE-RINSE SPRAYER INSTALLS	**37**	**19,499**	**$1,948**	**$0.10**
	TOTAL THERMS and INCENTIVES		**40,074**	**$17,504**	**$0.44**

Below are two graphs from Franklin's Bensight tracking and reporting portal, made available to Nicor for real time viewing of metrics. Graph 1 on the left depicts harvested therms from direct install (DI) measures and Graph 2 captures trade ally (TA) installed measures. Direct install measures are cost effective energy saving devices which are free to the customer and installed by the energy advisor at the time of the site assessment. Direct install measures are also retrofitted as part of cold canvassing campaigns, to attain immediate therm savings and open the door for a full site assessment. Natural gas direct install measures for the pilot included high efficiency shower heads, faucet aerators and pre-rinse sprayers.

Therms from trade ally installed measures include all of the incented retrofits including programmable thermostats, steam trap replacement, furnace and boiler tune-ups and boiler reset controls.

The approximate 40,000 therms harvested in the Rockford pilot were split almost evenly amongst trade ally installed measures and free direct install measures.

Graph 1: Therms from DI Measures



Graph 2: Therms from TA installed Measures

Program Achievement

Critical to goal attainment is the marketing outreach strategy used to create program awareness and generate project leads. Franklin Energy tested the effectiveness of two distinct marketing strategies, each to be used in a pilot city. They included:

1. Solely using trade allies to generate market awareness and leads (Rockford)
2. Traditional program marketing outreach which also includes leads generated by sales-driven trade allies (Chicago)

Nicor and ComEd combined efforts in the Rockford test pilot, where trade ally outreach alone was used for market education, awareness and lead generation.

Trade Ally Recruitment and Participation: Challenges and Successes

Launching and marketing a new small business program using trade allies alone was an aggressive test, and in the onset of the program, one that posed interesting challenges. The initial challenge was recruiting trade allies willing to engage a program where lead generation was required for participation and the only method of attaining project work. A total of 26 trade allies were signed in the 1st (16) and 2nd (10) recruiting efforts. Most allies that declined the offer were strictly installers, with little or no sales engine to drive lead generation. Others that declined were from ComEd's prescriptive program. These were contractors that focused on larger customers, with higher project dollar potential.

Of the 26 contractors that signed with the program, five were active with lead generation, true to the 80/20 rule. The common trait amongst all five performers was a dedicated resource to solicit the program to their existing customer base and new prospects. Two of these contractors were responsible for all of Nicor's 19,000 TA installed therms. These included HVAC trade allies Gilley's Heating & Air and T.H.E. Energy Savers.

Another pilot challenge was the need for continuous TA training and mentoring by a dedicated trade ally liaison. At the initial Rockford TA kickoff meeting, all 16 trade ally organizations attended and asked good questions. Towards the end of the presentation, many of the contractors from various trades began to collaborate on how they could work together to share leads for mutual sales benefit. Franklin left the meeting feeling very positive about the TA selection and the amount of time that would be needed to meet program goals.

Several weeks had passed without significant leads from this TA group. Franklin inquired with individual TA organizations to determine the dilemma. Below is a list of the reasons for their non-participation.

1. Shortly after the meeting, several TA landed bigger projects from larger customers. These projects consumed all of their resources and time. They did not have time (or desire) to pursue smaller projects.

2. Three of the trade allies that agreed to program terms and attended the kickoff meeting were only interested in the promise of the full scale program. They had no intentions of pilot participation and did not convey this in interview discussions.

3. Several became frustrated with the pilot's customer qualification parameters. Many of the leads they delivered did not qualify because the proprietors owned more than 10 businesses, the businesses were over 100 kW, or the business was part of a larger national franchise. These parameters were discussed in the interviewing process and individually detailed in the Trade Ally Agreement signed by all participating contractors.

4. Several trade allies were not available for discussion and would not return our calls.

In the 4th week of the pilot, with minimal lead generation, a new batch of trade allies was recruited. This time a different recruiting strategy used supply houses to recommend contractors with solid reputations, significant sales acumen, and interest in efficiency programs. This provided an additional 10 trade allies, five of which were active contractors that provided the necessary leads to attain pilot goals.

The findings from pilot trade ally recruitment include:

a. TA recruitment and mentoring must be ongoing for program success. A dedicated resource should be allocated to this task
b. The 80/20 rule for trade allies was found to apply in both pilots
c. The TA requiring the most training and mentoring proved to be the most successful in attaining Nicor's natural gas goals. Persistence and patience pay
d. To lower acquisition costs, recruit TA organizations with a solid sales and marketing engine for lead generation. Review the TA's true sales potential
e. The use of supply houses should be a primary strategy in the TA recruitment process
f. Do not underestimate the potential of a remotely located trade ally that is aggressive and dedicated to the program. Some of the pilot's best performers did not reside anywhere near the city of Rockford.

Trade Ally Summary

All but three of the participating Rockford trade allies had requested participation in the full scale program. The reasons are very clear. In all of the projects awarded, 70% of project costs were paid to the trade allies in terms quicker than their standard Net 30 days. Additionally, project sizes ranged from $3,000 to $15,000 and were completed in less than 2 weeks. Lastly, the promise of the full scale program extended to the trade allies' predominant service territories was an attractive proposition.

Marketing Campaigns Summary

Table 2 below summarizes the various marketing campaigns initiated in the Rockford natural gas pilot. The Rockford pilot used two key cold canvassing campaigns. These included the offer of a free or relatively low cost measure to the customer, with the premise of harvesting quick savings and scheduling a site assessment with the customer. Franklin initiated two cold canvassing campaigns. One involved the free installation of a pre-rinse sprayer (PRS) and the other a trade ally installed programmable thermostat with a 70% incentive.

In the case of the PRS campaign, a Franklin energy advisor solicited restaurants one day per week for a duration of 4 weeks. The advisor targeted streets heavily populated with sit down and fast food restaurants. The advisor explained the program to the proprietor or manager and offered to install a free pre-rinse sprayer to save energy costs and reduce water volume. The table details an 88% acceptance rate, and 10 commitments to a future energy assessment.

The programmable thermostat campaign used the same technique, with the exception that a trade ally (contractor) solicited and installed the device using a 70% incentive. Out-of-pocket customer costs for the thermostat was $30 for a 1 stage and $75 for a 2 stage. Interestingly, when either the energy advisor or trade ally inquired of the customers' interest in a site energy assessment, both yielded approximately a 25% conversion rate.

Table 2 Nicor SBEES Marketing Campaigns

Rockford						
Initiative	**Response**	**Assessment**	**Installs**	**Therms**	**Incentive**	**Cost/Therm**
Cold Canvass Campaigns						
Pre-Rinse Sprayer Installs	88%	10	37	19,499	$1,949	$0.10
Thermostat Installations - 1 & 2 Stage combined	100%	9	88	16,051	$7,962	$0.50

Key Program Highlights

1. ***Flat Rate Measure Pricing Model*** – Franklin implemented a measure pricing strategy which required significant due diligence and negotiation with trade allies, but made easier for prospects to participate. When engaging trade allies, Franklin requested an informal RFP, requiring each to submit pricing for the measures applicable to their trade. From this union and non-union market pricing, Franklin established a flat rate price for each measure. The utilities' incentives were then applied to these known values. For example, a furnace tune-up measure with a flat rate price of $125 and 70% incentive to the trade ally, would have a $37.50 out-

of- pocket cost to the customer. With a predetermined flat rate price for each measure, the energy advisor could provide the customer with accurate energy savings, out of pocket costs and payback. This immediate feedback was instrumental in getting commitments from customers to proceed with projects on the day of the site assessment. A proven tactic in the pilot, this method should garner the same results in the full scale program starting June, 2011.

Another advantage to the flat rate pricing model is the elimination of price negotiation between the contractor and customer. Since price is already established and agreed to by trade allies, the customer is not concerned with TA selection, nor finding the best price. A key objective of the pilot was to make program participation straight forward and easy. Development of flat rate measure pricing was instrumental in achieving this objective.

2. ***Trade Ally RFP Process*** – Franklin's trade ally management team developed a streamlined process to recruit, qualify and administer a RFP from each of the solicited trade allies. The process began with sourcing various contractor lists from which to recruit. These include MBE/WBE contractors, contractors currently engaged in energy efficiency programs, and trade ally lists categorized by geography. Recruitment began with a phone call to evaluate the interest of the prospective trade ally. If they appeared to be a fit, the process continued with an in person visit to further explain program details and request a proposal for measure pricing. Market pricing from all the trade allies was then used to develop a flat rate price for each measure, taking into consideration cost effectiveness to the utility, customer payback and attractiveness to union and non-union trade allies. All trade allies had to be insured and willing to adhere to all program parameters, including safety, recycling, intellectual property and lead generation. Entry into the program was finalized with their signing of a formal agreement with Franklin, the implementation contractor. Franklin was accountable for the trade ally's action and performance throughout the program. Last, but not least important, the ultimate goal in TA selection was finding a sales driven organization that could not only provide excellent service, but also had the sales engine to drive lead generation for the betterment of the program. Most successful C&I programs have a stable of allies who fit this profile.

3. ***Multi-Utility Collaboration*** – A key objective of the pilot was to determine the cost impact of a multi-utility effort. With Nicor's late entry into the pilot, the most obvious benefit, economies of scale was not realized. This would have included, but not be limited to, amortizing costs across the utilities for trade ally recruitment, marketing collateral, site energy assessments and shared measure costs (programmable thermostats). Again, these costs would have been better amortized had Nicor entered the pilot in its inception.

   Another challenge of Nicor's December entry into the pilot was the fact that ComEd met it goals the second week of January. This provided only two weeks of site assessments where energy advisors could recommend both electric and

natural gas measures. Site assessments conducted after ComEd attained its goal could only highlight natural gas measures. However, as referenced earlier in the report, some of these measures were out of season. Moving forward, there is no question as to the positive impact collaboration will have on lowering acquisition costs for both Nicor and ComEd in a full scale program.

4. ***TA Outreach Approach vs. Traditional Program Marketing*** – As mentioned earlier in the report, the Chicago and Rockford pilots used different outreach approaches. When comparing the effectiveness of the TA approach in Rockford versus that of traditional program outreach in Chicago, one realization became evident. The Rockford pilot did not start or progress as quickly as the Chicago pilot. Traditional program marketing in Chicago produced immediate site assessment leads and projects, motivating the trade allies to generate their own leads. Soon after receiving project work, the allies realized the impact the pilot, and promise of a full scale program would have on their businesses. As is usually the case, roughly 20% of them became very proactive respective to lead generation. Typically, significant TA lead generation is more prevalent with mature programs that have been in existence for two or more years.

   Conversely, a very positive outcome of the Rockford TA outreach approach was the cost of acquisition. Marketing costs were minimal, with no expenses for direct mailings, outbound telemarketing, or community event venues. The trade off for this reduced cost was a delayed ramp-up to program savings. However, using this sole outreach approach, the Rockford pilot harvested over 40,000 therms and 657,000 kWh in less than four months.

5. ***Cold Canvassing Campaigns*** – An encouraging highlight of the Nicor small business pilot was the success of grass roots campaigns for the free installation of energy saving devices. Close to 100% of all prospects approached were open to the free devices offered, with approximately 25% of these agreeing to a future energy assessment. The most successful campaign was the four day pre-rinse sprayer installation in restaurants. On average, each 1 day blitz yielded 4,800 therms and 3 commitments to a site energy assessment. This strategy should again be utilized in the full scale program. Total direct install measures will most likely account for approximately 30 - 35% of Nicor's 2012 goal. The total cost (labor + material) for these types of direct install devices (PRS, showerheads, faucet aerators) range from $0.10 to $0.89 per harvested therm. This renders them very cost effective measures.

6. ***Role of the Energy Advisor in Small C&I*** – Regardless of measure mix or incentive levels, small C&I remains a "hard-to-reach" market, given their limited capital, resources, and time to consider energy efficiency. The pilot underscored this characterization and the need for a consultative approach with this audience. Franklin's energy advisors served in this capacity, using a combination of technical expertise and salesmanship to:

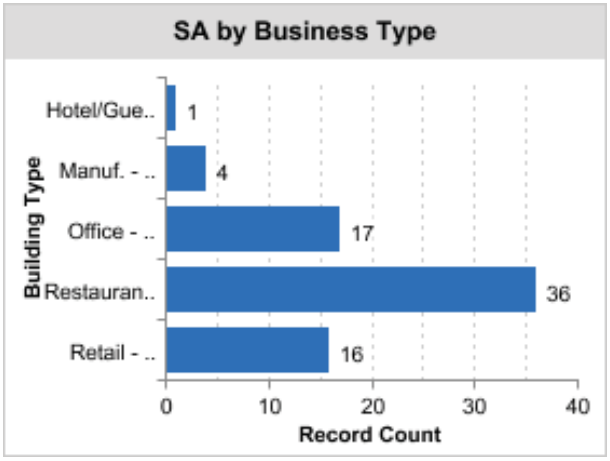
a. Sell the concept of energy efficiency
b. Perform an energy assessment of the owner's facility
c. Educate on the benefits of a holistic approach to building efficiency upgrades (selling all the measures)
d. Guide the customer through the program process.

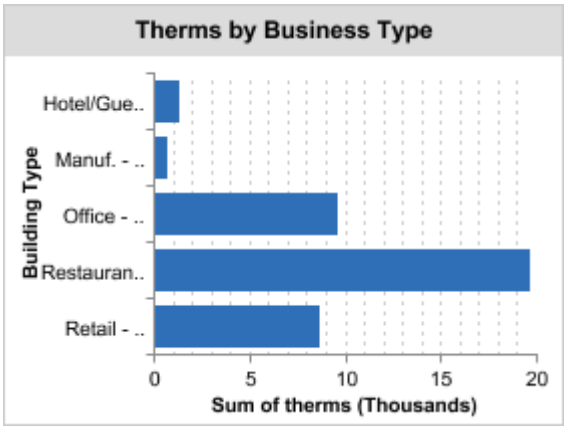
The conversion rate (energy assessment to project) was at 54%. This higher rate is the result of many customer touches, addressing program parameters, explaining financials surrounding the assessment, and satisfying general concerns before customer commitment to a project.

7. ***Real time visibility through Salesforce***

Vital to program tracking and reporting is real time visibility to performance metrics. The tool utilized in the Rockford pilot was Franklin's Bensight, a web based data tracking system that is a derivative of Salesforce.com. This database afforded the ability to;

- Qualify participants
- Track assessments by business type
- Gauge incentive costs/ therm
- Monitor the incentive pipeline
- Provide real-time visibility to therm goal attainment and more





A powerful database, Bensight enables tracking of any pre-defined metric, providing the data is recurrently captured.

Program Findings - Overcoming Market Barriers

- **Seasonal Timing**

One pilot barrier was the impact seasonal timing had in therm acquisition. Due to Nicor's late entry into the pilot, the Utility missed the season for furnace and boiler tune-ups. Typically, the tune-up season begins in September and carries through to the end of October. Nicor did not enter the pilot until the third week in December, 2010. This part of the winter season is far past the time when businesses and residences engage in boiler and furnace tune-ups. Due to the missed timing of these measures, the pilot relied more heavily on free direct install measures. These included efficient showerheads, faucet aerators and pre-rinse sprayers. A valuable lesson for the full scale program is to develop a marketing plan which capitalizes on seasonal measures.

- **Engaging Trade Allies**

The Rockford test pilot confirmed the value of regular trade ally meetings and a dedicated liaison to interface with these critical program members. Engaged trade allies are the key to an active program with a strong project pipeline. The biggest obstacle to building a strong TA network is helping them become comfortable speaking to the program. This was accomplished in the pilot by using a dedicated resource to regularly interface with trade allies. The trade ally liaison conducted joint sales calls with contractors and kept an open door of communication to address questions and concerns. A trade ally's comfort level takes time to develop, but as discovered in the pilot, when they achieve this level, good things happen to the program.

Customer Outreach: Challenges and Successes

- **Customer Skepticism**

The pilot's success in addressing customer skepticism is attributed to:

a. Providing all customer interfacing personnel with adequate utility identification,
b. Designing straight forward sales literature for the ability to quickly explain program eligibility parameters and benefits
c. Using experienced energy advisors with a background in the small C&I customer segment.
d. Use of a simplistic, yet detailed financial tool which quantified energy savings potential and calculated customer out of pocket costs and paybacks for each recommended measure.

Customer skepticism is part of every energy efficiency program. However, the above mentioned tactics establish credibility early in a program and word of this approach spreads quickly through a business community. To capitalize on this approach, an implementation contractor should use the networking capability of local chambers and aldermanic districts for a viral effect to this audience.

Upstream Actor Challenges

The pilot program had one upstream distributor challenge. In the midst of the pilot, several of the lighting trade allies were affected by a defective batch of ballasts sourced from a local distributor. The problem turned out to be a nationwide problem, in that a Chinese ballast manufacturer had supplied hundreds of thousands of bad ballast to distributors across the country. This delayed several of the lighting projects by up to one month, but had no affect on Nicor's natural gas pilot projects.

Program Improvement Recommendations

During the course of the Rockford pilot, there were a number of minor setbacks. These are noted with the hope that will be considered for the full scale implementation. They are as follows:

1. **Streamlining Utility Approval Process**es– Lengthy marketing, legal and executive approval lead times for sales collateral were a challenge to launching the pilot in a timely manner. This challenge seems to be a common thread amongst many utilities and should be considered in the collaborative utility effort for June 1, 2011. One commendation would be for the utilities to formalize a more streamlined process, to increase speed to market for quicker goal attainment.

2. **Marketing Plan - HVAC Tune-up Season**- As mentioned, hitting all potential natural gas measures in the applicable season will balance the measure mix and achieve a quicker route to goal attainment. Moving forward, the full scale program will initiate a marketing plan to better time the season for boiler and furnace tune-ups, as well as steam trap replacement and repair. Since natural gas measures are limited, seasonal timing is critical to therm goal attainment.