nicor GAS

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 conservation corporation

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Contents

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.

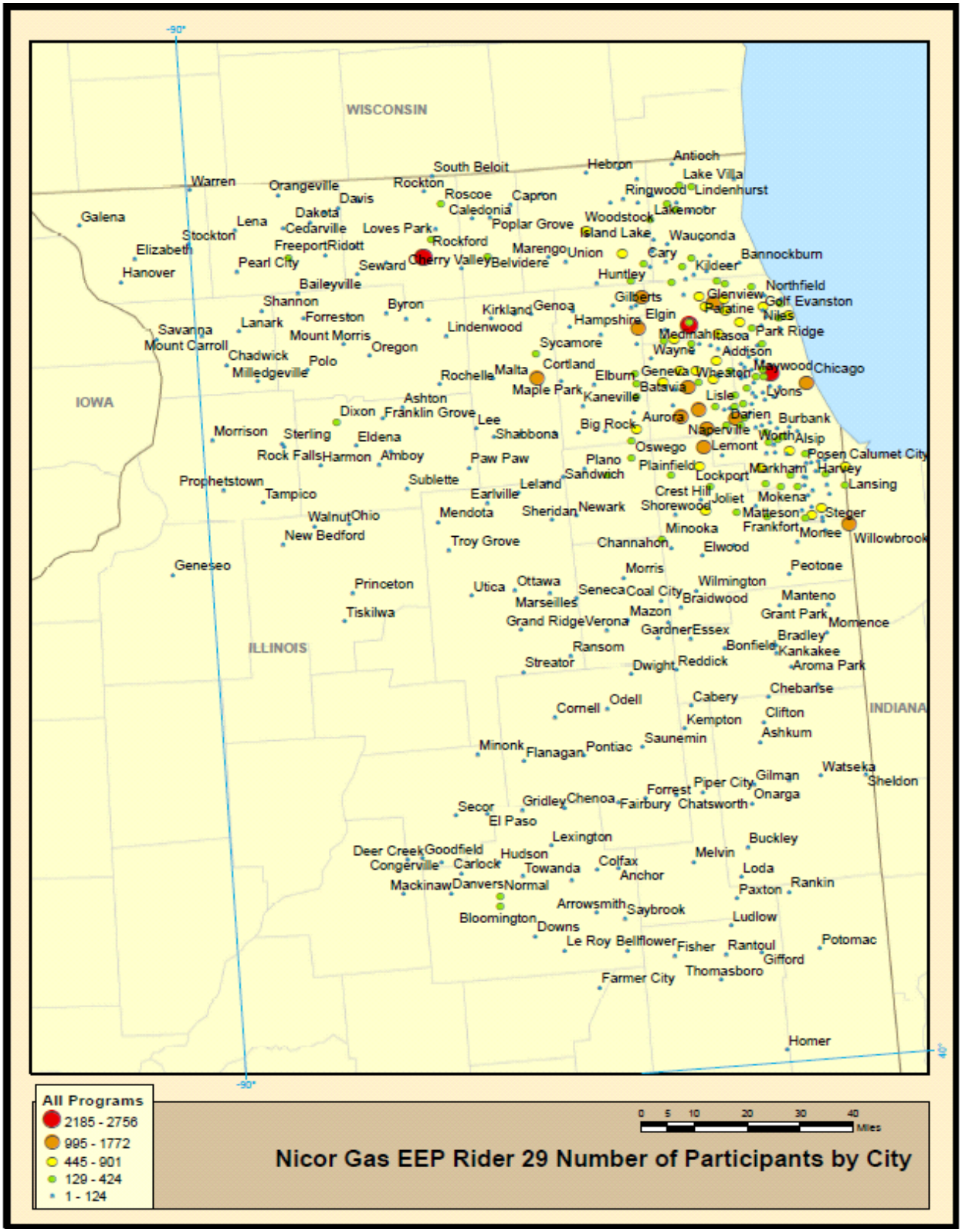
In parallel with the development of the Operating Plan, WECC worked with Nicor and the Advisory Board to select implementation contractors for each of the efficiency programs. The implementation contractor for the Residential Prescriptive, Business Prescriptive and Custom Business programs was selected 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 $8,934,947 or 62.3 percent of the total Rider 29 budget of $14,330,963. Similarly the actual commercial expenses of $2,732,696 were 19.1 percent of the total budget.

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



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	$15,633,917	+24%
TRC – Gas Only	1.6	1.9	+19%
Net Benefits – Gas and Electric	$15,389,967	$20,296,475	+32%
TRC – Gas and Electric	1.7	2.2	+29%
Expenses	$14,278,753	$11,667,643	-18%
Participants*	65,169	58,832	-10%
Net Therm Savings	5,700,054	4,819,550	-16%
Cost/Net Therm	$2.51	$2.42	-3%

*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							$ 5,938,962	$ 822,611	$ 6,761,573
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	$ 10,194,700
Umbrella Marketing							$ 58,601	$ 25,115	$ 83,716
Program Evaluation							$ 157,500	$ 67,500	$ 225,000
Program Administration							$ 814,959	$ 349,268	$ 1,164,227
Summary of Other Portfolio Costs:							$ 1,031,060	$ 441,883	$ 1,472,943
GRAND TOTALS	34,704	24,128	58,832	2,549,777	2,269,773	4,819,550	$ 8,934,947	$ 2,732,696	$ 11,667,643

*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

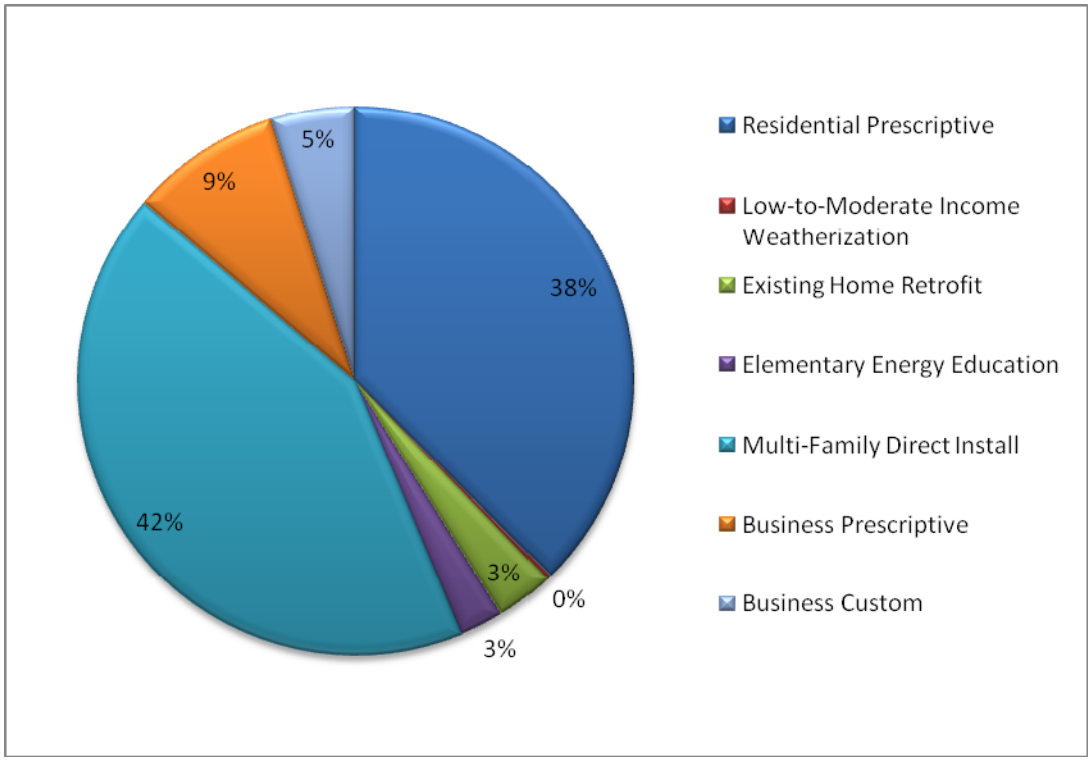


Chart 2. Total Incentive ($) Allocation by Program

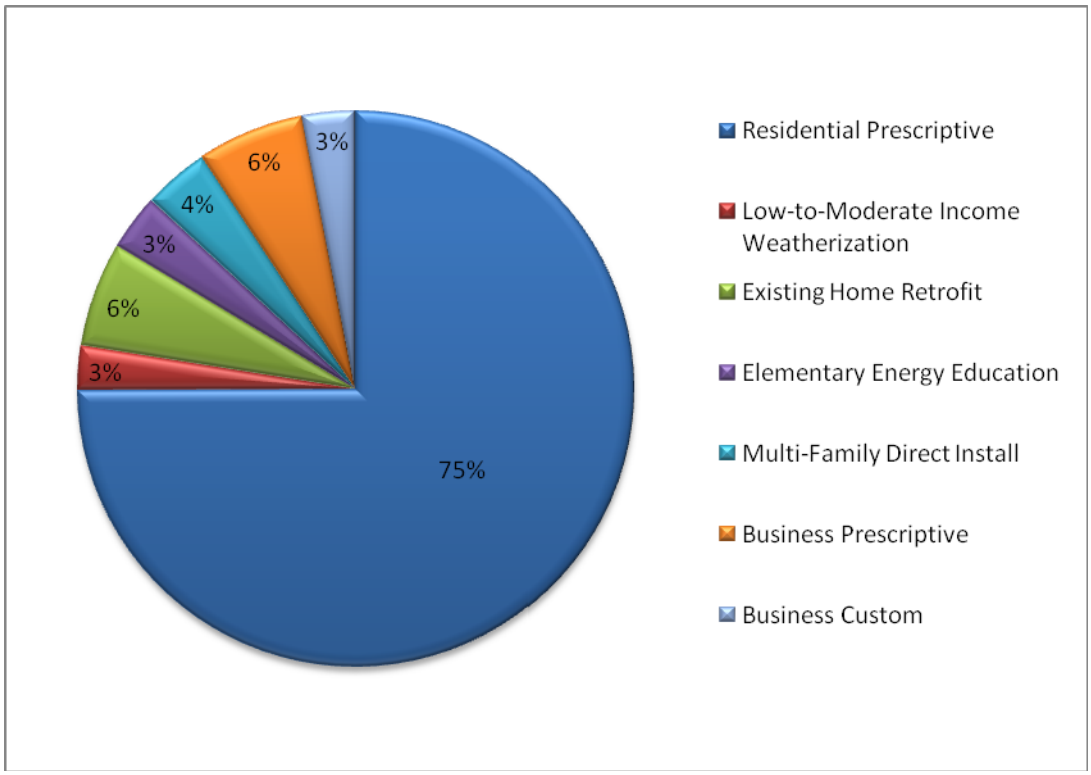
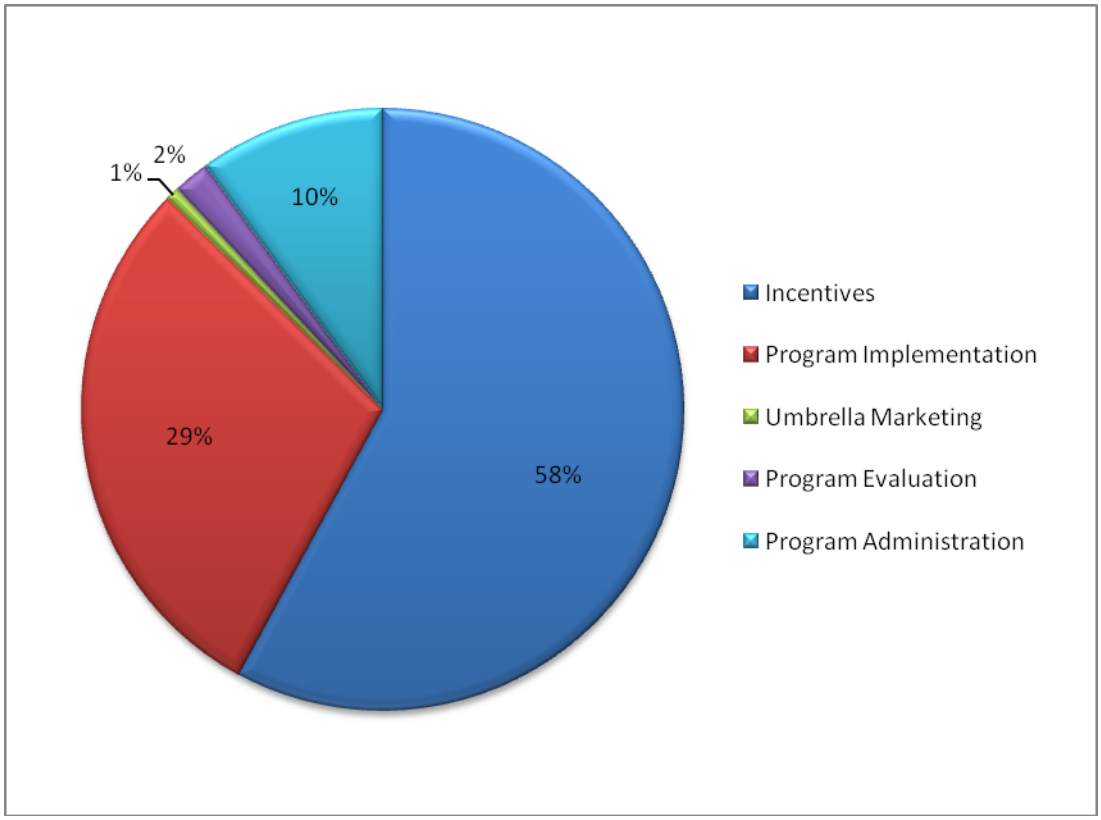


Chart 3. Portfolio Budget ($) Allocation



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

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.

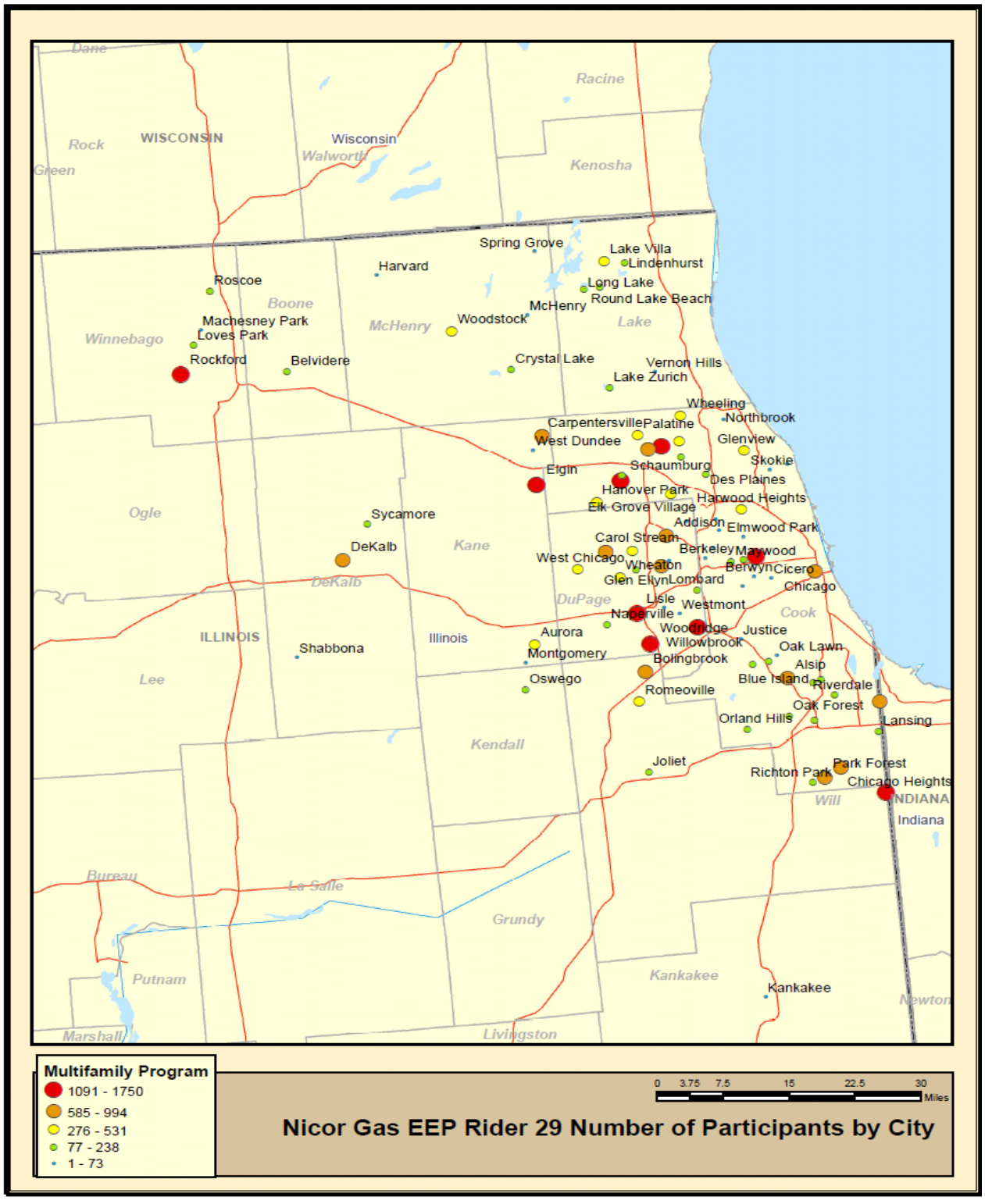
Lastly, a minimum of one unit per building was required to be tested for flow rates of each fixture, recording the pre- and post-flow rates. Testing was to be completed on approximately 4 percent of the total unit installations, which was achieved with a 4.83 percent of units tested.

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



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 "package" 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 "on 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.

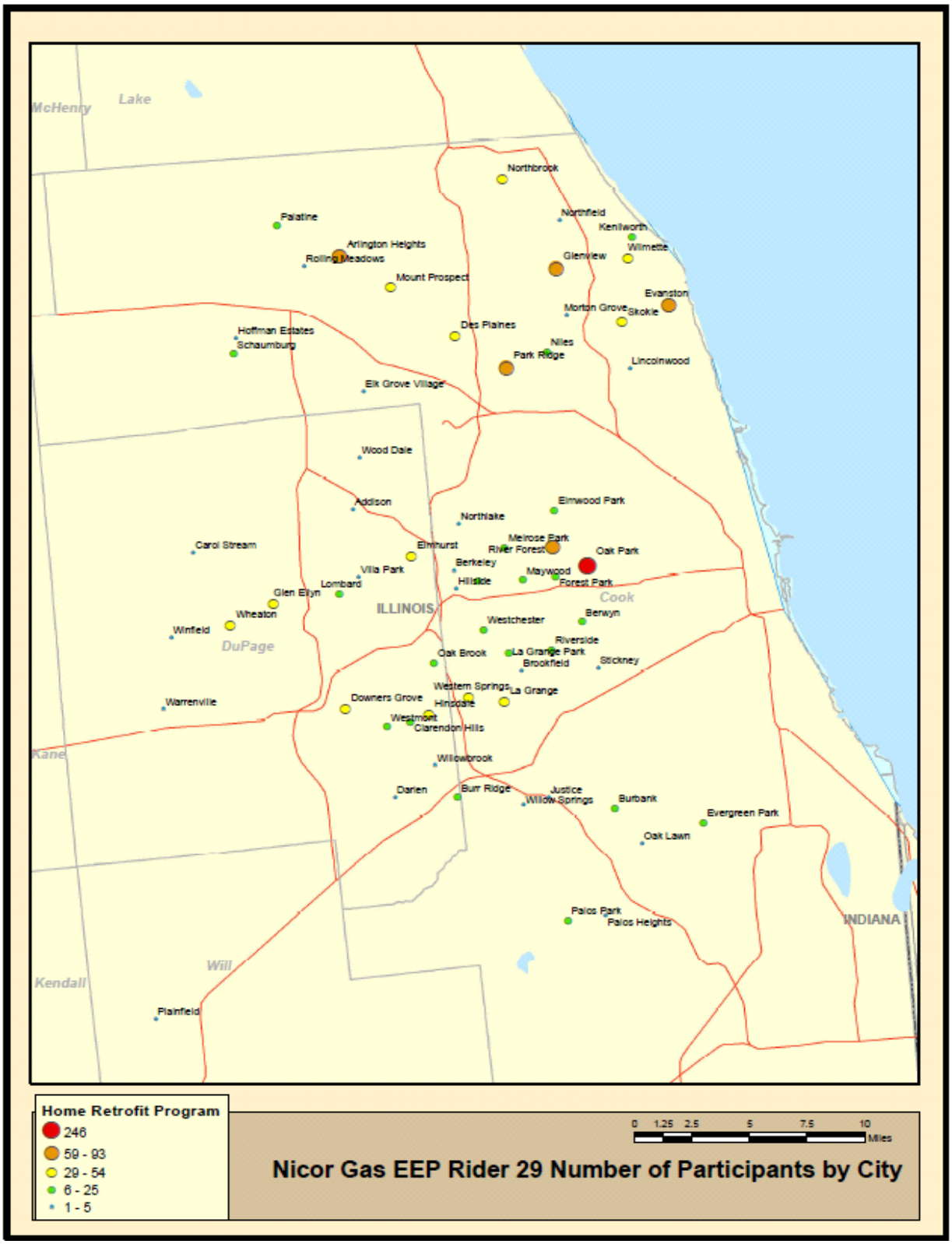
The average conditioned square footage of the homes was 3,314 SF, and the average annual consumption was 1,671 Therms, well over the marketing target criteria of 1,200 Therms per home. The goal of a 25 percent reduction in air leakage per home was nearly achieved at 23.8 percent with reports from 98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