

# Nicor Gas Energy Efficiency Plan

June 2017 - May 2020



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Table 1 Glossary of Terms

Term	Acronym	Definition
Administrative Costs		A cost that may be incurred by a Program Administrator, contractor or subcontractor that is not easily attributable to a specific Program or other cost categories, but benefits all functions of the Energy Efficiency Portfolio
American Society of Heating, Refrigerating, and Air-Conditioning Engineers	ASHRAE	A leading professional organization which develops equipment standards and technical resources.
Annual Fuel Utilization Efficiency	AFUE	A rating that reflects how efficiently a gas furnace or boiler converts fuel to energy. A larger number is more efficient.
Avoided Costs		The costs a utility would incur to supply the next increment of energy.
Commonwealth Edison Company	ComEd	A local electricity provider serving most of Nicor Gas' service territory.
Compact fluorescent light bulb	CFL	A fluorescent light bulb that uses less electricity for the same lumen output than the typical incandescent light bulb.
Combined Heat and Power	CHP	A power system designed to produce both heat and electricity from single heat/fuel source.
Department of Commerce and Economic Opportunity	The Department	Illinois State agency.
Demand-Side Management	DSM	Actions that help customers to reduce their energy consumption.
Discount Rate		The rate by which future values are converted to today's dollars.
Emerging Technology		Those activities related to exploring and testing new technologies that are not yet widely deployed, demonstrating market readiness, and establishing pilot projects to identify customer and market acceptance.
Energy Efficiency	EE	The process of reducing energy consumption while maintaining or improving productivity.
Energy Efficiency Plan	EPP	Nicor Gas' proposed energy efficiency portfolio for 2017 through 2020.
Evaluation, Measurement & Verification	EM&V	The process of confirming that energy efficiency installations, as well as calculated energy savings, are at the levels reported.
Energy and Environmental Economics Calculator	E3	A firm based in California that created the E3 Calculator.
Free Ridership		A factor to account for those customers who participate in an energy efficiency program, but would have implemented measures even in the absence of the program.
Gallon per minute	GPM	The flow rate of water through a water fixture such as faucet aerator or showerhead.

Term	Acronym	Definition
Gas Technology Institute	GTI	A non-profit natural gas research and development organization.
Gross therm Savings		Natural gas savings from all program participants, regardless of program influence.
Heating, Ventilation, and Air Conditioning	HVAC	The collection of space heating and cooling equipment.
Home Energy Rating System	HERS	A standardized system for rating the energy-efficiency of homes, which results in the HERS Index score for each home. A home built to code scores a HERS Index of 100, while a net zero energy home scores a HERS Index of 0. Each 1-point decrease in the HERS Index corresponds to a 1% reduction in energy consumption compared to the reference home.
Home Performance with ENERGY STAR	HPwES	An energy efficiency program developed by ENERGY STAR for the home retrofit market.
Illinois Commerce Commission	Commission	Illinois regulatory agency.
Illinois Energy Efficiency Stakeholder Advisory Group	SAG	A group of parties interested in energy efficiency in Illinois that provides advice on energy efficiency plans and related issues.
Impact Evaluation		An evaluation which reviews program achievements to ensure that deemed savings and engineering assumptions are accurate based on actual program participants.
Implementation contractor	IC	The third-party or parties hired to administer certain energy efficiency delivery activities.
Incremental Costs		The price difference between a standard product and an energy efficiency product.
Installation Contractor		The third-party or parties hired to install energy efficiency measures in homes or businesses.
Investor-Owned Utility	IOU	A utility owned by private investors, as opposed to one owned by a public trust or agency; a commercial, for-profit utility as opposed to a co-op or municipal utility.
Load Shape		The time-of-use pattern of customer or equipment energy use. This pattern can be over 24 hours or over a year (8,760 hours).
Low Income		Low Income Customer means a residential Customer of a participating utility with a household income at or below one hundred and fifty percent (150%) of the poverty level.
Leadership in Energy and Environment Design	LEED	One of many green building programs that encourage architects, building designers, contractors and builders to construct energy efficient buildings.
Market Potential Study	MPS	An evaluation of the amount of energy efficiency available over a certain time period

Term	Acronym	Definition
		in a specific geographic area.
Measure Life		An estimate of the number of years that a piece of equipment or service will perform if properly maintained.
Midwest Energy Efficiency Alliance	MEEA	A collaborative network of utilities, non-profits, policymakers, manufacturers, and other energy professionals who advance energy efficiency in the Midwest.
Moderate Income	Mod Income	A Moderate Income Customer means a residential customer of a participating utility with a household income between one hundred and fifty one percent (151%) to three hundred percent (300%) of the federal poverty level.
Net therm Savings		Natural gas savings adjusted for NTG.
Net-To-Gross	NTG	A factor representing the percent of gross energy savings that are attributable to the utility's energy efficiency program efforts. This factor accounts for both free-ridership and spillover.
Participant		A customer who installs energy efficiency measures in return for an incentive or receives energy efficiency services from energySMART.
Portfolio Management		Internal and external administration resources required to manage the overall portfolio.
Process Evaluation		An evaluation which assesses how a program operates and the processes it uses; conducted to help programs run as smoothly and efficiently as possible.
Program Management Tool	energyENGINE	Information system Nicor Gas uses to produce reports and manage EE programs and program achievements.
Program Year	PY	The 12 months over which the program is offered. This means the year in which measures are installed and incentives are paid. For energySMART, the PY covers period from June 1 <sup>st</sup> through May 31 <sup>st</sup> .
Program Administrator Cost Test	PACT	A cost-effectiveness test that assesses the benefits and costs of an efficiency measure, product, or program based on the costs to the program administrator or utility.
Participant Cost Test	PCT	A cost-effectiveness test that assesses the benefits and costs of an efficiency measure, product, or program based on the costs to the program participants.
Request for Proposal	RFP	The competitive bidding process by which third-parties will apply for certain external administrative and delivery roles.

Term	Acronym	Definition
Rider 29		The tariff rider that allowed Nicor Gas to begin to offer energy efficiency programs in 2010.
Rider 30		The tariff rider that allowed Nicor Gas to begin to offer energy efficiency programs in current program cycle per state law Section 8-104.
Rate Impact Test	RIM	A cost-effectiveness test that assesses the Energy Efficiency programs potential impact on the overall utility rates.
Section 8-104		The section of the Public Utilities Act that requires gas utilities to provide energy efficiency programs.
Spillover		Additional savings attributed to a program above and beyond those from the specific measures and participants tracked in the program database.
Technical Reference Manual	TRM	A consistent set of documentation regarding the assumptions about prescriptive energy savings measures.
Total Resource Cost	TRC	A cost-effectiveness test that assesses the benefits and costs of an efficiency measure, product, or program based on the total cost to both the participant and the utility.
United States Department of Energy	DOE	Federal energy agency.
Utility Gas Supply Costs		The value paid by Nicor Gas to purchase its next incremental therm of natural gas.
Utility Avoided Cost	UAC	Utility costs to deliver marginal unit of energy. The Utility Avoided cost includes commodity cost, transportation and distribution costs, greenhouse gas costs and additional quantifiable societal benefits.
Weatherization	Wx	Installation of insulation to prevent or reduce air leakage from a residential or commercial dwelling.
Weighted Average Cost of Capital	WACC	Discount rate used to calculate present value of benefits and costs.

# 1 EXECUTIVE SUMMARY

## 1.1 Introduction to the Plan

Northern Illinois Gas Company d/b/a Nicor Gas Company (“Nicor Gas” or the “Company”) is pleased to present its third three-year Energy Efficiency Plan (“EEP”) branded as energySMART, a Nicor Gas Program (“energySMART”) in compliance with the requirements of Section 8-104 of the Public Utilities Act (the “Act”). The comprehensive portfolio presented in this document will allow Nicor Gas to continue partnering with customers to lower their energy usage, resulting in reduced costs, improved cash flows, increased building comfort and reduced emissions. The plan will also provide lasting benefits throughout Northern Illinois by creating jobs, increasing productivity, expanding opportunities for businesses selling energy efficient products and services, and helping communities meet environmental goals.

During the three years of the plan, which runs from June 2017 through May 2020, energySMART will invest approximately \$90 million to help customers install more than 320,000 energy efficiency measures and over 12,000 energy efficiency retrofit and technical assistance projects in homes and businesses across the Nicor Gas service territory. The plan helps customers save over 37 million net therms during the program cycle and approximately one half billion (500 million) net therms over the lifetimes of the installed measures and projects. These represent cost-effective investments for Nicor Gas customers: at the portfolio level, the benefit-cost ratio from the Illinois Total Resource Cost (“TRC”) perspective is 1.76, producing net benefits of over \$113 million to homeowners, renters, large and small businesses in Nicor Gas service territory.

Taken together with Nicor Gas efforts in previous years, by the end of this next plan cycle, the total investments total approximately \$300 million funding energy efficiency programs that have helped customers save over 118 million net annual therms and over 1.4 billion net lifecycle therms, and supported over 5,000 jobs<sup>1</sup>. To put this in perspective, the savings in annual carbon emissions associated with these investments are equivalent to the annual reductions from removing 132,000 cars from the road, meeting energy needs of 66,270 households for one year (a city the approximate size of Orland Park, IL), or planting approximately 16 million trees<sup>2</sup>.

Table 2 below outlines planned investment and savings targets. Consistent with the requirements of the Act, Nicor Gas implements programs on a Plan Year (“PY”) calendar, with years running from June 1 through May 31. This third EEP covers PY7 through PY9 (June 1, 2017 - May 31, 2020).

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<sup>1</sup> Nicor Gas energySMART Economic Impact Report.

<sup>2</sup> Calculation based on EPA Calculator found at <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

The tariff supporting energySMART also includes approximately \$30 million in investments to fund additional programs operated by the Department of Commerce (the “Department”). The Act requires that 25 percent of the total Nicor Gas energy efficiency budget fund the Department programs serving low income and public sector customers, as well as programs to help transform energy efficiency markets. The Department portfolio will create a minimum savings of approximately 12 million net therms<sup>3</sup> for low income households and renters, public schools, government buildings, and park districts.

**Table 2 Energy Efficiency Plan Investments and Savings<sup>4</sup>**

Thousands	PY7	PY8	PY9	Total*
<b>Nicor Gas</b>				
Spending	\$30,030	\$30,030	\$30,030	\$90,090
Annual Therm Savings	12,400	12,400	12,400	37,201
Lifecycle Therm Savings	166,508	166,508	166,508	499,523
<b>DCEO</b>				
Spending	\$10,011	\$10,011	\$10,011	\$30,033
Annual Therm Savings	4,280	4,326	4,363	12,969
Lifecycle Therm Savings**	-	-	-	-
<b>Self Direct Customers</b>				
Spending***	\$3,300	\$3,300	\$1,925	\$8,525
<b>Total</b>				
Spending	\$43,341	\$43,341	\$41,966	\$128,648
Annual Therm Savings	16,680	16,727	16,764	50,171
Lifecycle Therm Savings**	166,508	166,508	166,508	499,523
* Column sums may not match totals due to rounding to thousands				
** Lifecycle therms not available from the Department				
*** Assuming 22 self direct customers spending \$150,000 per year for PY7 and PY8 (22*150K=\$3.3MM) and 7/12 of that amount in PY9 per Section 8-104(n).				

<sup>3</sup> In preparing this plan for submission to the Commission, Nicor Gas referenced the Department’s proposed plan as of June 28, 2016 and found at [http://www.ilsag.info/mm\\_2016\\_6\\_28.html](http://www.ilsag.info/mm_2016_6_28.html).

<sup>4</sup> Figures used in this table are rounded for readability. See Appendix B for exact detail.

Finally, Section 8-104(m) of the Act allows certain large manufacturing businesses to “self-direct” their energy efficiency contributions outside of the Nicor Gas and the Department portfolios. During the next plan cycle, 22 large businesses have chosen to self-direct, representing approximately \$10 million in additional energy efficiency investments that will be implemented by these businesses independent of the EEP. The Act does not require these customers to develop savings goals associated with their self-directed activities.

Overall, Nicor Gas customers (homeowners, renters, small and large businesses) will invest over \$128 million supporting energy efficiency during the next plan cycle, including activities directed through energySMART, the Department, and self-direct customers. These investments are expected to improve customer’s efficiency in Nicor Gas territory by approximately 50 million therms and approximately 500 million lifecycle therms, not including additional savings created by the Department and the self-direct customers.

## 1.2 Nicor Gas energySMART Portfolio Features

energySMART is designed to align with an overall marketing strategy in place since the inception of PY4. The portfolio as shown in Figure 1 is comprised of two programs; the Residential Program and the Business Program, with both programs featuring several customer participation tracks based upon the offerings that are aligned with a customer-centric delivery approach. Essentially, the programs have been streamlined to match the marketing and outreach strategy that more naturally resonates with our target audiences. The Residential Program is comprised of four customer participation tracks, while the Business Program is comprised of five customer participation tracks. Nicor Gas has identified 196 specific energy efficiency measures (Appendix A) to promote through the programs, which also include custom pathways for customers to install additional measures not specifically identified in the plan. The portfolio also funds investment in essential portfolio functions necessary to deliver the portfolio, including: emerging technology; marketing and outreach; program management; data analytics and business intelligence; and evaluation.

The programs include a wide range of delivery strategies to provide all customers meaningful opportunities to participate. The strategies target:

- Residential single family and multi-family homes
- Large and small businesses
- Customers in existing buildings as well as builders (and customers) constructing new homes and facilities
- Owners, renters and landlords
- Customers replacing equipment as well as customers retrofitting or operating existing equipment

- Customers interested in comprehensive solutions across multiple systems and buildings as well as customers interested in more limited approaches targeting individual measures
- Trade allies and contractors that install equipment directly in customer facilities and programs that encourage customers to work with these local trade allies for installations
- Programs that provide, in addition to financial incentives, education, energy assessments, design assistance, project management assistance, trade ally network development, quality assurance, certification and other features to overcome efficiency market barriers

As shown in Figure 1, the Residential and Business Programs reflect a natural customer experience from the initial engagement to specific offering delivered. Many of the offerings within each track are coordinated with other investor owned utilities (“IOUs”) and the Department. Further, energySMART will also coordinate where possible with other statewide and national branding agencies such as Illinois Home Performance, ENERGY STAR, Illinois Municipal Electric Authority, Municipal Electric Authority, and the Salvation Army. The tracks are further defined below.

**Figure 1 Nicor Gas energySMART Portfolio Structure**

Residential Program				Business Program				
Education & Outreach Track	Assessment Track	Rebate Track	New Construction Track	Education & Optimization Track	Assessment Track	Rebate Track	Custom Incentive Track	New Construction Track
Behavior Energy Savings	SF (Audit/DI)	Prescriptive Rebates	New Construction	RCx	Technical Assitance & Assessments	Prescriptive Rebates	Large Business Custom	New Construction
Elementary Education	MF (Audit/DI)	Retail Rebates	Code Compliance	SEM	MF (Audit/DI)	Upstream (Rebates)	Small Business Custom	Code Compliance
Energy Saving Kits		Wx Prescriptive			SB (Audit/DI)		MF Custom	
		Wx Projects (Mod Income, Deep Retrofit)					CHP	

### 1.2.1 Residential Program Tracks

The residential tracks are designed to align with the overall marketing and outreach strategy of the energySMART portfolio. The tracks essentially follow a typical Nicor Gas customer's energy efficiency journey from initial education, outreach and engagement to investing in energy household efficiency projects. The offerings are designed to meet a wide cross section of customer income levels, housing types, and other customer needs ranging from free behavior altering offerings to investments in high performance equipment and installations.

#### Residential Education and Outreach Track

The education and outreach track is the first step in a typical household's energy efficiency journey. This track builds awareness of how they use energy, identifying the different ways to save energy, and, finally, how they can partner with Nicor Gas to take action. Through this track, energySMART engages residential customers through various means including community events, online and social media targeting, bill inserts, customized home energy reports and general mass media approaches. The track also houses partnerships with local schools to integrate energy efficiency into elementary school curriculums. In addition to teaching children about energy use and efficiency opportunities in the classroom, the program provides hands-on learning by providing students and their families with showerheads, aerators, and other measures to install in their homes. The program is offered jointly with other northern Illinois IOUs: ComEd, The Peoples Gas Light and Coke Company ("Peoples Gas"), and North Shore Gas Company ("North Shore").

#### Residential Assessment Track

The household energy efficiency journey continues with the Assessment track offerings of technical assistance, walk through energy assessments, and direct installation of energy efficient equipment including low-flow showerheads, faucet aerators, hot water heater pipe wrap, advanced and programmable thermostats and electric saving devices. The streamlined approach provides residential customers the opportunity to select the energy assessment and technical assistance approach that is best suited for them and their needs. Customers receive comprehensive energy efficiency and safety assessments from BPI certified energy advisors, who recommend efficiency upgrades and direct customers to local certified contractors. Most offerings in this track will be delivered jointly with ComEd, the Department and, possibly, local municipal utilities.

#### Residential Rebate Track

The track offers various financial incentives to households installing efficient space heating, water heating, controls (programmable and advanced thermostats) and weatherization equipment. The track also offers point of sale rebates for advanced thermostats, and possibly other online "virtual retail" platforms. The track offers a range of weatherization rebates to meet different household needs. The track's income-qualified offering provides eligible customers with direct installation of comprehensive weatherization upgrades with only modest out-of-pocket costs that can be paid through on-bill financing. The track's deep retrofit offering

provides bonus rebates and additional services to customers addressing multiple, interconnected systems in a comprehensive manner. The track also allows customers to receive standardized rebates for less comprehensive weatherization measures, again, allowing customers to finance out-of-pocket costs using on-bill financing.

### Residential New Construction Track

The track addresses energy efficiency opportunities in the residential new construction market. The track offers financial incentives, education and training for new home builders and energy efficiency raters. Further, the track aims to improve compliance with residential energy codes by educating and training a qualified work force, by providing financial incentives for hiring code enforcement staff, and by offering leasing arrangements for the purchase of expensive verification equipment such as duct blasters, blower doors, and infrared imaging. The track offerings will be jointly offered with other Illinois IOUs and the Department.

### 1.2.2 Business Program Tracks

The business tracks are designed to align with the overall marketing and outreach strategy of the energySMART portfolio. The offerings are designed to meet a wide cross section of customer needs, including those for large and small customers, commercial and industrial customers, building owners and tenants, simple and more comprehensive projects, new and existing buildings, and capital and operating solutions.

### Business Education and Optimization Track

This track starts the business customer's energy efficiency journey by building awareness of energy usage in facilities and operations, identifying measures and approaches available to save energy, and, finally, helping customers understand how to partner with Nicor Gas to take action. The offerings include a retro-commissioning ("RCx") component that provides customers with expert assistance in optimizing mechanical systems. In addition, the track offers Strategic Energy Management ("SEM"), which educates customers on state-of-the-art lean manufacturing principles and brings together diverse companies to share best practices. SEM embeds in customer organizations an energy efficiency ethic that focuses on energy savings as a key part of business operations, culture and success. Finally, the track increases awareness of other available Nicor Gas commercial and industrial offerings. Nicor Gas delivers the RCx and SEM offerings jointly with other Illinois utility programs.

### Business Assessment Track

The track offers technical assistance and energy assessments to business customers. The streamlined approach provides business customers the opportunity to select the technical assistance approaches best suited for their needs, and provides services ranging from quick, walk-through assessments to investment grade audits. Assessments provided to small businesses and multifamily buildings also provide free, direct installation of some measures, including low flow fixtures, pipe insulation, pre-rinse sprayers, and controls.

### Business Rebate Track

The track offers financial incentives for customers to install efficient space heating, water heating, steam traps, commercial cooking equipment, and controls. In addition, Nicor Gas will offer financial incentives upstream in the supply chain to distributors and manufacturers of commercial cooking equipment to help further transform that market. Nicor Gas will work with other Illinois utilities and the Department to jointly deliver this upstream offering.

### Business Custom Incentive Track

The custom incentive track offers financial incentives to business customers completing non-standard energy efficiency projects not included in the other rebate tracks. Custom incentives are available to small, medium and large businesses, multi-family building owners and also for CHP projects. Where appropriate, Nicor Gas coordinates with ComEd to jointly deliver custom rebate projects.

### Business New Construction Track

The track offers technical design and financial assistance to commercial real estate developers, design and architecture firms engaged in the construction of new commercial buildings. Further, the track aims to improve compliance with commercial energy codes by educating and training a qualified work force, by providing financial incentives for hiring code enforcement staff, and by offering leasing arrangements for the purchase of expensive verification equipment such as duct blasters, blower doors, and infrared imaging. The track offerings will be jointly offered with other Illinois utilities and the Department.

## 1.2.3 Portfolio Functions

The successful implementation of the energySMART portfolio depends on the following essential support functions to provide strategic oversight, analytical and quantitative support, business intelligence and data management services, marketing and customer engagement strategies, evaluation and measurement, research and development, and performance reporting.

### Portfolio Management

The portfolio management function includes the internal staffing and other expenses necessary to successfully administer the portfolio, including staff responsible for overall portfolio management, planning and measurement, market research, accounting, regulatory support, and quality assurance. Further, this function also manages the Nicor Gas engagement in the Illinois Technical Reference Manual (“TRM”) and Illinois Stakeholder Advisory Group (“SAG”) processes.

### Portfolio Marketing

The portfolio marketing function includes the internal staffing and other expenses necessary to successfully deliver the portfolio's marketing strategies. The internal team is responsible for the development, execution and management and delivery of marketing and communication strategies, plans and materials for customer engagement, and education. This function coordinates marketing, outreach and communications among implementation contractors, and develops all trade ally communications and materials. Further, the function develops and maintains websites, customer communications, and all creative development (graphic design, content writing, etc.), and also coordinates all outreach, events, and initiatives with community partners.

### Evaluation, Measurement and Verification ("EMV")

Consistent with the provisions of Section 8-104, Nicor Gas invests three percent of the energySMART budget on impact and process evaluations of energySMART offerings by an independent evaluator.

### Emerging Technology ("ET")

Consistent with the provisions of Section 8-104, Nicor Gas devotes three percent of its portfolio budget to emerging technologies. This actively solicits new technology and program delivery ideas from the energy efficiency marketplace and then uses a structured process to screen, evaluate, field test, and integrate into energySMART the most promising approaches. The final goal is to share these ideas by feeding the annual TRM update process, and also by collaborating with other ET organizations and collaborations nationwide.

## 1.2.4 Portfolio Spending, Savings and Cost-Effectiveness Targets

Table 3 outlines the spending, savings, and cost-effectiveness associated with the residential and business programs and associated support functions. Appendix A provides additional results for each measure included in the portfolio.

Table 3 PY7-PY9 Spending and Therm Savings<sup>5</sup>

Program / Track (Thousands)	Spending	Gross Annual Therm Savings	Net Annual Therm Savings	Net Lifecycle Therm Savings	TRC
<b>Residential Program</b>					
Education and Outreach Track	\$2,707	2,203	2,107	10,761	5.93
Assessment and DI Track	\$5,904	715	697	5,709	1.11
Prescriptive Rebate Track	\$31,692	14,593	12,715	207,042	1.47
New Construction Track	\$3,159	811	811	24,324	1.67
<b>Business Program</b>					
Education and Optimization Track	\$2,409	3,273	3,287	11,307	2.79
Assessment and DI Track	\$4,892	322	258	2,083	0.68
Prescriptive Rebate Track	\$10,667	14,599	10,085	100,586	3.19
Custom Incentive	\$10,353	8,169	5,963	105,740	2.49
New Construction Track	\$3,135	2,459	1,279	31,972	2.86
<b>Portfolio</b>					
Portfolio Administration	\$8,071				
Portfolio Marketing	\$1,685				
EM&V	\$2,708				
Emerging Technology	\$2,708				
<b>Totals</b>					
Residential Program	\$43,462	18,323	16,329	247,835	1.58
Business Program	\$31,456	28,822	20,872	251,687	2.63
Portfolio	\$15,171				
<b>Totals</b>	<b>\$90,090</b>	<b>47,145</b>	<b>37,201</b>	<b>499,523</b>	<b>1.76</b>

<sup>5</sup> Figures used in this table are rounded for readability. See Appendix B for exact detail.

### 1.3 Building from Past Efforts

The plan builds on the firm foundation and strategy that energySMART has developed over the past six years. In May 2010, Nicor Gas launched its initial energy efficiency pilot portfolio funded by customer rates through the Company's Rider 29. The Rider 29 portfolio included six programs: residential prescriptive rebates, home weatherization, multifamily buildings, elementary education, business prescriptive rebates, and large business custom. This initial portfolio helped energySMART start building relationships with customers and trade allies. The Rider 29 efforts also helped the EEP build infrastructure in areas such as rebate processing, trade ally management, outreach, customer engagement, procurement, information systems, and evaluation primarily through contracting with various implementation contractors.

The first EEP authorized by Section 8-104 launched in June 2011 and expanded on the Rider 29 portfolio by adding seven new programs. New offerings included residential and business new construction programs, a behavior change offering, and a small business program. During the development of this portfolio, Nicor Gas established a long term strategic direction and planned evolution of the EEP over time. It was clear that energy efficiency was here to stay in Illinois, and Nicor Gas evaluated the various options to manage the EEP going forward. These options included extremes such as a complete outsourced portfolio with a handful of internal staff, to a fully integrated department with full delivery capabilities for offerings to customers. Nicor Gas determined that a hybrid approach that builds over time core competencies in house but not quite delivering all offerings was the strategic direction to pursue.

Key elements and competencies deemed critical to insource included expertise that allow Nicor Gas to control and fully manage interactions with our customers and control data and process flows to our implementation contractors and evaluators. Marketing, IT systems, Program Management, Trade Ally Management, Planning, Measurement and Design, Customer Engagement, all are core functions that initially required third party contractors to perform. Over time, Nicor Gas has continued to onboard these skills, which provide efficiencies, long-term consistency, and the ability to control messages and communications to customers. Furthermore, retaining these core proficiencies in-house makes the program nimbler and better able to adjust to meet customer needs. It allows the ability to change out implementation contractors as business needs or program changes require, without significant interruption or impacts to customers. energySMART becomes the hub of all data and expertise, where contractors can then be added or removed to best serve customers.

This strategy has generated efficiencies that lower costs and improve service to customers. As the EEP program expertise has migrated to Nicor Gas, energySMART has consolidated implementation contractors, combined six different call centers into one, and can now provide concierge services to customers to troubleshoot issues, cross-promote offerings, and engage with customers at public events. Nicor Gas has also developed a single data platform (energyENGINE) to consolidate data for all program activities, customer demographics, customer contacts, outreach details, and market intelligence that allows for faster and more dynamic portfolio design, adjustment and response to customer needs. This platform helps the portfolio capitalize on "big data" with approaches for real time EM&V, data mining, market

research, market potential studies, and other activities that otherwise would require costs in the hundreds of thousands of dollars annually performed by third parties.

As a result of these strategies, Nicor Gas has expanded its staffing capability during the past two portfolio cycles. Nicor Gas hired internal staff to manage key functions, including accounting, customer engagement, marketing, emerging technology, evaluation, portfolio technology, planning, program management, regulatory and quality control.

Consistent with the Act, Nicor Gas also devoted 3 percent of its budget in the first plan to develop an emerging technologies program that fosters promising new energy efficiency opportunities. The program has successfully spurred innovation by local and national manufacturers and has been featured at conferences run by the American Council for an Energy Efficient Economy, the Emerging Technologies Coordinating Council, and E-Source. This successful offering can be combined with other utility emerging technology spending, as has already been the case with Peoples Gas/North Shore, and ComEd. Partnerships by other plan administrators can further leverage the Nicor Gas infrastructure and processes already developed and proven successful over the past years.

The EEP has also developed extensive networks of local businesses delivering energy efficiency products and services to Nicor Gas customers. These businesses provide equipment for space heating, water heating, and cooking equipment; products such as showerheads and thermostats; engineering and architectural services; and specialty analyses such as home energy rating, new construction and retro-commissioning. In addition, the networks reach out to key market enablers such as realtors, real estate developers, local municipalities, and environmental organizations. In all, the Nicor Gas' EEP's trade ally network includes over 9,000 organizations located throughout Northern Illinois.

As discussed previously in Section 1.2, the evolution of the portfolio has resulted in simplifying the offerings to customers into two programs; the Residential Program and the Business Program. Both programs feature several customer participation tracks based upon the offerings that are aligned with a customer-centric delivery approach. Essentially, the programs have been streamlined to match the marketing and outreach strategy that more naturally resonates with our target audiences. This change was conceived and executed by energySMART staff through a process called Customer Journey Mapping, a step-by-step process to walk through the customers experience as the customer engages in energySMART. This award winning effort is an example of building core competencies in-house that benefits the customers who participate in the offerings.

#### **1.4 Awards and Recognitions**

Since its inception, energySMART has received 12 national and regional awards for its innovative approaches and successful execution. The Midwest Energy Efficiency Alliance awarded Nicor Gas with Inspiring Efficiency awards in both the Marketing and Education categories in 2015, recognizing energySMART for its "customer stories" marketing strategy and campaign, and its "What's in the Box" furnace education campaign. Also in 2015, ENERGY STAR recognized energySMART with a Market Leader award for contributing 603 energy-

efficient new construction homes in the year. In 2014, energySMART received its second Stevie Award for its “customer stories” marketing campaign, and received the Association for Energy Services Professional’s Energy Award for its steam trap business marketing campaign. In addition, the Midwest Energy Efficiency Alliance awarded Nicor Gas with the Inspiring Efficiency award in the Impact category for providing technical assistance to more than 200 business new construction and renovation projects. The Nicor Gas energy efficiency team has and will continue to share learnings gained from our local experience; will continue to present and speak at numerous peer conferences and gatherings; and will continue to engage with national and international organizations to help lead our industry, benchmark our activity and advance the overall goals of energy efficiency.

## **1.5 Economic Impacts**

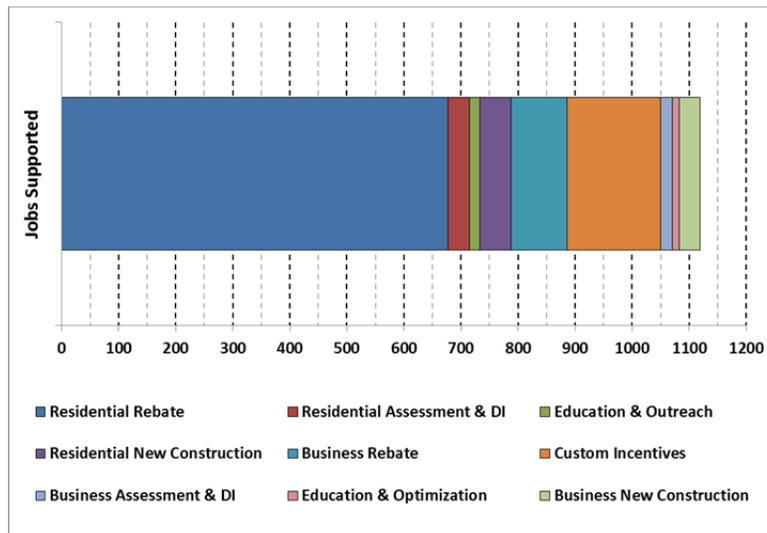
Significant economic activity in Northern Illinois is taking place as a direct result of the Nicor Gas energySMART portfolio. Since its inception, Nicor Gas has invested approximately \$200 million in the Northern Illinois economy through program spending and customer financial incentives, and helped customers save over 100 million therms and 1 billion gallons of water. This investment and resulting energy savings spurs economic activity and supports jobs and wages. An economic impacts study commissioned by Nicor Gas determined that PY3 energy efficiency investments by Nicor Gas and its customers supported almost 5,000 jobs paying \$311 million in wages, and spurred \$800 million in local economic activity.

The current plan, serving PY7-9, is also expected to yield significant local economic impacts, although, with lower budgets, impacts will be smaller than those found in PY3. As shown in Figure 2, the proposed energySMART plan is expected to support over 1,100 jobs paying over \$122 million in wages and spurring over \$197 million in economic activity in the Northern Illinois. Figure 3 shows the residential rebate track and custom incentive track providing the largest impacts. This is mainly due to the relatively large out of pocket investments made by customers in these tracks.

Figure 2 Expected Economic Impacts of PY7- PY9 energySMART program



Figure 3 Jobs Supported by Track



## 1.6 Supplier Diversity and Inclusion

At Nicor Gas, we believe diverse businesses bring innovation, quality and overall competitive value to our organization. We recognize that our business diversity efforts will have a positive and lasting impact on our communities, and we remain committed to doing business the right way – embracing and promoting diversity and inclusion as a part of our corporate values.

The energy efficiency team, in partnership with our supplier diversity and supply chain teams, have worked diligently to foster awareness, enhance collaboration and provide support to increase the diversity of our supplier team. Since 2015, spending to diverse suppliers has increased to over \$2 million, more than doubling the spending from 2015 to 2016.

As the portfolio continues to mature, energySMART will continue to explore and increase opportunities for direct and indirect spending with minority, women, and veteran owned businesses.

Our results reflect our intentional efforts to advocate, develop and create opportunities for diverse businesses. Since 2015, the Nicor Gas energy efficiency team has increased supplier diversity efforts such as including diversity in all sourcing decisions, and collaborating closely with our implementation contractors to expand and identify opportunities for additional diverse spending opportunities. This has resulted in additional opportunities to provide mentoring, consultation, business education and training to help diverse businesses expand their service offerings and broaden their presence into our business.

Examples where the Nicor Gas energy efficiency team has succeeded in these efforts include launching a new moderate income home weatherization offering in 2016 utilizing diverse minority vendors. One vendor had experience participating in energySMART as a trade ally providing insulation and air sealing services to customers. The opportunity to partner with this vendor helped the team launch the offering quickly, while expanding opportunities for a diverse business partner. This effort is expected to generate approximately \$500,000 in diverse spending in PY6 and beyond. Another diverse business partner providing weatherization services will be advised and mentored over the coming year to build the organization and capacity to participate as a program partner in 2017.

Another example includes our work with a large implementation contractor to source all water saving direct install measures through a diverse vendor. Not only was the implementation contractor able to create nearly \$250,000 in diverse spending annually, they also leveraged this objective by hiring the vendor nation-wide for all the other programs, thus expanding this success well beyond Illinois.

A final example includes an initiative to source energy savings kits through a diverse company who is not currently in the energy efficiency marketplace. This Illinois Company produces kits for a variety of large businesses worldwide. The energySMART team walked the company through the business requirements, and selected them to perform this work, introducing them to an entirely new market – energy efficiency. As they develop and hone their delivery systems,

through mentorship from energySMART, they will be introduced to other energy efficiency market players nation-wide.

At Nicor Gas, we believe organizational diversity in our workplace is closely tied to our success, and we are committed to providing a workplace where all employees can thrive and feel valued and respected. Not only is the Nicor Gas energy efficiency team diverse demographically and in experience, but our team significantly participates in company Employee Resource Groups (“ERGs”), which help celebrate organizational diversity and provide opportunities for internal personal and professional development. Our team is also very much involved in state-wide efforts such as the Illinois Utilities Business Diversity Council (“IUBDC”).

### **1.7 Spending and Savings Targets**

Section 8-104 of the Act defines spending limits and savings goals for natural gas utility energy efficiency plans, and proceedings to date before the Illinois Commerce Commission (“Commission”) have also clarified these requirements.

Section 8-104(d) requires utilities to limit their spending on energy efficiency to ensure that the estimated annual average increase in amounts paid by retail customers in connection with natural gas service is no more than 2 percent of annual revenue. Section 8-104(e) allocates spending among the utility and the Department, assigning 25 percent of total spending to the Department and the remaining 75 percent to utility efforts. Finally, Section 8-104(f) allows up to 3 percent of spending for independent evaluations and Section 8-104(g) allows up to 3 percent of spending for emerging technology activities.

In its Order in Docket No. 10-0562 approving the first Nicor Gas plan, the Commission clarified that revenues used to calculate the 2 percent spending limit include revenues from whole requirements customers and transportation customers as well as implied gas cost revenue for residential and small commercial customers that purchase natural gas from third parties. The spending limit calculation does exclude spending by other large transportation customers on alternative gas suppliers, as well as revenue from customers choosing to “self-direct” their energy efficiency activities or are exempt as specified in Section 8-104(m). Effective January 1, 2020, as required in Section 8-104(n), all of the customers who meet the definition for self-direct eligibility will become completely exempt from the law, and will no longer contribute to or participate in the energySMART portfolio. During the three years covered by this EEP (PY7-PY9), those customers who have chosen to remain active in the energySMART portfolio and have chosen to not self-direct, are included the 2 percent revenue limit until 2020, but excluded for the remainder of PY9.

The Act also requires natural gas utilities to achieve annual therm savings that are calculated as a percentage of calendar year 2009 sales and that increase with each successive year. For the third plan, the Act defines combined savings targets—including Department savings—reaching 1.4 percent in PY7, 1.5 percent in PY8, and 1.5 percent in PY9. The Act assigns 20 percent of the savings target to the Department, with the remaining 80 percent delivered by Nicor Gas, leaving Nicor Gas targets at 1.12% in PY7 and 1.2% in PY8 and PY9.

Although the Act defines increasing savings targets, the Commission has established—in its Order in Docket No. 13-0549 approving the second Nicor Gas Energy Efficiency Plan—that savings targets must be modified if they cannot be achieved within spending limits defined in Section 8-104(d). In that docket, the Commission established modified savings goals for Nicor Gas that were lower than those defined in the Act.

Finally, the Act provides natural gas utilities with the flexibility to manage spending and savings across the three years of plan operation. Rather than meet annual spending and savings targets, the Act allows Nicor Gas to meet cumulative targets across the three years covered by the plan. In the last Ameren Illinois Company d/b/a Ameren Illinois (“Ameren”) energy efficiency plan filing docket (Docket No. 13-0498), the Commission determined that cumulative savings targets should be calculated as the sum of annual savings targets verified by the independent evaluator, and in Docket No. 15-0297, Nicor Gas and Commission Staff have both agreed with this approach.

### **1.8 Statutory Spending and Savings for Third Plan**

Table 4 calculates the Section 8-104 spending and savings requirements for the third Nicor Gas plan. Spending available during the third plan is below levels for PY4-6 due to lower natural gas commodity costs, as well as increased numbers of self-direct customers. On average, the spending for the third plan declines 3 percent from the previous three-year period.

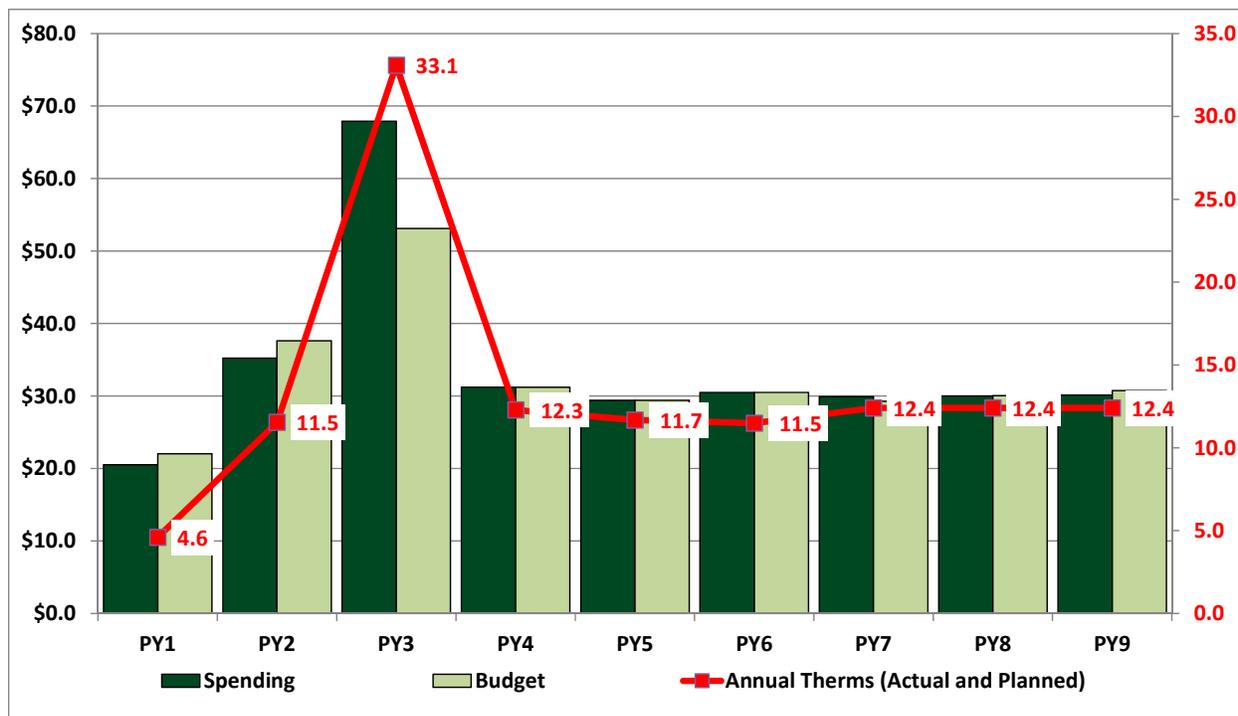
**Table 4 Statutory Spending and Savings Targets for PY7-PY9<sup>6</sup>**

Thousands	PY7	PY8	PY9	Total
<b>Spending Limit</b>				
Revenue Basis for Section 8-104	\$1,952,326	\$2,003,325	\$2,050,518	\$6,006,169
Percentage Spending Limits	2%	2%	2%	2%
Spending Limit	\$39,047	\$40,066	\$41,010	\$120,123
Nicor Gas Limit (75%)	\$29,285	\$30,050	\$30,758	\$90,093
Department Limit (25%)	\$9,762	\$10,017	\$10,253	\$30,031
<b>Savings Target (Therms)</b>				
2009 Sales	4,696,987	4,696,987	4,696,987	14,090,961
Less Self Directed Customers	730,361	730,361	793,949	2,254,671
Sales Basis for Section 8-104	3,966,626	3,966,626	3,903,038	11,836,291
Percentage Savings Limits	1.40%	1.50%	1.50%	NA
Annual Savings Target (Therms)	55,533	59,499	58,546	173,578
Nicor Gas Limits (80%)	44,426	47,600	46,836	138,862
Department Limit (20%)	11,107	11,900	11,709	34,716

Due to the 2 percent spending limit as set forth in Section 8-104(d), Nicor Gas will not be able to meet the statutory savings targets of 44 to 47 million therms, as shown in Table 4. In the history of the energy efficiency program, Nicor Gas created the highest savings in PY3, at 33.1 million therms, however, PY3 spending was more than twice that available for any single year in PY7-9. The statutory targets are not achievable given the limited spending allowed by the Act for PY7-9.

<sup>6</sup> Figures used in this table are rounded for readability. See Appendix B for exact detail.

Figure 4 Nicor Gas Spending and Savings Performance (Actual & Planned)



Instead, Nicor Gas has developed a portfolio that provides substantial savings, but that also meets a number of additional objectives outlined in Section 8-104 and important for long term portfolio success. In addition to the modified savings goal, the Commission approved the Illinois Energy Efficiency Policy Manual Version 1.0 in Docket No. 15-0487, which allows for savings goals to be adjustable after a Program Administrator has received Plan approval. More specifically, the Illinois Energy Efficiency Policy Manual Version 1.0 asserts that a Program Administrator’s,

“... Energy savings goals will be adjusted to align them with changes to IL-TRM values.

In addition, Program Administrator and/or IPA annual energy savings goals will be adjusted to align them with the Evaluator’s recommended Net-to-Gross values for the entire Plan period prior to the start of the first Plan Year of an approved Plan or Section 16-111.5B Program.

Within sixty (60) days after Commission approval of the annual IL-TRM values, each Program Administrator will file adjusted energy savings goals reflecting updated IL-TRM values applicable to the Program Year commencing June 1.”

In finalizing the portfolio, Nicor Gas allocated available budgets by applying the following objectives, which are also outlined in Table 5:

**Table 5 Nicor Gas Energy Efficiency Portfolio Objectives**

Planning Objective	Consideration
Budget	Remain within the 2% statutory budget and size the tracks/offersings according to rate class contribution.
Cost-Effectiveness	Demonstrate that overall portfolio is cost-effective using TRC test.
Savings	Increase annual therms. Increase lifecycle therms.
Fairness	Provide diverse cross section of opportunities for customers of all rate classes as well as the moderate income population.
Market	Maintain stability for Trade Ally partners.
Economic Development	Increase economic activity within Illinois.

Budget:

The 3-year portfolio budget must remain within the Section 8-104(d) limits of \$90 million, although individual years can deviate from the annual 2 percent cap.

Cost-Effectiveness:

The Act requires that the overall energySMART portfolio be cost-effective using the TRC test. Nicor Gas went beyond this statutory requirement to also analyze the cost-effectiveness of individual programs and measures. Nicor Gas used this information to adjust the portfolio, eliminating investment in some cost-ineffective measures and adjusting delivery approaches to improve program cost-effectiveness.

However, Nicor Gas did not use the TRC test as a strict screening criterion at the program or measure level. Nicor Gas may include some measures with TRC ratios below 1.0 if they provide substantial sources of therm savings and they increase opportunities for customers to participate. In addition, it is important to maintain stability for these program implementation contractors and trade allies, since the programs may prove cost-effective in the future if new delivery approaches can lower program costs and if volatile natural gas markets result in higher avoided costs.

Several measures with TRC benefit-cost ratios below 1.0 were also maintained in the plan if they contributed to overall program success. Some measures provide low-cost entry points for

customers to participate; others eliminate market confusion by simplifying overall program offerings; and others provide bundling opportunities that enhance participation in more cost-effective or more measures and savings.

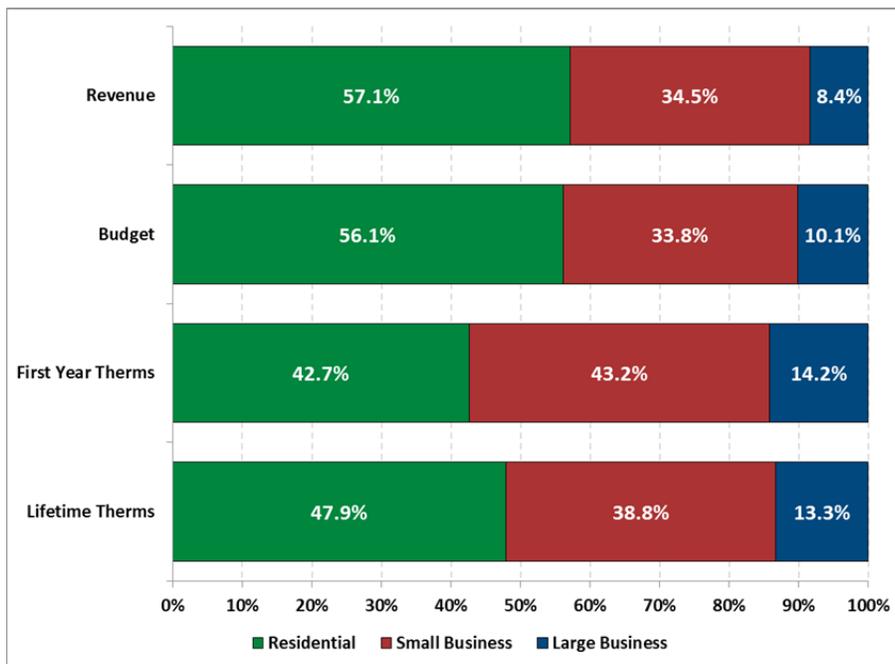
#### Therm Savings:

Section 8-104(c) establishes savings goals that are measured in “first year” or “annual” savings; that is, new savings added to the portfolio in each year of portfolio operation. However, because some portfolio measures have very short lifetimes (e.g., behavior change measures last only a few years) while others last much longer lifetimes (e.g., attic insulation has a useful life of 20 years), the first-year savings metric does not capture the full benefits associated with plan investments. Several stakeholders in the SAG expressed interest in also understanding the lifecycle savings associated with each program. Nicor Gas considers both lifecycle savings and annual savings in setting program budgets, generally favoring programs with low cost per lifecycle therm saved, but also including some programs with low costs per annual therm saved that could also help support other plan goals.

#### Fairness:

Section 8-104(f) requires Nicor Gas to provide a diverse cross section of opportunities for customers of all rate classes to participate. Going beyond rate classes, Nicor Gas has also designed its portfolio to provide meaningful opportunities for all customers to participate, including large and small customers, owners and renters, customers in new construction and existing buildings, customers in the market to purchase new equipment and customers interested in improving the efficiency of existing equipment, as well as a wide range of additional market segments. To ensure fairness of opportunity to participate, Nicor Gas has allocated portfolio budgets to customer classes in general proportion to class contribution to revenue. (See Figure 5.)

Figure 5 Budget and Savings by Nicor Gas Rate Classes



Market Based Programs:

In setting program budgets, Nicor Gas allocated relatively higher funding to programs driven by market forces, as opposed to programs that Nicor Gas controls—to some extent—through promotion and pricing policies. These market driven programs include the rebate and new construction tracks, which have volumes tied primarily to market forces around equipment failures and building construction. Because the energySMART program relies on trade allies to engage directly with the majority of customers in these market-driven programs, additional efforts to educate, communicate and coordinate with these programs is necessary. Furthermore, should the market “heat-up”- such as when very cold winters trigger higher furnace replacements, or when customer demand increases for exciting new technologies (e.g.: advanced thermostats) - funding needs to be enough to support these short-term market events. For other programs, energySMART can more directly regulate market activity. For example, customer demand for energy savings kits can be lowered by reducing outreach and website exposure for a period of time. However, for those market-based offerings, where consistent market participation from our trade allies and customers serves as one of the most influential drivers of results within energySMART, consistent and sufficient funding levels must be maintained.

Economic Development:

In addition to achieving energy savings, Nicor Gas is committed to utilizing energy efficiency as a tool to support economic growth and help build wealth and employment within our communities. When developing an energy efficiency portfolio, Nicor Gas remains cognizant of

how energySMART can improve the economic competitiveness for businesses and individuals. Nicor Gas recognizes that investments in energy efficiency not only lower costs for businesses and families, but also create numerous opportunities for the local job force, diverse business owners, and economically distressed communities.

## 1.9 Additional Plan Requirements

Section 8-104 establishes two additional program-specific requirements for natural gas efficiency plans in addition to requirements for savings, spending, cost-effectiveness, and participation opportunity. These include:

### Standards

Section 8-104(f) (2) requires utilities to provide specific proposals for implementing building and appliance standards that have been put into effect. The code support components of the two new construction programs meet this requirement.

In addition, programs in energySMART establish applicable building and appliance standards as minimum eligibility requirements for program enrollment, and, in many cases, require customers to significantly exceed minimum standards in order to earn incentives. The programs also educate customers and trade allies about building and appliance standards as part of ongoing outreach and communication efforts.

### Low and Moderate Income Customers

The Act requires utilities to coordinate with the Department to target programs to households at or below 150% of the poverty level and with incomes at or below 80% of area median income. The Department maintains primary responsibility for programs targeting these customers.

Nicor Gas will also coordinate several offerings with the Department to further meet the needs of this market and to expand opportunities for moderate income customers between 150% and 300% of poverty level. A number of offerings work cooperatively with the Department to allow eligible customers and developers of new housing to access the more generous benefits offered by the Department programs. An example of this from previous plans include the Residential Program that provided services for several Habitat for Humanity projects. The Residential Program also provides services to a number of low and moderate income residents. Many of the residential offerings are free of charge and require no customer investment, including free energy assessments, free measures directly installed during energy assessments, and free energy savings kits. The Residential Education and Outreach track also serves schools in low- and moderate income neighborhoods. Nicor Gas is committed to expanding opportunities for moderate income households and finding approaches to tailor additional offerings to rental and moderate income markets.

In addition to providing coordinated offerings with the Department to reach moderate income customers, Nicor Gas will work collaboratively and within the Company's legal and business constraints regarding the Department's delivery of energy efficiency offerings within Nicor Gas'

service territory. Nicor Gas will explore the possibility of establishing a contractual relationship with the Department to permit access to customer energy usage for the Department's planning and implementation of Low Income and public sector programs, similar to the controlled and secured access provided to Nicor Gas' energy efficiency program vendors.

### 1.10 Program Budgets and Goals

Using the portfolio objectives outlined in Table 5, Nicor Gas developed budgets and savings goals for each program, as well as the spending required for portfolio support functions. These are shown in Table 3 above. Table 6 below summarizes energySMART budget and goals.

**Table 6 energySMART PY7-PY9 Budget and Goal Summary<sup>7</sup>**

Thousands	PY7	PY8	PY9	Total
Budget (\$)	30,030	30,030	30,030	90,090
Annual Savings Goal (Therms)	12,400	12,400	12,400	37,201
Life Cycle Savings Goal (Therms)	166,508	166,508	166,508	499,523
Annual Savings Dollar /Therm	2.42	2.42	2.42	2.42
Life Cycle Savings Dollar /Therm	0.18	0.18	0.18	0.18

### 1.11 Meeting the Standards of Section 8-104 of the Act

The energySMART program meets all requirements of Section 8-104<sup>8</sup> of the Act. Please see Table 7 below.

**Table 7 Requirements of Section 8-104(f)**

Sub Section	Plan Cross Reference
8-104(f)	The current plan document will be filed with the Commission on or before October 1, 2016.

<sup>7</sup> Figures used in this table are rounded for readability. See Appendix B for exact detail.

<sup>8</sup> 220 ILCS 5/8-104 found at <http://www.ilga.gov/legislation/ilcs/fulltext.asp?DocName=022000050K8-104>.

Sub Section	Plan Cross Reference
	<p>(f) (1): Appendix A shows the list of measures that Nicor Gas will be offering to meet proposed modified savings goals found in Appendix B.</p> <p>(f) (2): The energySMART plan addresses new buildings and appliance standards in Chapters 2 and 3.</p> <p>(f) (3): Nicor Gas' calculation of the average per therm cost for the rate classes under its Rider 30, Energy Efficiency Plan Cost Recovery, is presented in the Company's direct testimony filed contemporaneously with the plan.</p> <p>(f) (4): The Department's plan includes programs for low income customers that are at or below 150% of federal poverty level as described in Section 1.1.</p> <p>(f) (5): The overall portfolio of energy efficiency measures, not including low income programs covered in Section 8-104(b) is cost-effective using the TRC test. Please see Table 26 in Section 5.3 for TRC results of proposed tracks, programs, and the overall portfolio.</p> <p>(f) (6): N/A</p> <p>(f) (7): Nicor Gas' Rider 30, Energy Efficiency Plan Cost Recovery, was approved by the Commission in Docket No. 10-0562, and meets the requirements of Section 8-104(f)(7). Nicor Gas is not proposing any changes to Rider 30.</p> <p>(f) (8): Table 3 in Section 1.2.4 lists proposed EM&amp;V costs that are 3% of the proposed budget. Section 4.5 discusses EM&amp;V in detail.</p>

### 1.12 Organization of this Plan

The following chapters outline the key features and planning assumptions for each program. Chapter 2 contains the residential program outlines, and Chapter 3 provides the business program outlines. Chapter 4 summarizes the portfolio support functions necessary to successfully deliver the portfolio programs. Chapter 5 summarizes key portfolio planning assumptions. Appendix A provides detailed tables outlining spending, savings, participation, and cost-effectiveness for each program and measure. Appendix B provides the adjustable goals template. The adjustable goals template will be used in future to calculate goal adjustments as a result of annual TRM updates.

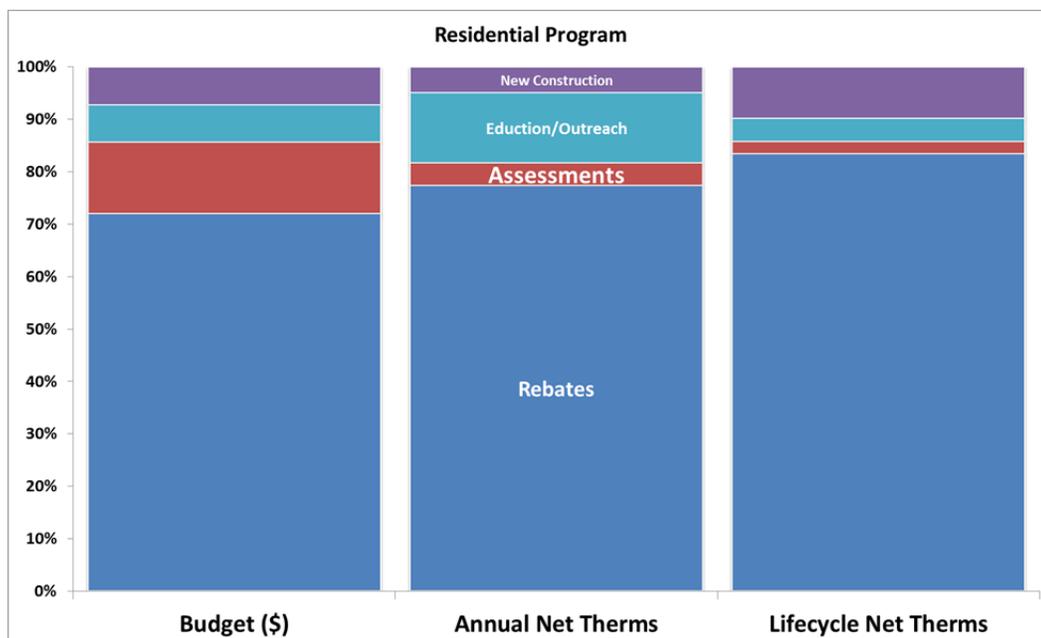
## 2 RESIDENTIAL PROGRAM

Nicor Gas’ residential program includes four participation tracks offering energy efficiency education and outreach, assessments, rebates, and new home construction. The tracks are designed to address all energy efficiency opportunities in the residential segment and implement new building and appliance standards that have been placed into effect.

Figure 6 provides budget, annual net therm and lifecycle net therm breakdown by each Track. Each track has several offerings, as shown in Figure 7.

The Company has taken a holistic approach in its program design, encouraging customers to make their entire living environments more energy efficient, rather than replace equipment measure by measure. The majority of offerings described in this section are offered in collaboration with the regional electric utility, ComEd, as well as other key stakeholders such as municipalities and community groups. Where appropriate, Nicor Gas also partners with Ameren, Peoples Gas, North Shore, and the Department to deliver some programs. Nicor Gas believes that these collaborations will result in increased savings for its customers, by capturing both electric and natural gas measures within the same project, as well as cost savings for both the programs and their customers.

**Figure 6 Residential Program Breakdown by Track**



Program Name	Residential Program
Purpose	The residential program is a one stop shop platform for Nicor Gas' residential customers' energy efficiency needs.
Target Market	All residential customers served by Nicor Gas including coordinated efforts with the Department to reach low income customers. Most offerings are coordinated with the electric suppliers ComEd or Ameren, but stand-alone offerings are also provided to customers not served by electric IOUs.

Description

The program addresses all of the energy efficiency needs of residential customers by providing a diverse set of participation tracks, including Education & Outreach, Assessment, Rebate, and New Construction. Each track provides various offerings, measures and solutions to meet the energy needs of residential customers, as shown in Figure 7.

In PY7-9, Nicor Gas will be adding several moderate income offerings and measures targeted directly to residential customers earning between 150% - 300% of the federal poverty line. Nicor Gas has been in contact with the Department to discuss approaches to coordinate these offerings and measures with Department programs.

Figure 7 Residential Program Offerings by Track

Residential Program			
Education & Outreach Track	Assessment Track	Rebate Track	New Construction Track
Behavior Energy Savings	SF (Audit/DI)	Prescriptive Rebates	New Construction
Elementary Education	MF (Audit/DI)	Retail Rebates	Code Compliance
Energy Saving Kits		Wx Prescriptive	
		Wx Projects (Mod Income, Deep Retrofit)	

**1. Education & Outreach Track**

The education and outreach track is the first step in a typical household's energy efficiency journey. This track builds awareness of how customers use energy, the different ways available to save energy, and, finally, how they can partner with Nicor Gas to take action. The track groups educational and outreach offerings described below.

Description  
(cont.)Energy Savings Kits (“ESKs”)

Nicor Gas plans to continue distributing ESKs in PYs 7-9. Nicor Gas anticipates approximately 13,000 kits will be distributed annually during next program cycle. The kits will target customers through direct e-mail, outreach events, energySMART website promotions, and through financial heating assistance intake centers. Residential customers can request free kits that include low-flow showerheads (1 or 2 per kit), kitchen aerators, and bathroom aerators (2 per kit). These low-flow devices conserve hot water, and therefore save the natural gas needed to heat the water.

Nicor Gas will target moderate income customers for receipt of some ESKs by distributing kits at financial heating assistance intake centers where customers apply for LIHEAP assistance, and through additional targeting strategies. The Department has been engaged and coordination is ongoing to explore and allocate additional funding within the Department budget to support additional ESKs for low income customers. The additional funding can increase the total number of ESKs distributed to target communities. The Department can choose the number of ESKs they would like to incent.

Energy Education Kits

Nicor Gas plans to offer Energy Education Kits jointly or in collaboration with other regional electric and municipal utilities. There is a high potential for these kits to benefit both gas and electric utility customers. The utilities will determine a framework for cost allocation based on savings/benefits to each utility's customers. This offering includes a comprehensive educational component that teaches students about all forms of energy and ways to improve energy efficiency. Each student is provided with a “take-home kit” of water- and electric-saving measures (3, low-flow showerhead, 2 bathroom aerators and kitchen aerator) that they are expected to install with their families at home. In areas of our service territory not served by ComEd, the students are provided with kits that don't include the electric measures. The students fill out surveys to help the independent evaluator determine the measures installed and associated savings.

Nicor Gas plans on targeting some kits towards moderate income customers. Nicor Gas can choose schools to participate that are located in areas where a significant portion of moderate income homes exist based on census data. Further, the Department has been engaged and coordination is ongoing to explore and allocate additional funding within the Department budget to support additional Energy Education Kits. The additional funding can increase the total number of kits distributed to target communities. The Department can choose how many kits they would like to incent.

Description  
(cont.)**Behavior Energy Savings**

Customers are provided with non-economic incentives to change how they perceive their energy use, so as to affect their energy use behaviors and hence achieve energy savings. Nicor Gas will produce Home Energy Reports based upon customers' specific consumption habits in the home, making normative comparisons with peer groups, and/or targeting the community. The proposed program plans a cohort approach of approximately 35,000 residential customers annually with a new cohort each year.

**2. Assessment Track**

The residential assessment track groups various technical assistance and assessment resources available to the residential customers by target dwelling types. The streamlined approach provides residential customers opportunity to select assessment and technical assistance best suited for them and their needs.

**SF Home (Audit/DI)**

The offering includes various assessments available to single family residents. A quick walkthrough/assessment is available for customers interested in learning about weatherization opportunities only. Deeper assessments are available, with copays, for customers interested in understanding all energy efficiency opportunities in their homes, including mechanical systems, air flow balancing, weatherization, etc. All assessments include free direct installation measures, including low flow showerheads, aerators, water heater pipe insulation, water heater thermostat setback, reprogramming of existing programmable thermostats, and an opportunity for home owner to install smart thermostat with co-pay. Where we offer joint and coordinated programs with electric utilities, additional electric measures will also be included.

Description  
(cont.)MF (Audit/DI)

The offering targets customers living in multifamily buildings with more than five residential units. The offering is delivered in conjunction with whole building assessments which are discussed further as part of the Business program. The residential offering provides direct installation of free energy efficiency measures in common areas and living units by approved contractors or by the program implementation contractor. Measures include low-flow showerheads, faucet aerators, domestic hot water pipe wrap, programmable thermostats and thermostat education and adjustment of the temperature setting of the hot water heaters to substantially reduce the consumption of natural gas and electricity. Where we offer joint and coordinated programs with electric utilities, additional electric measures will also be included.

Nicor Gas plans to engage with vendor(s) that currently provide similar services to the Department to perform DI activities in buildings that are primarily occupied by low or moderate income customers. A discussion of whole building assessments is discussed further as part of the Business program. The vendor(s) will test approaches to engage with these buildings, and execute DI measures in individual units based upon their pre-existing relationships and outreach to those customers. Due to the vast territory Nicor Gas serves, specific geographic areas will be identified for these Department vendors to target with this test activity. Other portions of the territory will be served through current energySMART vendors or new vendors as needed. Vendors will all be required to integrate into energyENGINE, and approaches will be assessed after the first plan year to determine if the different approach is effective and if costs are in-line with other approaches.

**3. Rebate Track**

The residential rebate track groups various prescriptive measures by delivery approaches as noted below.

Prescriptive Rebates

Prescriptive rebates are available to residential customers who wish to install high efficient space heating and water heating equipment such as high efficiency furnaces and boilers, advanced thermostats, etc. Customers can use the Company's On-Bill Financing program to finance any measure included in the energy efficiency plan, allowing customers to install efficient equipment for no out-of-pocket investment. Loans must be at least \$500, but can cover multiple measures, so, for example, customers installing advanced thermostats along with efficient furnaces may finance the entire project.

Description  
(cont.)Retail Rebates

Nicor Gas will work with retailers to provide point-of-sale or possibly an online web-based approach for rebates to residential customers for the purchase and installation of qualifying high-efficiency products. The proposed plan includes the advanced thermostat measure in the retail channel, but this channel may expand to additional measures in the future. Nicor Gas will work with other Illinois utilities to jointly deliver the advanced thermostat offering.

Upstream Rebates

Nicor Gas is not proposing any residential upstream rebates at this time. However, based upon the learning experience from the commercial kitchen upstream offering in the business program, Nicor Gas may revisit residential upstream market during this portfolio period, or in future portfolio cycles.

Weatherization (“Wx”) Prescriptive Rebates

The Wx prescriptive rebates offering is jointly delivered with ComEd, but customers of municipal electric suppliers are also eligible to participate. The offering provides instant discounts for installation of air sealing and insulation measures by approved contractors in single family and smaller multi-family (1-4 units) dwellings. Contractors must be certified by the Buildings Performance Institute and use blower doors to ensure proper installation of weatherization measures and document air sealing improvements. Customers can also leverage on-bill financing to pay for the non-rebated portion of the measures, with most contractors prepared to help customers enroll in the financing program.

Wx Projects (Deep Retrofit, Income Qualified)

The Wx Projects offering is a customized approach to energy efficiency in residential dwellings. The offering primarily consists of two measures; Deep Retrofits and Income Qualified Wx.

The deep retrofit measure uses a comprehensive, whole-house approach to energy efficiency by treating houses and small multifamily buildings (1 – 4 units) as systems of interconnected mechanical systems. The offering includes a deep assessment of the dwelling envelope, mechanical systems, air distribution system, appliances and lighting. Customers will receive a customized energy report with energy efficiency improvement recommendations. Customers will also receive bonus incentives, beyond the standard incentives available in other offerings, to undertake multiple recommendations.

Description  
(cont.)

The Income Qualified Wx measure is a new offering to address energy efficiency needs of moderate income customers. Nicor Gas approved contractors will perform thorough energy assessments to identify appropriate measures, developing work orders outlining comprehensive weatherization retrofits. Crews will then be scheduled to return and complete the work, including direct installation measures.

The offering will target moderate income single family homeowners and small multi-family building owners (1 – 4 units). Moderate income residential customers are defined as 150% to 300% of the federal poverty line. Nicor Gas will partner with organizations, like the Salvation Army to identify and pre-qualify customers. Customers below the 150% threshold will not be rejected. Nicor Gas intends to serve these customers or use our concierge services to refer them to the Department's programs. (This approach will be coordinated with the Department.) Nicor Gas also has developed an internal intake eligibility verification process for those customers who have not been pre-qualified by partner organizations.

energySMART is launching the moderate income weatherization offering in PY6. Learnings from that new offering will help smooth the launch in this next three-year plan.

This offering provides the following insulation and direct installation measures: advanced thermostat, attic and knee wall insulation, air sealing measures (basement air seal, attic hatch, window caulk, door sweeps, door weather stripping), band joist insulation, basement sidewall insulation, wall insulation, ductwork sealing and insulation, bathroom faucet low flow aerator, kitchen low-flow aerator, low-flow showerhead, water heater pipe insulation, water heater thermostat setback, and programmable thermostat education.

Nicor Gas will require a \$500 copay to leverage available budgets and allow more homes to participate. Customers can borrow the copayment utilizing the Company's On-Bill Financing program, allowing for no out-of-pocket investments, and, in many cases, allowing for immediate net savings from bill savings that exceed loan payments.

Description  
(cont.)

#### **4. New Construction Track**

The residential new construction track improves energy efficiency in the new construction market by offering incentives and education to residential builders, raters and municipal code staff. The track includes rebates for newly built single family and small multi-family homes (1 – 4 units), and a new offering to alleviate barriers towards code compliance in Illinois.

##### Residential New Construction (“RNC”)

RNC is a joint offering with ComEd in which participating builders receive incentives to build homes at least 20% more efficient than required by local building codes. Incentives are tiered to reward higher efficiency with higher payments. Builders work with accredited raters who perform site visits, verify building practices, and complete program documentation. Raters also receive financial incentives.

##### Code Compliance

This offering is a joint collaboration with the Department and all other state utilities. The offering aims to understand and alleviate barriers towards compliance with the energy portion of the statewide residential building code. The pilot design includes training personnel to conduct code reviews, financial incentives for hiring code enforcement staff, and offering leasing arrangements for the purchase of expensive verification equipment such as duct blasters, blower doors, and infrared imaging.

Collaboration

The program includes several measures that are offered jointly or coordinated with partner program administrators including ComEd, Peoples Gas/North Shore, Ameren, and the Department. Please see Table 8.

**Table 8 Residential Program Coordination**

Offering	Joint Implementer	Single Customer Application	Joint Marketing/	Providing Information about ComEd/Dept.
<b>Residential Tracks</b>				
Prescriptive Rebates				
Retail Rebates	X	N/A <sup>1</sup>	X	CE
Wx Prescriptive	X	N/A <sup>1</sup>	X	CE
Wx Income Qualified	X	N/A <sup>1</sup>	X	CE/DEPT
Wx Deep Retrofit	X	N/A <sup>1</sup>	X	CE
SF Home Audit/DI	X	N/A	X	CE
MF Unit Assessment/DI	X <sup>2</sup>	N/A	X	CE
Energy Savings Kits		N/A	X	DEPT <sup>4</sup>
Education Kits	X	N/A	X	CE/DEPT <sup>4</sup>
Behavior Energy Savings				
Residential New Construction	X	X	X	CE
Code Compliance	X	X <sup>3</sup>	X	CE/DEPT
<b>Notes:</b>				
1. Instant discount				
2. More than one implementer but still utilized jointly between program administrators				
3. Application process TBD				
4. The Department may choose to implement using Department funds as described in the plan				
N/A – No Application but common intake process				
Information represents Nicor Gas expectations for PY7 and are subject to change in reaction to market conditions.				

<p>Delivery Strategy</p>	<p>The program is delivered through four customer participation tracks. The tracks represent energySMART’s overall customer engagement strategy as determined through various customer journey mapping exercises. The tracks represent a natural energy efficiency journey for residential customers that starts with education and awareness about energy efficiency opportunities, available resources and rebates from energySMART, moves to deeper technical assistance through energy assessments, and finally achieves energy savings through installation of efficient equipment and purchase of high performance new homes.</p>
<p>Marketing Strategy</p>	<p>The energySMART marketing and outreach strategy for PY7-PY9 will continue to build on the proven approach of guiding customers along the continuum of awareness, education and participation. From outbound calling to community interactions, all aspects of the marketing and outreach strategy ensure that customers understand how they can take full advantage of the products and services available to them through the program. energySMART will utilize a concierge-like service through the Marketing and Outreach Center to proactively engage customers and will utilize mass media, customer communications (such as email and bill inserts), and multicultural marketing and outreach events to continue to effectively reach a diverse cross section of customers and help them participate in the program.</p> <p>The marketing and outreach strategy for PY4-6 emphasized a customer-centric approach achieved through message consistency under the energySMART brand, removing barriers to participation, and proactive, targeted outreach to customers to provide support throughout their journey. The marketing and outreach plan for PY7-9 will continue to build on this strategy, including continued outreach and education through in-person engagement, brand awareness, cross-promotion and strategic use of data to support the tactics and communications channels. Trade ally engagement through webinars, email communications and outreach visits will play a crucial role as new offers are introduced to the market and others are transitioned upstream.</p>

**Eligible  
Measures**

A comprehensive list of available measures are listed in Appendix A. The key measures in the Residential Program include:

- Energy Savings Kits
- Elementary Education Kits
- Home Energy Reports
- Low-flow Showerheads
- Faucet Aerators
- Advanced Thermostats
- High Efficiency Furnaces
- Weatherization Measure, including Income Qualified Weatherization
- High Efficiency New Homes

Please see the measure summary report in Appendix A for more details on each measure.

Program  
Targets

The residential program budget, savings and participation targets are provided in tables 9 and 10 below. Please note the figures are rounded. The savings and costs are in thousands.

**Table 9 Residential Program Targets**

Residential Program	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	18,323
Annual Net Therms	16,329
Lifecycle Gross Therms	279,606
Lifecycle Net Therms	247,835
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Costs	17,097
Incentives	18,440
<u>3rd Party Incentives</u>	7,925
Total	\$43,462
<b>\$ / Therm</b>	
\$ / Gross Therm	\$2.37
\$ / Net Therm	\$2.66
\$ / Lifecycle Gross Therm	\$0.16
\$ / Lifecycle Net Therm	\$0.18
<b>COST EFFECTIVENESS</b>	
TRC	1.58
PAC	3.62

Program  
Targets  
(cont.)**Table 10 Residential Program Participation Summary**

<b>PARTICIPATION</b>		
Pipe Insulation Projects	385	Projects
Low-flow fixtures	63,108	Units
Thermostats	68,796	Units
Water heater Wraps	1,101	Projects
Assessment & Technical Assistance Projects	29,286	Projects
Home Energy Reports	14,682	Reports
New Construction Homes	3,003	Homes
Boilers	186	Unit
Furnace Rebates	50,778	Unit
Shell / Wx Prescriptive Projects	4,320	Project
Duct sealing Projects	1,638	Project
ESKs and Elem Education Kits	73,518	Kit
Custom Wx Projects	1,083	Project

Track  
Breakdown

The track level breakdown of the Residential program above is provided below. Please note the figures are rounded. The savings and costs are in thousands.

**Table 11 Residential & Outreach Track Targets**

Residential Education & Outreach	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	2,203
Annual Net Therms	2,107
Lifecycle Gross Therms	11,740
Lifecycle Net Therms	10,761
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	963
Incentives	-
<u>3rd Party Incentives</u>	<u>1,745</u>
Total	\$2,707
<b>\$ / Therm</b>	
\$ / Gross Therm	\$1.23
\$ / Net Therm	\$1.29
\$ / Lifecycle Gross Therm	\$0.23
\$ / Lifecycle Net Therm	\$0.25
<b>COST EFFECTIVENESS</b>	
TRC	5.93
PAC	5.93

Track  
Breakdown  
(cont.)

Table 12 Residential Assessments &amp; DI Targets

Residential Assessments & DI	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	715
Annual Net Therms	697
Lifecycle Gross Therms	5,913
Lifecycle Net Therms	5,709
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	3,206
Incentives	-
<u>3rd Party Incentives</u>	<u>2,698</u>
Total	\$5,904
<b>\$ / Therm</b>	
\$ / Gross Therm	\$8.25
\$ / Net Therm	\$8.48
\$ / Lifecycle Gross Therm	\$1.00
\$ / Lifecycle Net Therm	\$1.03
<b>COST EFFECTIVENESS</b>	
TRC	1.11
PAC	1.31

Track  
Breakdown  
(cont.)

**Table 13 Residential Rebate Track Targets**

Residential Rebates	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	14,593
Annual Net Therms	12,715
Lifecycle Gross Therms	237,628
Lifecycle Net Therms	207,042
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	11,074
Incentives	17,136
<u>3rd Party Incentives</u>	<u>3,482</u>
Total	\$31,692
<b>\$ / Therm</b>	
\$ / Gross Therm	\$2.17
\$ / Net Therm	\$2.49
\$ / Lifecycle Gross Therm	\$0.13
\$ / Lifecycle Net Therm	\$0.15
<b>COST EFFECTIVENESS</b>	
TRC	1.47
PAC	3.90

Track  
Breakdown  
(cont.)

Table 14 Residential New Construction Targets

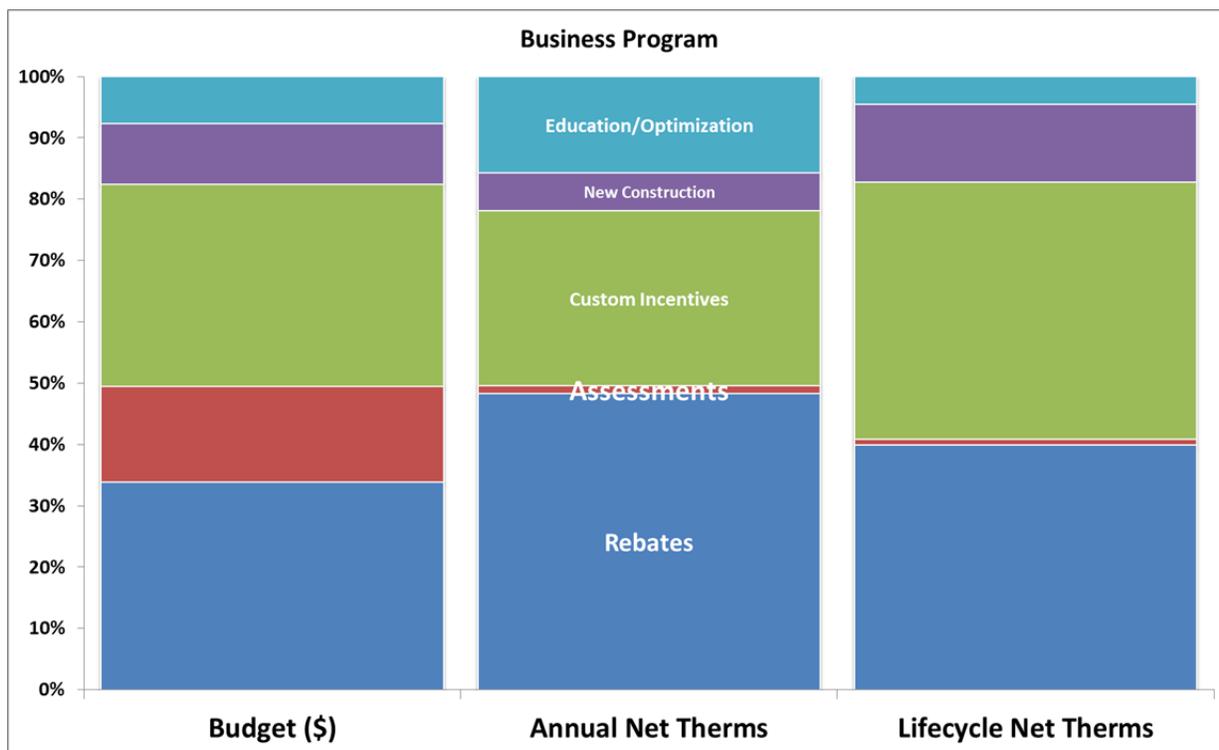
Residential New Construction	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	811
Annual Net Therms	811
Lifecycle Gross Therms	24,324
Lifecycle Net Therms	24,324
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	1,855
Incentives	1,305
<u>3rd Party Incentives</u>	-
Total	\$3,159
<b>\$ / Therm</b>	
\$ / Gross Therm	\$3.90
\$ / Net Therm	\$3.90
\$ / Lifecycle Gross Therm	\$0.13
\$ / Lifecycle Net Therm	\$0.13
<b>COST EFFECTIVENESS</b>	
TRC	1.67
PAC	3.46

### 3 BUSINESS PROGRAM

Nicor Gas’ Business program targets commercial and industrial customers with five participation tracks that provide a diverse cross section of opportunities for all customers to participate. The tracks are designed to address all energy efficiency opportunities in the business segment and implement new building and appliance standards that have been placed into effect. The tracks include education and optimization, assessments, rebates, custom incentives and new construction. Figure 8 provides budget, annual net therms and lifecycle net therms breakdowns for each Track. Each track has several offerings as shown in Figure 9.

The majority of offerings described in this section are offered in collaboration with the regional electric utility, ComEd, as well as other key stakeholders such as municipalities and community groups. Where appropriate, Nicor Gas also partners with Ameren, Peoples Gas, North Shore, and the Department to deliver some programs. Nicor Gas believes that these collaborations will result in increased savings for its customers, by capturing both electric and natural gas measures within the same project, as well as cost savings for both the programs and their customers.

Figure 8 Business Program Breakdown by Track



Program Name	Business Program
Purpose	The business program is a one stop shop platform for all of Nicor Gas' small, medium and large commercial and industrial ("C&I") customers' energy efficiency needs.
Target Market	All C&I customers served by Nicor Gas excluding self-direct, public sector and exempt customers as defined by Section 8-104.

Description

The program addresses all of the energy efficiency needs of business customers by providing a diverse set of participation tracks. Figure 9 shows the tracks, which include Education & Optimization, Assessments, Rebates, Custom Incentives, and New Construction. The tracks provide various offerings, measures and solutions to meet the energy needs of any business customer.

Figure 9 Business Program Offerings by Track

Business Program				
Education & Optimization Track	Assessment Track	Rebate Track	Custom Incentive Track	New Construction Track
RCx	Technical Assistance & Assessments	Prescriptive Rebates	Large Business Custom	New Construction
SEM	MF (Audit/DI)	Upstream (Rebates)	Small Business Custom	Code Compliance
	SB (Audit/DI)		MF Custom	
			CHP	

**1. Education and Optimization Track**

The education and optimization track is designed to enhance customer’s understanding of energy usage in their facilities and to promote available Nicor Gas commercial offerings. This track starts the business customer’s energy efficiency journey by building awareness of energy usage in facilities and operations, identifying measures and approaches available to save energy, and, finally, helping customers understand how to partner with Nicor Gas to take action. The track groups educational and optimization measures as described below.

Description  
(cont.)Retro-Commissioning

The RCx offering identifies and implements low-cost and no-cost energy efficiency measures. The measures include mechanical system tune-ups and adjustments to energy management systems and HVAC controls that improve operational efficiency by returning the systems to their intended operation or design specifications. Monitoring-based commissioning is also available for customers to continuously monitor building systems and save energy by keeping control settings at optimal levels. RCx will be delivered through a network of commissioning providers that have been trained in program protocols and processes. For smaller facilities, commissioning providers conduct a targeted assessment of systems with substantial energy savings opportunities such as packaged HVAC units. Larger facilities are eligible to receive more comprehensive assessments of building systems and controls. This offering includes a strong customer education component to promote the value of retro-commissioning services, targeting senior management decision-makers as well as facility operations and maintenance staff. RCx is a joint offering with ComEd.

RCx Express

The RCx Express offering focuses on smaller commercial facilities and buildings typically under 25,000 square feet. The offering achieves facility optimization through “express” tune-ups of targeted mechanical equipment. Instead of simply reporting the necessary adjustments for the customer to later implement, RCx Express contractors make immediate adjustments on the spot, for example, by closing dampers stuck in the open position.

Strategic Energy Management (“SEM”)

This offering generates process and behavior savings at customer facilities by focusing on waste reduction, process improvement, and lean manufacturing principles. The offering is delivered through small cohort groups of 10-12 customers of similar size who use significant quantities of natural gas (excess of 1 MM therms) and electricity. SEM services are provided at no cost to the participating customers. SEM embeds in customer organizations an energy efficiency ethic that focuses on energy savings as a key part of business operations, culture and success. The offering further increases customer participation in the Business Rebate and Custom Incentives tracks. Additionally, SEM will target health care facilities as participants for the upcoming portfolio. SEM is a joint offering with ComEd.

Description  
(cont.)

## **2. Assessments Track**

The track offers technical assistance and energy assessments to business customers. The streamlined approach provides business customers the opportunity to select the technical assistance approaches best suited for their needs, and provides services ranging from quick, walk-through assessments to investment grade audits. Assessments provided to small businesses and multifamily buildings also provide free, direct installation of some measures.

### Large Business Assessments

This offering provides various technical assistance opportunities to mid-sized and large businesses with the aim of driving projects in the Rebate and Custom Incentive tracks. Assessments available to customers include ASHRAE Level 2 audits suitable for larger customers interested in comprehensive projects; mid-sized assessments targeted at small customers with less complex systems, and drop-in and walk-through opportunity assessments to help customers identify simpler solutions and begin their customer energy efficiency journey.

Mid-sized and drop in/walk through assessments include free direct installation of showerheads, aerators, laminar flow restrictors, pre-rinse spray valves, salon sprayers, programmable thermostats, pipe insulation.

### MF (Audit/DI)

The offering focuses on finding energy efficiency opportunities in the centralized energy systems, building shells, and common areas of multifamily buildings that can be delivered through the Rebates and Custom Incentives tracks. The assessments are generally free and coupled with the installation of free energy direct install efficiency products in common areas. The offering is delivered in conjunction with the MF Unit Assessments described as part of the Residential Assessments Track.

Nicor Gas plans to engage with vendor(s) that currently provide similar services to the Department to perform similar activities in buildings that are primarily occupied by low or moderate income customers. The vendor(s) will test approaches to engage with these buildings, and complete assessments and direct install in buildings based upon their pre-existing relationships and outreach to those customers.

Description  
(cont.)

The direct installation measures offered during assessments include aerators, pre-rinse spray valves, programmable thermostats, low-flow showerheads, and pipe insulation in common areas where applicable.

Due to the vast territory Nicor Gas serves, specific geographic areas will be identified for these vendors for this test activity. Other portions of the territory will be served through current energySMART vendors or new vendors as needed. Vendors will all be required to integrate into energyENGINE, and approaches will be assessed after the first plan year to determine if the different approach is effective and if costs are in-line with other approaches.

#### SB (Audit/DI)

This offering provides technical assistance to small business customers with the aim of directly installing some direct install measures and driving additional projects through the Rebate and Custom Incentive tracks. The typical assessment opportunities include ASHRAE level 2 audits, small business assessments with direct install of energy efficiency products, drop in assessments and walk through opportunity assessments.

The direct installation measures offered during small business assessments include aerators, pre-rinse spray valves, salon sprayers, programmable thermostats, low-flow showerheads, and pipe insulation.

### **3. Rebate Track**

The Business Rebate track groups various prescriptive measures by delivery approach, as noted below.

#### Prescriptive Rebates

Prescriptive rebates are available to all business customers for efficient space heating, process heating, water heating, commercial cooking, programmable thermostats, steam trap, pipe insulation, and water saving equipment. The Prescriptive Rebates offering is delivered in partnership with local trade allies, who are responsible for working with customers to identify, specify, and install qualifying equipment. Many trade allies provide “instant rebates” to lower customers’ initial investment, working with Nicor Gas to receive rebate payments after verified installations. In addition, the various technical assistance offerings in the Assessments track are an important source of prescriptive rebate projects. Appendix A provides a detailed, comprehensive list of all the measures offered through the Rebates track.

Description  
(cont.)**Upstream Rebates**

In this new offering, Nicor Gas will offer financial incentives and other support to manufacturers and distributors of commercial cooking equipment. By working with upstream actors, in addition to existing downstream trade allies, Nicor Gas hopes to extend market reach and simplify program processes. In addition, by paying upstream incentives before markups along the supply chain, Nicor Gas will leverage rebate value to eventual end users. Nicor Gas will work with other Illinois utilities and the Department to jointly deliver this offering.

**4. Custom Incentives**

This track offers financial incentives to customers who implement cost-effective projects not addressed in the prescriptive rebate offering. The Custom Incentives track includes three offerings targeting large, small, and multifamily businesses, as well as a fourth track for combined heat and power projects.

**Large Business Custom**

This offering targets customers using at least 60,000 therms per year, and typically includes larger, more complex projects such as manufacturing process systems, heat recovery systems, burner replacements, and integrated control systems. Projects step through a pre-approval process that involves engineering consultations, site visits, and preliminary incentive calculations. Projects also require post-installation site visits to verify installation. During site visits, engineers also collect project-specific data to calculate final incentive payments that is provided to the independent evaluator.

**Small Business Custom**

This offering targets smaller and midsized customers and typically involves less complex projects such as building weatherization, ventilation systems, or steam trap repairs. Projects go through streamlined pre- and post-installation processes covering similar steps as those outlined for the large business offering. Most Small Business Custom projects are identified through the Small Business Assessment offering, although customers may participate in the program without receiving an assessment.

Description  
(cont.)MF Custom

This offering targets multifamily buildings for projects such as central plant upgrades and tune ups, steam trap repairs, weatherization, and other opportunities not available in the prescriptive rebate offering. This offering is delivered as part of a comprehensive multifamily solution involving building assessments, in-unit and common area direct installations, and prescriptive rebates. From the perspective of building owners and tenants, customers receive one seamless offering tailored to the specific needs of each building.

Nicor Gas plans to engage with vendor(s) that currently provide similar services to the Department to perform similar activities in buildings that are primarily occupied by low or moderate income customers. The vendors will test approaches to engage with these buildings, and cultivate projects in buildings based upon their pre-existing relationships and outreach to those customers. Due to the vast territory Nicor Gas serves, specific geographic areas will be identified for these Department vendors to target this test activity. Other portions of the territory will be served through current energySMART vendors or new vendors as needed. Vendors will all be required to integrate into energyENGINE, and approaches will be assessed after the first plan year to determine if the different approach is effective and if costs are in-line with other approaches.

Combined Heat & Power ("CHP")

This offering will provide financial incentives and technical assistance to business customers installing eligible CHP projects. The CHP offering is offered jointly with ComEd, and also offered solely by energySMART in municipalities not served by ComEd. Eligibility, at least initially, in a joint territory will be limited to customers with electric loads of at least 1 MW to align with ComEd requirements. CHP projects follow processes similar to those outlined for Large Business Custom projects, including pre-installation engineering consultations, site visits, and preliminary incentive calculations; post-installation site visits; and extensive data collection. CHP projects will be facilitated by specialized feasibility studies to help assure customers and the utilities that CHP projects are technically and economically viable. Trade allies with specialty CHP expertise will be enrolled to provide feasibility studies and project management services.

Description  
(cont.)

## 5. **Business New Construction**

The business new construction track addresses energy efficiency in the new construction market by offering financial incentives and education to commercial builders, design and architecture firms, businesses specifying and installing efficient equipment, and municipal code staff. The track includes a new construction offering targeting new and renovated buildings, and a pilot to alleviate barriers towards commercial code compliance.

### Business New Construction (BNC)

The BNC offering targets projects early in development to maximize opportunities for high-performance design strategies. The offering is available to commercial, industrial or multi-family new construction and major renovation projects submitted early in the design phase and meeting square footage requirements. Nicor Gas delivers the program jointly with ComEd.

Technical staff use energy modeling or whole building energy simulations to optimize building designs for energy performance. Modeling results provide design teams with information on energy savings, energy cost savings, and incentive amounts for multiple scenarios. Design teams then select the strategies meeting their design and financial objectives. The program provides three types of financial incentives: free modeling support; measure incentives that increase with overall energy savings; and design incentives that offset the cost of design teams incur to coordinate with the program.

### Code Compliance

This offering is a joint collaboration with the Department and all other Illinois utilities. The offering aims to understand and alleviate barriers towards compliance with the energy portion of the statewide commercial building code. The pilot design includes training personnel to conduct code reviews, financial incentives for hiring code enforcement staff, and offering leasing arrangements for the purchase of expensive verification equipment such as duct blasters, blower doors, and infrared imaging.

Collaboration

The program includes several offerings that are offered jointly with other state program administrators. Please see Table 15 below.

**Table 15 Business Program Coordination**

Offering	Joint Implementer	Single Customer Application	Joint Marketing/	Providing Information about ComEd/Dept.
<b>Business Tracks</b>				
Prescriptive Rebates				
Upstream Rebates	X	X <sup>3</sup>	X	CE
Custom Incentives				
Custom Incentives (MF)	X <sup>2</sup>	X	X	CE
Business Assessment & DI				CE
Business DI (MF)	X <sup>2</sup>	N/A	X	CE
RCx	X	X	X	CE
SEM	X	X	X	CE
BNC	X	X	X	CE
Code Compliance	X	X <sup>3</sup>	X	CE/DEPT
Notes:				
1. Instant discount				
2. More than one implementer but still utilized jointly between program administrators				
3. Application process TBD				
4. The Department may choose to implement using Department funds as described in the plan				
N/A – No Application but common intake process				
Information represents Nicor Gas expectations for PY7 and are subject to change in reaction to market conditions.				

Delivery Strategy

The program is delivered through five participation tracks. The tracks represent Nicor Gas' overall customer engagement strategy as determined through various customer journey mapping exercises. The tracks represent a natural energy efficiency journey for business customers that starts with education and awareness about energy efficiency opportunities, available technical assessment resources and rebates from Nicor Gas. The tracks culminate in offerings that help customers achieve energy savings by installing efficient equipment, improving process efficiencies, implementing customized energy efficiency solutions, and constructing high performance buildings.

<p>Marketing Strategy</p>	<p>The energySMART marketing and outreach strategy for PY7-9 will focus on targeted communications and engagement of business customers across all segments. Nicor Gas will continue to utilize outreach events, meetings, email marketing and direct mail to engage businesses in a targeted approach with relevant messages. Nicor Gas will also leverage business relationships and our concierge-type service through the EEP Marketing and Outreach Center to engage participation among business that have not yet taken advantage of the EEP, as well as continue to support businesses who have already participated to find additional opportunities to control their energy usage. Trade allies will continue to play a role in supporting businesses through their projects and serving as a main communication channel with businesses for certain offerings. Trade allies will be fully engaged to ensure a smooth transition as offerings are moved upstream. General brand awareness will be maintained through outreach with chambers of commerce and through business publications.</p>
<p>Eligible Measures</p>	<p>The Measure Summary Report in Appendix A provides a comprehensive list of all measures in the Business Program, along with supporting data. The key measures in the Business program include:</p> <ul style="list-style-type: none"> <li>• Retro-commissioning</li> <li>• Strategic Energy Management</li> <li>• Assessments</li> <li>• Programmable Thermostats</li> <li>• High-pressure spray valves</li> <li>• High efficiency HVAC Equipment             <ul style="list-style-type: none"> <li>- Steam Traps</li> </ul> </li> <li>• Pipe insulation</li> <li>• Commercial Kitchen Equipment             <ul style="list-style-type: none"> <li>- Customized Projects</li> <li>- Commercial New Construction Projects</li> </ul> </li> </ul>

Program  
Targets

Tables 16 and 17 provide budgets, savings and participation targets for the Business program. Please note that figures are rounded, and savings and costs values are presented in thousands.

Table 16 Business Program Targets

Business Program	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	28,822
Annual Net Therms	20,872
Lifecycle Gross Therms	364,751
Lifecycle Net Therms	251,687
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Costs	12,962
Incentives	14,999
<u>3rd Party Incentives</u>	<u>3,496</u>
Total	\$31,456
<b>\$ / Therm</b>	
\$ / Gross Therm	\$1.51
\$ / Net Therm	\$2.08
\$ / Lifecycle Gross Therm	\$0.09
\$ / Lifecycle Net Therm	\$0.12
<b>COST EFFECTIVENESS</b>	
TRC	2.63
PAC	5.24

Program  
Targets  
(cont.)

Table 17 Business Program Participation Summary

<b>PARTICIPATION</b>		<b>Units</b>
Technical assistance and assessments	1,632	Projects
Low-flow fixtures	13,806	Units
Custom Projects	492	Projects
Pipe insulation	725	Projects
RCx Projects	27	Projects
New Construction	50,335,028	Sq Ft
Boilers	1,365	Units
Steam traps	5,304	Traps
Thermostats	348	Units
Furnaces	948	Units
Other HVAC	201	Units
Water heater	108	Units
Food service	3,066	Units
Commercial Washings	18	Projects

Track  
Breakdown

The track level breakdown of the Business program is provided in the tables below. Please note that figures are rounded and savings and costs values are presented in thousands.

**Table 18 Business Education & Optimization Track Targets**

Business Education & Optimization	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	3,273
Annual Net Therms	3,287
Lifecycle Gross Therms	11,236
Lifecycle Net Therms	11,307
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	921
Incentives	257
<u>3rd Party Incentives</u>	<u>1,232</u>
Total	\$2,409
<b>\$ / Therm</b>	
\$ / Gross Therm	\$0.74
\$ / Net Therm	\$0.73
\$ / Lifecycle Gross Therm	\$0.21
\$ / Lifecycle Net Therm	\$0.21
<b>COST EFFECTIVENESS</b>	
TRC	2.79
PAC	2.88

Track  
Breakdown  
(cont.)

**Table 19 Business Assessment & DI Track Targets**

Business Assessment & DI	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	322
Annual Net Therms	258
Lifecycle Gross Therms	2,629
Lifecycle Net Therms	2,083
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	2,628
Incentives	-
<u>3rd Party Incentives</u>	<u>2,264</u>
Total	\$4,892
<b>\$ / Therm</b>	
\$ / Gross Therm	\$15.19
\$ / Net Therm	\$18.97
\$ / Lifecycle Gross Therm	\$1.86
\$ / Lifecycle Net Therm	\$2.35
<b>COST EFFECTIVENESS</b>	
TRC	0.68
PAC	0.71

Track  
Breakdown  
(cont.)

Table 20 Business Rebate Track Targets

Business Rebate	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	14,599
Annual Net Therms	10,085
Lifecycle Gross Therms	144,552
Lifecycle Net Therms	100,586
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	5,474
Incentives	5,192
<u>3rd Party Incentives</u>	-
Total	\$10,667
<b>\$ / Therm</b>	
\$ / Gross Therm	\$0.73
\$ / Net Therm	\$1.06
\$ / Lifecycle Gross Therm	\$0.07
\$ / Lifecycle Net Therm	\$0.11
<b>COST EFFECTIVENESS</b>	
TRC	6.31
PAC	3.19

Track  
Breakdown  
(cont.)

**Table 21 Custom Incentive Track Targets**

Custom Incentives	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	8,169
Annual Net Therms	5,963
Lifecycle Gross Therms	144,849
Lifecycle Net Therms	105,740
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	2,314
Incentives	8,039.41
<u>3rd Party Incentives</u>	-
Total	\$10,353
<b>\$ / Therm</b>	
\$ / Gross Therm	\$1.27
\$ / Net Therm	\$1.74
\$ / Lifecycle Gross Therm	\$0.07
\$ / Lifecycle Net Therm	\$0.10
<b>COST EFFECTIVENESS</b>	
TRC	2.49
PAC	6.77

Track  
Breakdown  
(cont.)

**Table 22 Business New Construction Track Targets**

Business New Construction	PY7-PY9
<b>THERMS (in 1,000's)</b>	
Annual Gross Therms	2,459
Annual Net Therms	1,279
Lifecycle Gross Therms	61,484
Lifecycle Net Therms	31,972
<b>BUDGET (in \$1,000's)</b>	
Non-Incentive Cost	1,625
Incentives	1,510
<u>3rd Party Incentives</u>	=
Total	\$3,135
<b>\$ / Therm</b>	
\$ / Gross Therm	\$1.27
\$ / Net Therm	\$2.45
\$ / Lifecycle Gross Therm	\$0.05
\$ / Lifecycle Net Therm	\$0.10
<b>COST EFFECTIVENESS</b>	
TRC	2.86
PAC	6.47

## 4 PORTFOLIO FUNCTIONS

### 4.1 Portfolio Administration

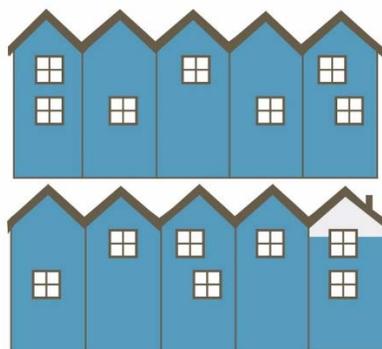
Nicor Gas has continued to evolve and grow internal core competencies consistent with the strategy to deliver a first class, comprehensive portfolio to Nicor Gas customers since the inception of energySMART in 2011. To accommodate this ramp-up and evolution of the program over time, energySMART is leading the way through innovations in program design, collaboration, and new technologies. During the first five years as of the filing of this plan, energySMART has reached customers in 644 out of 694<sup>9</sup> (Figure 10) communities in the Nicor Gas service territory, or greater than 92% of the entire territory. As reported in the Illinois SAG, Nicor Gas has delivered more lifecycle therm savings<sup>10</sup> (gross) than all of the other gas programs (including the Department) combined over the first reported three years of program offerings (Figure 11 below). The number of participating contractors and trade allies engaged in the program remains strong with more than 9,000 contractors participating, and over 300 contractors who are part of the Contractor Circle who leverage energySMART branding and tools/services such as the online “Find a Contractor” tool. The majority of rebates issued per year are for equipment or improvements installed by Contractor Circle members. For example, 100% of rebates issued for air sealing and attic insulation were for work performed by Contractor Circle members. Customer engagement in energySMART (measured by inbound and outbound customer calls, website visits, email opens and click-throughs, and outreach interactions) increased by more than 450% compared to the previous 3-year cycle. energySMART continues to mature, and expand in reach, engagement and value for Nicor Gas customers throughout Illinois.

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<sup>9</sup> [http://www.aglresources.com/about/distribution\\_nic.aspx](http://www.aglresources.com/about/distribution_nic.aspx)

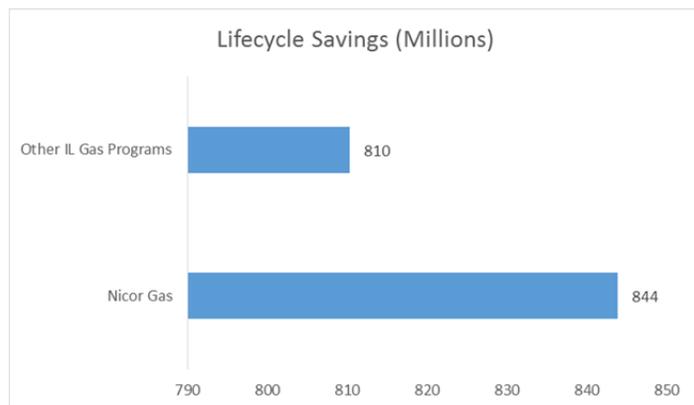
<sup>10</sup> [http://www.ilsag.info/subcommittee\\_il-ee-successes.html](http://www.ilsag.info/subcommittee_il-ee-successes.html)

**Figure 10 Nicor Gas energySMART customer reach**



644 of the 694 communities in Nicor Gas territory have participated. That's more than 92%.

**Figure 11 Lifecycle Gross Therm Savings through GPY3**



As the program has matured, the synergies of insourcing many previously outsourced administrative activities has facilitated cost-effective delivery of a first class portfolio to Nicor Gas customers with offerings they desire, in ways they understand and how they choose to participate. Over the past three years, Nicor Gas has developed internal core competencies around trade ally management, planning, data management, marketing, and customer care. As these skills have developed, further synergies including advanced data analytics, deeper program management, and direct outreach will continue to be performed by energySMART staff in the next three year plan and beyond.

Nicor Gas has been building on a long-term strategy with each new portfolio cycle advancing on the efforts of the past. In addition, the engagement with stakeholders in IL continues to mature, as policy and protocols are evolving as well. For example, within the first three year portfolio, the stakeholders, Nicor Gas and other plan administrators in Illinois negotiated and drafted a statewide TRM and established a NTG policy. In the second three year cycle, a statewide

policy manual was created that embodies principals that are reflected in this current third cycle filing. These are significant achievements for everyone involved; utilities, regulators, environmental & ratepayer advocates, trade allies & contractors, and most significantly, customers. There are many utilities outside of Illinois that took decades to achieve what these parties have accomplished in Illinois over the past five years.

Broadly speaking, the SAG process has helped bring all stakeholders<sup>11</sup> to the table in order to solve and build statewide consensus. The effort associated with extensive negotiations of the policy manual and program evaluations dominated the SAG discussions in this past cycle. As Nicor Gas' energy efficiency program continues to mature and reset at a fairly flat budget level, statewide policy and regulatory matters also continue settling into more of a steady-state. However, until that steady-state is achieved, additional costs and administrative resources borne by all parties associated with energy efficiency in Illinois will continue to be incurred over the next three year plan period.

Over the past years, Nicor Gas has continued to leverage collaboration and coordination among the utilities, the Department, and many of the market actors through trade ally focus groups, emerging technology entrepreneurs and other partnerships. This has been a model of success. Through such collaborations, Nicor Gas has leveraged savings associated with joint marketing, customer acquisition and program delivery. Joint and collaborative programs have allowed Nicor Gas to engage with customers with a holistic offering that strives to address both gas and electric needs. Through these partnerships, Nicor Gas and ComEd have been leaders across the US in these efforts. The most recent achievement has been the joint SEM offering launched in PY4 among 10 of Nicor Gas and ComEd's largest industrial customers. The offering is the first in the industry where two separate utilities have come together to serve a common customer to offer such a SEM service. Although there are some additional costs and complexity associated with such partnerships, the net benefit to the customer is obvious. Since the launch of the very first programs during Rider 29, Nicor Gas has voluntarily reached out to our partners to coordinate offerings across northern Illinois. While not perfect, these efforts continue to create a streamlined and simple offering to our joint customers, and will be an important continuing evolution throughout the next three year plan delivering maximum benefits to our customers in an efficient way.

Core competencies that have been moved in-house also include planning and information technology. Unlike the early startup years, the Nicor Gas energy efficiency department now houses customer, program and market information in a data warehouse called energyENGINE. This three-year effort is paying dividends now and will continue into the future. Now that the data is consolidated from multiple sources and integrated, the next steps involve using data analytics for marketing, program design, planning, real-time evaluation and a host of other applications. Investments in energyENGINE have already proven useful in the current plan

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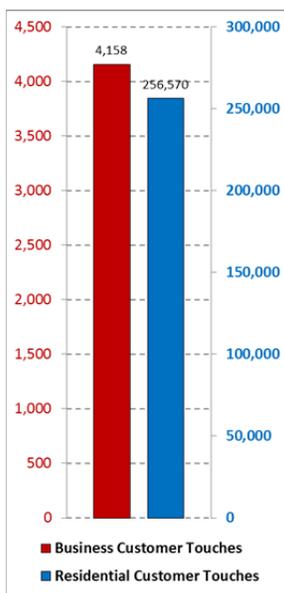
<sup>11</sup> The stakeholders that regularly participated in the SAG process included the Commission Staff, the Illinois Attorney General's Office, the Citizens Utility Board, the Environmental Law and Policy Center, and the Natural Resources Defense Council.

operations, targeted marketing, and have been used in the design of this three year plan filing. Further development of these capabilities in-house over this next three year cycle and beyond will continue to allow the portfolio to avoid costly third-party services and products that are in the market today.

In order to continue to grow and mature along with the program, our customers, trade allies and other market actors, the entire “administration” of the portfolio will accomplish over the next three-year portfolio:

- Engagement with over 250 thousand customers over three years (Figure 12) to install over 330 thousand energy efficiency measures and projects
- Delivery of over 37 million therms of savings and almost \$15 million<sup>12</sup> in reduced gas bills
- Assistance to more than 5 thousand trade allies to understand, engage, and “sell” high efficient equipment and services
- Oversight and direction of the \$90 million portfolio managed by with 40 internal and over 100 contract jobs in Illinois that would not exist without energySMART

**Figure 12 Nicor Gas planned Households and Businesses Penetration**



<sup>12</sup> Assuming commodity price of Natural Gas at \$0.40 per therm.

## Organizational Structure

The program management and administration of the energy efficiency team is comprised of internal Nicor Gas staff and external staff from implementation contractors. The internal team consists of 40 positions. The organizational structure and tasks are summarized below.

The internal energy efficiency organization reports to the Vice President Energy Efficiency, whose role is a shared services position in the Southern Company Gas organization. This position has executive oversight responsibilities for energy efficiency programs.

Nicor Gas' energy efficiency program is managed by two Managing Directors, with an organization is structured around four major functions:

1. Operations and Planning;
2. Quality Assurance and Evaluation (Accounting, Information Technologies and Regulatory);
3. Marketing and Communications; and,
4. Customer Outreach and Partner Services.

Although Nicor Gas will hire implementation contractors to perform the majority of transactional tasks and some day-to-day program tasks, it is important for energySMART to have an internal workforce responsible for overall oversight, marketing, information systems, and program management of the portfolio. Over the course of time, Nicor Gas will continue to internalize additional aspects of these core competencies as critical synergies are identified to manage a successful customer-focused and needs-driven program.

The primary tasks for each function are listed below. Detailed explanation of various functions is provided below.

### Operations and Planning

- Provide overall management and oversight on energy efficiency programs delivery and implementation to meet the statutory goals.
- Manage vendors performing implementation activities including vendor relationships and performance.
- Coordinate and collaborate on jointly implemented programs with other utilities and municipalities.
- Propose changes to program parameters to improve performance.

- Perform research and analysis including benefits-cost analysis on energy efficiency measures, programs and over-all portfolio to drive a cost-effective program.
- Collaborate with IC's to develop thorough and accurate technical assumptions for energy savings measures.
- Lead efforts to update and include new measures in the Illinois technical reference manual.
- Assist IC's with cost-effectiveness analysis on proposed measures and programs, available market and joint offerings with other utilities.
- Conducts inter year and intra year programs planning adjustments to assure energySMART meets goals.
- Develop, design and plan the three-year portfolio.
- Provide market research and intelligence to develop new offerings suitable to customer needs in the Nicor Gas service territory leveraging the emerging technologies program.

#### Quality Assurance and Evaluation (Accounting, Information Technologies and Regulatory)

- Produce forecasts for each program.
- Process and verify invoices to ensure pricing, activities and services conform to contractual terms.
- Develop, update and administer information technologies that support energySMART.
- Make necessary filings with the Illinois Commerce Commission (testimony related to docketed cases, data requests, quarterly updates and other interrogatories).
- Develop and provide program quality assurance oversight.
- Coordinate and collaborate with the Department.
- Coordinate efforts with third party EM&V contractors, IC's, SAG, and others to assure evaluation activities are completed, evaluation recommendations are vetted and implemented, and lessons learned applied.

#### Marketing and Communications

- Achieve a consistent brand messaging across energySMART and cross-promote offerings with a centralized EEP marketing and communications team.

- Plan, implement and direct overall program marketing, communications, public relations, public affairs and internal/external outreach efforts.
- Build internal capabilities to perform customer segmentation analysis and drive energySMART program participation in-house.
- Create mail and email communication, content development, technical and trade ally collateral development, website design and maintenance, and technical or trade ally event coordination and staffing.
- Develop educational and community outreach materials and programs.

#### Customer Outreach and Partner Services

- Manage, support and provide oversight of rebate processing and marketing and outreach center operations.
- Conduct inbound and outbound calls to direct customers to the correct program offerings, solve customer problems, and encourage customers to take additional energy saving actions.
- Staff community outreach events.
- Follow up and engage with program participants through surveys, focus groups, and other strategies to develop insights into participant behavior on installed energy savings measures.
- Manage and coordinate the procurement process within the department.
- Coordinate meeting and conference functions.
- Collaborate with on-bill financing efforts to ensure feature of energySMART are available to customers.

#### **4.2 Portfolio Marketing**

Portfolio Marketing is a key component of the program. Some elements such as marketing, education, and outreach, do not lend themselves to direct allocations to specific savings estimates but do serve as an integral component for achieving savings within the portfolio.

#### Communication and Outreach strategy

energySMART's communication and outreach strategy has evolved since the program's inception from a broad, decentralized approach to a targeted and customer-centric strategy, focused on simple, relevant and consistent messages and a balance between broad and targeted reach. The result of this transition has been deeper and more effective customer

engagement and barrier-free participation. The program marketing, communications and outreach strategy for plan years seven through nine will continue to build on the foundation of a customer-centric, relevant and targeted approach established during plan years four through six. By leveraging the resources created over the past few years, including the energySMART Marketing and Outreach Center and the energyENGINE data warehouse, energySMART will achieve a balance between broad awareness, targeted outreach and relevant communications to engage customers.

#### Nicor Gas energySMART Awareness

Through customer and contractor feedback, we continue to find that broad awareness and education about energySMART offerings, the website (nicorgasrebates.com) and online resources (such as our Find a Contractor tool) are essential to keep the program front of mind for customers and contractors. As such, we will continue to layer the outreach and communication strategy with messages that inform customers of the program through channels including:

- Television, radio and billboards
- Community partnerships and events, such as the Brookfield Zoo and Naperville Ribfest
- Bill inserts, email communications and other customer communications

The program website will continue to serve as the central portal for educational resources and information. An online store may be added as an additional way to engage customers and streamline the rebate application process. The Marketing and Outreach Center and the Contractor Circle network will continue to serve as the front lines of outreach, service and support for customers.

#### Nicor Gas energyENGINE Segmentation and Targeting

Building on the energyENGINE (energySMART's data warehouse) and integrated email marketing platform implemented during PY4 through PY6, we will continue to create a more relevant and personalized experience for our customers by targeting communications based on market data and past participation, as well as engaging them in-person with energy-saving kits and point-of-sale rebates at outreach events or at physical or web-based retail locations. energySMART will also incorporate digital media and search engine optimization to compliment the personalized, local experience for customers.

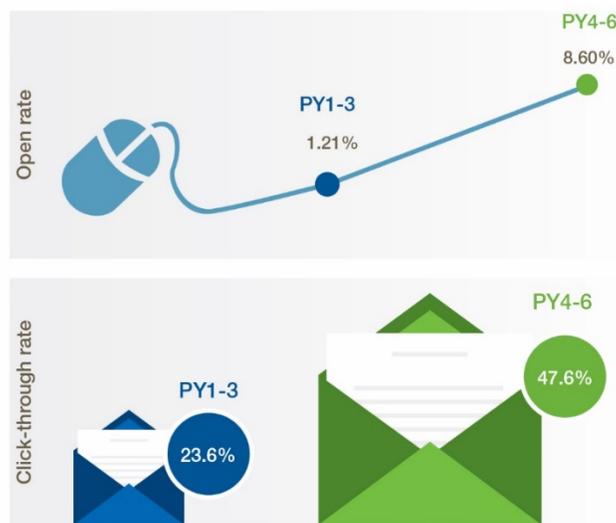
Targeted marketing, communications and outreach efforts may include:

- Email communications
- Zoned bill inserts
- Outbound call campaigns

- Multicultural marketing
- Community partnerships and outreach events, such as township energy fairs or community forums

Through targeted email marketing, energySMART has significantly increased customer engagement and education by sending relevant messages based on customer data gathered within energyENGINE. For example, two neighbors may receive completely different email content based on what offers they have already participated in, what types of equipment or improvements they have demonstrated interest in, and how much energy they use in their homes. By targeting content, customers experience more personalized communications and messages are relevant (not promoting offers that they have already taken advantage of). Open and click-through rates of customer email communications have nearly doubled (Figure 13) since implementing in-house email marketing and targeting content based on data available through the energyENGINE.

**Figure 13 Email communication open and click-through rates**

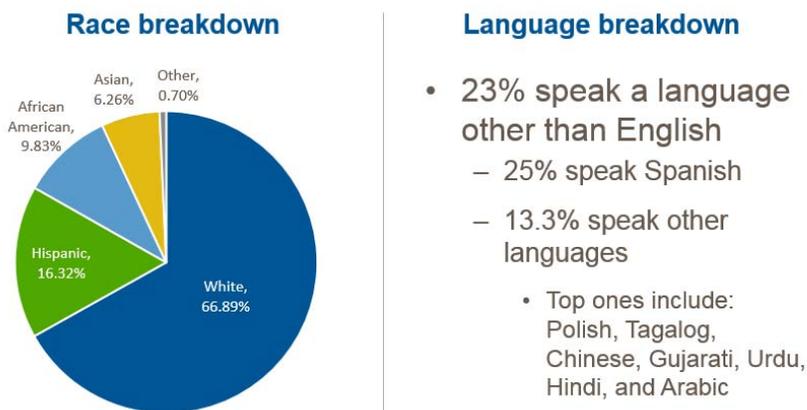


**Customer engagement increased by more than 450% after insourcing core areas of marketing, outreach and IT.**

During PY4, the program’s marketing team commissioned a study of census data to identify the areas of multicultural presence (Figure 14) throughout the Nicor Gas territory. energySMART will establish a hyperlocal presence through the continuation of multicultural marketing proven successful using this data during plan years five and six. By meeting our customers in their communities and promoting offerings in publications of cultural affinity, the program can go deeper (Figure 15) to reach customers that may not have engaged with the program in past. A mix of English content with headlines translated into key languages (Figure 16) will help

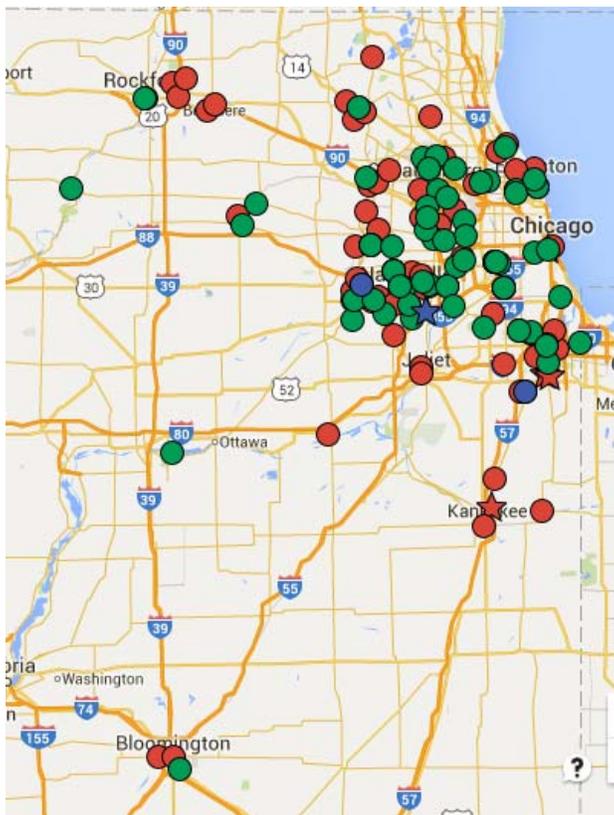
communicate the program offers. Many of the community events and partnerships that energySMART engaged in as a part of this effort reached customers who had not yet learned about energySMART through mainstream media. For example, at the Xilin Festival, a customer in Naperville’s Chinese community said, *“I had no idea you had this program until seeing you at this event today.”* In another instance, the customer told us that they learn their news through the India Bulletin, not mainstream news publications. During an event held in partnership with WVON radio, a customer announced to the attendees that he was unsure about the program, but after meeting energySMART representatives at a previous WVON event and getting a home energy assessment, he was a believer and had since participated in several other offerings. These examples of building trust in cultural communities across our territory demonstrate the effectiveness of outreach and education through multicultural targeting.

**Figure 14 Service Territory Multicultural Demographics**



energySMART will also emphasize ways for all customers to participate, regardless of income. From distributing free energy-saving kits and sharing energy-saving tips at food pantries and energy assistance events, to promoting smart thermostats at events where customers may be able to purchase on-site, program outreach and communications will make an effort to meet customers where they are to encourage saving energy at any income level.

Figure 15 energySMART outreach across service territory



energySMART will also continue to make an effort to reach customers in the way they preferred to be contacted, whether by phone or email, in mainstream media or local/cultural publications, or on the internet or more traditional media outlets.

Figure 16 energySMART multi-language marketing

Trade Ally Communication and Training

Part of the marketing and communications strategy includes robust communications and resources for Trade Allies, including the Trade Ally Portal on nicorgasrebates.com and collateral that supports sales and customer education. Trade Allies are an integral part to the success of our energySMART portfolio. Trade Allies install products, provide services or support energySMART in various facets. The goal of the training is to provide Trade Allies with the tools and resources to help them provide a superior customer experience and quality installations. Trade allies are typically offered training on program offerings, technical expertise, safety, sales, energy efficiency, etc. As rebates change and new offers are introduced to the program, communications and training sessions will keep contractors engaged in the program evolution to provide excellent service and support to customers. In some instances, this allows Trade Allies to offer instant discounts and submit customer rebate applications.

In addition to offering Trade Ally training, the portfolio also houses a Contractor Circle service, which is an energySMART offering where enrollment is based on program participation. Membership offers many benefits including but not limited to being searchable on our “Find A Contractor Tool,” instant discount offerings, Energy Efficiency loans, use of Contractor Circle logo, and Free marketing material (some of which can be branded with their logo). This

component has not only driven savings for our customers, but it also provides local businesses with a continuous book of business within the energy efficiency market.

### Customer Satisfaction

Customer and trade ally feedback helped shape energySMART – from the structure of the portfolio, to program implementation design, to the language used to describe the offerings. During the previous three-year plan, customer journey-mapping and focus groups resulted in more streamlined communications and removal of pain points in the participation process. For example, customers missing required information on the rebate application submittal now receive a proactive phone call from our outreach team rather than only receiving a letter in the mail. As an ongoing part of the energy efficiency marketing, communications and outreach strategy, the program will continue to engage customers and trade allies in focus groups, surveys, and customer journey-mapping to continuously improve the participation experience and remove any perceived barriers to participation.

### **4.3 Regional Energy Groups and Consortiums**

The Nicor Gas energy efficiency team participates in and attend functions, training events, and working groups in many energy efficiency related professional organizations. This ability to foster and develop peer-to-peer relationships, benchmark with other programs across the US and Canada, and otherwise develop skills and know-how, sharing best practices continues to advance the innovation and offerings to our customers. Furthermore, the best practices and innovations developed by Nicor Gas through the energySMART program can and are shared with others, as evidenced by the numerous peer-awards received by individuals and on behalf of the entire program. Nicor Gas is a leader in energy efficiency, and benefits from this role by engaging robustly with our peers. Below is a listing of some of the organizations Nicor Gas partners with:

1. Consortium of Energy Efficiency (“CEE”) – CEE is the US and Canadian consortium of gas and electric efficiency program administrators. They work together to accelerate the development and availability of energy efficient products and services for lasting public benefit. CEE members build infrastructure supporting national markets in efficiency. CEE role is not to develop or implement the programs delivered at the local level, but to influence national players-manufactures, stakeholder, government agencies, and to benchmark, share ideas, and help maximize the impact of efficiency programs. Their market initiatives impact residential, commercial and industrial products and services, including home appliances, water heating, HVAC and whole home. We participates on various committees that are shaping EE equipment and offerings. Some committees we have participated in are Residential HVAC, Residential Water Heating, and Whole Home. We also participate by attending meeting in person.
2. The American Council for an Energy-Efficient Economy (“ACEEE”) – ACEEE is a nonprofit, 501(c)(3) organization, acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors. The EEP leverages and benefits from engagement and participation in ACEEE through work conducted by ACEEE such as:

- Conducting in-depth technical and policy analyses
- Advising policymakers and program managers
- Working collaboratively with businesses, government officials, public interest groups, and other organizations
- Convening conferences and workshops, primarily for energy efficiency professionals
- Assisting and encouraging traditional and new media to cover energy efficiency policy and technology issues
- Educating consumers and businesses through our reports, books, conference proceedings, press activities, and websites

3. The Association of Energy Services Professionals (“AESP”) – AESP is the premier organization for professionals in the energy efficiency industry dedicated to improving the delivery and implementation of energy efficiency, energy management and distributed renewable resources. Membership in AESP helps advance energySMART professional growth and development through acquiring current practical knowledge and building networks in the energy efficiency field. AESP offers a wide range of on-site and regional courses in a variety of energy-related disciplines, and delivers practical information, case studies, best practices, and lessons learned. Other benefits of AESP membership include:

- Resource Library  
Ranging from past conference presentations, white papers to reports, compilations of data and books, past issues of Strategies and previously recorded Brown Bag Webinars, AESP offers publications that meet the professional development needs of its members.
- AESP Brown Bag Webinars  
Monthly Webinars on current issues, relevant case studies and new technologies. Now FREE to active members.
- Networking  
Cited as one of the most important member benefits, AESP brings together a nice mix of thoughtful leaders, seasoned professionals and those new to the industry.
- Topic Committees  
Topic committees focus on specific areas in the energy services field. Members participate in the development of products and services including publications, training courses, conference presentations and more. The current AESP topic committees are: Market Research and Evaluation, Program Implementation, Energy Technology and Services, Pricing and Demand Response, DSM Business Issues and Models, and Marketing.

- Strategies  
Monthly e-newsletter includes articles and case studies on successful programs, as well as information on key issues, major industry events and member news.
- Annual National Conference  
This leading energy event brings together professionals and thought leaders to share insights and experiences in the field.

4. United States Green Building Council (“USGBC”) – USGBC was founded in 1993 with a mission to promote sustainability-focused practices in the building and construction industry. They also created one of the leading green building rating systems, which would later become known as LEED (Leadership in Energy and Design). Since the rating systems unveiling in 2000, it has become an international standard for environmentally sound buildings, certifying hundreds of thousands of square feet per day. The energySMART staff participate in educational and networking events in an effort to provide information to industry participants about our offerings, solicit feedback on our programs, and build relationships with Trade Allies who currently or potentially participate with energySMART.

5. The Midwest Energy Efficiency Alliance (“MEEA”) – MEEA is a collaborative network and influential membership organization spanning thirteen states that provides a professional forum where energy providers, policymakers, implementers, manufacturers and advocates can make connections, seek advice and learn about energy efficiency. MEEA facilitates an annual conference which plays an important role in forging partnerships, promoting new technologies and curating the evolving conversation around economic sustainability and environmental stewardship from energy efficiency. MEEA also facilitates the Illinois Home Performance with Energy Star (“IHPwES”) which we partner with to offer our Air Sealing & Insulation rebate to customers. Customers are also issued a certificate if they meet Energy Star qualifications.

6. Corporate Roundtable on Sustainability – The Corporate Roundtable on Sustainability provides an informal, collaborative forum for companies committed to bringing sustainability to their operations, their employees, and their senior leadership. More than 40 local executives gather at meetings held three or four times annually. Companies make presentations to the collective on demonstrated strengths and successes in diverse areas of focus. Participants discuss their aspirations, share best practices, exchange ideas, and support each other's goals and challenges on sustainability. Nicor Gas has presented an overview to the group about energySMART offerings and how they, their employees or companies can take advantage from these rebates and incentives to help them save money and energy. We also have presented on our new SEM offering to provide an overview and share how they can get involved. SEM is a continuous improvement approach to reducing energy intensity over time for larger companies.

7. National Association of the Remodeling Industry (“NARI”) – NARI serves as a medium for business development, advocacy and the principal source for industry intelligence. NARI connects homeowners with its professional members and provides tips and support so that the customer has a positive remodeling experience. NARI is an organization of high-quality remodeling professionals. Its members are committed to integrity, high standards, professional education, ethics and market recognition. NARI's Core Purpose is to advance and promote the

remodeling industry's professionalism, product and vital public purpose. NARI members may participate with energySMART or provide customers with information on how they can participate. energySMART staff attend meetings and present NARI members with information about our offerings so they are equipped to provide the content to their customers.

8. American Society of Heating, Refrigerating and Air-Conditioning Engineers ("ASHRAE") – ASHRAE is a global society advancing human well-being through sustainable technology for the built environment. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today. Its mission is to advance the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world. energySMART participates with this Trade Ally group to learn about energy efficiency trends and new equipment. There is a strong emphasis on participation in local meetings as well as attending the national conferences to learn about new equipment, connect with Trade Allies and manufacturers, and build relationships.

9. Home Performance Coalition (formally ACI – Affordable Comfort, Inc.) – The Home Performance Coalition's vision is that all homes are healthy, comfortable and energy-efficient. The Home Performance Coalition's regional and national conferences continue in the proud tradition of ACI events, convening professionals from all sectors and welcoming contractors, HVAC professionals, remodelers, builders, utilities, manufacturers, local, state, and federal government agencies, nonprofits, and everyone working to create healthy, comfortable, resource-efficient homes. The Home Performance Coalition's educational agendas present essential information for industry professionals at every stage of their careers—from the fundamentals of building science to strategies for marketplace transformation. Many of our Trade Allies participate in this organization. energySMART participate in the events, where individuals come together to discuss technical problems, exchange new techniques, source new tools and materials, enhance business development strategies, and examine the role that residential energy efficiency plays in creating strong, healthy communities, the development of green jobs, and environmental stewardship.

#### 4.4 Emerging Technology Program

The Emerging Technology Program (“ETP”) brings energy-efficient natural gas technologies into the Nicor Gas territory marketplace after conducting technical demonstrations, verifying potential therm savings and providing incentives for market adoption. This function is intended to support technologies that are nearing commercial viability, or already commercially viable and available, yet untested or unable to overcome market barriers in the Nicor Gas territory. There are no savings goals for this program. However, ETP projects are expected to generate energy savings that will be documented in ETP reports.

The energySMART program originally selected the Gas Technology Institute (“GTI”) through a competitive RFP process to administer this function in the portfolio. The ETP is managed by a Nicor Gas Program Manager. The function will continue to exist in this program cycle (PY7-9) and the incumbent vendor may (after negotiation of current terms and conditions) continue to administer the ETP function in both this and the next program cycle since several of the pilot projects underway have longer maturity cycles thus allowing continuity over time.

ETP consists of two tracks to develop and test a product offerings, that is an internal track and an external track. The internal track includes offerings that test improved program designs, new delivery strategies, and new methods to market. These offerings primarily use established technologies, but may refine or fine tune the information about those technologies (e.g. dynamic zone damper system), or combine multiple requirements into one offer (e.g. combining space and domestic hot water heating offerings) or improve delivery over traditional program designs (e.g. focusing on direct outside air roof-top units) . The external track focuses on identifying new or under-utilized technologies and increasing their adoption rate by providing financial incentives to technical demonstration projects resulting in energy savings.

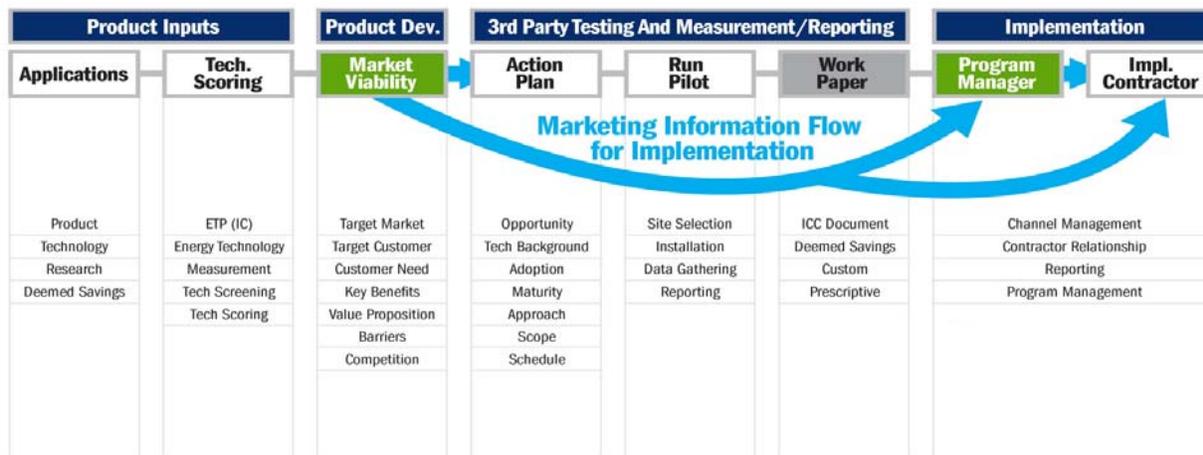
ETP allows energySMART to identify new prescriptive and custom technologies to promote through existing energy efficiency tracks, and also identify new opportunities to deliver promising technologies and delivery approaches. Data generated from technical demonstration pilots lead to new measures that can be offered as a prescriptive measure, and will feed into the state wide Technical Reference Manual update process to be used by programs across Illinois and other jurisdictions through our collaborations with GTI who is engaged with emerging technology programs across the US and Canada.

An on-line application process was developed that serves as a simple and wide gateway to the ETP for interested parties to submit ideas and receive immediate feedback on the concept through the system. The “Ready”, “Set”, “Go” three step process (Figure 17 and Figure 18) provides an immediate screening and feedback at the “Ready” stage. If the idea meets the base standards, it proceeds to the “Set” stage where a deeper evaluation is performed by the ETP administrator. Finally, the product is sent to Nicor Gas for a market viability review. The market viability review helps to determine if there is a sufficiently large market potential and if the product make sense. The last stage, “Go”, will result in a fully developed concept with implementation plan for consideration by energySMART to deploy as a pilot.

Figure 17 Nicor Gas ETP – A Ready, Set, Go Stage and Gate Process



Figure 18 Nicor Gas ETP Process Map



In addition to providing incentives, the ETP will develop case studies based on actual results, highlight demonstration sites, feed the IL TRM update process, and promote successes to gain wider acceptance for customers, trade allies, and Nicor Gas customers. These efforts are essential to help establish new energy efficient natural gas technologies identified by the ETP in Illinois.

### Successful Technologies Evaluated

During the second program cycle, the ETP successfully evaluated over hundred individual submittals representing several technologies including high efficiency condensing rooftop units (“RTU”) expected to yield up to 2,395 net therms per unit, on-demand domestic hot water recirculation system expected to save 2,000 net therms and commercial and industrial air curtains expected to save 42.5% of gas savings per heating system. The ETP has been very successful as evidenced by the activity in such a short period of time. There are a total of 85 development applications, 22 pilots, and 8 potential pilots as the program moves through PY6.

### Subscriptions

ETP utilizes various subscription services in order to stay abreast of developing technological advancements and services. This enables the ETP to cast a wide net in its search for viable products to be piloted and maximize effectiveness of internal resources. ETP will continue to utilize a free subscription to FreshPatents.com for example, which produces a list of patent applications for energy efficient products by category.

### Joint Collaborations

As a result of the effective and efficient ETP function demonstrated over the first two program cycles, the other Program Administrators in IL have either partnered on individual projects or expressed interest in jointly implementing ETP in the future. Leveraging the backbone that has been created, additional dollars from other Plan Administrators can be efficiently incorporated into the ETP. Specifically, The Department has expressed a desire to partner with energySMART to incorporate evaluation and demonstration of technologies that can impact low income customers, and public sector buildings/institutions. Collaboration is expected to take place with one or more IL based Plan Administrators in this plan cycle.

In addition to partnering with GTI and other Plan Administrators, the ETP will utilize various external entities in order to expand its reach. In the next plan cycle, the ETP will extend collaboration with other non-Illinois based utilities across the country and establish nationwide joint utility pilots. Other utilities will be able to utilize our established methods and development processes that might take them another 3-5 years to develop in exchange for a portion of the operational costs for conducting the pilot. This will allow energySMART to leverage statutorily limited ETP funding to complete more work.

In addition to conducting joint pilots with other utilities throughout the country, the Company will partner with the Clean Energy Trust (CET), which is a local Chicago-based entity dedicated to leveraging science, innovation, and entrepreneurship to bring about cleaner and more sustainable energy and resource solutions within the Midwest. Numerous other national labs, universities, investment institutions and utilities partner with the CET with various projects and initiatives.

Lastly, the ETP may partner with the Research Park at the University of Illinois, which is dedicated to providing an environment where technology-based businesses can utilize

collaborative research tools and access to University labs, equipment and services. Numerous Multinational and/or publicly traded corporations participate within this organization. In addition, this group tracks the economic growth produced by its participants at the state and local levels.

### Lessons Learned and Future Considerations

A number of lessons learned and insights gained from the first two program cycles have served as a strong foundation for the second ETP cycle. These learnings have helped shape the core principles that assist with the continued evolution of the ETP.

#### *1. Product technology mix*

Consideration will be given to the seasonal impacts on the products being tested. It was realized that products that have a seasonal impact on energy savings may result in longer testing time frames. For example if a product favors heating season technologies and requires testing during the heating season, an unavoidable lead-time to the process may be added if the pilot is unable to be implemented for the current heating season. There will be insufficient data for another year thus delaying the products implementation. The ETP therefore, will look for a balanced product mix of heating and non-heating season products so there are always multiple pilots to run. In addition to maintaining a mix of heating and non-heating season products, the ETP aims to maintain a diverse mixture of products for commercial, industrial, and residential sectors in order to capture market transformation opportunities in all customer sectors. Partnership with the Department would expand these sectors to specifically target low income and public sector buildings/facilities as well.

#### *2. Market viability*

The market viability section was added to the screening section of products to determine if there exists an actionable market for the product in question before starting a test phase or a pilot. Both engineering and market considerations will be taken into account when selecting products.

#### *3. Product development process*

The ETP will incorporate best practices from a traditional product development process similar to consumer product companies. The techniques used in consumer product marketing are similar to those required for the EEP. This will include determining how the consumer perceives energySMART offerings and what level of incentives is sufficient to drive an energy efficiency action.

#### *4. Pilot site selection*

A considerable challenge exists with finding candidate sites and facilities to install and test pilot offerings. The challenges range from interrupting regular business operations from installation of new products and altering production processes. During the first program cycle, the Nicor Gas ETP identified 10 large customers that agreed to be first contacts on future pilot testing sites. The goal will be to increase this enrollment over the next cycle to at least 25 customers.

## 5. Trends

The advances in cloud computing and wireless technologies is being addressed in the Nicor Gas ETP. A greater number of wireless technologies connected to cloud computing are in pilot test phases. In most cases, wireless technologies translate to lower installation costs and enables adoption in markets that were previously cost prohibitive.

## 6. Emerging Technology

Although there are new emerging technologies that will be evaluated, a great deal of emphasis is placed on existing technologies that never attained significant market adoption, but due to changing market conditions may now be viable. However, as these technologies and ideas are evaluated, the ETP will look further “upstream” to identify new ideas to fill the pipeline as necessary.

## 7. Applicant Participation

A commitment from interested parties is vital to the success of the ETP and active participation is required from interested parties wishing for a product to be tested and evaluated by the ETP. This may happen either by supplying the ETP with a no cost product that is intended for future offering, pilot site identification, or installation and configuration.

### 4.5 Evaluation, Measurement and Verification (“EM&V”)

Evaluation, measurement, and verification (“EM&V”) are the processes used to confirm that energy efficiency installations, as well as calculated energy savings, are at the levels reported. EM&V processes are typically employed to determine the effectiveness of energy efficiency and other demand-side management (“DSM”) programs. Processes may include:

- Site visits to confirm proper installation and operation of efficient equipment
- Pre- and/or post-installation monitoring to measure energy savings
- Program, process, and impact evaluations
- Participant Surveys to estimate free-ridership, spillover and NTG ratios

These processes are designed to improve the operations of energy efficiency programs, measure their impacts, and correctly attribute energy savings to utility efforts.

Section 8-104(f)(8) of the Act provides that a gas utility’s proposed energy efficiency plan must:

Provide for quarterly status reports tracking implementation of and expenditures for the utility’s portfolio of measures and the Department’s portfolio of measures, an annual independent review, and a full independent evaluation of the 3-year results of the performance and the cost-

effectiveness of the utility's and Department's portfolios of measures and broader net program impacts and, to the extent practical, for adjustment of the measures on a going forward basis as a result of the evaluations. The resources dedicated to evaluation shall not exceed 3% of portfolio resources in any given 3-year period.

220 ILCS 5/8-104(f)(8).

Table 3 above provides the proposed EEP expenditures for EM&V in each program year which include the costs of the EM&V independent evaluators. They do not include other costs for evaluation related activities, such as EEP staff, consultants, legal or program implementers' costs to collect materials used for evaluations.

There are two types of formal program evaluations (process and impact evaluation) that will be applied within this three-year EEP in addition to ongoing less formal monitoring processes. Process evaluations determine if individual programs are performing as designed and effectively reaching the target customer groups. Methods employed for process evaluation include surveys of participants and non-participants, direct interviews with those involved with the program at all levels (including participants and non-participants), contractors and "trade ally" surveys, and assessments of program processes. The result of a process evaluation is the recommendation of whether a program should continue being offered in its current state or if it requires refinement, needs a change in the rebate or incentive levels to attract participants, or should be considered for removal from the portfolio.

Impact evaluations determine the actual impact of the program in terms of metrics including energy savings achieved. The impact of a program is measured against program goals and includes amount of saved energy, reduced or shifted demand, program cost-benefit ratio, number of participants, number of free-riders, spillover impacts and other measureable quantities. These metrics are usually defined by program goals (i.e., total reduced energy). A variety of direct and indirect methods are utilized in the impact evaluation process including statistical, survey and analytical methods which are used to assess the impact of programs.

Nicor Gas will select an independent evaluation contractor to perform impact and process evaluations for the programs. The evaluator will support portfolio level goals of providing high confidence and precision in total portfolio savings, without exceeding budgetary limitations. These portfolio goals will likely require allocating EM&V resources and budget dollars among individual programs. Statutory EM&V spending limits will be enforced at the portfolio level over the total of each three year portfolio period. It should be noted that because EM&V activities traditionally take place part-way or after a given plan year has ended, the expenses associated with each plan year's evaluation typically lag the given calendar plan year under evaluation.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, a schedule for activities, and a program level budget. The EEP will review and comment on plans to ensure that it is consistent with actual program implementation. Due to the nature of EM&V work (some evaluation work can be conducted "in parallel" with the program's delivery, while other aspects of EM&V must be

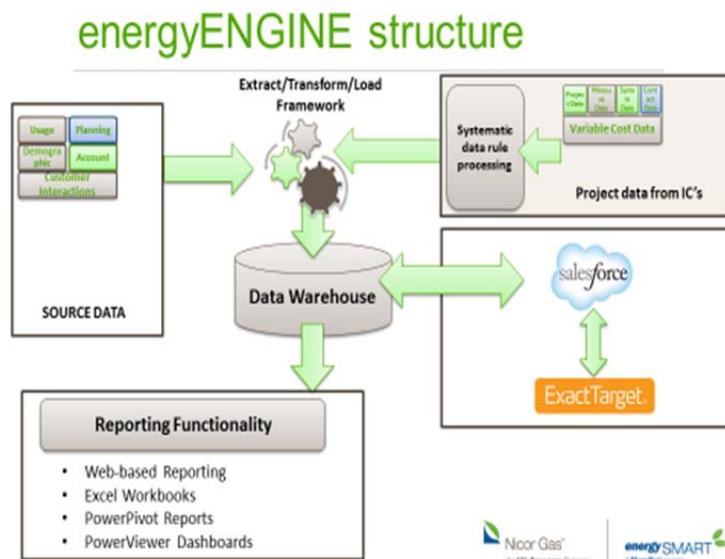
conducted after a program or project is completed), spending in any given plan year may be associated with work performed in preceding years.

The degree of EM&V conducted by evaluators will depend on its collaborations with other utilities. Where possible, the EEP will share the expense of EM&V and minimize EM&V duplication with its partners in order to maximize program cost-effectiveness.

#### 4.6 Portfolio Technology, Business Intelligence and Data Analytics

The EEP has invested and built a strong platform of software infrastructure for energy efficiency program management, marketing and outreach, tracking and reporting since the inception of the program. energySMART generates a significant amount of customer data that must be gathered, stored, reported on and used for analysis purposes by both internal and external parties. Since the inception of energySMART, Nicor Gas’ information technology platform has undergone three phases of technology implementation to-date. Nicor Gas’ platform has been dubbed “energyENGINE.” A schematic of the energyENGINE structure is shown in Figure 19 and its evolution is described in the following phases.

Figure 19 Nicor Gas energyENGINE Structure



## Phase I

The first phase of EEP's technology implementation began in 2010 and its initial aim was to purchase and/or modify a software program that met the requirements of running an energy efficiency program from a basic data and individual transaction basis. The Company was in need of an application that could manage the regulatory and tracking requirements and provide for accurate recordkeeping for its program. The EEP contracted with a third-party vendor to configure, host and support the application which became known as the Project Management Tracking ("PMT") System. This application tracked all EEP related customer activity, dollars spent, and therm savings associated with the program.

The functionality of the PMT was to track program results such as participating customers, incentives paid, program implementation costs, etc. Specifically, the PMT provided the following:

- Program Design – The PMT maintained a database (or library) of energy efficiency measures.
- Program Management – The PMT provided the capability to manage the performance and cost of the energy efficiency programs. This included access to the status of specific projects, as well as, reporting of results at the measure and program level.
- Workflow Management – Certain energy efficiency programs involve many steps in the application and management of installation activities, typically organized as a project. The PMT provided the capability to manage the workflow of these projects. A historical record of the project is maintained in the system for future analysis and reporting.
- Incentive Processing – A key element of program management is the efficient processing of incentive payments to customers and trade allies who have participated in an energy efficiency program. The PMT tracked incentives paid on energy efficiency measures per customer account.
- Management Reporting – The PMT provided reporting capabilities, including:
  - Executive/Management – High-level reporting of key statistics on the performance of EEP and each individual program.
  - Program Management – Detailed reports to provide program managers with information to determine if programs are on track.
  - Regulatory – These reports will provide reliable/auditable data to support EEP performance against approved plans.

## Phase II

In 2014, the EEP outgrew the PMT, and migrated off its PMT platform and incorporated the analytics into a data warehouse and Customer Relationship Management (“CRM”) application (Salesforce). As Nicor Gas evolved and identified the significant value of incorporating and analyzing data from multiple systems in a single source system, it undertook a second round of enhancements that focused on integrating these multiple sources of data into one platform and a CRM system was introduced for answering and tracking customer engagement with the program and within its technology ecosystem. The core of the data warehouse was constructed utilizing data from the following sources: energyENGINE customer participation, customer utility billing data, utility data for larger customers, demographic customer data from third-party providers for both residential and business customers and planning data representing TRM values. This second phase of technology introduction was also performed by a third-party vendor; however a different vendor was utilized than in Phase I, who then took responsibility for hosting of the system. This second phase provides energySMART with a best in class data warehouse, reporting, analytics and CRM tool to meet the business’ energy efficiency management requirements. Consolidating all of these features into a central system, that is modular in its configuration, enhances, leverages and benefits the program as follows: data integrity, operational efficiency, ad-hoc analysis, regulatory reporting needs and customer engagement. Simultaneously, energySMART integrated ExactTarget for e-mail marketing to customers.

- Data Integrity – The central data warehouse serves as the “Single Source of Truth” for all data across the energy efficiency enterprise. In addition, it improved the trust level of information and alleviated challenges and issues due to version control, data drift and data lineage.
- Operational Efficiency – Eliminated the need for manual aggregation of data to allow for more time to be spent on higher value activities. It also drastically improved the time required to make data available to end users for consumption.
- Ad-hoc analysis – Created the ability to run reports and pull customized data sets to quickly and efficiently answer key business questions.
- Regulatory reporting – Automated industry standard regulatory reports, freeing up resources to focus on value creation activities.
- Customer Engagement – Implemented an integrated technology platform to run operations for call center based energy efficiency marketing and outreach initiatives. Implemented e-mail marketing platform for energy efficiency enterprise.

This second phase of enhancements was a major step in the evolution of developing a data management system for EEP that makes Nicor Gas’ system the central point of all key data for the program. It also allowed for customer information access by the Marketing and Outreach Team within the department whose primary responsibility is interacting and answering customer’s inquiries. It was also during this phase that Nicor Gas settled on a standardized

single file format for data related to its program for all offerings and measures. As a result of this added functionality, this consolidated application was re-branded and became known as the Company's "energyENGINE".

### Phase III

In 2016, Nicor Gas made further enhancements to energyENGINE. As the EEP continued to mature, data needs continued to develop and grow and increased efficiency opportunities continued to present themselves. In phase three, Nicor Gas undertook adding two new modules to energyENGINE - Trade Ally Management and EM&V.

#### Trade Ally Management:

The goal of the Trade Ally Management module is to provide a centralized location for collecting, storing and reporting Trade Ally data. Currently, the Trade Ally systems reside with Nicor Gas' implementation contractors. Adding this capability in-house provides for:

- The development of one comprehensive Master Trade Ally List for reporting purposes and the management thereof;
- Salesforce capabilities for Trade Ally data collection. Implementation Contractors and energySMART employees will have the capability of documenting conversations of meetings, events and encounters with trade allies;
- Trade Ally data points into the data warehouse. Nicor Gas will be able to identify the number of jobs by trade ally, as well as the offerings and measures that each trade ally has performed in the program; and
- Finally, electronic document storage for trade ally related documents will be able to be kept.

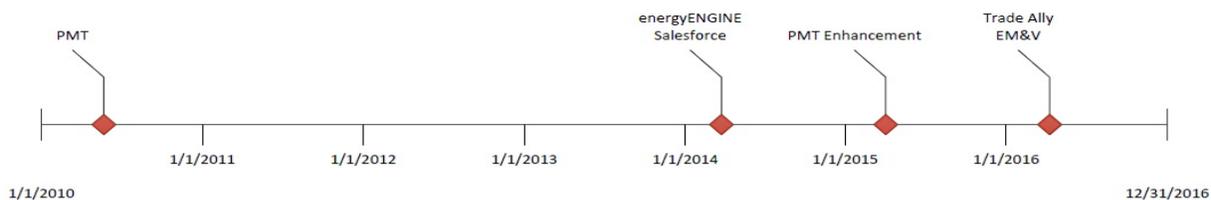
#### EM&V:

Nicor Gas and its evaluation contractor, (currently Navigant), identified an EM&V project that sought out ideas for streamlining and making the evaluation process more efficient. The objectives of the project are to:

- Reduce the evaluation time by making program performance data and relevant savings information available to evaluator close to real-time;
- Create a central repository for housing energy savings information required by an independent evaluator in order to perform annual evaluations. Examples of information housed include output files of various software tools, engineering calculation workbooks, pre- and postproduction/site data used in savings calculation, etc.; and

- Service all data requirements of the evaluator by eliminating evaluator to implementation contractor data requests. This will reduce data verification needs and improve data quality allowing the evaluator needed data in near real-time that hopefully can speed evaluation activities.

**Figure 20 Summary of energyENGINE evolution**



**Future Enhancements:**

Enhancements going forward will be concentrated around ensuring Nicor Gas’ energyENGINE remains the hub of data for the EEP. In addition, Nicor Gas will analyze the data being captured in the energyENGINE and determine the appropriate methods for further mining the information (data analytics) to benefit the EEP program.

## 5 PORTFOLIO DESIGN TECHNICAL ASSUMPTIONS

### 5.1 Cost-Effectiveness Modeling

#### Model Overview

Nicor Gas utilizes a modeling calculator designed by Energy and Environmental Economics (E3) to measure cost-effectiveness of the overall portfolio and individual programs and measures. Founded in 1989, E3 advises utilities, regulators, government agencies, power producers, energy technology companies, and investors on a wide range of critical issues in the electricity and natural gas industries. E3 developed the tools and framework for cost-effectiveness assessment of energy efficiency used by several investor-owned and publicly-owned utilities in California, New York, Illinois, Pennsylvania, Maryland, and Ontario, Canada.

The E3 Calculator estimates savings, spending, and cost-effectiveness for energy efficiency programs and portfolios. Users can rely on default values and assumptions contained in the E3 Calculator, create customized versions that better reflect their programs or service territory. energySMART worked with E3 to modify the E3 Calculator for use in Illinois.

To calculate cost-effectiveness, the E3 Calculator takes information about energy efficiency measures, arranges them into programs, and then arranges programs into portfolio. Within the calculator, users specify measures with data on costs and savings, programs with additional data on participation and administrative budgets, and portfolios with additional data on portfolio administrative budgets. Cost-effectiveness calculations are then generated for individual energy measures and programs, as well as for the total portfolio.

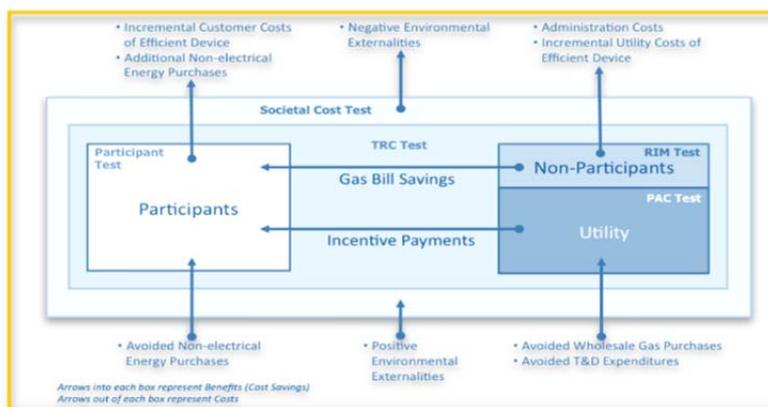
There are several reasons why energySMART selected this particular model for its energy efficiency evaluation:

- E3 is an industry leader in energy efficiency cost-effectiveness calculations;
- The E3 Calculator is a recognized industry standard, widely used and understood;
- The model is appropriate in scale for a stand-alone natural gas utility, since it includes relatively simple characterizations of electric utility avoided costs;
- The model is designed with end-users in mind and it features major improvements in usability;
- The model is built on an open-source spreadsheet platform and can be customized to add inputs specific to Nicor Gas;
- The E3 Calculator offers the best value to energySMART; and
- The energySMART planning team is experienced with the use of E3 calculator.

### Model Outputs

Cost-effectiveness is generally measured in terms of the benefit-cost ratio, where the benefits of energy efficiency (mostly from avoided costs) are compared against the costs (mostly program and measure costs) of measures, programs, and portfolios. The E3 Calculator analyzes the cost-effectiveness of energy efficiency from several different perspectives (the participant, the utility, the ratepayer, and the total resource cost)<sup>13</sup>. From each perspective a benefit-cost ratio greater than one implies that the benefits of implementing the energy efficiency measure outweigh the costs of the program and the product. A ratio less than one indicate that costs outweigh benefits. The higher the benefit-cost ratio, the greater the cost-effectiveness of the measure or program. The specific tests and perspectives within the E3 Calculator are outlined in Figure 21 and described further below.

Figure 21 Cost-Effectiveness Tests in E3



- Program Administrator Cost Test – Measures the effect of the efficiency measure on the administrating utility’s revenue requirement. The utility’s costs of implementing energy efficiency measures include direct installation costs incurred by the utility (as opposed to the participant), incentives, program administration, and marketing expenses. Benefits include the utility’s avoided cost of purchasing or generating energy.
- Total Resource Cost Test – Measures the benefits and costs of the efficiency measure as a resource option based on the total cost of the measure to the utility’s service territory, including both participant and utility costs. Costs include those incurred by the participant to purchase, install and maintain the more efficient equipment and by the utility to market and administer the efficiency program. Any direct installation costs incurred by the utility are also included. Incentives are not included as they are not a resource cost; instead, they are transfers from the utility to the customer. That is, an

<sup>13</sup> These methods are based on the industry-standard *California Standard Practice Manual*. The cost-effectiveness methodology has been adjusted to be consistent with Section 8-104 of the Act.

incentive increases the utility's cost and decreases the participant's cost by the same amount, with a net effect of zero.

- **Participant Cost Test** – Measures the quantifiable costs and benefits to the customer from participating in an energy efficiency program. Participant costs include the purchase and installation of the efficient equipment, less any incentive or incentive received from the utility. Benefits include the participant's bill savings due to reduced energy consumption.
- **Ratepayer Impact Measure Test** – Measures the net impact of efficiency programs on natural gas rates. This test compares the cost savings of the efficiency measure to the revenue losses (i.e. lost margins) resulting from each measure. The cost savings are the same as those for the Program Administrator Cost Test, while revenue losses are the program implementation costs (utility incentive, direct install costs and marketing, and administration) plus lost revenue from reduced energy sales. If the marginal cost of gas to the utility is higher than the rates charged to the utility, the avoided costs will more than offset the revenue losses, leading to a RIM Test ratio greater than one.

### Model Inputs

The following Table 23 describes the key inputs necessary for the computation of the benefit-cost ratios in the E3 Calculator.

**Table 23 Common Inputs to Cost-Effectiveness Tests**

<b>Input</b>	<b>Purpose</b>
<i>Financial Inputs</i>	
Discount Rate	Since the mechanism for computing and comparing costs and benefits involves using net present value methods, the model requires a discount rate to consistently value dollar outlays in different years.
Retail Energy Rates	These are the natural gas and electricity rates paid by consumers, which are used to determine participant savings.
Utility Gas Supply Costs	This is the cost of gas paid by the utility to purchase the next incremental (marginal) therm.
Green House Gas ("GHG") Costs	As required by Section 8-104(b) of the Act, natural gas avoided costs include reasonable estimates of the financial costs likely to be imposed by future regulation of emissions of greenhouse gases.

Input	Purpose
Water Costs	Water costs are estimated to account for direct benefits that accrue to participants for installing water conserving measures.
Other Quantifiable Societal Benefits	As required by Section 8-104(b) of the Act, TRC benefits include other quantifiable societal benefits.
<i>Measure- and Program-Related Inputs</i>	
Measure Life	This gives the length of time that installed efficiency measures provide savings.
Measure Annual Savings	This quantifies the reduction in energy consumption that will occur in each year of the measure's useful life.
Measure Participation	This tracks the number of efficient units installed by program participants.
Measure Incremental Costs	This represents the cost difference between an efficient measure and a standard (baseline) measure, including differences in both purchase price and installation cost.
Gas Savings Profile	This adjusts for seasonality of measure savings. Certain measures save gas predominantly in the winter while others apply annually. Gas avoided costs are also adjusted to reflect seasonal variation.
Net-to-Gross Ratio	This represents the percent of gross energy savings that are attributable to the energy efficiency program. This factor accounts for both free-ridership (customers that would have installed the measures, even in the absence of the program) and spillover (additional savings generated by the program beyond those directly counted through measure participation).
Incentive Costs	This represents the rebates or other financial incentives paid to program participants for each installed measure.

Input	Purpose
<i>Administration Costs</i>	
Program & Portfolio Administration	This tracks non-incentive costs required to deliver the programs and portfolio, including internal staff salaries, administrative expenses, and vendor implementation costs, emerging technology, information systems, marketing, and evaluation.

## 5.2 Assumptions and Data Sources for E3 Input Files

### Discount Rate

The Nicor Gas discount rate of 7.44% represents the company’s weighted average cost of capital.

### Avoided Costs

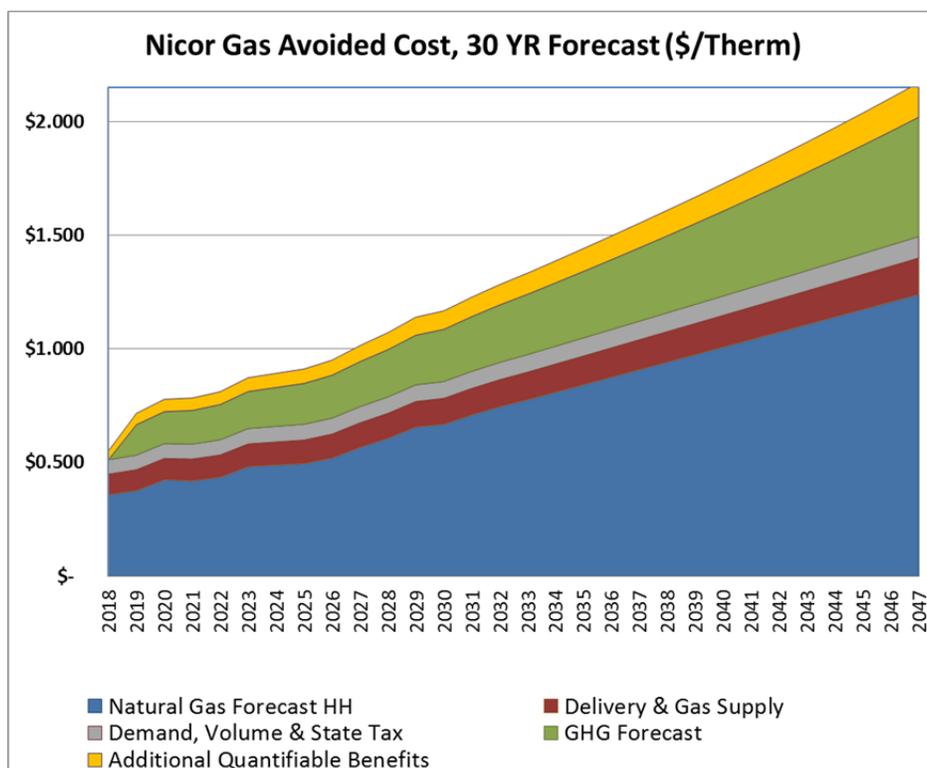
Nicor Gas included in its avoided cost calculations the costs for purchasing natural gas commodity, the costs to transport and deliver commodity purchases to customers, as well as the greenhouse gas and other societal benefits required by Section 8-104(b). Nicor Gas calculated natural gas commodity prices at Henry Hub, using the *Wood Mackenzie Natural Gas Forecast, Long Term View* from May 2015. Nicor Gas calculated the avoided supply costs by adding the pipeline delivery and gas basis charges required to transport gas from Henry Hub to the Chicago city gate, the variable distribution charges required to distribute gas from the city gate to customers, and the state taxes incurred by customers. Nicor Gas then added estimates of greenhouse gas (“ghg”) costs developed from the Department of Energy’s May 2014 *Annual Energy Outlook*. The ghg adder is applied at 2020. Finally, Nicor Gas calculated other quantifiable benefits as 7.5% of the avoided supply and greenhouse gas costs, consistent with the approach used by Nicor Gas in its second EEP approved by the Commission in Docket No. 13-0549. Total avoided costs range from \$0.55 per therm in 2017 to \$1.303 per therm in 2031. Calculation of the 2018 avoided costs is shown in Table 24 below.

**Table 24 Calculation of 2018 Avoided Costs**

Gas Charge	Cost (\$/Therm)
Natural Gas Commodity Price Forecast @ Henry Hub	0.3587
Pipeline Delivery & Gas Supply	0.0903
Demand, Volume & State Tax	0.0638
Greenhouse Gas*	0.0000
Additional Quantifiable Benefits	0.0385
<b>Total</b>	<b>\$0.5512</b>
* The Greenhouse gas adder is applied from 2020.	

The gas commodity price forecast extends to the year 2031. However, because the EEP includes measures with lifetimes longer than 15 years (such as the Residential New Construction program), these forecasts are extended an additional 15 years (to 2040) using a trend analysis. The final results for the avoided cost forecast are shown in Figure 22.

**Figure 22 Nicor Gas Avoided Cost, 30 YR Forecast (\$/Therm)**



Water Benefits

Several measures included in energySMART such as aerators and low flow showerheads, save water in addition to natural gas. To account for economic benefits associated with these water savings, Nicor Gas constructed an index of municipal water rates for the 22 largest municipalities in the service territory (Table 25). In the Nicor Gas service territory the cost of water for participants is \$4.40 per 1,000 gallons in 2013, using a weighted average by population. Throughout the period of the forecast, the water rate index is inflated at 4.78% per year based on historic inflation for water utilities tracked by the U.S. Department of Labor.

Table 25 Water Rates

City	Avg Residential Rate (Assumes <20,000 gal per month)	Population (US Census Bureau)
Aurora	\$5.27	199672
Rockford	\$2.07	152222
Naperville	\$3.55	142773
Elgin	\$4.51	108188
Cicero	\$4.53	84261
Champaign	\$4.53	81291
Bloomington	\$5.36	77071
Arlington Heights	\$4.42	75428
Evanston	\$1.66	74785
Schaumburg	\$6.36	74550
Palatine	\$3.15	68858
Skokie	\$4.34	65066
Des Plaines	\$5.44	58617
Orland Park	\$4.06	57016
Tinley Park	\$4.19	56965
Wheaton	\$4.61	53238
Normal	\$5.73	52772
Hoffman Estates	\$5.80	52124
Oak Park	\$4.53	52104
Downers Grove	\$5.52	48163
Glenview	\$5.94	44888
Lombard	\$5.16	43462
Weighted Average	\$4.40	

### Gas Savings Profiles

Gas usage varies with the time of year and type of equipment. energySMART defined two gas savings profiles to represent these different usage patterns. A “winter only” profile applied to measures affecting space heating equipment. An “annual” profile applied to all other measures.

### Seasonal Commodity Prices

Seasonal commodity prices were developed to ensure that avoided cost savings matched the gas savings profiles developed for heating and non-heating measures. Winter price premiums were calculated using monthly commodity price forecasts from the *Wood Mackenzie Natural Gas Forecast, Long Term View* from May 2015, and weighting winter prices by heating degree days weighted for Nicor Gas’s service territory using the following weather regions: O’Hare, Rockford, and Springfield. Winter price premiums used in the analysis ranged between \$0.027 per therm and \$0.036 per therm.

## Technical Assumptions

Technical assumptions include the inputs specified at the measure, program, and portfolio level required to calculate the costs and benefits of energySMART.

Measure inputs include the incremental costs participants incur to install efficient equipment relative to baseline alternatives, rebates and other financial incentives provided by Nicor Gas, incremental savings relative to baseline alternatives, water savings for certain measures, and equipment lifetimes. In addition, participation and NTG ratios are applied to each individual measure.

Nicor Gas used a variety of sources to calculate measure inputs. The algorithms and assumptions included in the June 1, 2015 version of the Illinois TRM, version 5, were used to calculate energy and water savings for measures covered by the TRM. For other measures, results of the Nicor Gas most recent applicable independent EM&V evaluation results were applied when available, and, if needed, data from other utilities and implementation contractors were also used.

In general, incremental costs and equipment lifetimes were also calculated using TRM assumptions and algorithms. However, in the current program design, a focus was given to data mining and analysis of actual performance data from PY1-PY5, including contractor invoices and customer-reported project costs, to calculate incremental costs. This is consistent with approaches identified in the IL-TRM Policy Document adopted in ICC Docket No. 13-0077 that supports the use of better data when available. Appendix A lists all the measure inputs used in the analysis.

Program inputs include participation inputs that drive measure costs and savings, program costs for marketing and administration, and NTG ratios. Participation inputs were developed from Nicor Gas program experience to date, regression and data modeling of past participation, benchmarking from other like programs, and feedback from SAG members. Participation was also adjusted as necessary to meet the budget limits set by Section 8-104(d) of the Act and the planning objectives outlined in Section 1.8.

Program costs were also developed based on Nicor Gas experience to date, modeling and analysis of historic program data, comparison to national and regional benchmarks, and feedback from SAG members.

Portfolio inputs include additional costs for portfolio functions, including portfolio management, marketing, emerging technology, evaluation, and portfolio technology. Portfolio costs were developed based on Nicor Gas experience to date, comparison to national and regional benchmarks, and feedback from SAG members. Portfolio costs are provided in Table 3 above.

### Measure Incentive Costs

energySMART developed measure-level incentives based on a review of incremental measure costs, budget availability, Rider 30 program experience, other local and national benchmarks, feedback from SAG participants, and recommendations coming out of the market potential study conducted for Nicor Gas before first EEP. The EEP believes that these incentive levels are properly designed to stimulate the market to reach its proposed EEP goals. However, should participation lag or dramatically exceed expectations, energySMART may modify incentive levels during the three-year period to achieve desired outcomes, all while managing the constraints for cost-effective programs.

### Retail Rates

Retail rates included in the model are the blended forecast of Nicor Gas rates for each customer class, including residential, small business and large business.

### Net-to-Gross Ratios

NTG ratios reflect the most recent available NTG results from the independent evaluator and the SAG NTG Policy as applied prospectively for PY6. Given the shift in portfolio design from a program orientation in the second EEP to the new customer engagement approach, Nicor Gas applied NTG values at the measure level to ensure that existing NTG research would most accurately reflect the new portfolio design. Consistent with the Illinois Energy Efficiency Policy Manual Version 1.0 changes going into effect for PY7, Nicor Gas will work with the independent evaluator and other SAG participants to update NTG ratios in the PY7 NTG Policy process, and adjust plan goals accordingly.

## **5.3 Cost-Effectiveness Results**

The energySMART program with a portfolio benefit-cost ratio of 1.76, achieves the requirements of Section 8-104 that Nicor Gas demonstrate “that its overall portfolio of energy efficiency measures, not including programs covered by item (4) of this subsection (f), are cost-effective using the total resource cost test and represent a diverse cross section of opportunities for customers of all rate classes to participate in the program”.

Nicor Gas went beyond this statutory requirement to also analyze the cost-effectiveness of individual programs and measures. Nicor Gas used this information to adjust the portfolio, eliminating investment in some cost-ineffective measures and adjusting delivery approaches to improve program cost-effectiveness.

The Residential program and the Business program are both cost-effective with benefit-cost ratios of 1.58 and 2.63 respectively. All but one customer participation track is also cost-effective. The only track that is not cost-effective is the Business Assessment track. However, the purpose of this track is to provide customers with technical assistance, energy assessments and, in some cases direct installation of measures. That is, the track is designed as a primary

feeder to customer participation in the Rebate and Custom Incentives tracks, making these tracks highly cost-effective.

Therefore, Nicor Gas did not use the TRC test as a strict screening criterion at the program or measure level. Few cost ineffective measures are also included in the plan. Those that are in the portfolio contribute to overall program success. Some measures provide loss leaders to interest customers in participation; others eliminate market confusion by simplifying overall program offerings; and others provide bundling opportunities that enhance participation in more cost-effective measures.

Table 26 provides the cost-effectiveness results for each program in the portfolio. Appendix A provides cost-effectiveness results for each measure in the portfolio.

**Table 26 Cost-Effectiveness Results**

Programs	Cost Effectiveness	
	TRC	PAC
Residential Education & Outreach	5.93	5.93
Residential Assessment & DI	1.11	1.31
Residential Rebate	1.47	3.90
Residential New Construction	1.67	3.46
<b>Residential Program</b>	1.58	3.62
Business Education & Optimization	2.79	2.88
Business Assessment & DI	0.68	0.71
Business Rebate	3.19	6.31
Custom Incentives	2.49	6.77
Business New Construction	2.86	6.47
<b>Business Program</b>	2.63	5.24
<b>Portfolio</b>	1.76	3.41

## 6 CONCLUSION

The Nicor Gas energy efficiency team is excited to implement the next three year proposed design of the energySMART portfolio which will yield cost-effective results and benefit our customers. The energySMART team deemed the portfolio planning process to be once again invaluable in identifying potential barriers and developing mechanisms to be utilized in the future in order to circumvent or prevail over those challenges. In addition, the Nicor Gas team is confident with the implementation strategies devised considering all tactics were developed utilizing empirical data and qualitative experience tracking.

With the experienced team of energySMART staff, Nicor Gas expects a seamless transition will occur between our second and third portfolio filings. The success of the entire energySMART portfolio will continue to rely on continuous communication and partnership with all stakeholders, implementation contractors, trade allies and independent evaluators in order to receive constant feedback. Most critical to energySMART success however will be our continued focus on the customer's needs, and providing simple, and clear pathways for them to engage and take action. Working together collaboratively, energySMART will continue to be a successful program that will lead the way for years to come.