Statewide Database of Energy Efficiency Efforts in Indiana: 2011

Prepared by:
State Utility Forecasting Group
Purdue University
West Lafayette, Indiana

Prepared for:
Indiana Office of Energy Development
Indianapolis, IN

June 2012

Foreword

This report reflects the initial effort by the State Utility Forecasting Group (SUFG) at Purdue University to develop a central database of energy efficiency efforts throughout the state of Indiana. The purpose of the database is to collect and quantify energy efficiency efforts in the state. The database contains information regarding energy efficiency, demand-side management, and load management programs, including participation rates, incentives, gross and net energy savings, peak demand reductions, tax incentives, and required technology and software. SUFG will also include information on the development of advanced metering infrastructure (smart grid) in Indiana, including experimental programs, and various energy efficiency education efforts.

Survey requests were sent to a number of entities involved in energy efficiency efforts, including electric and natural gas utilities, state and local government agencies, and large energy consumers, such as universities and industrial facilities. While it is likely that a substantial amount of customer-driven energy efficiency measures were undertaken at the residential and smaller commercial/industrial level, no attempt has been made to estimate those projects at the level of smaller customers. This would involve a significantly larger surveying and sampling and would be beyond the scope of this project.

The surveys requested information for calendar year 2011. Thus, this report reflects only those efforts that occurred in 2011 and does not include the effects of prior energy efficiency projects that continue to reduce the demand for energy.

SUFG appreciates the cooperation and contributions of the survey respondents to enable this summary to be a comprehensive representation of the energy efficiency efforts throughout the state of Indiana

This report was prepared by and is the responsibility of SUFG. The information contained in this report should not be construed as advocating or reflecting any other organization's views or policy position. Comments and questions should be directed to:

State Utility Forecasting Group
Purdue University
Gerald D. and Edna E. Mann Hall, Room 154
203 South Martin Jischke Drive
West Lafayette, IN 47907-1971
Phone: 765-494-4223
Fax: 765-494-6298
e-mail: sufg@ecn.purdue.edu
https://www.purdue.edu/dp/energy/SUFG/

This project was initiated as a result of a request from the Indiana Office of Energy Development that the State Utility Forecasting Group (SUFG) collect information regarding program efforts in energy efficiency (EE) in Indiana and maintains a database of programs. The survey requested data from electric and gas utility sectors encompassing investor-owned, rural electric cooperatives, and municipal utilities in addition to government agencies, universities, and large electricity consumers. SUFG has compiled the information and this report summarizes the information provided on a statewide perspective.

SUFG held an initial organizational workshop among key stakeholders from all utility sectors to guide the development of the project. The outcome was that SUFG will maintain the database that will contain information regarding energy efficiency and load management programs, including participation rates, incentives, gross and net energy savings, peak demand reductions, tax incentives, and required technology and software. Educational programming efforts were also collected as part of the data request. It will also include information on the development of advanced metering infrastructure (smart grid) in Indiana, including experimental programs, and various energy efficiency education efforts.

The data were acquired directly through the distribution of the survey document. The identities of respondents were held confidential, and data was aggregated to prevent disclosure of respondent association to responses.

The degree to which the surveyed entities responded varies considerably. The electric and natural gas utilities, which may have regulatory reporting requirements and dedicated staff in the energy efficiency area, had a high response rate and provided a great deal of detailed information. A lower response rate was obtained from government agencies, particularly in the case of smaller entities such as local governments. It is likely that these entities do not have staff whose primary function involves energy efficiency. Thus, it is likely that responding to the request was considered to be too large of a burden. In certain cases, estimates have been made to account for information when responses were incomplete. For instance, if a responder provided peak demand savings but not energy savings for a program that reduces overall energy consumption, energy savings were estimated. These estimates were made using responses for similar programs from other respondents and energy efficiency reports for other areas. Such estimates were made in a conservative fashion, so as not to artificially inflate the results. Thus, the information in this report represents a lower boundary on the amount of energy efficiency activities in Indiana. While there likely was a significant amount of unreported energy efficiency activity, unreported programs are not included. General information has been

provided for some programs to give the reader an indication of the magnitude of some of these programs.

This report focuses specifically on electricity and natural gas. Efficiency gains involving other energy sources (e.g., fuel oil) or water are not considered. In some cases, cross benefits occur with other energy sources or water, such as the installation of low-flow showerheads. This program reduces both water and energy consumption, but water usage reductions are not quantified.

Comparison to Last Year's Report

In January 2012, SUFG produced a report covering the calendar year 2010. This report represents a similar undertaking for calendar year 2011. In comparing the two sets of data, 2011 indicates a move from government sponsored programs to utility sponsored programs. This results primarily from two factors: first, government programs associated with Recovery and Reinvestment Act of 2009 (ARRA) were beginning to wind down in 2011 and second, electric utility programs were ramping up to meet the Indiana Utility Regulatory Commission's demand-side management order of December 2009.

This report contains an overall lower level of expenditures and energy savings that are known with certainty. This is due to the reduction in reported numbers from government agencies being larger than the increase in utility-sponsored activities. The drop in reported government programs is seen most dramatically in low income weatherization programs, which represented over 1/3 of total residential natural gas savings in 2010, but are less than one percent of the total residential natural gas savings in this report. The increase in electric utility-sponsored programs is evident from a fourfold increase in reported residential electricity savings.

Explanation of Terms

A number of terms are used in this report that are common to the energy industries, but may be unfamiliar to others. The concepts of energy and power, along with the units in which they are expressed, are of primary importance. Energy is the capability to do work, while power is the rate at which energy is either produced or consumed. Energy can come in a number of different forms, such as electrical, chemical, and kinetic. While it is common to refer to the consumption of energy, it is more accurate to consider the energy as being transformed from one form to another. Thus, a light bulb converts electrical energy to light energy and thermal energy (heat).

Efficiency is the ratio of the amount of useful energy that is obtained from the amount of energy used as an input. In the light bulb example, the light energy is the useful energy (the thermal energy is usually not wanted) and the electrical energy used by the bulb is the energy input. Incandescent bulbs generally produce more heat than fluorescent or solid-state lights, so they are less efficient

The basic unit of electrical power is the watt (W). Larger quantities are often expressed in kilowatts (kW), which is 1,000 W, or in megawatts (MW), which is a million watts. Incandescent bulbs for indoor use generally range between 40 and 150 watts, while a kitchen toaster may be on the order of 1 kW.

The basic unit of electrical energy is the kilowatt-hour (kWh). It is the amount of energy used by a process or device using one kilowatt of power for one hour's time. Alternatively, it is the energy consumed by a 100 watt light bulb that is on for 10 hours. Larger amounts of electrical energy are often reported in megawatt-hours (MWh). One MWh is the same as 1,000 kWh. There are 3,412 British thermal units (Btu) in a kWh.

The basic unit of energy in the natural gas industry is the therm, which is equivalent to 100,000 Btu. A therm is also roughly equivalent to the amount of energy contained in 100 cubic feet of natural gas. The energy in one therm of natural gas is approximately equal to 29.3 kWh.

This report examines reductions in the amount of electrical power during the periods of highest usage, also known as the peak demand. Reduction in natural gas demand at the peak demand is not considered. The electrical peak demand is of particular interest due to the inability to store electrical energy. Thus, sufficient capability to instantaneously convert energy in other forms to electrical energy must be maintained. This capability is generally derived from expensive generation equipment, so reductions in peak demand can have a significant financial impact in the electricity industry. Since the chemical energy of natural gas is stored in the molecules of the gas itself and since the conversion from chemical energy to the form desired by the customer occurs at the customer's location, there is no concern over reductions in the peak power demand.

Gross Savings vs. Net Savings

Energy reductions are reported in terms of both gross and net savings whenever both sets of data are available. Gross energy savings represents the reduction in energy consumption occurring from the decisions that the program is promoting, regardless of whether the decision would have been made if the program was not in place. For example, the gross savings for an appliance rebate program would include the reduction in energy consumption due to the higher

efficiency appliance. It would not take into consideration whether the customer would have bought the higher efficiency appliance anyway, even without the rebate.

Net savings are the reduction in energy consumption that occurs because of the program. In the previous example, the energy savings for those customers that would have purchased the higher efficiency appliance are not included in the net savings.

Another potential difference between gross and net energy savings involves reductions in energy usage that result from the existence of the program but are not directly attributable to the program. An example of this could be a program where a customer is provided with a single energy efficient device (such as a compact fluorescent light bulb) and then decides to purchase more of the devices. The gross savings would include the single device from the program while the net savings would include all of the devices.

Net energy savings are of particular importance to utility-sponsored energy efficiency programs where it is important to demonstrate the relative costs and benefits of the program. Since there is no specific program impacting customer-driven energy efficiency (which is largely limited to large industrial customers and governments for this report), there is no distinction between net and gross savings for these instances.

Estimating the net savings associated with a particular program can be a complex task involving extensive customer surveys and statistical modeling. Furthermore, there is a lack of standardization in estimating, measuring and verifying methods. In instances where only gross savings were reported, net savings were estimated using typical gross to net savings ratios for similar programs from other responses. In some cases, net savings are assumed to equal gross savings.

Time Period Analyzed

This report includes only those energy efficiency efforts that were undertaken during the calendar year 2011. As such, it represents a snapshot of activities during the year and does not include the effects of energy efficiency efforts from previous years. Based on filings with the Energy Information Administration, embedded energy efficiency from utility-sponsored efforts prior to 2010 was responsible for reducing the electrical energy demand in 2011 by about 600,000 MWh. Peak demand was reduced by 461 MW by these programs. Estimating the impact of embedded energy efficiency from the various programs is beyond the scope of this effort.

Number of Employees Involved in Energy Efficiency Programs

According to the survey responses, there are a minimum 57.87 full-time equivalent (FTE) employees involved in the many different energy efficient programs, across the state of Indiana. Many of these individuals only spent a fraction of their time on energy efficiency efforts, with other job responsibilities accounting for the remainder. A full-time employee who spends one tenth of their time on energy efficiency efforts counts as 0.1 FTE, while one who spends one half counts as 0.5 FTE. The 57.87 FTE is determined by summing the responses from the surveys.

Leveraging Financial Support

Although the majority of the energy efficiency programs are not financially supported by other organizations, the Weatherization Programs are most commonly supported by local Community Assistance agencies such as Indiana Housing and Elementary Education programs. Utilities from around the state will commit Demand Side Management funding to support the installation of low-cost energy efficiency measures. This is done by leveraging federal weatherization funds. Electric utilities also run refrigerator replacement programs through existing weatherization networks.

Collaboration with Other Entities

The surveys confirmed that each company collaborates with multiple energy efficient companies. In addition to collaboration amongst the various entities surveyed, collaboration occurred with a number of federal and state government agencies, university-based energy efficiency organizations, and economic development organizations.

Marketing Methods

Several marketing methods were used to promote the energy efficiency programs of the respondents. The survey indicates 91.7 percent of respondents indicated they engaged in marketing efforts for promoting their energy efficiency programs. The marketing methods used were as follows:

- Bill Inserts
- Community Outreach
- Direct Mailing offers
- Event Sponsorship
- Organization Website Online Advertising
- Newsletters
- Newspaper
- Program Partner Promotion, (i.e. Low Income Home Energy Assistance Program Referrals)
- Radio
- Social Media Email
- Telephone message
- Television Ads
- Trade Alley Outreach

Energy Efficiency Program Specific Information

The following are names and descriptions of energy efficient programs being used across the state of Indiana:

Residential Programs

- *Prescriptive Rebate Programs:* Prescriptive rebate programs encourage residential customers to purchase more energy-efficient lighting, electric appliances, gas appliances and heat pumps. After purchasing the equipment, customers apply for a rebate that reimburses a portion of the cost.

- *Appliance Recycling Programs:* Residential appliance recycling programs target customers with second refrigerators and freezers and offers incentives for removing these units from service. The units must be in working condition in order to qualify, since removing a non-functioning unit would not result in any energy savings.

- *New Construction:* New construction programs provide cash incentives to local builders and developers for constructing new residential homes that meet specified ENERGY STAR® standards[1].

- *Low Income Weatherization Programs:* These programs provide weatherization[2] services to low income customers. The Indiana Community Housing and Development Authority (IHCDA) provides these services for the lowest income customers and some utilities provide these services to customers with incomes between 151% and 200% of the federal poverty guidelines. This income bracket usually falls outside the requirements for other assistance programs, but often lacks the financial resources to do their own energy efficiency upgrades. The programs select individuals as participants who own a single-family house and who are on a low-income weatherization waiting list as provided by IHCDA.

[1] The Energy Star program was created in the early 1990s by the United States Environmental Protection Agency in an attempt to reduce energy consumption and greenhouse gas emission by power plants. As of 2006, more than 40,000 Energy Star products are available in a wide range of items including major appliances, office equipment, lighting, home electronics, and more. The EPA estimates that it saved about $14 billion in energy costs in 2006 alone.

[2] Weatherization involves weather proofing a house/building and its interior from the elements, particularly from sunlight, precipitation, and wind. It can involve adding insulation and weather stripping. This reduces the energy consumption and improves the energy efficiency, allowing low-income families to permanently reduce their energy bill.

- *Home Performance/Retrofit Program:* Residential customers who participate in this program will receive a home energy audit conducted by a certified inspector to help customers understand what measures can be installed to increase their home's energy efficiency. Each assessment may include:

    - Full assessment of appliances, insulation, space heating and water heating systems
    - Utility bill analysis and cost savings estimate for reducing energy usage
    - Water heater adjustment for optimal safety and energy efficiency
    - Free installation of energy efficient water fixtures (showerheads, kitchen & bath aerators)
    - Combustion safety testing for furnace and water heater

- *Multi-family Direct Install Program*: Energy efficient water fixtures (showerhead, bathroom aerator and kitchen aerator) installed in rental units to reduce hot water consumption. The program also provides education to tenants about the energy benefits of these installed measures and behavior changes that will have a lasting impact on their energy and water consumption.

- *Educational Programs:* Educational programs include both educational outreach programs and on-line audit programs. Educational outreach programs are aimed at helping 5th-grade Indiana students learn the importance of energy efficiency and how it helps to protect our natural resources and the environment. National Energy Foundation (NEF) conducts Think! Energy Indiana on behalf of the utility. As part of the program, NEF provides an interactive, hands-on, classroom presentation and distributes take-home kits to select fifth grade classrooms across northern Indiana. The experiential program teaches the importance of energy, natural resources and environmental issues, and gives each participating student's family the technologies to start making a difference. Contents of the Think Energy! Indiana Take Action Kit includes:

    - High-Efficiency Showerhead
    - Kitchen Aerator
    - Bathroom Aerator
    - Shower Timer
    - Digital Water and Refrigerator Thermometer

The on-line audit tool provides education on how a bill is calculated, how a customer's energy costs compare to other homes/businesses in the area, and disaggregates the various uses for natural gas in their home or business to help them understand how they are using energy. Tool provides recommendations on how to conserve energy in the areas of no/low cost solutions, projects that require customer investment and projects that are not recommended due to cost/payback. In addition to the education component, the program includes the distribution of an energy savings kit to residential natural gas customers who complete a detailed (level 3) on-line audit. The kits are only distributed during specific times of the year when the offer is being promoted by the utility.

- *Home Audit Programs:* Customers who participate in this program will receive a home energy audit conducted by a certified inspector to help customers understand what measures can be installed to increase their home's energy efficiency. The inspector may prepare a comprehensive personal report outlining the customer's energy usage. Each assessment may include:

    - Full assessment of appliances, insulation, space heating water heating systems
    - Utility bill analysis and cost savings estimate for reducing energy usage
    - Water heater adjustment for optimal safety and energy efficiency
    - Free installation of energy efficient water fixtures and compact fluorescent lamps
    - Combustion safety testing for furnace and water heater

	Measures Implemented	Annual Gross Therms Savings	Annual Net Therms Savings	Annual Gross MWh Savings	Annual Net MWh Savings	Annual Peak Demand kW Reductions	Cost
Residential							
Home Audits	18,312	702,333	574,825	7,339	6,563	1,627	$2,544,930
Prescriptive Rebates	2,184,150	2,852,435	1,857,599	160,077	103,064	37,605	$18,463,426
Appliance Recycling	8,961	0	0	12,187	8,130	1,678	$1,252,938
Educational Programs	26,710	733,791	670,733	4,208	6,836	417	$719,656
New Construction	4,928	276,242	233,874	3,467	4,241	651	$1,886,180
Low Income Weatherization	8,828	42,042	40,042	10,507	8,439	2,612	$4,046,911
Multi-Family Direct Install	47,025	1,766,207	1,603,932	14,459	14,241	1,648	$1,106,259
Direct Load Control	58,212	0	0	48	48	51,730	$2,690,234
Total	**2,357,126**	**6,373,050**	**4,981,005**	**212,292**	**151,562**	**97,968**	**$32,710,534**

Commercial & Industrial Programs

- *Prescriptive Rebates:* Commercial prescriptive rebates programs offer cash rebates to customers who purchase and install higher-efficiency lighting, variable frequency drives, and select energy-efficient equipment. After purchasing the equipment, customers apply for a rebate that reimburses a portion of the cost. Customer applications may involve new construction, retrofit, and replacement of failed equipment.

- *Custom Programs*: Commercial and industrial custom programs offer incentives up to $25,000 per project for the installation of efficient technologies or implementation of process improvements that do not fit the parameters of the prescriptive rebate program. The program administrator works with the customer to assess the energy savings and eligibility of the proposed project under the program.

- *Energy Efficiency:* Non-residential retail customers submit competitive applications for energy savings projects they would like to implement. The company can receive a refund of up to 50% of the cost of the project(s).

- *Workforce Training:* The Purdue Technical Assistance Program (TAP) Energy Efficiency & Sustainability (EES) program provides workforce training to commercial, industrial, and institutional organizations. Workers are trained to identify opportunities for energy efficiency and to develop solutions. EES hosts public workshops and provides on-site training, auditing and implementation mentoring.

- *Miscellaneous Programs:* Miscellaneous programs represent a number of measures including air conditioning load management, new construction, and optimization of controls.

	Measures Implemented	Annual Gross Therms Savings	Annual Net Therms Savings	Annual Gross MWh Savings	Annual Net MWh Savings	Annual Peak Demand kW Reductions	Cost
Commercial / Industrial							
Prescriptive Rebates	120,013	970,795	752,364	69,510	37,331	13,909	$6,343,499
Energy Efficiency	95	0	0	42,064	33,072	3,750	$14,222,278
Custom Programs	57	134,325	100,915	2,490	2,139	75	$320,044
Workforce Training	54,919	585,600	439,200	26,638	18,974	560	$1,123,167
Miscellaneous Programs	534	14,972	14,600	882	838	82	$141,204
Total	**175,618**	**1,705,692**	**1,307,079**	**141,584**	**92,354**	**18,376**	**$22,150,192**

Energy Efficiency and Conservation Block Grants

The American Recovery and Reinvestment Act of 2009 (ARRA) included funding to support energy efficiency and conservation measures in various communities across the country. A number of Indiana communities received funding through the Energy Efficiency

and Conservation Block Grant (EECBG) Program. Larger communities (also referred to as entitlement communities) received funding directly from the U. S. Department of Energy, while funding for smaller (non-entitlement) communities was processed by the Indiana Office of Energy Development (OED).

EECBG funding could be used for energy efficiency retrofits of government owned buildings, retrofits of privately owned commercial buildings, and for grant administration[3]. Eligible building retrofits include a number of energy uses, such as heating, ventilation and air conditioning; insulation and weatherization; and appliances.

Eight counties and 23 municipalities received EECBG funds directly from the federal government. Another 56 smaller communities received funding through OED. Additionally, OED provided 59 EECBG grants to non-profit organizations, small businesses, and institutions of higher education.

EECBG funds were made available for a number of different local energy efficiency programs. Examples include energy efficiency evaluations, as well as replacement of street and building lighting, windows, and HVAC systems [1].

Given the multi-year nature of the EECBG initiatives, the energy savings achieved in Indiana in 2011 through the EECBG programs is undetermined. The program was initiated in 2009, with many projects starting in 2010 and a number continuing into 2011. Similarly, it is not known how much of the EECBG funds were spent in 2011. The overall amount of money provided for the programs is significant compared to other energy efficiency spending in the state[4].

[3] The use of funds for grant administration only applies to communities that received funds directly from DOE. The programs administered by OED did not allow funding to be used for grant administration.

[4] Grant amounts came from the U. S. Department of Energy website http://www1.eere.energy.gov/wip/eecbg_allocation.html#eecbg

Grantee	Amount	Grantee	Amount
Anderson	$560,200	New Albany	$165,900
Bloomington	$745,000	Noblesville	$170,000
Carmel	$633,000	Portage	$151,100
Columbus	$190,000	Richmond	$169,200
Elkhart	$557,300	South Bend	$1,046,800
Evansville	$1,206,000	Terre Haute	$617,700
Fishers	$610,100	Allen County	$404,500
Fort Wayne	$2,474,400	Clark County	$438,900
Gary	$935,200	Elkhart County	$629,800
Greenwood	$193,900	Hamilton County	$362,400
Hammond	$728,100	Hendricks County	$546,900
Indianapolis	$8,032,300	Lake County	$2,979,700
Kokomo	$214,600	LaPorte County	$462,900
Lafayette	$659,000	Porter County	$511,800
Lawrence	$176,200	St. Joseph County	$453,400
Mishawaka	$219,000	Tippecanoe County	$416,700
Muncie	$665,700	State of Indiana	$14,052,400
		TOTAL	**$42,380,100**

Other Energy Efficiency Efforts Initiated in 2010

In last half of 2011, the Indiana Office of Energy Development announced the funding of a number of energy efficiency projects [2]. These projects are not included in the numbers reported here, but do represent a significant investment in energy efficiency going forward. In August, 18 communities were selected to undergo energy audits and develop strategic energy plans as part of the Community Energy Program at an average cost of $56,620. In October and November, a total of 18 Indiana companies received a total of $5,452,729 through the Conserving Hoosier Industrial Power grant program. These grants provided funding for a number of energy efficiency efforts, such as lighting retrofits, variable speed drives, energy management systems, and upgrades of boilers, HVAC systems, motors, and insulation. In December, four grants were announced under the Community Conservation Challenge. A total of $994,399 was provided for programs that included home weatherization, lighting upgrades, monitoring software, and boiler retrofits.

University Ground Source Heat Pumps

DOE has provided a total of $6.3 million of ARRA funds to Ball State University and Indiana Institute of Technology to install ground source heat pumps on their campuses [1]. The Ball State project is estimated to cost between $70 million and $75 million and will replace four coal-fired boilers. The project was formally dedicated in March 2012 with completion scheduled for 2014. The amount of money spent on this project in 2011 is unknown. The Indiana Tech project became operational in 2010 and will use carbon dioxide as the cooling medium.

Dollars Spent in 2011 on Costs Not Attributable to a Specific Program

Respondents were asked to identify the costs of delivering various energy efficiency programs broken down by the following categories: Administration, Marketing, and Other. While most respondents provided information along these lines, some either provided no information or indicated that all costs were attributed to specific programs.

Administration	$5,026,167
Marketing	2,238,957
Evaluation, Measurement, and Verification	366,129
Other	789,063
Total Costs	$8,420,316

Summary of Energy Savings

Over $60 million dollars was spent on energy efficiency efforts in 2011 in Indiana. This covered over 2,500,000 different efficiency measures, or about one for every 2.6 residents. The majority of these measures were implemented with residential customers, which represents one measure per every 1.2 households. Over 8 million therms of natural gas and 350 thousand MWh of electricity were saved on an annual basis by these programs.

	Measures Implemented	Annual Gross Therms Savings	Annual Net Therms Savings	Annual Gross MWh Savings	Annual Net MWh Savings	Annual Peak Demand kW Reductions	Cost
Residential	2,357,126	6,373,050	4,981,005	212,292	151,562	97,968	$32,710,534
Commercial & Industrial	175,618	1,705,692	1,307,079	141,584	92,354	18,376	$22,150,192
Other Costs							$8,420,316
Total	**2,532,744**	**8,078,742**	**6,288,084**	**353,876**	**243,916**	**116,344**	**$63,281,042**

Natural Gas vs. Electricity Energy Efficiency Levels

Annual consumption of electrical energy in Indiana in 2009 was approximately 100 million MWh [3]. Annual consumption of natural gas in the same year by residential, commercial and industrial customers was about 4 billion therms [3]. Thus, the 2011 energy efficiency savings identified through the survey process represents 0.24 percent of the electricity consumption and 0.15 percent of the natural gas consumption. These percentages are nearly switched from the 2010 report, where natural gas savings were higher than electricity savings.

From a utility-sponsored energy efficiency perspective, Indiana natural gas utilities were more aggressive than their electrical counterparts in 2010. This was primarily a result of their respective rate structures. Traditionally, both electric and natural gas rates contain both the operational costs of providing the service and a return on capital investments. The operational costs include the cost of procuring fuel (for electricity generation) or the commodity itself (for

natural gas). Typically, the operational cost fraction of electricity rates are much smaller than for natural gas rates. The opposite is normal for the fractions accounting for the return on investment. This is largely due to the capital-intensive nature of building electricity generation, transmission and distribution facilities. Thus, a utility-sponsored energy efficiency program has the potential to reduce the company's return on their capital investments, which can limit the attractiveness of such program from the company's perspective. Due to the relative differences in operating vs. investment costs, this reverse incentive hits the electricity industry harder.

Furthermore, the largest natural gas utilities have had their rates restructured using a method known as decoupling. Rate decoupling is a mechanism whereby rates are adjusted such that the utility's revenues are separated from its sales. In essence, the return on investment portion of the rates are separated from sales, so that it receives the same amount of return whether sales are high or low, while the operating costs are passed through to the customers. This form of rate design removes the reverse incentive that may be seen under traditional ratemaking. Additionally, as part of the decoupling process, the natural gas utilities agreed to meet certain energy efficiency targets.

In December 2009, the Indiana Utility Regulatory Commission issued an order requiring electric utilities under its jurisdiction to meet certain energy efficiency goals in the future. While utilities began developing programs in 2010 to meet those requirements, the programs were not in place in time to impact energy efficiency during that year. In 2011, these programs had a significant impact. These impacts are expected to grow in the future as the electric utilities continue to develop programs to meet the Commission order's requirements, which ramp up over time.

References

[1] U.S. Department of Energy, "Recovery Act State Memos: Indiana," 2010. http://energy.gov/downloads/indiana-recovery-act-state-memo

[2] Indiana Office of Energy Development, http://www.in.gov/oed/

[3] Energy Information Administration, U.S. Department of Energy, State Data for Consumption & Sales, http://www.eia.gov/state/state-energy-profiles-more-consumption-sales.cfm