FILED July 09, 2013 INDIANA UTILITY REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE COMMISSION'S)	
INVESTIGATION, PURSUANT TO IC § 8-1-2-58,)	
INTO THE EFFECTIVENESS OF DEMAND SIDE)	
MANAGEMENT ("DSM") PROGRAMS)	
CURRENTLY UTILIZED IN THE STATE OF)	
INDIANA, INCLUDING AN EXAMINATION OF)	
ISSUES THAT COULD IMPROVE THE)	CAUSE NO. 42693-S1
EFFECTIVENESS OF DEMAND SIDE)	
MANAGEMENT PROGRAMS IN THE STATE,)	
INCLUDING CONSIDERATION OF THE)	
ESTABLISHMENT OF AN INDEPENDENT DSM)	
ADMINISTRATOR MODEL ON A STATE-WIDE)	
BASIS)	
)	
RESPONDENTS: ALL JURISDICTIONAL)	
ELECTRIC AND GAS UTILITIES IN THE STATE)	
OF INDIANA)	

COMPLIANCE FILING

On October 16, 2012, the Demand Side Management Coordination Committee

("DSMCC") filed an EM&V Administrator Revised Statement of Work. On June 13, 2013, the Indiana Utility Regulatory Commission issued a Docket Entry in this Cause requesting the DSMCC to file a copy of the following reports (upon finalization and

acceptance by the DSMCC of each report):

- Annual Impact and Process Report and an Integrated Report with a Cost Benefit chapter;
- (2) Process Report;
- (3) Impact Evaluation Report for each utility; and
- (4) EM&V Summary Report for the general public.

In compliance with the June 13, 2013 Docket Entry, the DSMCC respectfully submits the attached EM&V Summary Report for the general public supplied by TecMarket Works on June 24, 2013 as accepted by the DSMCC on July 8, 2013. The EM&V Summary Report meets the requirement for item 4 above.

In accordance with the June 13, 2013 Docket Entry, a paper copy of the EM&V Summary Report is also being filed with the Commission. Respectfully submitted on behalf of the Demand Side Management Coordination Committee,

ames

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EM&V Summary Report

June 21, 2013

Final Report

2012 Energizing Indiana Programs

EM&V Summary Report

JUNE 21, 2013

FINAL REPORT

Prepared for

The Indiana Demand Side Management Coordination Committee

Submitted by

The Indiana Statewide Core Program Evaluation Team:

TecMarket Works, Opinion Dynamics Corporation, The Cadmus Group, Integral Analytics, Building Metrics, and Energy Efficient Homes Midwest

With Maria Larson







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OVERVIEW OF RESULTS

This report presents the assessment of the ex-ante, audited, verified, ex-post gross, and net energy savings achieved by the Energizing Indiana statewide Core programs during the first year of operations (program year one or PY1). In addition, the report includes process evaluation findings designed to document the operations of the programs and to enhance or improve the programs' operations in future years. This report was completed by the TecMarket Works Indiana Statewide Core Program Evaluation Team consisting of representatives from TecMarket Works (the Evaluation Administrator), The Cadmus Group, Opinion Dynamics, Integral Analytics, and Building Metrics (the Evaluation Team).

Energizing Indiana consists of five Core energy efficiency programs serving low-income customers, residential customers, commercial and industrial customers, and schools. Specifically, these programs include: 1) The Residential Home Energy Assessment (HEA) program; 2) Residential Low-Income Weatherization (LIW) program (also referred to the Income-Qualified Weatherization program¹); 3) The Energy Efficient Schools (EES) Education and Building Assessment² programs; 4) The Residential Lighting program; and 5) The Commercial and Industrial (C&I) Prescriptive Rebates program.

The six utility companies taking part in the statewide Core program effort are Duke Energy, Vectren, Indianapolis Power & Light Company (IP&L), Indiana Michigan Power Company (I&M), Northern Indiana Public Service Company (NIPSCO), and the Indiana Municipal Power Agency (IMPA). The programs are administered by a third party, GoodCents (Program Administrator or Third-Party Administrator), who was hired through a competitive bid process in 2011.

The evaluation efforts included in this study are designed to meet among the highest reliability standards in the industry and conform to the definitions and requirements of the Indiana Evaluation Framework³. That Framework requires that the studies be reliable, such that they have a confidence level of 90% with a level of precision that is within plus or minus 10% over the standard three-year program cycle at the utility level and at the program level. This also means that because there are five programs sponsored by six utility companies, this evaluation provides 30 individual program impact assessments (5x6=30) reported across the six utility companies. The results of the utility-specific energy impacts assessments are then rolled up to report program-level energy impacts that achieve a 90% confidence level and $\pm 10\%$ precision interval for each program and the results in total. To be clear, while the savings reported in this PY1 evaluation are reliable at the program level, the highest level of utility-specific reliability will be reported at the end of the program cycle once all three years' worth of program sampling and evaluation analysis efforts have been completed and rolled up into the final program-cycle evaluation report (to be delivered in Spring of 2015). It should also be noted that all language and terminology in this report are written to be consistent with the DSM Impact Steps outlined in the Indiana Evaluation Framework. Reviewers should reference these documents throughout the review of this report as needed.

In total, the programs reported achieving 73% of the planned ex-ante gross goal for kWh in 2012, or 416,666,806 kWh and 88,587 kW. Of this, the Evaluation Team verified accomplishments of 294,986,472 kWh and 53,576.65 kW for an overall verified program realization rate of 71% for kWh and



¹ The GoodCents Business Requirements Document (BRD) notes this program as the Low-Income Weatherization program, and the Energizing Indiana website lists it as the Income-Qualified Weatherization program. For this document we will refer to the program as the Low-Income Weatherization (LIW) program.

² The Building Assessment program was also referred to as the Energy Efficient Schools Audit program.

³ The Indiana Evaluation Framework, TecMarket Works, September 25, 2012, as updated with measure-level effective useful lives in February 2012. (Note: The studies also comply with the California Energy Efficiency Evaluation Protocols, TecMarket Works, April 2006).

60% for kW. The program's ex-post evaluated net savings were found to be 268,404,441 kWh and 69,053.50 kW. The net-to-gross (NTG) ratio for the kWh savings is .79, and for the kW savings is .75.

Overall, at a high level, verified savings reported via this evaluation are significantly lower than the exante gross savings reported by the Program Administrator. In several cases, the savings are also lower than the ex-ante gross savings being assumed for specific measures on a per-installation basis. While the ex-post net savings are usually lower than the ex-ante gross, the difference between the ex-ante projected gross and verified savings presented in this report is excessive. Several of the programs simply did not achieve the pre-established level-measure installation rates that were assumed when the programs were planned. The consistently seen discrepancies include:

- The types of homes served—far more gas heated and gas water heated homes were served than were assumed in planning⁴.
- Low installation rate compared to planning assumptions—the number of measures installed via the programs, were installed in lower volumes than the levels assumed by the Program Administrator during the planning phase.
- Lower volumes of participants than planned—several of the programs did not achieve the participation rates assumed during the planning stage.

While we note the significant difference between ex-ante gross projected savings and the ex-ante verified savings, we also are cognizant that this first evaluation report represents the first year of the operations of a new set of programs offered statewide in Indiana. Hiring and training new staff, and designing and launching new start-up energy efficiency program structures are always challenging, and it can typically take several months before savings are achieved. The Energizing Indiana programs were established in a manner that expected the Program Administrator to meet very aggressive energy-savings objectives that required high levels of participation immediately upon launch. In the view of the Evaluation Team, this is significantly challenging and typically not seen in the first year of new programming. This challenge was noted to the DSMCC and the Commission by the Evaluation Administrator during the pre-program planning hearings held at the Commission prior to the finalization of the GoodCents contract for services.

We recognize that planning for and launching a set of five statewide programs would be a challenge for any Program Administrator. Simply put, in the opinion of the Evaluation Team, there was not enough ramp-up time, allowing for the levels of increasing participation needed to meet the first year's savings targets. Based on where the programs are after PY1, and on the outcomes of this evaluation, considerable thought should be given to the balance of the program years' savings targets and whether or not the exante goals for the three-year cycle can be achieved. Success in future years will likely be dependent on a number of variables:

- 1. Can the Program Administrator continue to ramp-up participation to meet basic unit goals outlined in the contract?
- 2. Can the Program Administrator change the mix of homes served to achieve the highest amount of electric savings possible, while limiting time and expense spent on gas measures that do not help meet the Core program goals?



⁴ The Program Administrator assumed that 50% of HEA and LIW homes would have electric water heating and that 23% of LIW homes would have electric heat and central air conditioning. However, based on program data, for LIW 33% of homes had electric water heaters and 13% of homes had electric heat and central air. For HEA, 30.7% of households had electric water heating.

- 3. Will customer recognition and awareness of Energizing Indiana grow enough to increase demand in the market for these programs?
- 4. Can the Program Administrator make changes to the program implementation approach that serves to maximize the number of measures installed in homes and businesses across the state?
- 5. Can the utility-run Core and Core Plus programs evolve and collaborate in ways that contribute to the success of each?

If the Program Administrator focuses significant efforts on correcting the conditions that are leading to lower-than-expected ex-ante gross savings, and if they can improve the measure-installation rates for the measures covered by the program, there is a strong probability that two things can occur. The verified savings can be increased, and the Program Administrator can make major progress toward making up the PY1 gap and achieving the contracted ex-ante gross energy savings goals across the three-year cycle.

It is critical to note that the Evaluation Team does not believe that the current approach for projecting exante gross savings should be continued. While each program is different, ex-ante gross savings should be counted at the measure level and only for measures that are installed and being used by participants in ways that produce the expected savings. Currently, programs like the Home Energy Audit (HEA) and Low-Income Weatherization (LIW) use a per-house ex-ante savings approach; that is, the assumption is that the same mix of measures is installed in each home. Because the Program Administrator did not install the number of measures assumed in the planning process in the types of homes they expected, the per-home ex-ante gross savings were higher than the audited and verified savings the Evaluation Team found for the program. Because progress toward utility goals is measured at the verified level, this gap as well as shortfalls in the achieved ex-ante savings will require the programs to make up savings in PY2 and PY3. It will be critically important for the Program Administrator to increase the rates of participation or the level of installations, or both, in order to have the programs perform at the required level needed to reach energy-savings goals.

While the program struggled with meeting the planning targets and ex-ante goals, there were many overall positive outcomes that the Evaluation Team highlights below and throughout this report. Notably, these positives indicate that PY2 and PY3 will be delivered upon a fairly solid base that was built in PY1. These positives outcomes include:

- 1. Generally, participants indicated high satisfaction with the program and their experience with individual programs.
- 2. Several programs experienced significant growth in participation rates in the last few months of PY1, which indicates through trending that volume may be increasing to the levels needed to meet program goals in future years, but only if this growth is continued and sustained.
- 3. A fully ramped-up Program Team is in place; the Program Administrator now has experienced staff in place who can focus on program delivery in the upcoming years.
- 4. The level and quality of marketing and outreach efforts were regarded as appropriate for most of the programs.
- 5. Coordination between the Third-Party Administrator and some of the utilities' Core Plus programs shows signs of working well (e.g., Core Plus programs). That is, for some utilities the Core and Core Plus programs are beginning to help customers know about the offers of these other programs, potentially increasing participation in both or either of the programs. If this leveraged marketing can be increased, thereby increasing total savings, the potential for reaching



the overall Core and Core Plus combined goals is increased. This could provide an important basis for the balance of the three-year statewide cycle.

Detailed program-specific energy impact and process evaluation findings are provided in this report. The above findings are important enough to be placed up front in the Executive Summary, but it should be noted that they are more general in nature and apply to multiple programs. Readers are directed to the program-specific evaluation findings for summaries of program-specific evaluation results.

PROGRAM DESCRIPTIONS

Energizing Indiana is described as "a united effort by the Indiana Office of Utility Consumer Counselor (OUCC), participating utilities, and consumer organizations to offer comprehensive energy efficiency programs that bring savings to communities across the state." The program consists of five Core offerings that are delivered by an independent third-party administrator, GoodCents. The year 2012 represented the first year (PY1) of a three-year program cycle for Energizing Indiana. The Energizing Indiana programs include offerings for homes, schools, businesses, and commercial facilities. Table 1 provides a program-by-program summary of the Energizing Indiana offerings.

Program	Brief Program Description
Residential Home Energy Audit (HEA)	This program provides a free walk-through energy audit that analyzes participant energy use; assesses the heating, ventilation, and air conditioning (HVAC) systems in a home; recommends weatherization measures or upgrades; and facilitates the direct installation of low-cost energy-saving measures including low-flow showerheads, Compact Fluorescent Lamp (CFL) bulbs, sink aerators, pipe wrap, and water heater tank wrap.
Low-Income Weatherization (LIW)	This program provides a free walk-through audit that includes all HEA offerings, with the addition of full diagnostic testing (blower-door) for the home. Auditors recommend weatherization measures or upgrades that facilitate the direct installation of low-cost energy-saving measures including low-flow showerheads, CFL bulbs, sink aerators, pipe wrap, and water heater tank wraps. In addition, eligible homes may receive the installation of air sealing and attic insulation through the program.
Energy Efficient Schools (EES) Education and Building Assessment	This program has two components. The first, the Education program, works with fifth- and sixth-grade students to help them learn about energy efficiency and how they can make an impact at their school and home. Participating schools receive classroom curriculum education and Energizing Indiana take-home efficiency kits. The second, the Building Assessment program, works with schools to assess their HVAC systems to determine if they are operating efficiently. The results of this assessment are used to guide schools to the appropriate upgrades and rebates that may be available through the Commercial and Industrial (C&I) program or other Core Plus programs.

Table 1: Program Descriptions



Program	Brief Program Description
Residential Lighting	This program works with retailers and manufacturers to offer bought- down pricing on CFLs, ENERGY STAR [®] -qualified fixtures, ceiling fans, and Light Emitting Diode lamps (LEDs) at the point of purchase.
Commercial and Industrial (C&I) Prescriptive Rebates	This program provides prescriptive rebates to commercial and industrial facilities based on the installation of energy efficiency equipment and system improvements. Upgrades can include Lighting, Variable Frequency Drives (VFDs), HVAC, and efficient ENERGY STAR commercial kitchen appliances. In addition, the program offered direct-mail CFLs kits starting in the fall of 2012.

BUDGET AND EXPENDITURES

Overall, the Program Administrator spent 57% of the PY1 implementation budget for all programs evaluated in this report in 2012. Spending was fairly consistent across utilities, although spending in the I&M territory, where there was more overall program activity for several of the programs, significantly outpaced spending in the other utility territories. Overall spending by program aligns with the savings achieved on behalf of the utilities by the Program Administrator, suggesting that savings and spending were pacing each other appropriately. Table 2 shows the budgets and reported expenditures by utility at the statewide level⁵.

Table 3 shows the by-program spending, including spending for the branding effort not assessed as part of this evaluation.



⁵ Budget data was provided to the Evaluation Team by GoodCents.

Utility	Available Budget	Reported Expenditures	% of Budget Utilized
Duke	\$28,513,436	\$14,891,021	52%
I&M	\$8,506,750	\$6,328,630	74%
IPL	\$14,685,488	\$8,039,949	55%
IMPA	\$5,127,801	\$2,486,986	49%
NIPSCO	\$11,519,895	\$6,836,475	59%
Vectren	\$6,047,324	\$3,813,826	63%
Statewide	\$74,400,693	\$42,396,888	57%

Table 2: Budget to Expenditures by Utility and Statewide⁶

Table 3: Budget and Expenditures

Program	2012 Budget	Reported Expenditures	% of Budget Utilized
Residential Home Energy Audit	\$17,572,792.45	\$10,149,143.28	58%
Low-Income Weatherization	\$5,875,457.02	\$5,875,818.78	100%
Energy Efficient Schools	\$7,347,906.20	\$7,302,787.83	99%
Residential Lighting	\$6,290,026.70	\$6,200,456.17	99%
C&I	\$37,314,510.80	\$12,868,681.48	34%
Branding	\$689,544.00	\$689,544.00	100%

The Commercial and Industrial (C&I) program came in furthest from the program spending target.

EX-ANTE SAVINGS SUMMARY

Ex-ante savings reflect the reported savings values provided by the Program Administrator. These are the savings reported by the Program Administrator in the program-tracking information aggregated, and reported in the GoodCents Portal.

Across all of the energy efficiency programs, the Program Administrator achieved 73% of its 2012 planned program energy savings goals, and 63% of its planned demand savings. Overall, the DSMCC portfolio fell short of the planning goal by 157,460,794 kWh and 52,127 kW. The Low-Income Weatherization (LIW) program and Energy Efficient Schools (EES) programs came in closest to the planned savings total at 100% and 98% of kWh, respectively. The Commercial and Industrial (C&I) and Home Energy Audit (HEA) programs fell farthest from meeting the planning goal, coming in at 63% and 62% of kWh goal, respectively. Table 4 provides a summary of the Program Administrator's ex-ante⁷ savings compared to the planned savings for 2012. These savings do not present any adjustments (e.g.,



⁶ Budget data was provided to the Evaluation Team by GoodCents.

⁷ Reported or ex-ante sales are based on the GoodCents Portal reports represented by utility results from January 1, 2012, through December 31, 2012. <u>https://indiana.goodcents.com/</u>.

they do not reflect any evaluation activity) from the Evaluation Team, and simply show the savings as reported by the Program Administrator for the year 2012.

	kWh			kW			Therms
Program	Goal	Ex-Ante	% of Goal	Goal	Ex-Ante	% of Goal	Ex- Ante
Home Energy Audit	52,357,368	32,293,623	62%	23,325	14,407.00	62%	NA
Low-Income Weatherization	9,877,800	9,877,800	100%	4,265	4,266.00	100%	345,657
Energy Efficient Schools	30,968,505	30,313,815	98%	NA	NA	NA	175,526
Residential Lighting	121,664,925	117,805,969	97%	19,444.20	18,827.45	97%	0
Commercial and Industrial	359,259,002	226,375,599	63%	93,680	51,087	55%	NA
Statewide Total	574,127,600	416,666,806	73%	140,714	88,587	63%	521,183

Table 4: 2012 Statewide Ex-Ante Savings by Program

*Only two of the programs were identified by GoodCents as having therm goals, and only for two of the six utilities.

AUDITED SAVINGS SUMMARY

Audited savings reflect program savings after they have been reviewed by the Evaluation Team. The Team completed the audit of the Energizing Indiana savings by reviewing the programs' tracking databases; comparing results against the ex-ante energy savings numbers reported by the Program Administrator, including adjusting for incidence of measures; and ensuring that program ex-ante savings were applied correctly to a sampling of measures. Based on any findings, the Team made adjustments, as necessary, to correct for any errors or omissions as identified above, then recalculated program savings based on the adjusted audited number of measures. Table 5 provides a comparison of the total audited savings by program for the year 2012 against the ex-ante savings reported by the Program Administrator.

Program	kWh Ex-Ante	kWh Audited	kW Ex-Ante	kW Audited	Therms Ex- Ante	Therms Audited
Homo Enorgy Audit	22 202 622	22 607 570	14 407 00	11 591 42	221 270	664 650
Home Energy Audit	32,293,025	23,007,370	14,407.00	11,361.42	231,379	004,030
Low-Income Weatherization	9,877,800	5,261,427	4,265.50	3,275.41	345,657	676,697
Energy Efficient Schools	30,313,815	30,313,815	NA	NA	175,526	175,502
Residential Lighting	117,805,969	117,701,601	18,827.45	18,793.53	0	0
Commercial and Industrial	226,375,599	217,830,865	51,086.68	47,856.18	NA	NA
Statewide Total	416,666,806	394,715,278	88,586.63	81,506.54	752,562	1,516,849

Table 5: 2012 Statewide Audited Savings by Program

The audited savings for Residential Lighting program, Commercial and Industrial (C&I) program, and Energy Efficient Schools (EES) program are quite close to the ex-ante savings, coming in at 99%, 96% and 100%. In contrast, the audited savings for the Home Energy Audit (HEA) and Low-Income Weatherization (LIW) programs are significantly lower than reported. This is not because of errors in the count of total homes served, but because the makeup of measures actually installed in the homes and the type of homes served (electric versus gas heat) were significantly different than assumed in the planning



stage. Thus, while the Program Administrator assumed that 50% of all homes served by the HEA program would receive water heater wraps, less than 1% of homes were actually treated with this measure. Additional details on the audited savings for each program can be found in subsequent sections of this report. In addition, the Evaluation Team has provided utility-specific Technical Volumes that have been delivered in tandem with this report. These volumes present the detailed by-utility analyses that were completed to develop the statewide savings numbers presented throughout this report.

VERIFIED SAVINGS SUMMARY

Verified savings are computed after confirming that measures have been installed and were found to be operating, by applying a statewide installation and persistence rate to the audited savings calculated above. Verification typically employs the detailed analysis of a stratified random sample of installations. Typical methods for collecting necessary data include telephone surveys and/or site visits. In this step, adjustments are made to the audited (above) savings to address issues such as measures rebated but never installed; measures not meeting program qualifications; measures installed but later removed; or measures improperly installed.

This step does not alter the per-measure ex-ante deemed saving values being claimed by the Program Administrator. For 2012, the Core programs had a goal of delivering 574,397 MWh and 140,714 kW in verified energy savings. Table 6 and Table 7 compare the ex-ante savings to the verified savings by program in total. Table 8 provides the utility breakouts.

Program	kWh Ex-Ante	Verified kWh	kWh Realization Rate	kW Ex-Ante	Verified kW	kW Realization Rate
Home Energy Audit	32,293,623	17,190,585	53%	14,407.00	7,866.62	55%
Low-Income Weatherization	9,877,800	4,118,006	42%	4,265.50	2,570.39	60%
Energy Efficient Schools	30,313,815	28,718,896	95%	NA	NA	NA
Residential Lighting	117,805,969	92,944,602	79%	18,827.45	14,858.04	79%
Commercial and Industrial	226,375,599	152,014,384	67%	51,086.68	28,282	55%
Statewide Total	416,666,806	294,986,472	71%	88,586.63	53,576.64	60%

Table 6: 2012 Statewide Ex-Ante and Verified Savings by Program – Energy



Program	Therms Ex-Ante	Verified Therms	Therms Realization Rate
Home Energy Audit	231,379	573,383	287% ⁸
Low-Income Weatherization	345,657	659,946	191%
Energy Efficient Schools	175,526	160,125	91%
Residential Lighting	0	0	0%
Commercial and Industrial	NA	NA	NA
Statewide Total	752,562	1,393,454	185%

Table 7: 2012	Statewide Ex	-Ante and	Verified S	Savings by	Program -	- Therms
I UDIC / I AVIA	Diate mac L2	a millio una	v ci micu c	Ju mgo v	I I USI am	



⁸ The Program Administrator only tracked therms savings information for two participating utilities.

	2012 kWb	2012 Verified	kWh Realization	2012 kW	2012 Verified	kW Realization
Program	Ex-Ante	kWh	Rate	Ex-Ante	kW	Rate
DUKE						
Home Energy Audit	6,368,469	3,499,648	0.55	2,841.00	1,532.99	0.54
Low-Income Weatherization	3,125,688	1,388,300	0.44	1,350.00	773.54	0.57
Energy Efficient Schools	16,450,650	15,585,122	0.95	N/A	NA	NA
Residential Lighting	43,553,056	34,338,302	0.79	6,960.53	5,511.83	0.79
Commercial and Industrial	92,696,419	64,678,069	0.70	19,088.00	10,718.00	0.56
TOTAL DUKE	162,194,282	119,489,441	0.74	30,239.53	18,536.36	0.61
I&M						
Home Energy Audit	4,238,031	2,343,867	0.55	1,883.86	1,062.80	0.56
Low-Income Weatherization	1,723,888	708,364	0.41	744.30	462.91	0.62
Energy Efficient Schools	2,058,312	1,950,017	0.95	NA	NA	NA
Residential Lighting	20,956,767	16,641,948	0.79	3,349.26	2,660.83	0.79
Commercial and Industrial	38,487,311	25,527,031	0.66	8,795.00	4,921.00	0.56
TOTAL I&M	67,464,309	47,171,227	0.70	14,772.42	9,107.54	0.62
IPL		·				··································
Home Energy Audit	10,934,024	5,690,564	0.34	4,875.82	2,567.00	0.53
Low-Income Weatherization	1,051,024	446,148	0.42	454.00	262.47	0.58
Energy Efficient Schools	4,127,466	3,910,305	0.95	NA	NA	NA
Residential Lighting	20,790,327	16,391,731	0.79	3,322.66	2,608.78	0.79
Commercial and Industrial	29,951,735	20,785,007	0.69	6,539.00	3,664.00	0.56
TOTAL IPL	66,854,576	47,223,755	0.71	15,191.48	9,102.25	0.60
IMPA						
Home Energy Audit	1,752,072	932,516	0.53	777.93	420.97	0.54
Low-Income Weatherization	391,200	180,372	0.46	169.00	103.87	0.61
Energy Efficient Schools	1,084,200	1,027,156	0.95	NA	NA	NA
Residential Lighting	5,715,155	4,492,942	0.79	913.38	714.50	0.78
Commercial and Industrial	19,503,585	13,931,261	0.71	4,928.00	2,850.00	0.58
TOTAL IMPA	28,446,212	20,564,247	0.72	6,788.31	4,089.34	0.60
NIPSCO						
Home Energy Audit	5,198,223	2,611,307	0.50	2,352.71	1,304.85	0.55
Low-Income Weatherization	2.268.960	831.650	0.37	980.00	619.54	0.63

 Table 8: Statewide Ex-Ante and Verified Savings by Program by Utility – Energy

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	2012 kWh	2012 Verified	kWh Realization	2012 kW	2012 Verified	kW Realization
Program	Ex-Ante	kWh	Rate	Ex-Ante	kW	Rate
Energy Efficient Schools	4,808,844	4,555,833	0.95	NA	NA	NA
Residential Lighting	17,586,488	13,787,432	0.78	2,810.63	2,198.16	0.78
Commercial and Industrial	30,162,786	17,035,343	0.56	8,301.00	4,337.00	0.52
TOTAL NIPSCO	60,025,301	38,821,565	0.65	14,444.34	8,459.55	0.59
VECTREN						
Home Energy Audit	3,802,803	2,112,683	0.56	1,675.84	977.40	0.58
Low-Income						
Weatherization	1,317,040	563,171	0.43	569.00	348.06	0.61
Energy Efficient Schools	1,784,343	1,690,462	0.95	NA	NA	NA
Residential Lighting	9,204,176	7,292,246	0.79	1,470.99	1,163.94	0.79
Commercial and						
Industrial	15,573,763	10,057,674	0.65	3,436.00	1,792.00	0.52
TOTAL VECTREN	31,682,125	21,716,236	0.69	7,151.83	4,281.40	0.60



Program	2012 Therms Ex-Ante*	2012 Verified Therms	Therms Realization Rate
DUKE			
Home Energy Audit	NA	102,624	NA
Low-Income Weatherization	NA	112,355	NA
Energy Efficient Schools	NA	NA	NA
Residential Lighting	NA	NA	NA
Commercial and Industrial	NA	NA	NA
TOTAL DUKE	NA	214,979	NA
I&M	·		
Home Energy Audit	NA	83,064	NA
Low-Income Weatherization	NA	116,865	NA
Energy Efficient Schools	NA	NA	NA
Residential Lighting	NA	NA	NA
Commercial and Industrial	NA	NA	NA
TOTAL I&M	NA	199,929	NA
IPL			
Home Energy Audit	NA	187,765	NA
Low Income Weatherization	NA	74,829	NA
Energy Efficient Schools	NA	NA	NA
Residential Lighting	NA	NA	NA
Commercial and Industrial	NA	NA	NA
TOTAL IPL	NA	262,594	NA
IMPA			
Home Energy Audit	NA	29,412	NA
Low-Income Weatherization	NA	17,961	NA
Energy Efficient Schools	NA	NA	NA
Residential Lighting	NA	NA	NA
Commercial and Industrial	NA	NA	NA
TOTAL IMPA	NA	47,373	NA
NIPSCO			
Home Energy Audit	132,600	104,655	79%
Low-Income Weatherization	218,970	255,032	116%
Energy Efficient Schools	127,828	116,790	91%
Residential Lighting	0	NA	0
Commercial and Industrial	NA	NA	NA
TOTAL NIPSCO	479,398	476,477	99%

Table 9: Statewide Ex-Ante and Verified Savings by Program by Utility – Therms

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Program	2012 Therms Ex-Ante*	2012 Verified Therms	Therms Realization Rate
VECTREN			
Home Energy Audit	98,779	65,862	67%
Low-Income Weatherization	126,687	82,904	65%
Energy Efficient Schools	65,401	43,335	66%
Residential Lighting	0	NA	0
Commercial and Industrial	NA	NA	NA
TOTAL VECTREN	290,867	192,101	66%

*Ex-ante therm savings provided by GoodCents, programs without therm goals do not have a realization rate (NA).

EX-POST AND NET SAVINGS SUMMARY

Ex-post gross evaluated savings for the Energizing Indiana programs for PY1 are determined through engineering analysis, building-simulation modeling, billing analysis, metering analysis, or other accepted impact-evaluation methods. Adjustments made at this point reflect engineering adjustments made to the ex-ante per-measure savings that were claimed by the program and outlined in the Business Requirement Document⁹, and do not include net adjustments. Adjustments to the verified savings may include changes to the baseline assumption, adjustments for weather, adjustments for occupancy levels, adjustments for decreased or increased production levels, and other adjustments following from the impact analysis approach. The engineering analysis for each measure type included in each program is discussed in the program-specific sections below.

Net savings reflect the ex-post savings with the net-to-gross (NTG) ratio applied to ex-post evaluated gross savings estimates to account for a variety of circumstances, including savings-weighted free rider and spillover effects. Net savings are provided and achieve a 90% confidence and \pm -10% precision interval for each program¹⁰.

Table 10 and Table 11 provide the program-level ex-post gross and net savings and the utility-level expost gross and net savings.



⁹ From "Demand-Side Management Coordination Committee Independent Third Party Administrator Statement of Work." January 28, 2013.

¹⁰ PY1 confidence and precision levels are 90/10 at the statewide level. Utility level 90/10 will be achieved at the end of PY3.

	kWh				kW			Therms		
Program	Ex-Post	NTG Ratio	Net	Ex-Post	NTG Ratio	Net	Ex-Post	NTG Ratio	Net	
Home Energy Audit	17,939,625	0.89	15,960,939	2,030.00	0.89	1,804.00	1,718,321	1.00	1,720,108	
Low-Income Weatherization	6,995,190	1.00	6,995,190	807.01	1.00	807.01	578,463	1.00	578,463	
Energy Efficient Schools	40,566,432	1.02	41,414,941	4,600.00	1.09	5,010.99	977,932	1.21	1,147,481	
Residential Lighting	91,411,428	0.57	52,104,514	10,867.56	0.57	6,194.51	(1,747,283)	0.57	(995,951)	
Commercial and Industrial	182,642,707	0.83	151,928,857	74,342	0.74	55,237	0	NA	0	
Statewide Total	339,555,382	0.79	268,404,441	92,646.57	0.75	69,053.51	1,527,433	1.60	2,450,101	

 Table 10: 2012 Statewide Ex-Post and Net Savings by Program¹¹

Table 11: 2012 Statewide Ex-Post and Net Savings by Program by Utility

	kWh				kW		Therms		
Program	Ex-Post	NTG	Net	Ex-Post	NTG	Net	Ex-Post	NTG	Net
DUKE									
Home Energy Audit	3,664,688	0.89	3,271,487	404.95	0.89	361.06	333,256	1.00	334,184
Low-Income Weatherization	2,211,178	1.00	2,211,178	204.07	1.00	204.07	128,136	1.00	128,136
Energy Efficient Schools	23,470,892	1.03	24,081,247	2,563.30	1.09	2,792.58	435,551	1.19	518,838
Residential Lighting	33,886,113	0.57	19,315,084	4,028.37	0.57	2,296.17	(647,720)	0.57	(369,200)
Commercial and	58 073 046	0.88	51 260 015	47 154	0.68	31.961	0	NA	0
TOTAL DUKE	121,305,917	0.83	100,148,911	54,355	0.69	37,615	249,223		611,958

¹¹ Note that the NTG ratios provided above represent the total for the program and all its components (e.g. the C&I prescriptive effort has a NTG of .58 and while the bulb drop received a NTG of well over one, when all ex-post and all Net savings are combined the program level blended NTG is .86). NTG for individual components are reported within each program section.

FINAL EVALUATION SUMMARY REPORT_YEAR 1 CORE PROGRAMS _ JUNE 20 2013



		kWh			kW			Therms		
Program	Ex-Post	NTG	Net	Ex-Post	NTG	Net	Ex-Post	NTG	Net	
								2.46		
I&M										
Home Energy Audit	2,456,323	0.89	2,180,481	275.39	0.89	243.87	239,344	1.00	238,605	
Low-Income Weatherization	1,315,530	1.00	1,315,530	110.10	1.00	110.10	107,876	1.00	107,876	
Energy Efficient Schools	2,770,869	1.02	2,822,012	306.54	1.09	334.38	79,306	1.16	91,804	
Residential Lighting	16,337,807	0.57	9,312,550	1,942.27	0.57	1,107.09	(312,288)	0.57	(178,004)	
Commercial and Industrial	30,972,533	0.81	25,093,655	6,630.00	0.86	5,730.00	0	NA	0	
TOTAL I&M	53,853,062	0.76	40,724,228	9,264	0.81	7,525	114,238	2.28	260,281	
IPL										
Home Energy Audit	6,010,373	0.89	5,355,687	681.45	0.89	606.41	562,989	1.00	565,499	
Low-Income Weatherization	919,212	1.00	919,212	89.34	1.00	89.34	75,548	1.00	75,548	
Energy Efficient Schools	5,738,881	1.02	5,851,412	625.05	1.09	680.16	156,807	1.16	181,568	
Residential Lighting	16,091,318	0.57	9,172,051	1,913.50	0.57	1,090.70	(307,566)	0.57	(175,313)	
Commercial and Industrial	27,312,033	0.79	21,706,520	5,186	0.88	4,559.00	0	NA	0	
TOTAL IPL	56,071,817	0.77	43,004,882	8,495.34	0.83	7,025.61	487,778	1.33	647,302	
IMPA										
Home Energy Audit	973,979	0.89	866,122	110.24	0.89	97.87	89,496	1.01	89,982	
Low-Income Weatherization	330,926	1.00	330,926	30.01	1.00	30.01	19,175	1.00	19,175	
Energy Efficient Schools	1,463,005	1.02	1,491,303	163.12	1.09	177.58	37,299	1.17	43,537	

EVALUATION SUMMARY REPORT_YEAR 1 CORE PROGRAMS _ JUNE 21 2013



	kWh				kW			Therms		
Program	Ex-Post	NTG	Net	Ex-Post	NTG	Net	Ex-Post	NTG	Net	
Residential Lighting	4.408.674	0.57	2,512,944	524.10	0.57	298.74	(84,272)	0.57	(48.035)	
Commercial and								1		
Industrial	18,187,831	0.86	15,571,787	4,228.00	0.89	3,779.00	0	NA	0	
TOTAL IMPA	25,364,415	0.82	20,773,082	5,055.47	0.87	4,383.20	61,698	1.70	104,659	
NIPSCO										
Home Energy Audit	2,652,409	0.89	2,357,536	313.21	0.89	278.24	298,167	0.99	295,770	
Low-Income				Ī						
Weatherization	1,273,453	1.00	1,273,453	174.79	1.00	174.79	163,783	1.00	163,783	
Energy Efficient Schools	4,626,279	1.00	4,637,948	672.85	1.09	733.85	211,890	1.16	246,448	
Residential Lighting	13,530,379	0.57	7,712,316	1,608.48	0.57	916.83	(258,630)	0.57	(147,419)	
Commercial and								1		
Industrial	30,775,928	0.85	26,186,805	7,699	0.87	6,667	0	NA	0	
TOTAL NIPSCO	52,858,448	0.80	42,168,058	10,468	0.84	8,771	415,210	1.35	558,582	
VECTREN										
Home Energy Audit	2,181,854	0.88	1,929,626	244.97	0.88	216.67	195,069	1.01	196,068	
Low-Income						1		1		
Weatherization	944,890	1.00	944,890	198.70	1.00	198.70	83,944	1.00	83,944	
Energy Efficient Schools	2,496,506	1.01	2,531,019	268.87	1.09	292.45	57,078	1.14	65,285	
Residential Lighting	7,157,136	0.57	4,079,568	850.84	0.57	484.98	(136,806)	0.57	(77,979)	
Commercial and										
Industrial	17,321,336	0.70	12,100,174	3,445	0.74	2,541	0	NA	0	
TOTAL VECTREN	30,101,722	0.72	21,585,277	5,008	0.75	3,734	199,285	1.34	267,318	



SUMMARY OF IMPACT ADJUSTMENTS

Program	Planned kWh	Ex-Ante kWh	Audited kWh	Verified kWh	Realization Rate	Ex-Post kWh First Year	Ex Post kWh Lifetime	Net kWh First Year	Net kWh Lifetime
Home Energy Audit	52,357,368	32,293,623	23,607,570	17,190,585	53%	17,939,625	94,900,617	15,960,939	84,433,367
Low-Income									
Weatherization	9,877,800	9,877,800	5,261,427	4,118,006	42%	6,995,190	56,952,468	6,995,190	56,952,468
Energy Efficient Schools	30,968,505	30,313,815	30,313,815	28,718,896	95%	40,566,432	248,614,575	41,414,941	257,088,383
Residential Lighting	121,664,925	117,805,969	117,701,601	92,944,602	79%	91,411,138	457,055,690	52,104,514	260,522,570
Commercial and									
Industrial	359,259,002	226,375,599	217,830,865	152,014,384	67%	182,642,707	1,263,147,435	151,928,857	1,026,404,749
Statewide	574,127,600	416,666,806	394,715,278	294,986,472	71%	339,555,092	2,120,670,785	268,404,441	1,685,401,538

Table 12: Summary of PY1 Planned, Ex-Ante, Audited, Verified, Ex-Post, and Net Statewide kWh Savings

Table 13: Summary of Planned, Ex-Ante, Audited, Verified, Ex-Post, and Net Statewide kW Savings

Program	Planned kW	Ex-Ante kW	Audited kW	Verified kW	Realization Rate	Ex-Post kW First Year	Ex-Post kW Lifetime	Net kW First Year	Net kW Lifetime
Home Energy Audit	23,325.00	14,407.00	11,581.40	7,866.60	55%	2,030.20	2,030.20	1,804.13	1,804.13
Low-Income									
Weatherization	4,264.50	4,265.51	3,275.41	2,570.39	60%	807.01	807.01	807.01	807.01
Energy Efficient Schools	NA	NA	NA	NA	NA	4,600.00	4,600.00	5,010.99	5,010.99
Residential Lighting	19,444.17	18,827.45	18,793.53	14,858.04	79%	10,867.56	10,867.56	6,194.51	6,194.51
Commercial and									
Industrial	93,680.00	51,086.68	47,856.18	28,281.59	55%	74,342.00	74,342.00	55,237.00	55,237.00
Statewide	140,713.67	88,586.64	81,506.52	53,576.62	60%	92,646.77	92,646.77	69,053.64	69,053.64



Table 14: Summary of Planned, Ex-Ante, Audited, Verified, Ex-Post, and Net Statewide Therm Savings									
Program	Planned Therms	Ex-Ante Therms	Audited Therms	Verified Therms	Realization Rate	Ex-Post Therms First Year	Ex-Post Therms Lifetime	Net Therms First Year	Net Therms Lifetime
Home Energy Audit	NA	231,379	664,650	573,383	248%	1,718,321	13,024,869	1,720,108	13,038,419
Low-Income Weatherization	NA	345,657	676,697	659,946	191%	578,463	6,570,840	578,463	6,570,840
Energy Efficient Schools	193,229	175,526	175,502	160,125	91%	977,932	6,390,928	1,147,481	7,373,152
Residential Lighting	NA	NA	NA	NA	NA	(1,747,283)	(8,736,414)	(995,951)	(4,979,755)
Commercial and Industrial	NΔ	NΔ	NΔ	NΔ	NΔ	0	0	0	0
Statewide	193,229	752,562	1,516,849	1,393,454	185%	1,527,433	17,250,223	2,450,101	22,002,656

Table 14. Symmony of Blanned Ey Anto Audited Verified Ey Dest and Net Statewide Therm Serings



CORE PROGRAMS HIGH-LEVEL INSIGHT AND FINDINGS

Below is a summary of the key findings for each of the five Core programs offered through Energizing Indiana.

Home Energy Audit

The Home Energy Audit (HEA) program offers a walk-through audit and direct installation of energy efficiency measures. In 2012, the program achieved 62% of its energy savings goals and 62% of its demand savings goals while using 58% of its budget. Key evaluation findings include:

HEA participants¹² are satisfied with the program—especially with the professionalism of the auditors. On a scale of 0-10, overall satisfaction with the program was 8.8. Participants were most satisfied with the professionalism of the auditor, which scored a 9.6. The vast majority of participants (74%) could not list anything that could be done to improve the program.

The incidence rates found in the program database are lower than the estimated incidence rates, or the frequency of installation per measure across homes, used in program planning. Fewer measures are being installed in each home than the program planned, and measures meant to capture electric savings are being installed in homes with natural gas water heating. This lowers the amount of total savings achieved in the home. In addition, the participant survey showed that measures left behind might be hurting overall installation rates because participants had not yet installed them on their own at the time of the survey¹³. Finally, participants reported that they did not remove measures once they were installed, which resulted in high near-term persistence rates.

There were a number of issues with the program-tracking database. The program auditors are not consistently entering, or clearly identifying, the measures that are left behind in participants' homes and not installed. The program has some other data challenges. One challenge involves the lack of a data dictionary, which provides a definition for each field in a program database, its purpose, inputs, and data ranges, and is considered a best practice for energy efficiency program databases. Another challenge stems from inconsistent and ill-defined data-entry protocols for program staff/auditors, which lead to different tracking units (for example, BTUs versus tons) in the same fields. Likewise, auto-populate features included in the Optimizer Tool make it difficult to distinguish real from proxy data.

The net-to-gross (NTG) ratio was calculated at the measure level. Tank wrap (100%), pipe wrap (93%), and aerators (93%) had the highest program attribution, while CFLs had the lowest (77%) which is similar to other utility programs nationally.

Low-Income Weatherization

The Low-Income Weatherization (LIW) program provides a walk-through audit and the direct installation of energy efficiency measures, including blower door-guided air sealing. Health and safety checks are also performed, and qualified homes may receive attic insulation. In 2012, the program achieved 100% of its kWh savings goal and 100% of its demand savings goal while using 100% of its budget. Key evaluation findings include:



¹² Note that the participant survey only covered the first 10 months of the year. Significant increases in participation and the number of auditors may have changed overall program satisfaction. Please see the program-specific section for more details on this.

¹³ The program will get eventual credit for CFLs left behind in PY1 but not installed at the time of the survey. 55% will be credited in PY2 and 44% in PY3, with 1% assumed to never be installed per the Indiana TRM.

Survey data shows that 85% of participants are satisfied with the program overall¹⁴, and a majority (55%) could not list anything that could be done to improve the program. The highest areas of satisfaction were the length of the audit and the professionalism of the auditor.

Measure incidence rates, or the frequency of installation per measure across homes, in the program database are lower than planned by the Program Administrator, and measures meant to capture electric savings are being installed in homes with natural gas water heating. Auditors are also leaving several program measures behind with the participant to install later, rather than installing them at the time of the audit. This has resulted in much lower than anticipated installation rates. For example, CFLs have an installation rate of 78.6%¹⁵, while in a neighboring state the installation rate was about 20% higher.

Once program measures are installed, persistence rates are very high¹⁶. Persistence rates for program measures range from 97.2% for low-flow showerheads to 100% for pipe wraps. The program should ensure that auditors are installing as many program measures as possible in a participant's home. If measures are left behind, they should be tracked separately in the program database.

There were several issues with the program-tracking database. The Program Administrator is not separately tracking measures that are left behind with the participant to install later. There are also several other issues related to the program data-tracking which make data analysis challenging, including inconsistent and poorly defined data-entry protocols for program staff/auditors to follow, different tracking units (e.g., BTUs versus tons) being used in the same fields, using the auto-populate function, and the lack of a data dictionary¹⁷.

Energy Efficient Schools

The Energy Efficiency Schools (EES) program offers energy efficiency kits to students and energy assessments of school buildings at no cost. In 2012, the program achieved 98% of its energy savings goals and 91% of its energy savings goals while using 99% of its budget. Key evaluation findings include:

Satisfaction is high among participating teachers and facility staff. Almost all surveyed teachers (91%) reported they would be highly likely to recommend the program to other teachers. Ninety-two percent (92%) of facility staff reported high satisfaction with the overall Building Assessment program.

The Building Assessment program generates significant, untracked savings. Most savings generated in the first year of receiving the assessment are derived from behavioral changes such as setting air temperature controls and adjusting the building operating schedule. Sixty-nine percent (69%) of surveyed facility staff reported implementing at least one of the recommendations in the first year as a result of participating in the program.

A lack of funding is the principal barrier to participating in the Building Assessment program. The most common suggestion for program improvement was to provide financing options to schools implementing recommended improvements.

Program implementers reported that some utilities' participation goals for the Education program are set higher than the number of fifth-grade students in a given territory; therefore goals need to be set at realistic expectations regarding the number of students.

Teachers prefer to receive the kits earlier in the semester to allow time to teach the curriculum.



¹⁴ Note that the participant survey only covered the first 10 months of the year. Significant increases in participation and the number of auditors may have changed overall program satisfaction. Please see the program-specific section for more details on this.

¹⁵ This reflects measures installed by auditors and those later installed by participants.

¹⁶ This represents near-term persistence and may not reflect long-term usage of installed measures.

¹⁷ These inconsistencies could result in under-estimates or over-estimates of program savings, depending on the circumstances and the actual features of the home.

Residential Lighting

The Energizing Indiana Residential Lighting program works with retailers and manufacturers to offer bought-down pricing on CFLs, ENERGY STAR qualified fixtures, ceiling fans, and LEDs at the point of purchase. In 2012, the program achieved 97% of its ex-ante energy savings and demand goals while using 97% of its budget. This program achieved a realization rate of 79% between ex-ante and verified savings, and a net-to-gross (NTG) ratio of .57. Key evaluation findings include:

Reported program savings tracked very closely to the audited savings found in the program database. While total unit counts aligned within .01%, there were some greater variances between individual measure-type counts and reported counts, but this had minimal effects on overall audited to ex-ante counts.

Retailers report high satisfaction with the program overall, with 74% of retailers interviewed rating their satisfaction of the program with an average of 9 out of 10. Field representatives and program marketing generally received positive feedback, with retailers noting that in-store events were useful, increased sales, and provided immediate and more thorough information about the products to customers.

The program appears to have considerable data-tracking issues. While issues do not pertain to the accuracy of total units tracked, there appear to be significant challenges around accuracy and tracking of unit types and SKUs, retailer-unique IDs, retailer price and incentive levels, and field definitions. In addition, there is indication of duplicative data-tracking efforts occurring, and challenges with the timeliness and consistency of retailer/manufacturer data uploads and allocation tracking.

The free-ridership rate for this program is 43%; that is, of the bulbs sold 43% would have been sold in absence of the program, with .57 being the NTG ratio. This is in line with what we see in many other similar programs operating nationally and in the Midwest.

Commercial and Industrial Prescriptive Rebates

The Commercial and Industrial (C&I) Prescriptive Rebates program is designed to achieve long-term, cost-effective savings. This program relies on a prescriptive rebate structure that rewards participants with monetary incentives based on their installation of energy efficiency equipment upgrades. These upgrades include lighting, VFDs, HVAC, and ENERGY STAR kitchen equipment. The program also included a CFL-mailer program, referred to as the Bulb Drop. In 2012 the program achieved a realization rate of 67% for energy savings and 55% for demand savings, using 34% of the program budget. Key evaluation findings include:

Ninety-two percent (92%) of Bulb Drop survey respondents reported being "somewhat" or "very" supportive of the program efforts. For both lighting and non-lighting customers, they ranked the program approximately a 9 out of 10, 10 indicating "very satisfied."

The realization rate, when ex-ante is compared to the audited savings, was at 100% for energy and 98% for demand savings for participant-engaged rebated measures, without the Bulb Drop. The reduced realization rate, down to 67% for energy and 55% for demand, was primarily due to the low installation rate achieved. Additional savings will be counted toward 2013 and 2014, when these bulbs begin to replace more of the existing stock.

Large equipment, such as HVAC and VFDs, has the potential to achieve significant savings for the program. As the program matures and businesses have addition time to plan capital investments, these measures should be targeted through increased Trade Ally channels.

The net-to-gross (NTG) figure (58%) achieved in the program is in line with what we see for first-year commercial programs. As the program has more time to influence the market and facilitate retrofit planning, this number could change.



COST-EFFECTIVENESS SUMMARY

In general, the energy efficiency program portfolios for each of the individual utilities as well as the aggregation to the State of Indiana were found to be cost-effective for the 2012 program year under the PCT, UCT, and TRC tests. In addition, most of the year-1 programs were also found to be cost-effective with the exception of two programs. The Low Income Weatherization program and Home Energy Audit program did not pass cost-effectiveness for the state wide programs as a whole, or for their individual utility components. At the time this report was being prepared, the DSMCC was working with the TPA on addressing approaches for improving the cost effectiveness of these two programs as well as the portfolio as a whole. The following table provides the results of the benefit cost analysis for each program.

State of Indiana Program Cost Effectiveness: 2012											
	PCT	UCT	RIM	TRC							
Residential Programs											
Residential Lighting	4.81	3.42	0.77	2.80							
Low Income Weatherization	NA	0.64	0.39	0.64							
Home Energy Audit	NA	0.50	0.33	0.50							
School Energy Efficiency Kit	NA	2.24	0.77	2.24							
Non-Residential Programs											
School Building Assessments	NA	1.48	0.64	1.48							
Commercial & Industrial Incentives	3.51	3.19	0.86	2.19							
Total Portfolio	5.23	2.00	0.71	1.71							

Table 15: Summary Program Cost Effectiveness for the State of Indiana

