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2014-2018 ENERGY EFFICIENCY PLAN

Interstate Power and Light Company

Docket No. EEP-2012-0001

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List of Acronyms

199 IAC 35	1999 Iowa Administrative Code Chapter 35
Ag Rep	Agribusiness representative
Ag Trade Allies	Agribusiness trade allies
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
B/C	Benefit/cost
BHE	Black Hills Energy
BOC	Building Operator Certification
BOP	Builder Option Package
BPI	Building Performance Institute
BRC	Business Resource Center
Btu	British thermal unit
CAP	Community Action Program
CFL	Compact fluorescent lamp
CGRER	Center for Global and Regional Environmental Research
DCAA	Division of Community Action Agencies
Dealer Network	Energy Efficiency Dealer Network
Dealer	Dealers in the Energy Efficiency Dealer Network
DHR	Iowa Department of Human Rights
DLC	Direct Load Control
DOE	United States Department of Energy
EDA	Energy design assistance
EM&V	Evaluation, measurement, and verification
EEP	Energy Efficiency Plan
FPL	Federal poverty level
FTE	Full-time equivalent
GWh	GigaWatt hour
HERS	Home Energy Rating System
HES	Home Energy Savers
HVAC	Heating, Ventilation and Air Conditioning
ID	Identification
IDNR	Iowa Department of Natural Resources
IEC	Iowa Energy Center
IECC	International Energy Conservation Code
IEDA	Iowa Economic Development Authority
IFA	Iowa Finance Authority

IOUs	Investor-owned utilities
IPL	Interstate Power and Light Company
IPMVP	International Performance Measurement and Verification Protocols
IUA	Iowa Utility Association
KAM	Key Account Manager
kW	KiloWatt
kWh	KiloWatt hour
LED	Light emitting diode
LEED	Leadership in Energy and Environmental Design
LMP	Locational marginal price
MEC	MidAmerican Energy Company
MEEA	Midwest Energy Efficiency Alliance
MISO	Midwest Independent Transmission System Operator, Inc.
MW	MegaWatt
MWh	MegaWatt hour
NEEC	Northwest Energy Efficiency Council
OCA	Office of Consumer Advocate
PIE ²	Partnership for Industrial Energy Efficiency
Plan	Energy Efficiency Plan
POP	Point-of-purchase
RESNET [®]	Residential Energy Services Network
RIM	Ratepayer-impact measure
SAVE	System Adjustment for Verification Efficiency
T&D	Transmission and distribution
TREES	Tool for Reporting Energy Efficiency Savings
TRM	Technical Reference Manual
TV	Television
USDA	United States Department of Agriculture

1. Executive Summary

Interstate Power and Light Company (IPL), a service company subsidiary of Alliant Energy Corporation (Alliant Energy), hereby submits its proposed 2014-2018 Energy Efficiency Plan (the Plan), in compliance with Iowa Code §§ 476.6(14) and (16) (2011) and 199 Iowa Administrative Code (IAC) Chapter 35. This filing is made pursuant to the Iowa Utilities Board (Board) Final Order issued June 24, 2009, in Docket No. EEP-08-1. IPL's Plan describes extensive portfolios of residential and nonresidential energy-efficiency; demand response; and education, outreach, and training programs.

The Plan offers a comprehensive portfolio of programs and initiatives for acquiring energy-efficiency resources during the five-year planning period from 2014 to 2018. This Plan expands upon IPL's 2009–2013 Energy Efficiency Plan (2009-2013 EEP), filed with the Board April 23, 2008, and approved June 24, 2009, in Docket No. EEP-08-1. The Plan extends the savings targets for IPL's existing programs, introduces enhancements to individual programs, where warranted, and incorporates new programs and initiatives. Once approved, this Plan will replace the 2009-2013 EEP beginning on January 1, 2014. The Plan consists of 25 programs comprising three portfolios, as well as three additional funding initiatives.

In developing this Plan, IPL has compiled innovative programs that are tailored to the unique characteristics of IPL's service territory. Taken together, the programs outlined in this Plan continue IPL's more than 20-year history of offering customers cost-effective, equitable, flexible, and wide-ranging programmatic choices, incentive options,

information, and educational opportunities, designed to produce long-term savings and bring about lasting change in the way lowans use energy.

IPL has established annual electricity savings targets ranging from 1.12 to 1.16 percent of its retail sales forecast. The electric component targets 163 gigaWatt hours (GWh) of savings in 2014, projected to increase to 165 GWh in 2018. In each year of the Plan, IPL's natural gas component is expected to produce more than 2.3 million therms of savings.

In total, IPL's Plan projects slightly lower savings than those estimated in its 2009-2013 EEP, at a lower overall cost to customers. IPL plans to achieve these saving targets by: enhancing its already aggressive outreach, marketing, and education efforts; offering robust incentives for measures with the highest, cost-effective achievable savings potential; targeting new, previously untapped sources of savings potential; and streamlining customer delivery and administrative processes to achieve greater operational efficiencies. Table 1.1 provides a summary of electric and natural gas costs and savings by program.

Table 1.1 Savings and Cost Summary by Program

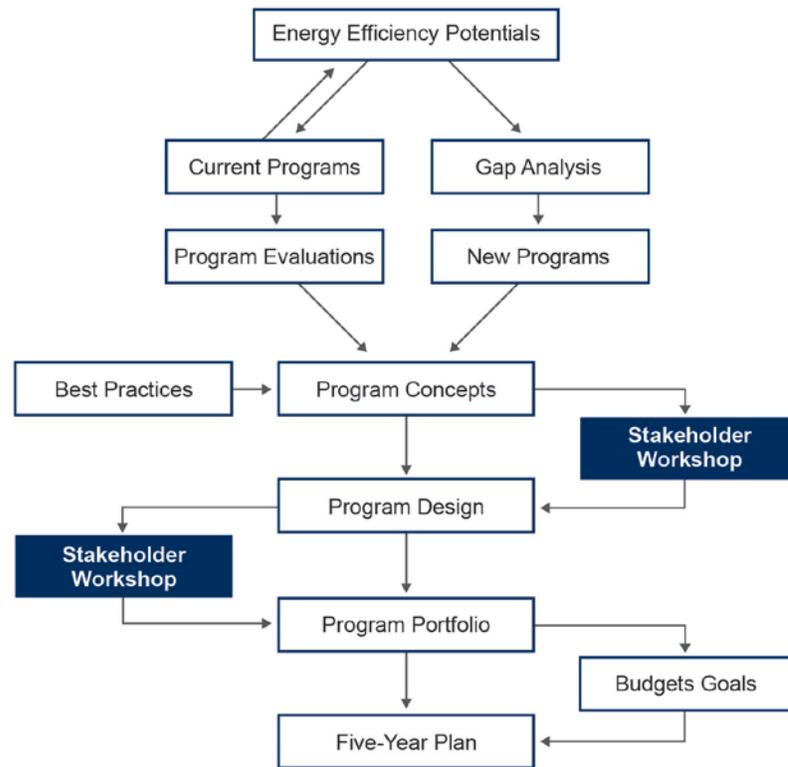
Programs	2014-2018 Cumulative Energy Savings		Total Costs (\$MM)
	Electricity (GWh)	Natural Gas (therms)	
<i>Energy-Efficiency Portfolio</i>	764.26	10,671,736	\$235.24
Residential Prescriptive Rebates	63.13	1,834,148	\$65.21
Home Energy Assessments	12.81	1,645,068	\$16.60
Change-a-Light	56.89	0	\$12.56
Appliance Recycling	52.78	0	\$8.68
New Home Construction	1.17	338,826	\$5.12
Multifamily	0.76	29,414	\$0.79
Weatherization	11.85	1,098,226	\$16.15
EnergyWise Education	4.36	141,170	\$0.47
Low Income Multifamily and Institutional Efficiency Improvements	0.50	19,609	\$0.47
Home Energy Savers	0.45	129,943	\$2.46
Nonresidential Prescriptive Rebates	121.47	3,378,382	\$44.09
Business Assessments	14.54	259,709	\$5.37
Custom Rebates	343.31	1,259,641	\$46.44
Commercial New Construction	62.12	537,600	\$6.29
Agriculture Sector	18.13	0	\$4.54
<i>Outreach, Education, and Training Portfolio</i>	20.99	1,249,179	\$16.42
Non-Targeted Energy Awareness and Information	0	0	\$2.29
School-Based Energy Education	20.99	1,249,179	\$3.13
Tree Planting	0	0	\$4.51
Hometown Rewards	0	0	\$2.60
Builder Training	0	0	\$0.60
Energy Efficiency Dealer Network	0	0	\$1.04
Bright Ideas	0	0	\$1.16
Research, Development, and Demonstration	0	0	\$1.09
<i>Demand Response Portfolio</i>	29.5	0	\$135.13
Residential Direct Load Control	2.5	0	\$12.76
Nonresidential Interruptible	27.0	0	\$122.37
<i>Other Funding Initiatives</i>	0	0	\$12.50
Legislative Assessment	0	0	\$8.00
Evaluation, Measurement, and Verification	0	0	\$3.00
Next Plan	0	0	\$1.50
TOTAL PORTFOLIO	814.8	11,920,915	\$399.30

1.1. Background

To develop the Plan, IPL was largely guided by the findings of the joint-utility *Assessment of Energy and Capacity Savings Potential in Iowa* (Assessment), a comprehensive study of energy efficiency and demand response savings potential in the service territories of Iowa's three investor-owned utilities (IOUs): IPL, Black Hills Energy (BHE), and MidAmerican Energy Company (MEC). The Assessment focused on reporting potential savings over a 10-year planning horizon from 2014 to 2023.

As illustrated in Figure 1.1, IPL then systematically compared end-uses in each of its existing programs to the results of the Assessment and other market data to identify potential programmatic gaps, untapped potential, or opportunities to increase customer participation and depth of savings by incorporating new market sectors, technologies, or delivery strategies.

Figure 1.1 Plan Development Process



To develop its Plan, IPL began with a bottom-up process, which involved compiling an extensive list of cost-effective measures with significant economic potential and aggregating them into appropriate programs by customer sector and equipment type. Additionally, IPL reviewed findings and recommendations resulting from collaborative efforts, program ideas from stakeholders, and results from the third-party evaluation of select programs contained in its 2009-2013 EEP. IPL conducted additional research on market conditions, program best practices, and other external factors that could affect economic, temporal, market, and administrative conditions associated with delivery of its programs. This information, combined with a structured review of its on-the-ground program delivery experience, provided IPL with a framework for its Plan development

process. The process culminated in a top-down balancing exercise to ensure that the composition and performance of the Plan meet IPL's goals and regulatory requirements.

At several points during the planning process, IPL coordinated with the other IOUs and held stakeholder meetings to present ideas, gather feedback, and report on the development of the Plan. IPL carefully considered the input it received in developing the Plan. (See Section 2.4, the Collaborative Process Section, and Appendix B for details on IPL's collaborative process.)

1.2. Plan Composition

The Plan's overarching approach may be best described as a portfolio perspective, addressing virtually every significant energy end-use in a customer's home, farm, or business, through a comprehensive, whole-facility approach or a menu approach, whichever works best for the customer. IPL employs multiple market intervention strategies in its Plan, including information, education, and technical assistance and, most importantly, financial incentives to produce long-term savings and provide IPL and its customers with the highest returns in terms of market reach, energy savings, and cost-effectiveness.

The Plan is composed of 25 programs, organized in the three primary portfolios: Energy Efficiency; Demand Response; and Outreach, Education, and Training. Additionally, the Plan includes three additional funding initiatives. In designing the portfolios, IPL sought to provide program opportunities for every customer sector with a range of available measures, delivery mechanisms, and educational opportunities.

IPL's Plan builds on its 2009-2013 EEP, adding new elements to capture untapped market potential, eliminating certain elements that failed to produce long-term benefits for Iowa customers, and streamlining program operations and delivery. Table 1.2 summarizes the changes to IPL's 2009-2013 EEP that are included in the Plan.

Table 1.2 2014-2018 Plan Changes

Program	Markets Served	Changes/Details
New Programs		
Multifamily	Buildings with four or more units	<ul style="list-style-type: none"> Holistic approach to multifamily efficiency, allowing the building owner to focus on both common areas and tenant units. Available for new construction as well as after-market upgrades. Will draw from existing programs (e.g., assessments, prescriptive and custom rebates, new construction programs). Addresses a hard-to-reach market with untapped efficiency potential.
Change-a-Light	All IPL customers	<ul style="list-style-type: none"> Year-round upstream point-of-purchase incentives and marketing campaign. Energy-efficient light bulbs including a variety of compact fluorescent lamps and LED bulbs.
Business Assessments	All commercial and industrial customers	<ul style="list-style-type: none"> Offers three types of business assessments to business owners for a wide range of facility types and sizes. Offers a small business direct install component that includes a comprehensive lighting package and technical support for the hard-to-reach small business sector.
Discontinued Programs/Initiatives		
Performance Contracting	Large commercial and industrial	<ul style="list-style-type: none"> Only one active project developer supporting the program. Customers find that the Custom Rebate Program better addresses their internal constraints. IPL will continue to offer support to those customers interested in financing as an effective way to implement energy efficiency.
Tree Planting	Residential customers	<ul style="list-style-type: none"> Eliminating three Tree Planting Program initiatives: <ul style="list-style-type: none"> Iowa Hometown Celebrations: eliminated due to lack of customer interest. Industrial Park Developments: often benefited private developers that had not paid into the Iowa energy-efficiency fund. Growing Kids, Growing Trees: Iowa's Department of Natural Resources offers a similar program.
Enhancements and Changes to Existing Programs		
Home Energy Assessments	Residential single family customers	<ul style="list-style-type: none"> Adding electric-only assessments to serve customers who: 1) have an all-electric home; 2) heat with propane; or 3) have natural gas service that is not provided by an Iowa IOU.

Program	Markets Served	Changes/Details
		<ul style="list-style-type: none"> • Adding comprehensive assessments including diagnostic testing for customers to identify specific improvements that offer the greatest return-on-investment opportunities. • Offering bonus incentives to encourage customers to install multiple recommended measures.
Residential Prescriptive Rebates	Residential customers	<ul style="list-style-type: none"> • Expanding HVAC system tune-up options. • Requiring quality installation for all furnace rebates. • Adding prescriptive incentives for whole-house fans. • Eliminating some measures with low participation and low cost-effectiveness.
New Home Construction	Residential builders and homeowners	<ul style="list-style-type: none"> • Simplifying the program for builders who use the Home Energy Rating System index to measure new home performance. • Adding two performance paths with tiered incentive levels. • Reducing required measures and incentives in the prescriptive path to adjust for new building codes.
Weatherization	Income-qualified residential customers	<ul style="list-style-type: none"> • Allowing for annual adjustments to match program eligibility to the current federal poverty level.
EnergyWise Education	Income-qualified residential customers	<ul style="list-style-type: none"> • Adding window film and one additional compact fluorescent lamp to the kit based on feedback from Community Action Program agencies.
Home Energy Savers	Income-qualified residential customers	<ul style="list-style-type: none"> • Allowing for annual adjustments to match program eligibility to the current federal poverty level. • Transferring program administration and marketing to Community Action Program agencies; IPL will partner with Community Action Program agencies to coordinate promotion.
Nonresidential Prescriptive Rebates	Nonresidential customers	<ul style="list-style-type: none"> • Adding prescriptive incentives for new measures. • Exploring an upstream incentive mechanism for motors and variable-speed drives. • Eliminating some measures with low participation and low cost-effectiveness.
Hometown Rewards	Communities	<ul style="list-style-type: none"> • Expanding community eligibility to populations between 5,000 and 25,000. • Additional funding for administrative expenses and implementation costs.
School-Based Energy Education	Schools	<ul style="list-style-type: none"> • Adding 5th grade to participant targets for the Alliant Energy Kids component.
Research, Development, and Demonstration	Varies	<ul style="list-style-type: none"> • Exploring new sources of potential energy savings, including: <ul style="list-style-type: none"> ○ Behavior change, ○ Transmission and distribution infrastructure, ○ Electric and plug-in hybrid vehicles, and ○ Data centers.

1.3. Energy-Efficiency Targets

The results of the Assessment were IPL's principal basis for establishing its 2014-2018 targets. The study provided information on energy-efficiency measures and their savings, costs, and market opportunities. The development of saving targets was also informed by IPL's over two decades of experience with energy-efficiency product markets and information on what has been achieved by other utilities operating in markets similar to IPL's. Based on these considerations and the lessons learned from implementing its 2009-2013 EEP, IPL has established savings targets that it believes are reasonably achievable.

As shown in Table 1.3, the revised Assessment identified 3,295 GWh of economic electric energy-efficiency potential over the 10-year planning horizon, from 2014 to 2023, representing 21 percent of IPL's forecast load in 2023. The Assessment further found that 85 percent of this potential (18 percent of the 2023 forecast load) might be achievable under an aggressive acquisition scenario, assuming that utility incentives were equivalent to 100 percent of incremental measure costs, and that participants have access to financing.

The Assessment also identified nearly 62 million therms of economic natural gas potential. This economic potential represents 23 percent of IPL's 2023 natural gas load, 65 percent of which (15 percent of 2023 load) is expected to be achievable under an aggressive market scenario. Assuming an even acquisition rate, the identified economic potential translates into 1.5 percent per year. The Plan targets average annual natural gas saving targets of 0.9 percent of retail sales, which represent 60 percent of the maximum achievable potential identified in the Assessment.

**Table 1.3 Technical and Economic Electric Energy-Efficiency Potential
(Cumulative in 2023) by Sector**

Resource	Base Case Sales (MWh)	Technical Potential			Economic Potential		
		Energy Savings Potential	Percent of Base Sales	Capacity Savings Potential	Energy Savings Potential	Percent of Base Sales	Capacity Savings Potential
Electricity (MWh)	15,465,326	3,840	25%	926	3,295	21%	803
Natural Gas (thousand therms)	267,040	90,767	34%	732	61,574	23%	515

Assuming the same aggressive achievable potential of 85 percent, results of the revised Assessment indicated a maximum achievable economic potential equal to 17 percent of IPL's 2023 forecast load, translating into 1.7 percent per year on average. The Plan includes average annual saving targets of 1.13 percent, which represent nearly 65 percent of the maximum achievable potential identified in the Assessment.

1.4. Demand Response Targets

The Assessment also developed estimates of market potential for the two demand response programs IPL currently operates: the Residential Direct Load Control (DLC) Program and the Nonresidential Interruptible Program. The Assessment included an evaluation of three scenarios based on program participation levels achieved by IOUs offering similar programs in other jurisdictions. The results of the Assessment indicated a total market potential ranging from 35 megaWatts (MW) under the base-case scenario to 46 MW under an aggressive expansion scenario for the Residential DLC Program. The Assessment also estimated the market potential for the Nonresidential Interruptible Program to range from 296 MW to 354 MW under the base-case and aggressive expansion scenarios, respectively (Table 1.4).

Table 1.4 Projected Demand Response Market Potential in 2023 (MW)

Program	Base Case	Moderate Expansion	Aggressive Expansion
Residential DLC	35	37	46
Nonresidential Interruptible Program	296	304	354

Based partly on the results of the Assessment and IPL’s experience with these programs, in its Plan, IPL will primarily aim to maintain the current levels of participation and the corresponding demand reduction targets of 44 MW for the Residential DLC Program and 270 MW for the Nonresidential Interruptible Program. The two programs are expected to provide a total load reduction capability of 314 MW, which represents 92 percent of the total potential identified by the Assessment under the moderate expansion scenario.

1.5. Benefits, Costs, and Cost-Effectiveness of the Plan

For each program in the Plan, IPL assessed cost-effectiveness by valuing its gross societal benefits, as measured by IPL’s avoided energy and capacity, costs (including externalities), and the program’s total life-cycle costs. A program’s cost-effectiveness is determined by the net present value of its benefits. A program is considered cost-effective if its net societal benefits are positive, in other words, when the ratio of the net present value of the program’s benefits as compared to costs is greater than 1.0.

IPL strived to design every portfolio in this Plan to be cost-effective when analyzed from a societal test perspective, as required by 199 IAC Chapter 35 (199 IAC 35.8(1)“e”(1)). Taken as a whole, the Plan is cost-effective, with a societal cost-benefit ratio of 2.49 to 1. However, some individual programs and measures are not cost-

effective according to the societal test. Additionally, several of IPL's natural gas measures are not cost-effective. Due to low projections for avoided natural gas costs, several measures that historically provided cost-effective natural gas savings in IPL's Plan do not pass the societal test.

Cost-effectiveness had to be balanced against the objectives of equity and comprehensiveness. IPL designed individual programs to incorporate a comprehensive set of measures. In some cases, IPL retained measures that are not cost-effective, if those measures offered other benefits such as high, sustained customer satisfaction and savings. An additional confounding factor affecting the cost-effectiveness of the Plan's natural gas components is the manner in which costs are allocated for certain measures producing electric and natural gas savings.

Shell-improvement, weatherization, and certain upgrades to heating and cooling systems affect the consumption of both electricity and natural gas. To separately determine the cost-effectiveness of a measure for each fuel, it is necessary to account for the benefits and costs associated with each fuel separately. While calculating energy savings and the corresponding benefits for each fuel is straightforward, there are no conventions for allocating joint implementation costs to each fuel. For the purpose of this Plan, IPL allocated the joint costs based on each fuel's relative British thermal unit (Btu) savings. This method, although practical, tends to shift a disproportionately large share of the measures' joint costs to the natural gas component of the Plan, lowering the cost-effectiveness of the natural gas measure and component as a whole. Absent a more equitable method for allocating these costs, it is reasonable to judge cost-

effectiveness for the Plan as a whole, rather than separately for its electric and natural gas components.

The tables below provide summary information on benefits and costs that comprised the cost-effectiveness analysis of IPL's Plan and the results of that analysis. Table 1.5 and Table 1.6 provide summary-level data incorporating electric and natural gas components combined. Table 1.7 and Table 1.8 show cost-effectiveness inputs and results for the electric component. Table 1.9 and Table 1.10 show cost-effectiveness inputs and results for the natural gas component.

Table 1.5 Plan Benefits and Costs

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Electric Savings (kWh)	163,084,964	162,779,248	160,200,436	162,872,055	165,813,594	814,750,297
Capacity Savings (kW)*	25,754	25,351	24,428	24,807	25,216	125,556
Natural Gas Savings (therms)	2,337,308	2,311,741	2,365,178	2,422,708	2,483,980	11,920,915
Capacity Savings (therms)	23,778	22,985	23,556	24,167	24,820	119,306
Participant Cost Net of Incentives (\$)	\$49,364,104	\$49,872,502	\$50,313,802	\$52,018,726	\$53,862,609	\$255,431,744
Direct Utility Costs (\$)	\$76,900,714	\$78,938,476	\$80,098,813	\$81,451,247	\$81,897,972	\$399,287,221
Planning and Design	\$1,083,104	\$1,104,744	\$1,300,722	\$1,326,111	\$1,353,330	\$6,168,011
Program Administration	\$6,259,508	\$7,333,131	\$7,452,518	\$7,539,216	\$6,630,745	\$35,215,118
Advertising and Promotion	\$3,126,288	\$3,193,675	\$3,252,165	\$3,327,903	\$3,407,865	\$16,307,895
Incentives	\$58,747,394	\$59,539,697	\$60,148,497	\$61,215,684	\$62,364,175	\$302,015,447
Equipment	\$3,345,191	\$3,369,503	\$3,393,845	\$3,422,130	\$3,450,557	\$16,981,225
Installation	\$3,188,903	\$3,226,016	\$3,263,586	\$3,304,744	\$3,346,178	\$16,329,426
Program Review and Assessment	\$1,150,326	\$1,171,710	\$1,287,481	\$1,315,459	\$1,345,122	\$6,270,098
Total Societal Cost	\$126,264,818	\$128,810,978	\$130,412,615	\$133,469,974	\$135,760,581	\$654,718,965

*Demand response is not included in cumulative capacity savings.

Table 1.6 Plan Cost-Effectiveness

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits (\$)	\$1,426,402,926	\$767,876,508	\$1,031,133,189	\$1,031,133,189
Net Present Value Costs (\$)	\$572,591,711	\$392,917,983	\$353,751,402	\$933,394,958
Benefit/Cost Ratio	2.49	1.95	2.91	1.10

Table 1.7 Electric Benefits and Costs

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Electric Savings (kWh)	163,084,964	162,779,248	160,200,436	162,872,055	165,813,594	814,750,297
Capacity Savings (kW)*	25,754	25,351	24,428	24,807	25,216	125,556
Participant Cost Net of Incentives (\$)	42,217,171	42,489,977	42,625,625	43,887,257	45,250,420	216,470,450
Direct Utility Costs (\$)	\$62,582,181	\$64,031,901	\$64,747,634	\$65,645,838	\$65,799,437	\$322,806,990
Planning and Design	\$850,413	\$864,782	\$1,019,442	\$1,036,782	\$1,055,397	\$4,826,815
Program Administration	\$4,525,368	\$5,383,766	\$5,468,268	\$5,527,352	\$4,779,917	\$25,684,671
Advertising and Promotion	\$2,445,598	\$2,491,222	\$2,529,134	\$2,581,601	\$2,637,036	\$12,684,591
Incentives	\$51,056,924	\$51,555,873	\$51,886,117	\$52,617,251	\$53,404,693	\$260,520,858
Equipment	\$865,607	\$869,889	\$874,159	\$878,865	\$883,609	\$4,372,129
Installation	\$2,013,609	\$2,029,019	\$2,044,684	\$2,060,833	\$2,077,047	\$10,225,192
Program Review and Assessment	\$824,661	\$837,351	\$925,830	\$943,154	\$961,737	\$4,492,734
Total Societal Cost	\$104,799,352	\$106,521,878	\$107,373,259	\$109,533,095	\$111,049,857	\$539,277,440
<i>Savings as a % of Total Sales (Electric)</i>	<i>1.13%</i>	<i>1.13%</i>	<i>1.12%</i>	<i>1.13%</i>	<i>1.16%</i>	

* Demand response is not included in cumulative capacity savings.

Table 1.8 Electric Cost Effectiveness

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits (\$)	\$1,327,954,780	\$651,779,266	\$966,905,087	\$966,905,087
Net Present Value Costs (\$)	\$443,709,308	\$292,920,129	\$285,971,026	\$786,007,813
Benefit-Cost Ratio	2.99	2.23	3.38	1.23

Table 1.9 Natural Gas Benefits and Costs

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Electric Savings (therms)	2,337,308	2,311,741	2,365,178	2,422,708	2,483,980	11,920,915
Capacity Savings (therms)	23,778	22,985	23,556	24,167	24,820	119,306
Participant Cost Net of Incentives (\$)	7,146,933	7,382,525	7,688,178	8,131,469	8,612,189	38,961,293
Direct Utility Costs (\$)	\$14,318,533	\$14,906,575	\$15,351,179	\$15,805,410	\$16,098,535	\$76,480,231
Planning and Design	\$232,691	\$239,962	\$281,280	\$289,329	\$297,933	\$1,341,196
Program Administration	\$1,734,140	\$1,949,366	\$1,984,250	\$2,011,864	\$1,850,827	\$9,530,447
Advertising and Promotion	\$680,689	\$702,453	\$723,030	\$746,302	\$770,829	\$3,623,304
Incentives	\$7,690,470	\$7,983,825	\$8,262,380	\$8,598,433	\$8,959,482	\$41,494,589
Equipment	\$2,479,584	\$2,499,614	\$2,519,685	\$2,543,265	\$2,566,948	\$12,609,096
Installation	\$1,175,294	\$1,196,997	\$1,218,902	\$1,243,911	\$1,269,131	\$6,104,235
Program Review and Assessment	\$325,665	334,359	\$361,651	\$372,304	\$383,385	\$1,777,363
Total Societal Cost	\$21,465,466	\$22,289,100	\$23,039,356	\$23,936,879	\$24,710,723	\$115,441,525
<i>Savings as a % of Total Sales (Gas)</i>	<i>0.84%</i>	<i>0.84%</i>	<i>0.87%</i>	<i>0.90%</i>	<i>0.93%</i>	

Table 1.10 Natural Gas Cost Effectiveness

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits (\$)	\$98,448,145	\$116,097,243	\$64,228,101	\$64,228,101
Net Present Value Costs (\$)	\$128,882,402	\$99,997,851	\$67,780,376	\$147,387,145
Benefit-Cost Ratio	0.76	1.16	0.95	0.44

As shown in the tables above, the total societal cost for the full five-year deployment of the Plan is estimated at \$655 million, \$539 million of which is attributable to electric and \$115¹ million to natural gas. The electric component accounts for 82 percent of the total societal cost of the Plan by this measure. Direct IPL costs of \$323 million for electric and \$76 million for natural gas constitute 61 percent of the total societal cost; the remaining costs are paid directly by participating customers as they install their electric and natural gas measures. Over \$335 million of IPL's costs, or 84 percent, constitute incentive payments.² IPL will spend an additional \$16 million for program promotion, representing four percent of IPL's costs. In sum, over 88 percent of IPL's spending is for incentives and advertising and promotion.

1.6. Schedule

IPL expects to implement this Plan starting on January 1, 2014, after approval by the Board. The majority of programs described in this Plan are already in place and operational. IPL has undertaken considerable collaboration with interested parties on Assessment and Plan design. IPL believes it is reasonable to assume contested issues will be limited and the Board can render a decision on this Plan in the early part of 2013's fourth quarter to enable efficient, cost-effective delivery and implementation.

1.7. Plan Contents and Organization

This document is organized in six chapters plus 9 appendices:

- Chapter 1, which is the current summary.

¹ Please note that numbers are rounded, and therefore do not total precisely in this sentence.

² IPL includes the costs for equipment and installation of free direct installation measures provided to customers in its incentive calculations.

- Chapter 2, following the current summary, describes the context for the Plan and explains the methodology, data and assumptions used in its development.
- Chapter 3 provides an overview of the energy-efficiency portfolio and detailed descriptions of the residential and nonresidential energy-efficiency programs.
- Chapter 4 presents IPL's Outreach, Education and Training portfolio, including detailed descriptions of each program in the portfolio.
- Chapter 5 includes a discussion of IPL's demand response portfolio and programs.
- Chapter 6 is dedicated to describing three additional funding initiatives that are included in IPL's overall Plan budgets.
- Technical details and supplemental material prepared in compliance with the Plan's filing requirements are organized in Appendices A through I.

2. Overview of the Plan

2.1. Introduction

IPL, a service company subsidiary of Alliant Energy, hereby submits its 2014-2018 Energy Efficiency Plan, in compliance with Iowa Code §§ 476.6(14) and (16) (2011) and 199 IAC Chapter 35. This filing is made pursuant to the Board's Final Order issued June 24, 2009, in Docket No. EEP-08-1. IPL's Plan describes extensive portfolios of: residential and nonresidential energy-efficiency; demand response; and education, outreach, and training programs.

The Plan offers a comprehensive portfolio of programs and initiatives for acquiring energy-efficiency resources during the five-year planning period from 2014 to 2018. This Plan expands upon IPL's 2009–2013 EEP, filed with the Board April 23, 2008, and approved June 24, 2009, in Docket No. EEP-08-1. The Plan extends the savings targets for programs in the 2009-2013 EEP, introduces enhancements to individual programs, where warranted, and incorporates new programs and initiatives. Once approved, this Plan will replace the 2009-2013 EEP beginning January 1, 2014. The Plan consists of 25 programs comprising three portfolios, as well as three additional funding initiatives, as outlined below.

Energy Efficiency Portfolio

The Energy Efficiency Portfolio includes:

1. Residential Prescriptive Rebates Program;
2. Home Energy Assessments Program;

3. Change-a-Light Program;
4. Appliance Recycling Program;
5. New Home Construction Program;
6. Multifamily Program;
7. Weatherization Program;
8. EnergyWise Education Program;
9. Low-Income Multifamily and Institutional Efficiency Improvements Program;
10. Home Energy Savers (HES) Program;
11. Nonresidential Prescriptive Rebates Program;
12. Business Assessments Program;
13. Custom Rebates Program;
14. Commercial New Construction Program; and
15. Agriculture Sector Program.

Outreach, Education and Training Portfolio

The Outreach, Education and Training Portfolio includes:

16. Non-Targeted Energy Awareness and Information Program;
17. School-Based Energy Education Program;
18. Tree Planting Program;
19. Hometown Rewards Program;
20. Builder Training Program;

21. Energy Efficiency Dealer Network Program;
22. Bright Ideas Program; and
23. Research, Development, and Demonstration Program.

Demand Response Portfolio

The Demand Response Portfolio includes:

24. Residential DLC Program; and
25. Nonresidential Interruptible Program.

Other Funding Initiatives

Other Funding Initiatives include:

26. Legislative Assessment;
27. Evaluation, Measurement, and Verification; and
28. Next Plan.

In developing its Plan, IPL compiled three portfolios of innovative programs that are tailored to the unique characteristics of IPL's service territory. Taken together, the portfolios outlined in this Plan continues IPL's more than 20-year history of offering customers cost-effective, equitable, flexible, and wide-ranging programmatic choices, incentive options, information, and educational opportunities, designed to produce long-term savings and bring about lasting change in the way Iowans use energy.

IPL has established annual electricity savings targets ranging from 1.12 to 1.16 percent of its retail sales forecast. The electric component targets 163 GWh of savings

in 2014, projected to increase to 165 GWh in 2018. In each year of the Plan, IPL's natural gas component is expected to produce more than 2.3 million therms of savings.

In total, IPL's Plan projects slightly lower savings than those estimated in its 2009-2013 EEP, at a lower overall cost to customers. IPL plans to achieve these saving targets by: enhancing its already aggressive outreach, marketing, and education efforts; offering robust incentives for measures with the highest, cost-effective achievable savings potential; targeting new, previously untapped sources of savings potential; and streamlining customer delivery and administrative processes to achieve greater operational efficiencies. Table 2.1 provides a summary of electric and natural gas costs and savings by program.

Table 2.1 Savings and Cost Summary by Program

Programs	2014-2018 Cumulative Energy Savings		Total Costs (\$MM)
	Electricity (GWh)	Natural Gas (therms)	
<i>Energy-Efficiency Portfolio</i>	764.26	10,671,736	\$235.24
Residential Prescriptive Rebates	63.13	1,834,148	\$65.21
Home Energy Assessments	12.81	1,645,068	\$16.60
Change-a-Light	56.89	0	\$12.56
Appliance Recycling	52.78	0	\$8.68
New Home Construction	1.17	338,826	\$5.12
Multifamily	0.76	29,414	\$0.79
Weatherization	11.85	1,098,226	\$16.15
EnergyWise Education	4.36	141,170	\$0.47
Low Income Multifamily and Institutional Efficiency Improvements	0.50	19,609	\$0.47
Home Energy Savers	0.45	129,943	\$2.46
Nonresidential Prescriptive Rebates	121.47	3,378,382	\$44.09
Business Assessments	14.54	259,709	\$5.37
Custom Rebates	343.31	1,259,641	\$46.44
Commercial New Construction	62.12	537,600	\$6.29
Agriculture Sector	18.13	0	\$4.54
<i>Outreach, Education, and Training Portfolio</i>	20.99	1,249,179	\$16.42
Non-Targeted Energy Awareness and Information	0	0	\$2.29
School-Based Energy Education	20.99	1,249,179	\$3.13
Tree Planting	0	0	\$4.51
Hometown Rewards	0	0	\$2.60
Builder Training	0	0	\$0.60
Energy Efficiency Dealer Network	0	0	\$1.04
Bright Ideas	0	0	\$1.16
Research, Development, and Demonstration	0	0	\$1.09
<i>Demand Response Portfolio</i>	29.5	0	\$135.13
Residential DLC	2.5	0	\$12.76
Nonresidential Interruptible	27.0	0	\$122.37
<i>Other Funding Mechanisms</i>	0	0	\$12.50
Legislative Assessment	0	0	\$8.00
Evaluation, Measurement, and Verification	0	0	\$3.00
Next Plan	0	0	\$1.50
TOTAL PORTFOLIO	814.8	11,920,915	\$399.30

Throughout its long history of commitment to energy efficiency and demand response, IPL has continued to grow and exceed its energy-efficiency goals. With the implementation of each new energy-efficiency plan and the development of each new program, IPL has sought to improve and enhance its customer offerings and deliver energy-efficiency savings. This Plan includes new programs such as: the Multifamily Program, Change-a-Light Program, and the Business Assessments Program; new and re-designed components for the Home Energy Assessments Program, New Home Construction Program, and Commercial New Construction Program; and enhancements including new measures and delivery strategies in its prescriptive rebate programs and other programs.

IPL respectfully requests that the Board approve all of these programs together as integrated portfolios within this Plan.

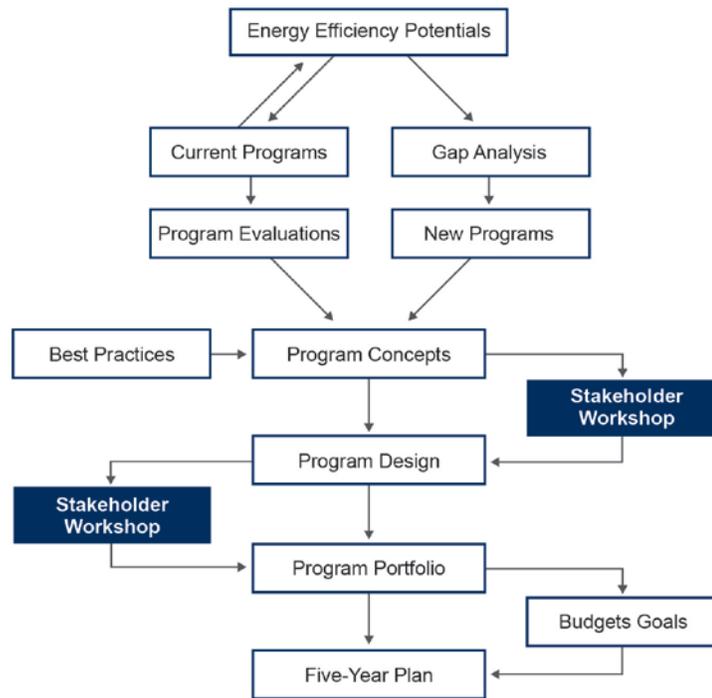
2.2. The Planning Process

To develop the Plan, IPL was largely guided by the findings of the joint-utility *Assessment of Energy and Capacity Savings Potential in Iowa* (Assessment), a comprehensive study of energy efficiency and demand response savings potential in the service territories of Iowa's three IOUs: IPL, BHE, and MEC. The Assessment focused on reporting potential savings over a 10-year planning horizon from 2014 to 2023 (more detail on the Assessment are provided in Section 2.2.1).

As illustrated in Figure 2.1, IPL then systematically compared end-use levels in each of its existing programs with the results of the Assessment and other market data to identify potential programmatic gaps and/or untapped potential, and opportunities to

increase customer participation and depth of savings by incorporating new market sectors, technologies, or delivery strategies.

Figure 2.1 Plan Development Process



To develop its Plan, IPL began with a bottom-up process, which involved compiling an extensive list of cost-effective measures with significant economic potential and aggregating them into appropriate programs by customer sector and equipment type. Additionally, IPL reviewed findings and recommendations resulting from collaborative efforts, program ideas from stakeholders, and results from the third-party evaluation of select programs contained in its 2009-2013 EEP. IPL conducted additional research on market conditions, program best practices, and other external factors that could affect economic, temporal, market, and administrative conditions associated with delivery of its programs. This information, combined with a structured review of its on-the-ground

program delivery experience, provided IPL with a framework for its Plan development process. The process culminated in a top-down balancing exercise to ensure that the composition and performance of the Plan meet IPL's goals and regulatory requirements. IPL used a five-step process to develop its Plan and constituent programs, as described below.

Step 1: Compile an extensive list of energy-efficiency and conservation measures and practices. Only measures based on proven, commercialized technologies were considered. For each measure considered in the Plan, IPL compiled data on technical specifications, potential end-use energy and peak demand impacts, and costs from the Assessment and other secondary sources. It calculated the peak load impacts for each measure directly from hourly end-use load shapes, which were calibrated to weather conditions in IPL's service territory.

Step 2: Determine the costs, savings, and avoided cost benefits for each measure to compute the measure's cost-effectiveness from a societal perspective. Screening measures based on achieving the cost-effectiveness threshold of 1.0 allowed IPL to identify those measures that would not materially contribute to its overall goals. IPL considered each measure individually based on its cost-effectiveness, economic potential, market conditions, historical participation rates (for currently existing measures), and other factors, and eliminated those that did not offer significant benefit to the overall goals of its Plan. However, to ensure a well-balanced and comprehensive Plan, IPL retained some measures with high savings potentials, such as insulation and other building shell measures, despite not achieving the cost-effectiveness threshold.

Step 3: Estimate the market saturation of each measure. IPL derived its estimate of market saturation (number of installations) for measures included in the 2009-2013 EEP by using historical participation and escalation rates, then projecting those rates over the five-year program delivery period in the Plan. For new measures, IPL derived participation rates by benchmarking similar programs operated by utilities in other jurisdictions, then tempering those rates with findings from the Assessment and other market research to arrive at realistic participation projections for each measure in each Plan year.

Step 4: For each program in the Plan, calculate program-level savings. IPL calculated savings as the sum of each measure's annual energy savings estimate and expected market saturation over the entire Plan.

Step 5: Balance the Plan. Finally, IPL iteratively adjusted the expected number of participants and customer incentive levels in each program to balance the Plan. The objective of balancing is to provide a reasonable mix of programs that meet IPL's goals for a compressive Plan with a robust set of programmatic options for every customer sector and segment.

At several points during the planning process, IPL coordinated with the other IOUs and held stakeholder meetings to present ideas, gather feedback, and report on the development of the Plan. IPL carefully considered the input it received in developing the Plan. (See Section 2.4 and Appendix B for details on IPL's collaborative process.)

2.2.1. Assessment of Potentials

199 IAC Chapter 35 sets forth the rules that implement legislation enacted in 1990 and modified in 1996, requiring Iowa's IOUs to "*file with the board an assessment of the potential for energy and capacity savings from actual and projected customer usage by applying commercially available technology and improved operating practices to energy-using equipment and buildings.*"³

In compliance with this requirement, the Iowa Utility Association (IUA), of which the IOUs are members, commissioned a statewide assessment of the remaining electric and natural gas energy-efficiency and demand response potentials within the service territories of Iowa's three largest IOUs from 2014 to 2023. Building upon five previous assessments of potential in Iowa, first conducted in 1989, the Assessment provided a thorough characterization of both the current state of energy consumption in the utilities' service territories and the forecast load in the absence of future energy efficiency.

The Assessment quantified the amount of energy that could be saved in each utility's service territory from 2014 to 2023. The Assessment included efficient technologies and practices that were widely commercially available at the time of the study, accounting for known changes in codes and standards, technical limitations (technical potential), societal cost-effectiveness (economic potential), and barriers and market conditions (achievable or market potential). In the context of the Assessment, market potential was defined narrowly as a resource acquisition scenario that assumes emerging technologies are available, first cost is removed as a barrier to participation, utility incentives cover 100 percent of measure costs, and that participants have access

³ 199 IAC 35.8(1).

to affordable financing. Figure 2.2 describes the types of energy-efficiency potential analyzed in the Assessment.

Figure 2.2 Types of Energy-Efficiency Potential

Not Technically Feasible	Technical Potential			
Not Technically Feasible	Not Cost Effective	Economic Potential		
Not Technically Feasible	Not Cost Effective	Market Barriers	Market Potential	
Not Technically Feasible	Not Cost Effective	Market Barriers	Budget & Planning Constraints	Utility Targets

Table 2.2 shows the forecasted 2023 baseline electric and natural gas sales and total potential for IPL’s service area. Study results indicated 3,840 GWh of technically feasible electric energy-efficiency potential by 2023, the end of the 10-year planning horizon, with approximately 3,295 GWh of these resources proving to be cost-effective. The identified economic potential represents a reduction of 21 percent of forecast load in 2023.

The Assessment results further indicated nearly 91 million therms of technically feasible natural gas energy-efficiency potential by 2023, 62 million therms (68 percent) of which is expected to be economic. The identified natural gas economic potential of

25.5 million therms amounts to 23 percent of forecasted load in 2023. As with electric potential, the residential sector represents the largest portion of natural gas technical and economic potential. Almost all of the remaining natural gas potential comes from the commercial sector, with a small portion from industrial applications.

Table 2.2 Technical and Economic Electric Energy-Efficiency Potential (Cumulative in 2023) by Sector

Resource	Base Case Sales (MWh)	Technical Potential			Economic Potential		
		Energy Savings Potential	% of Base Sales	Capacity Savings Potential	Energy Savings Potential	% of Base Sales	Capacity Savings Potential
Electricity (MWh)	15,465,326	3,840	25%	926	3,295	21%	803
Natural Gas (thousand therms)	267,040	90,767	34%	732	61,574	23%	515

As shown in Table 2.3, the results of the Assessment indicated that the residential sector represents the largest portion of electric technical and economic potential, at 42 percent and 40 percent, respectively. The commercial sector represents the second-largest contributor to technical and economic potential, at 32 percent for each, while the industrial potential accounts for 26 percent and 28 percent of technical and economic potential, respectively.

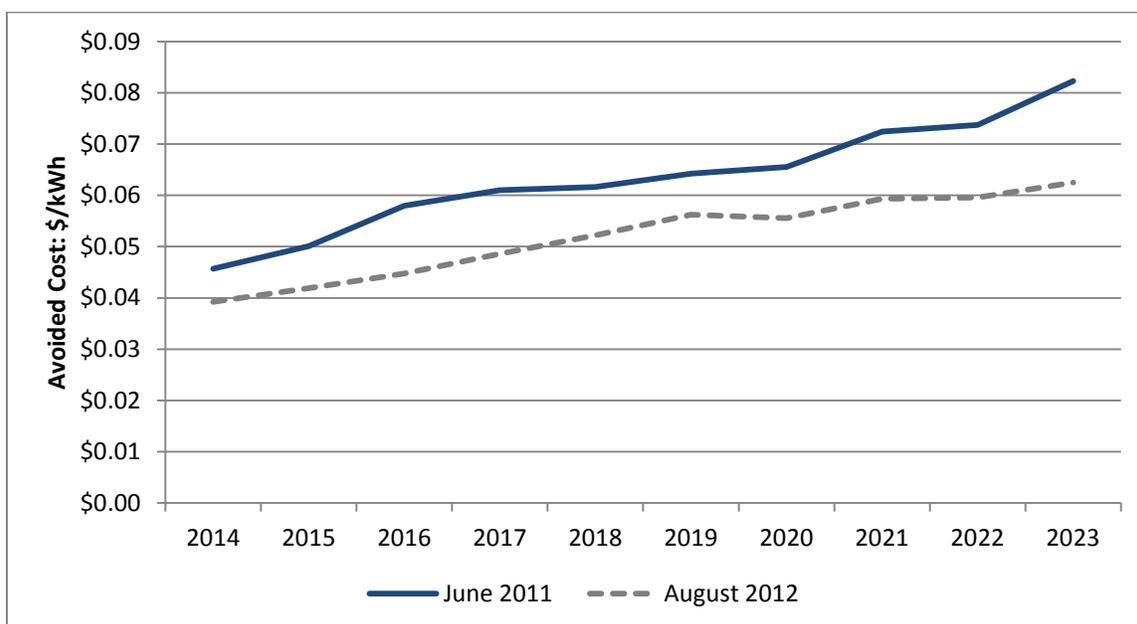
Table 2.3 Potential by Customer Class

Sector	Share of Technical Potential (percent)	Share of Economic Potential (percent)
Residential	42	40
Commercial	32	32
Industrial	26	28

2.2.2. Revised Electric Economic Potential

On August 23, 2012, in Docket No. IAC-2012-1503, IPL filed its revised electric avoided costs with the Board.⁴ The revised electric avoided costs were approximately 16 percent lower than the June 2011 avoided costs, which formed the basis for the Assessment's screening of the technical potential for average cost-effectiveness (Figure 2.3).

Figure 2.3 Comparison of June 2011 and August 2012 Annual Avoided Costs



IPL asked The Cadmus Group, Inc. to recalculate the electric economic potential in IPL's service territory using the revised avoided costs. The results of that analysis showed a six percent decline in economic potential across all sectors. The largest impact was in the residential sector, where economic potential dropped by over 15 percent (Table 2.4). Applying the revised avoided costs lowered the economic potential

⁴ There was no change in avoided costs for natural gas.

slightly, from 21.3 percent to 20 percent of the 2023 forecast load (Table 2.5), and did not materially affect the list of measures in IPL's Plan. Detailed results of the natural gas and revised electric technical and economic potentials by sector and end-use are reported in Appendix E of this Plan.

Table 2.4 The Effects of Changing Avoided Electric Costs on Economic Potential (Cumulative in 2023) by Sector

Sector	Economic Potential (GWh) December 2011 Avoided Costs	Economic Potential (GWh) August 2012 Avoided Costs	Percent Change
Residential	1,276	1,108	-15.2%
Commercial	1,149	1,132	-1.5%
Industrial	871	858	-1.5%
Total	3,296	3,098	-6.4%

Table 2.5 Change in Economic Potential as Fractions of 2023 Forecast Load by Sector

Sector	December 2011 Avoided Costs	August 2012 Avoided Costs
Residential	33.1%	28.8%
Commercial	28.9%	28.5%
Industrial	11.4%	11.2%
Total	21.3%	20.0%

2.2.3. Energy-Efficiency Market Potential

The Assessment also included an analysis of market potential. As defined in that study, market potential represents savings that might be achievable under an aggressive acquisition scenario, assuming that: incentive payments are up to 100 percent of incremental measure costs; financing is available; there is exemplary program design and implementation practices; and an emergence of new technologies that are currently not widely available in the marketplace. The analysis indicated that up

to 85 percent of electric and 65 percent of natural gas economic potential may be achievable over the 10-year study horizon. However, the analysis also showed that achieving savings at these levels would require substantially higher utility and customer expenditures than those currently occurring in Iowa or elsewhere in the nation.

2.2.4. Overall Strategy to Achieve Energy-Efficiency Goals

Since implementing its 2009-2013 EEP, IPL has experienced unparalleled changes in the Iowa marketplace. While many of these changes represent progress toward greater efficiency in buildings and equipment, they also have brought new challenges associated with IPL's ability to maintain its energy-savings trajectory within the confines of its commitment to delivering cost-effective energy efficiency to Iowa customers. Some of these issues are highlighted below.

- **Cost of natural gas.** The cost of natural gas has decreased from approximately \$1.16 per therm in 2009 to \$0.55 per therm currently, a reduction of 47 percent. Because avoided fuel costs are a major factor in calculating cost-effectiveness, this drop in natural gas prices decreases the benefit/cost ratios of natural gas efficiency measures by large margins. As a result, many of IPL's historically popular measures with good energy-savings value are no longer cost-effective.
- **Cost of savings.** While natural gas costs have decreased, the cost of capturing energy savings has increased over the past several years. Partially due to IPL's more than 20-year history of offering energy-efficiency programs, the low-hanging fruit has become increasingly scarce. Additional

factors include increasing product costs and economic conditions affecting customers' discretionary spending. As a result, IPL must dedicate ever-greater resources to capturing deeper energy savings from harder-to-reach customer segments and later adopters.

- **Adoption of new building codes.** Within the first 18 months of launching the Plan, the State of Iowa is expected to adopt the 2012 International Energy Conservation Code (IECC), which calls for significantly increased energy-efficiency standards in new residential buildings. The new code will increase the efficiency baseline for new residential construction to the extent that exceeding the code via many traditional new construction measures (e.g., insulation, infiltration, lighting) will no longer be economically viable for builders and residential new construction programs will no longer be cost-effective.
- **Changes in equipment standards.** Much like the adoption of new building codes, increasing equipment standards and other governmental intervention aimed at moving toward more efficient products and equipment are changing the efficiency baseline of many measures. As a result of new and impending efficiency standards for lighting, furnaces, boilers, and appliances, the energy savings available from these measures has decreased, which reduces their cost-effectiveness. As a result, IPL has had to eliminate some of its most popular and long-standing efficiency measures, and shift some of its resources away from measures that, in the past, produced large portions of its energy savings.

- **Approaching the efficiency ceiling.** In many cases, increasing standards mean that energy-consuming equipment and systems are reaching the cost-effective limit of achievable efficiency. At the same time, promising new technologies, such as light emitting diodes (LEDs) and tankless water heaters, have not reached a price point that would produce large-scale market adoption or contribute to measurable cost-effectiveness. In other cases, the incremental cost of high-efficiency equipment versus a standard-efficiency option (e.g., ENERGY STAR[®] computers) is too low to allow for cost-effective program delivery. The accumulated effect of these market impacts is a reduction in IPL's ability to move toward new technologies and efficiency strategies to replace dwindling savings and measures that are no longer cost-effective in its traditional programs.

Although the cumulative effect of these market changes has made program design and Plan development more challenging, IPL continues to look for new sources of energy savings and opportunities to serve its customers with diverse efficiency program opportunities. As in past energy-efficiency plans, IPL's Plan includes comprehensive portfolios of programs designed to offer a range of energy-savings opportunities to its customers, while simultaneously adjusting to the rapid changes in the marketplace. The resulting Plan is leaner, seeks to capture new sources of savings, streamlines programs for increased operational efficiency, and expands efforts to identify the next generation of economic energy-savings potential

2.2.5. Energy-Efficiency Targets

The results of the Assessment were IPL's principal basis for establishing its 2014-2018 savings targets. The study provided information on energy-efficiency measures and their saving, costs, and market opportunities. The development of saving targets was also informed by IPL's over two decades of experience with energy-efficiency product markets and information on what has been achieved by other utilities operating in markets similar to IPL's. Based on these considerations and the lessons learned from implementing its 2009-2013 EEP, IPL has established savings targets that are reasonably achievable.

As described in Section 2.2.1, the revised Assessment identified 3,295 GWh of economic electric energy-efficiency potential over the 10-year planning horizon, and that 85 percent of this potential (18 percent of the 2023 forecast load) might be achievable under an aggressive acquisition scenario.

Assuming the same aggressive achievable potential of 85 percent, results of the revised Assessment indicated a maximum achievable economic potential equal to 17 percent of IPL's 2023 forecast load, translating into 1.7 percent per year. The Plan includes annual saving targets ranging from 1.13 to 1.16 percent, which represent nearly 65 percent of the maximum achievable potential identified in the Assessment.

The Assessment also identified nearly 62 million therms of economic natural gas potential, 65 percent of which (15 percent of 2023 load) is expected to be achievable under an aggressive market scenario. Assuming an even acquisition rate, the identified economic potential translates into 1.5 percent per year. The Plan targets average

annual natural gas saving targets of 0.9 percent of retail sales, which represent 60 percent of the maximum achievable potential identified in the Assessment.

2.2.6. Demand Response Targets

The Assessment also developed estimates of market potential for the two demand response programs IPL currently operates: the Residential DLC Program and the Nonresidential Interruptible Program. The Assessment included an evaluation of three scenarios based on program participation levels achieved by IOUs offering similar programs in other jurisdictions. The results of the Assessment indicated a total market potential ranging from 35 MW under the base-case scenario to 46 MW under an aggressive expansion scenario for the Residential DLC Program. The Assessment also estimated the market potential for the Nonresidential Interruptible Program to range from 296 MW to 354 MW under the base-case and aggressive expansion scenarios, respectively (Table 2.6).

Table 2.6 Projected Demand Response Market Potential in 2023 (MW)

Program	Base Case	Moderate Expansion	Aggressive Expansion
Residential DLC	35	37	46
Nonresidential Interruptible Program	296	304	354

Based partly on the results of the Assessment and IPL’s experience with these programs, in its Plan IPL will primarily aim to maintain the current levels of participation and the corresponding demand reduction targets of 44 MW for the Residential DLC Program and 270 MW for the Nonresidential Interruptible Program. The two programs are expected to provide a total load reduction capability of 314 MW, which represents

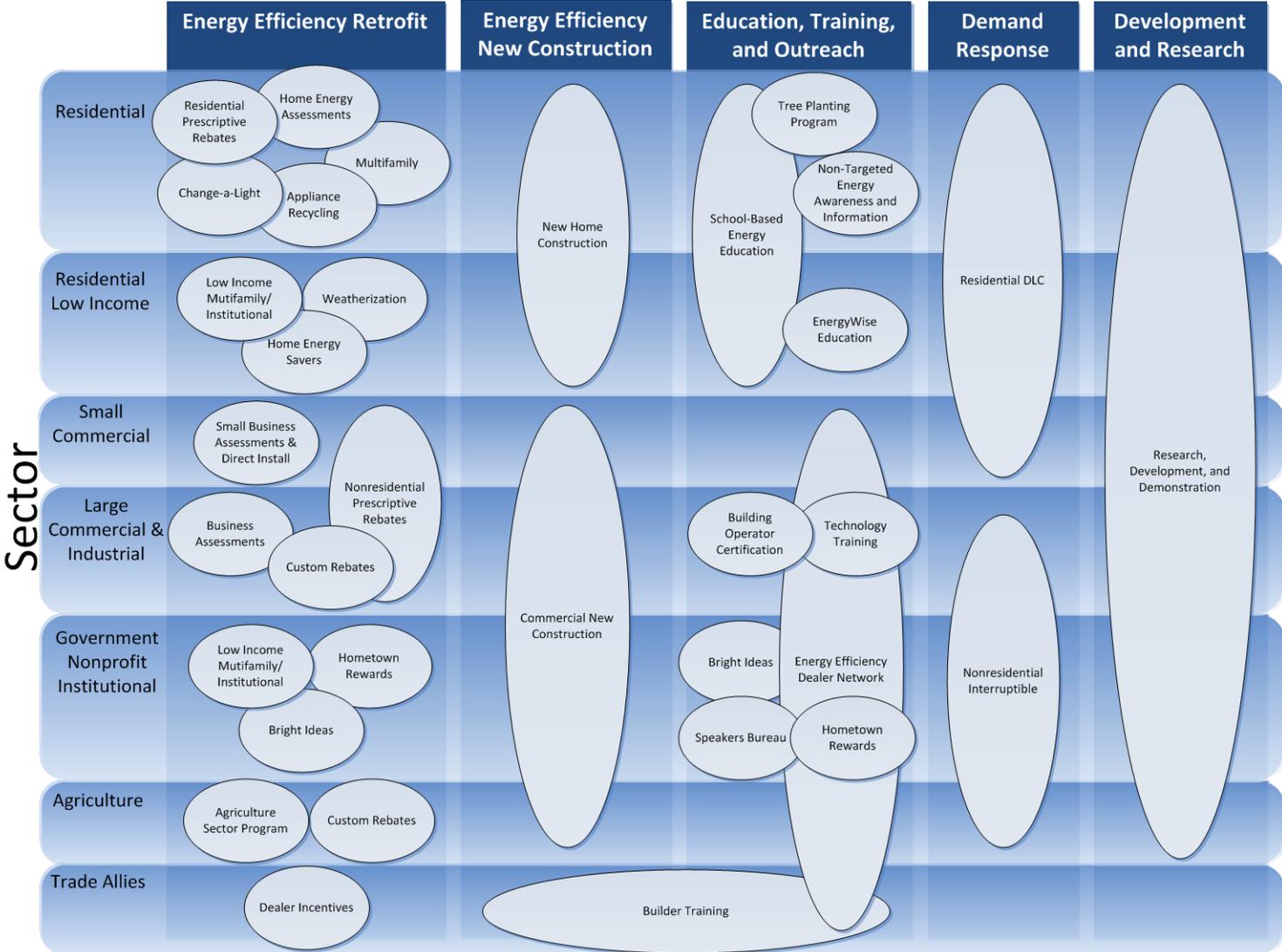
92 percent of the total potential identified by the Assessment under the moderate expansion scenario.

2.3. Plan Composition

The Plan's overarching approach may be best described as a portfolio perspective, addressing virtually every significant energy end-use in a customer's home, farm, or business, through a comprehensive, whole-facility approach or a menu approach, whichever works best for the customer. IPL employs multiple market intervention strategies in its Plan, including information, education, and technical assistance and, most importantly, financial incentives to produce long-term savings and provide IPL and its customers with the highest returns in terms of market reach, energy savings, and cost-effectiveness.

The Plan is composed of 25 programs, organized in the three primary portfolios: Energy Efficiency; Demand Response; and Outreach, Education, and Training. Additionally, the Plan includes three additional funding initiatives. In designing the portfolios, IPL sought to provide program opportunities for every customer sector with a range of available measures, delivery mechanisms, and educational opportunities. Figure 2.4 provides an overview of the Plan approach, which balances programmatic elements with customer sectors and segments.

Figure 2.4 Plan Elements by Sector



IPL's Plan builds on its 2009-2013 EEP, adding new elements to capture untapped market potential, eliminating certain elements that failed to produce long-term benefits for Iowa customers, and streamlining program operations and delivery. Table 2.7 summarizes the changes to IPL's 2009-2013 EEP that are included in the Plan.

Table 2.7 2014-2018 Plan Changes

Program	Markets Served	Changes/Details
New Programs		
Multifamily	Buildings with four or more units	<ul style="list-style-type: none"> • Holistic approach to multifamily efficiency, allowing the building owner to focus on both common areas and tenant units. • Available for new construction as well as after-market upgrades. • Will draw from existing programs (e.g., assessments, prescriptive and custom rebates, new construction programs). • Addresses a hard-to-reach market with untapped efficiency potential.
Change-a-Light	All IPL customers	<ul style="list-style-type: none"> • Year-round upstream point-of-purchase incentives and marketing campaign. • Energy-efficient light bulbs including a variety of compact fluorescent lamps and LED bulbs.
Business Assessments	All commercial and industrial customers	<ul style="list-style-type: none"> • Offers three types of business assessments to business owners for a wide range of facility types and sizes. • Offers a small business direct install component that includes a comprehensive lighting package and technical support for the hard-to-reach small business sector.
Discontinued Programs/Initiatives		
Performance Contracting	Large commercial and industrial	<ul style="list-style-type: none"> • Only one active project developer supporting the program. • Customers find that the Custom Rebate Program better addresses their internal constraints. • IPL will continue to offer support to those customers interested in financing as an effective way to implement energy efficiency.
Tree Planting	Residential customers	<ul style="list-style-type: none"> • Eliminating three Tree Planting Program initiatives: <ul style="list-style-type: none"> ○ Iowa Hometown Celebrations: eliminated due to lack of customer interest. ○ Industrial Park Developments: often benefited private developers that had not paid into the Iowa energy-efficiency fund. ○ Growing Kids, Growing Trees: Iowa's Department of Natural Resources offers a similar program.

Program	Markets Served	Changes/Details
Enhancements and Changes to Existing Programs		
Home Energy Assessments	Residential single family customers	<ul style="list-style-type: none"> • Adding electric-only assessments to serve customers who: 1) have an all-electric home; 2) heat with propane; or 3) have natural gas service that is not provided by an Iowa IOU. • Adding comprehensive assessments including diagnostic testing for customers to identify specific improvements that offer the greatest return-on-investment opportunities. • Offering bonus incentives to encourage customers to install multiple recommended measures.
Residential Prescriptive Rebates	Residential customers	<ul style="list-style-type: none"> • Expanding HVAC system tune-up options. • Requiring quality installation for all furnace rebates. • Adding prescriptive incentives for whole-house fans. • Eliminating some measures with low participation and low cost-effectiveness.
New Home Construction	Residential builders and homeowners	<ul style="list-style-type: none"> • Simplifying the program for builders who use the Home Energy Rating System index to measure new home performance. • Adding two performance paths with tiered incentive levels. • Reducing required measures and incentives in the prescriptive path to adjust for new building codes.
Weatherization	Income-qualified residential customers	<ul style="list-style-type: none"> • Allowing for annual adjustments to match program eligibility to the current federal poverty level.
EnergyWise Education	Income-qualified residential customers	<ul style="list-style-type: none"> • Adding window film and one additional compact fluorescent lamp to the kit based on feedback from Community Action Program agencies.
Home Energy Savers	Income-qualified residential customers	<ul style="list-style-type: none"> • Allowing for annual adjustments to match program eligibility to the current federal poverty level. • Transferring program administration and marketing to Community Action Program agencies; IPL will partner with Community Action Program agencies to coordinate promotion.
Nonresidential Prescriptive Rebates	Nonresidential customers	<ul style="list-style-type: none"> • Adding prescriptive incentives for new measures. • Exploring an upstream incentive mechanism for motors and variable-speed drives. • Eliminating some measures with low participation and low cost-effectiveness.
Hometown Rewards	Communities	<ul style="list-style-type: none"> • Expanding community eligibility to populations between 5,000 and 25,000. • Additional funding for administrative expenses and implementation costs.
School-Based Energy Education	Schools	<ul style="list-style-type: none"> • Adding 5th grade to participant targets for Alliant Energy Kids program component.
Research, Development, and Demonstration	Varies	<ul style="list-style-type: none"> • Exploring new sources of potential energy savings, including: <ul style="list-style-type: none"> ○ Behavior change, ○ Transmission and distribution infrastructure, ○ Electric and plug-in hybrid vehicles, and ○ Data centers.

Detailed descriptions of each program in IPL's Energy-Efficiency Portfolio, Outreach, Education, and Training Portfolio, and Demand Response Portfolio are provided in Chapters 3 through 5 of this Plan. Descriptions of three additional funding initiatives, including IPL's evaluation, measurement, and verification (EM&V) plans, are provided in Chapter 6.

2.4. Collaborative Process

Throughout developing its 2014-2018 Plan, IPL has pursued opportunities to inform stakeholders of its progress and solicit input. IPL has had frequent formal and informal communications with multiple parties, including: other Iowa IOUs; Iowa municipal and cooperative utilities; the IUA; consumer, environmental, and industry advocates; economic development organizations; community-based organizations; trade associations and trade allies; and its energy-efficiency program contractors. A detailed account of IPL's collaborative activities is provided in Appendix B of this Plan. Table 2.8 below summarizes IPL's stakeholder collaboration activities.

Table 2.8 Stakeholder Coordination Activities

Collaborative Activity	Stakeholder Participants	Topics/Outcomes
Assessment of Technical and Economic Potential	IPL, BHE, MEC, IUA, Office of Consumer Advocate (OCA)	Issue request for proposal and select a consultant to perform a statewide estimate of energy-efficiency potential.
Joint Utility Collaborative and Stakeholder Meetings	IOUs, OCA, IUA, other stakeholders including vendors, program contractors, trade allies, community-based organizations, etc.	<ul style="list-style-type: none"> January 24, 2012: launch collaborative process March 8, 2012: assess potential study overview May 15, 2012: low-income programs collaborative September 19, 2012: proposed Plan overview
Joint Utility Collaboration	IPL, BHE, MEC	Informal, periodic discussions aimed at achieving consistency in planning assumptions and specific program design features.
Stakeholder Program Proposals	All stakeholders including vendors, program contractors, trade allies, community-based organizations, etc.	<ul style="list-style-type: none"> Distribution of program templates and invitation for stakeholders to submit details on potential new programs for consideration in the Plan. Of 10 programs submitted, IPL incorporated four into its Research, Development, and Demonstration Program as pilots. Five program proposals included measures and components already represented in IPL's Plan.

2.5. Benefits, Costs, and Cost-Effectiveness of the Portfolio

For each program in the Plan, IPL began assessing cost-effectiveness by valuing the program's gross societal benefits, as measured by IPL's avoided energy and capacity costs (including externalities) and the program's total life-cycle costs. A program's cost-effectiveness is determined by the net present value of its benefits. A program is considered cost-effective if its net societal benefits are positive, in other words, the ratio of the net present value of the program's benefits as compared to costs is greater than 1.0.

2.5.1. Program Benefit Components

The benefits of an energy-efficiency program include the value of avoided time- and seasonally-differentiated costs, adjusted by a 10 percent externality factor as provided in 199 IAC 35.9(7). For each energy-efficiency measure included in a program,

hourly (8,760) system avoided costs were adjusted by the measure's hourly load shape to capture the full value of time- and seasonally-differentiated impacts of the measure. In the case of programs where conservation measures are expected to affect consumption of more than one fuel, (e.g. insulation and weatherization), avoided cost impacts for both fuels were incorporated in the analysis. Non-energy benefits, such as water savings, were not factored into the calculation of benefits because these benefits are typically hard to quantify and tend to be too small to alter the outcome of the analysis.

2.5.2. Program Cost Components

The cost component of the analysis consists of incremental measure costs and utility costs. The incremental measure costs are the incremental material and labor expenses associated with installing the energy-efficiency measures and their ongoing operation and maintenance costs, where applicable. Utility costs are the expenses associated with development, deployment, and operation of the program, and fall into the seven following categories:

1. **Planning and design:** expenses associated with program development, designing new programs, or making modifications to existing programs.
2. **Program administration:** costs associated with program support functions, such as ongoing operation, administration, trade ally management, and reporting.
3. **Advertising and promotion:** program-specific marketing, education, training, and demonstrations aimed at promoting the program.

4. **Incentives:** utility contributions provided to or on behalf of participants, including but not limited to rebates, loan subsidies, payments to dealers, rate credits, bill credits, and the cost of energy audits.
5. **Equipment:** program-specific costs associated with hardware purchased by the utility and given to customers as a portion of their incentives, such as direct installation measures.
6. **Installation:** labor costs associated with installing equipment provided to participants in individual programs.
7. **Program Review and Assessment:** expenses associated with annual program review and assessment.

2.5.3. Cost-Effectiveness Analysis

The economic performance of each program was evaluated from four stakeholder perspectives: (1) the program participants; (2) the utility; (3) all IPL customers (including nonparticipants, also referred to as ratepayers in 199 IAC Chapter 35); and (4) the society at large. These perspectives were evaluated by four tests, namely: (1) the participant cost test; (2) utility cost test; (3) ratepayer-impact measure (RIM) test; and (4) the societal cost test. The allocations of the benefit and cost components to various stakeholders is illustrated in Table 2.9. Benefit/cost ratios were calculated using the standard methods described in the California standard protocols⁵ for analyzing the cost-effectiveness of conservation programs. The assumptions used in these calculations are summarized in Table 2.10.

⁵ *California Standard Practice Manual for Economic Analysis of Demand-Side Management Programs and Projects.*

Table 2.9 Allocation of Benefits and Costs from Different Perspectives

	Stakeholder Perspective			
	Participant	Utility	All Customers (RIM)	Societal
Benefits				
Avoided energy costs		✓	✓	✓
Avoided capacity costs		✓	✓	✓
Avoided transmission and distribution losses		✓	✓	✓
Avoided secondary fuel costs		✓		✓
Bill reductions	✓			
Externalities adder (10%)				✓
Utility incentives	✓			
Costs				
Incremental measure costs	✓			✓
Utility costs incurred as incentives		✓	✓	
Utility costs other than incentives		✓	✓	✓
Lost revenues			✓	

Source: California Energy Commission. *California Standard Practice Manual for Economic Analysis of Demand-Side Management Programs and Projects*. October 2001.

Table 2.10 Primary Assumptions Used in the Benefit/Cost Analysis

	Electric	Natural Gas
Retail Rates	Residential 2nd block: \$0.110 per kWh Residential 3rd block: \$0.085 per kWh	Residential: \$0.188 per therm
	Small Commercial: \$0.100 per kWh	Small Commercial: \$0.180 per therm
	Large Commercial and Industrial: Summer: \$0.0197 per kWh Winter: \$0.0107 per kWh Plus Demand Charges of: Summer: \$21.07 per kW Winter: \$13.08 per kW	Large Commercial and Industrial: \$0.074 per therm*
Avoided Energy Costs (2014) (without losses or externalities)	Summer Peak: \$0.053 per kWh	Summer: \$0.445 per therm
	Summer Off-Peak: \$0.039 per kWh	
	Winter Peak: \$0.040 per kWh	Winter: \$0.472 per therm
	Winter Off-Peak: \$0.036 per kWh	
Avoided Capacity Costs (2014) (without losses or externalities)	Generation: \$111 per kW	Total: \$8.87 per peak day therm
	Transmission: \$81 per kW	
	Distribution: \$26 per kW	
	Total: \$218 per kW	
Externality Factor	10%	7.5%
Line Loss	Industrial: 4.86%	N/A
	Residential, Commercial, and Agricultural: 5.75%	
Discount Rates	Utility and RIM Discount Rate: 7.86%	
	Participant Discount Rate: 10%	
	Societal Discount Rate: 3.640%	
Inflation Rate	1.8%	

2.5.4. Summary of The Plan’s Projected Economic Outcomes

IPL strived to design every portfolio in this Plan to be cost-effective when analyzed from a societal test perspective, as required by 199 IAC 35.8(1)“e”(1). Taken as a whole, the Plan is cost-effective, with a societal cost-benefit ratio of 2.49 to 1. However, some individual programs and measures are not cost-effective according to the societal test. Additionally, several of IPL’s natural gas measures are not cost-effective. As was described in Section 2.1.4 above, due to low projections for avoided natural gas costs,

several measures that historically provided cost-effective natural gas savings in IPL's Plan did not pass the societal test.

Cost effectiveness had to be balanced against the objectives of equity and comprehensiveness. IPL designed individual programs to incorporate a comprehensive set of measures. In some cases, IPL retained measures that are not cost-effective, if those measures offered other benefits such as high, sustained customer satisfaction and savings. An additional confounding factor affecting the cost-effectiveness of the Plan's natural gas components is the manner in which costs are allocated for certain measures producing electric and natural gas savings.

Shell-improvement, weatherization, and certain upgrades to heating and cooling systems affect the consumption of both electricity and natural gas. To separately determine the cost-effectiveness of a measure for each fuel, it is necessary to account for the benefits and costs associated with each fuel separately. While calculating energy savings and the corresponding benefits for each fuel is straightforward, there are no conventions for allocating joint implementation costs to each fuel. For the purpose of this Plan, IPL allocated the joint costs based on each fuel's relative Btu savings. This method, although practical, tends to shift a disproportionately large share of the measures' joint costs to the natural gas component, lowering the cost-effectiveness of the natural gas measure and the natural gas component as a whole. Absent a more equitable method for allocating these costs, it is reasonable to judge cost-effectiveness for the Plan as a whole, rather than separately for its electric and natural gas components.

Only three programs in the energy-efficiency portfolio contained in IPL's Plan did not pass the societal cost-effectiveness threshold of 1.0:

1. *The New Home Construction Program.* All of IPL's energy-savings calculations and cost-effectiveness analyses assume that the State of Iowa will pass the 2012 IECC prior to, or soon after, IPL launches the programs contained within its Plan. This much more stringent energy code dictates that many of IPL's traditional new construction measures will become code, impacting the savings available from new construction projects and reducing the program's overall cost-effectiveness.
2. *The Multifamily Program.* IPL's Iowa territory is mostly rural, and its residential customer base is largely dominated by single-family housing. The limited number of multifamily housing customers likewise limits both participation and available savings from this sector. Additionally, the costs to deliver efficiency services to this sector are comparatively high. Taken together, these factors contribute to low overall programmatic cost-effectiveness.
3. *The HES Program.* This program targets customers in an income bracket incrementally higher than the federal limits for weatherization assistance. The program provides these customers with comprehensive services and incentive levels that are set higher than IPL's traditional prescriptive rebates, in order to meet these customers' needs for more substantial assistance. Consequently, the resulting program delivery costs are higher, which

impacts the program's overall cost-effectiveness. Regardless, due to the current economic slowdown, it is important for IPL to offer programs designed to help customers with additional support needs.

The tables below provide summary information on Plan-level benefits and costs that comprised the cost-effectiveness analysis of IPL's Plan and the results of that analysis. Table 2.11 and Table 2.12 provide summary-level data incorporating the electric and natural gas components combined. Table 2.13 and Table 2.14 show cost-effectiveness inputs and results for the electric component, and Table 2.15 and Table 2.16 show cost-effectiveness inputs and results for natural gas.

Table 2.11 Total Plan Benefits and Costs

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Electric Savings (kWh)	163,084,964	162,779,248	160,200,436	162,872,055	165,813,594	814,750,297
Capacity Savings (kW)*	25,754	25,351	24,428	24,807	25,216	125,556
Natural Gas Savings (therms)	2,337,308	2,311,741	2,365,178	2,422,708	2,483,980	11,920,915
Capacity Savings (therms)	23,778	22,985	23,556	24,167	24,820	119,306
Participant Cost Net of Incentives (\$)	\$49,364,104	\$49,872,502	\$50,313,802	\$52,018,726	\$53,862,609	\$255,431,744
Direct Utility Costs (\$)	\$77,100,714	\$79,638,476	\$78,965,480	\$81,817,814	\$81,764,638	\$399,287,221
Planning and Design	\$1,189,104	\$1,210,744	\$1,230,055	\$1,255,445	\$1,282,663	\$6,168,011
Program Administration	\$6,295,508	\$6,369,131	\$6,428,518	\$6,515,216	\$6,606,745	\$32,215,118
Advertising and Promotion	\$3,126,288	\$3,193,675	\$3,252,165	\$3,327,903	\$3,407,865	\$16,307,895
Incentives	\$58,747,394	\$59,539,697	\$60,148,497	\$61,215,684	\$62,364,175	\$302,015,447
Equipment	\$3,345,191	\$3,369,503	\$3,393,845	\$3,422,130	\$3,450,557	\$16,981,225
Installation	\$3,188,903	\$3,226,016	\$3,263,586	\$3,304,744	\$3,346,178	\$16,329,426
Program Review and Assessment	\$1,208,326	\$1,229,710	\$1,248,814	\$1,276,792	\$1,306,455	\$6,270,098
Total Societal Cost	\$126,464,818	\$129,510,978	\$129,279,282	\$133,836,540	\$135,627,247	\$654,718,965

* Demand response is not included in cumulative capacity savings.

Table 2.12 Total Plan Cost-Effectiveness

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits (\$)	\$1,426,402,926	\$767,876,508	\$1,031,133,189	\$1,031,133,189
Net Present Value Costs(\$)	\$572,560,012	\$392,917,983	\$353,692,697	\$933,336,253
Benefit/Cost Ratio	2.49	1.95	2.91	1.10

Table 2.13 Electric Benefits and Costs

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Electric Savings (kWh)	163,084,964	162,779,248	160,200,436	162,872,055	165,813,594	814,750,297
Capacity Savings (kW)*	25,754	25,351	24,428	24,807	25,216	125,556
Participant Cost Net of Incentives (\$)	\$42,217,171	\$42,489,977	\$42,625,625	\$43,887,257	\$45,250,420	\$216,470,450
Direct Utility Costs (\$)	\$62,582,181	\$64,031,901	\$64,747,634	\$65,645,838	\$65,799,437	\$322,806,991
Planning and Design	\$935,860	\$950,229	\$962,477	\$979,817	\$998,432	\$4,826,815
Program Administration	\$4,525,368	\$5,383,766	\$5,468,268	\$5,527,352	\$4,779,917	\$25,684,671
Advertising and Promotion	\$2,445,598	\$2,491,222	\$2,529,134	\$2,581,601	\$2,637,036	\$12,684,591
Incentives	\$51,056,924	\$51,555,873	\$51,886,117	\$52,617,251	\$53,404,693	\$260,520,858
Equipment	\$865,607	\$869,889	\$874,159	\$878,865	\$883,609	\$4,372,129
Installation	\$2,013,609	\$2,029,019	\$2,044,684	\$2,060,833	\$2,077,047	\$10,225,192
Program Review and Assessment	\$871,415	\$884,105	\$894,661	\$911,985	\$930,568	\$4,492,734
Total Societal Cost	\$104,799,352	\$106,521,878	\$107,373,259	\$109,533,095	\$111,049,857	\$539,277,441
<i>Savings as a % of Total Sales (Electric)</i>	<i>1.13</i>	<i>1.13</i>	<i>1.12</i>	<i>1.13</i>	<i>1.16</i>	

*Demand response is not included in cumulative capacity savings.

Table 2.14 Electric Cost-Effectiveness

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits (\$)	\$1,327,954,780	\$651,779,266	\$966,905,087	\$966,905,087
Net Present Value Costs(\$)	\$443,688,900	\$292,290,129	\$285,928,211	\$785,964,998
Benefit/Cost Ratio	3.01	2.23	3.41	1.23

Table 2.15 Natural Gas Benefits and Costs

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Natural Gas Savings (therms)	2,337,308	2,311,741	2,365,178	2,422,708	2,483,980	11,920,915
Capacity Savings (therms)	23,778	22,985	23,556	24,167	24,820	119,306
Participant Cost Net of Incentives (\$)	\$7,146,933	\$7,382,525	\$7,688,178	\$8,131,469	\$8,612,189	\$38,961,294
Direct Utility Costs (\$)	\$14,318,533	\$14,906,575	\$15,351,179	\$15,805,410	\$16,098,535	\$76,480,232
Planning and Design	\$253,244	\$260,515	\$267,578	\$275,627	\$284,231	\$1,341,195
Program Administration	\$1,734,140	\$1,949,366	\$1,984,250	\$2,011,864	\$1,850,827	\$9,530,447
Advertising and Promotion	\$680,689	\$702,453	\$723,030	\$746,302	\$770,829	\$3,623,303
Incentives	\$7,690,470	\$7,983,825	\$8,262,380	\$8,598,433	\$8,959,482	\$41,494,590
Equipment	\$2,479,584	\$2,499,614	\$2,519,685	\$2,543,265	\$2,566,948	\$12,609,096
Installation	\$1,175,294	\$1,196,997	\$1,218,902	\$1,243,911	\$1,269,131	\$6,104,235
Program Review and Assessment	\$336,911	\$345,605	\$354,153	\$364,807	\$375,887	\$1,777,363
Total Societal Cost	\$21,465,466	\$22,289,100	\$23,039,356	\$23,936,879	\$24,710,723	\$115,441,525
<i>Savings as a % of Total Sales (Gas)</i>	<i>0.84</i>	<i>0.84</i>	<i>0.87</i>	<i>0.90</i>	<i>0.93</i>	

Table 2.16 Natural Gas Cost-Effectiveness

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits (\$)	\$98,448,145	\$116,097,243	\$64,228,101	\$64,228,101
Net Present Value Costs(\$)	\$128,871,112	\$99,997,851	\$67,764,486	\$147,371,255
Benefit/Cost Ratio	0.76	1.16	0.95	0.44

As shown in the tables above, the total societal cost for the full five-year deployment of the Plan is estimated at \$655 million, \$539 million of which is attributable to electric and \$115 million of which is attributable to natural gas.⁶ The electric component accounts for 82 percent of the total societal cost of the Plan by this estimate. Direct IPL costs of \$323 million for electric and \$76 million for natural gas constitute 61 percent of the total societal cost; the remaining costs are paid directly by participating customers as they install their electric and natural gas measures.

Over \$335 million of IPL's costs, or 84 percent, constitute incentive payments. IPL will spend an additional \$16 million for program promotion, representing four percent of IPL's costs. In sum, over 89 percent of IPL's spending is for incentives and advertising and promotion.

2.6. Rate Impacts

IPL analyzed the rate impacts and average bill impacts by customer class for each program in the Plan, in compliance with 199 IAC 35.8(2)"e." In general, electric customers' annual bills are projected to be lower for all customer classes, reflecting a lower Plan budget for 2014 as compared to 2012. For natural gas customers, the total Plan budget for 2014 is lower than 2012. IPL reallocated Plan program expenses between customer classes, reflecting an emphasis towards nonresidential customer programs, which offer larger energy-savings opportunities. As a result, residential natural gas customers' bills are projected to be lower while nonresidential natural gas customers' bills will be higher. IPL distributed a pamphlet notice to all of its Iowa

⁶ Please note that numbers are rounded, and therefore do not total precisely in this sentence.

customers advising them of the Plan and the estimated impacts to their bills, in compliance with 199 IAC 35.4(4).

Appendix A provides detailed information on IPL's rate impacts at the Plan level, which reflect the allocation of individual program costs to the eligible customer classes following Board-approved allocation methodologies. Appendix A additionally provides details on the bill impacts by customer class for electric and natural gas separately.

2.7. Load Forecasts and Customer Load Profiles

IPL used forecasts of the long-term electric and natural gas resource requirements as a starting point for this Plan. These forecasts describe the base conditions of consumers' energy demand absent any new energy-efficiency initiatives, and provide the context for assessing energy-efficiency potentials and understanding how projected resource needs might be offset by various energy-efficiency programs and initiatives.

IPL expects to experience a steady growth from approximately 16,415 GWh to 17,883 GWh over the 10-year forecast period from 2014 to 2023, representing an average annual growth rate of 0.96 percent. IPL expects roughly 40 percent of this growth to occur in the industrial sector. The commercial sector accounts for over 30 percent, and the residential sector accounts for 20 percent of the projected load growth. Although the industrial sector represents the largest portion of megawatt hour (MWh) growth, the commercial sector is the fastest-growing in percentage terms, increasing by approximately 12 percent from 2014 to 2023.

Natural gas sales are projected to remain relatively flat from 2014 to 2023. Sales of natural gas in the residential sector, which accounts for roughly one-half of total consumption, is expected to increase by 0.1 percent, while commercial and industrial consumption is expected to decrease by 0.2 percent. Further details on IPL's forecasts can be found in Appendix C. Customer load profiles by class are in Appendix D.

2.8. Quality Assurance

IPL manages its Plan through a set of interdependent sequential activities, beginning with planning, proceeding to design, then to implementation, and finally, culminating in evaluation. Continuous improvement is the guiding principle in this process. IPL's Plan management approach provides a framework for continually assessing program performance, ensuring quality, and adaptively managing programs to meet overall Plan goals. IPL's continuous improvement process relies on four essential elements: (1) activity tracking; (2) quality control; (3) annual, internal program review and assessment; and (4) process and impact evaluations.

An effective activity tracking system is the foundation of IPL's energy-efficiency planning and delivery process. To ensure accurate tracking of program results, IPL uses a customized energy-efficiency tool, called *Tool for Reporting Energy Efficiency Savings* (TREES), to pay and track rebate payments and impacts. TREES receives data feeds from IPL's customer billing system and ensures that the customer's premise is active in the billing system and verifies the service type.

Quality control is an integral part of IPL's program delivery and customer/vendor relations management process. IPL incorporates quality control measures, such as

random site visits, annual vendor and incentive reviews, and customer satisfaction surveys, into program delivery systems at various stages of every program's life-cycle.

IPL conducts annual, internal evaluations of its programs to ensure they run as efficiently as possible. These efforts may include: reviewing vendor contracts; conducting performance reviews of its suppliers and other outside vendors as needed (resulting in a supplier scorecard); reviewing feedback from customers, collaborators, stakeholders, and other interested parties; and conducting internal tests to verify savings calculations. IPL also works with a third-party contractor who monitors market activity, such as changing codes and standards and utility program activities, then recommends adjustments to incentive levels and program delivery approaches to remain consistent with industry best practices.

Evaluations of IPL's program development and delivery process, or EM&V, is IPL's principal means of ensuring the validity and reliability of program savings and cost-effectiveness. IPL plans to evaluate its programs during the Plan period, and will do so with consultation and input of interested stakeholders. IPL will contract with an objective, independent contractor to conduct EM&V of its programs and will make its findings available to the public. A detailed description of IPL's anticipated EM&V activities and approach is provided in the Other Funding Initiatives chapter of this Plan.

2.9. Program Level Budgets, Impacts, and Cost-Effectiveness

The tables on the following pages provide program-level summaries for IPL's Plan.

- Table 2.17 through Table 2.31 present costs by program, broken out by budget category:
 - Table 2.17 through Table 2.21 show annual total Plan costs by budget category;
 - Table 2.22 through Table 2.26 show annual electric costs by budget category; and
 - Table 2.27 through Table 2.31 show annual gas costs by budget category.
- Table 2.32 and Table 2.33 show annual electric and natural gas impacts, respectively.
- Table 2.34 shows total, electric, and natural gas cost-effectiveness results.

Table 2.17 Total Plan Budget by Program (2014)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$818,590	\$3,329,112	\$2,458,813	\$31,405,030	\$2,812,370	\$3,188,903	\$982,968	\$44,995,786
Residential Prescriptive Rebates	\$246,957	\$1,111,306	\$864,349	\$10,001,757	\$0	\$0	\$123,478	\$12,347,847
Home Energy Assessments	\$35,222	\$140,889	\$105,667	\$1,761,111	\$358,786	\$664,150	\$0	\$3,065,825
Change-a-Light	\$22,734	\$250,078	\$113,672	\$1,818,750	\$0	\$0	\$68,203	\$2,273,437
Appliance Recycling	\$0	\$17,239	\$34,479	\$517,178	\$0	\$1,099,004	\$34,479	\$1,702,379
New Home Construction	\$8,676	\$8,676	\$60,730	\$728,766	\$0	\$0	\$150,000	\$956,848
Multifamily	\$1,216	\$12,156	\$8,509	\$6,078	\$30,650	\$93,161	\$2,431	\$154,201
Weatherization	\$0	\$899,970	\$0	\$0	\$2,017,057	\$301,399	\$12,500	\$3,230,926
EnergyWise Education	\$0	\$2,750	\$0	\$0	\$88,925	\$0	\$0	\$91,675
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$681	\$0	\$5,106	\$20,433	\$62,108	\$5,559	\$93,887
Home Energy Savers	\$4,025	\$52,325	\$16,100	\$0	\$151,200	\$128,800	\$52,325	\$404,775
Nonresidential Prescriptive Rebates	\$154,713	\$270,747	\$232,069	\$6,923,386	\$0	\$0	\$154,713	\$7,735,628
Business Assessments	\$32,191	\$42,922	\$85,843	\$196,000	\$143,610	\$540,281	\$32,191	\$1,073,038
Custom Rebates	\$277,502	\$370,003	\$740,006	\$7,585,066	\$0	\$0	\$277,502	\$9,250,079
Commercial New Construction	\$17,088	\$85,440	\$51,264	\$1,524,242	\$0	\$0	\$23,923	\$1,701,957
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$337,590	\$1,709	\$300,000	\$45,664	\$913,284
<i>Outreach, Education, and Training Portfolio</i>	\$158,329	\$472,029	\$640,881	\$1,315,444	\$532,823	\$0	\$58,580	\$3,178,086
Non-Targeted Energy Awareness and Information	\$17,264	\$12,948	\$379,809	\$0	\$0	\$0	\$21,580	\$431,601
School-Based Energy Education	\$12,391	\$49,565	\$24,782	\$0	\$532,823	\$0	\$0	\$619,561
Tree Planting	\$2,500	\$25,000	\$18,846	\$815,624	\$0	\$0	\$10,000	\$871,970
Hometown Rewards	\$15,000	\$75,000	\$125,000	\$260,000	\$0	\$0	\$25,000	\$500,000
Builder Training	\$48,000	\$18,000	\$48,000	\$6,000	\$0	\$0	\$0	\$120,000
Energy Efficiency Dealer Network	\$8,000	\$150,000	\$40,000	\$0	\$0	\$0	\$2,000	\$200,000

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$4,444	\$13,333	\$4,444	\$200,000	\$0	\$0	\$0	\$222,221
Research, Development, and Demonstration	\$50,730	\$128,183	\$0	\$33,820	\$0	\$0	\$0	\$212,733
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$53,000	\$1,618,000	\$0	\$0	\$0	\$0	\$29,000	\$1,700,000
Legislative Assessment	\$0	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$1,600,000
EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Next Plan	\$53,000	\$18,000	\$0	\$0	\$0	\$0	\$29,000	\$100,000
<i>Total</i>	\$1,083,104	\$6,259,508	\$3,126,286	\$58,747,394	\$3,345,193	\$3,188,903	\$1,150,325	\$76,900,713

Table 2.18 Total Plan Budget by Program (2015)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$838,037	\$3,396,270	\$2,510,915	\$32,173,397	\$2,834,006	\$3,226,016	\$1,002,965	\$45,981,606
Residential Prescriptive Rebates	\$254,780	\$1,146,512	\$891,731	\$10,318,606	\$0	\$0	\$127,390	\$12,739,019
Home Energy Assessments	\$36,983	\$147,933	\$110,950	\$1,849,167	\$364,380	\$677,433	\$0	\$3,186,846
Change-a-Light	\$23,871	\$262,582	\$119,355	\$1,909,688	\$0	\$0	\$71,613	\$2,387,109
Appliance Recycling	\$0	\$17,411	\$34,822	\$522,331	\$0	\$1,109,954	\$34,822	\$1,719,340
New Home Construction	\$9,023	\$9,023	\$63,160	\$757,916	\$0	\$0	\$150,000	\$989,122
Multifamily	\$1,276	\$12,764	\$8,935	\$6,382	\$30,650	\$93,161	\$2,553	\$155,721
Weatherization	\$0	\$899,970	\$0	\$0	\$2,017,057	\$301,399	\$12,500	\$3,230,926
EnergyWise Education	\$0	\$2,779	\$0	\$0	\$89,847	\$0	\$0	\$92,626
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$681	\$0	\$5,106	\$20,433	\$62,108	\$5,559	\$93,887
Home Energy Savers	\$4,428	\$57,558	\$17,710	\$0	\$166,320	\$141,680	\$57,558	\$445,254
Nonresidential Prescriptive Rebates	\$164,467	\$287,817	\$246,700	\$7,359,883	\$0	\$0	\$164,467	\$8,223,334
Business Assessments	\$32,191	\$42,922	\$85,843	\$196,000	\$143,610	\$540,281	\$32,191	\$1,073,038
Custom Rebates	\$278,010	\$370,680	\$741,359	\$7,598,933	\$0	\$0	\$278,010	\$9,266,992
Commercial New Construction	\$14,742	\$73,708	\$44,225	\$1,314,955	\$0	\$0	\$20,638	\$1,468,268
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$334,430	\$1,709	\$300,000	\$45,664	\$910,124
<i>Outreach, Education, and Training Portfolio</i>	\$160,522	\$478,497	\$656,166	\$1,339,379	\$535,497	\$0	\$59,967	\$3,230,028
Non-Targeted Energy Awareness and Information	\$17,782	\$13,336	\$391,203	\$0	\$0	\$0	\$22,227	\$444,548
School-Based Energy Education	\$12,453	\$49,814	\$24,907	\$0	\$535,497	\$0	\$0	\$622,671
Tree Planting	\$2,550	\$25,500	\$19,223	\$829,683	\$0	\$0	\$10,200	\$887,156
Hometown Rewards	\$15,300	\$76,500	\$127,500	\$265,200	\$0	\$0	\$25,500	\$510,000
Builder Training	\$48,000	\$18,000	\$48,000	\$6,000	\$0	\$0	\$0	\$120,000
Energy Efficiency Dealer Network	\$8,160	\$153,000	\$40,800	\$0	\$0	\$0	\$2,040	\$204,000

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$4,533	\$13,600	\$4,533	\$204,000	\$0	\$0	\$0	\$226,666
Research, Development, and Demonstration	\$51,744	\$128,747	\$0	\$34,496	\$0	\$0	\$0	\$214,987
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$53,000	\$2,618,000	\$0	\$0	\$0	\$0	\$29,000	\$2,700,000
Legislative Assessment	\$0	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$1,600,000
EM&V	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$1,000,000
Next Plan	\$53,000	\$18,000	\$0	\$0	\$0	\$0	\$29,000	\$100,000
<i>Total</i>	\$1,104,744	\$7,333,134	\$3,193,673	\$59,539,696	\$3,369,503	\$3,226,016	\$1,171,709	\$78,938,475

Table 2.19 Total Plan Budget by Program (2016)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$855,105	\$3,449,059	\$2,553,704	\$32,757,883	\$2,855,673	\$3,263,587	\$1,020,647	\$46,755,658
Residential Prescriptive Rebates	\$260,946	\$1,174,256	\$913,310	\$10,568,305	\$0	\$0	\$130,473	\$13,047,290
Home Energy Assessments	\$38,832	\$155,330	\$116,497	\$1,941,625	\$370,071	\$690,982	\$0	\$3,313,337
Change-a-Light	\$25,065	\$275,711	\$125,323	\$2,005,172	\$0	\$0	\$75,194	\$2,506,465
Appliance Recycling	\$0	\$17,586	\$35,172	\$527,574	\$0	\$1,121,096	\$35,172	\$1,736,600
New Home Construction	\$9,386	\$9,386	\$65,705	\$788,455	\$0	\$0	\$150,000	\$1,022,932
Multifamily	\$1,340	\$13,402	\$9,381	\$6,701	\$30,650	\$93,161	\$2,680	\$157,315
Weatherization	\$0	\$899,970	\$0	\$0	\$2,017,057	\$301,399	\$12,500	\$3,230,926
EnergyWise Education	\$0	\$2,805	\$0	\$0	\$90,703	\$0	\$0	\$93,508
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$681	\$0	\$5,106	\$20,433	\$62,108	\$5,559	\$93,887
Home Energy Savers	\$4,830	\$62,790	\$19,320	\$0	\$181,440	\$154,560	\$62,790	\$485,730
Nonresidential Prescriptive Rebates	\$175,243	\$306,675	\$262,865	\$7,842,126	\$0	\$0	\$175,243	\$8,762,152
Business Assessments	\$32,191	\$42,922	\$85,843	\$196,000	\$143,610	\$540,281	\$32,191	\$1,073,038
Custom Rebates	\$278,568	\$371,424	\$742,848	\$7,614,189	\$0	\$0	\$278,568	\$9,285,597
Commercial New Construction	\$10,438	\$52,191	\$31,315	\$931,085	\$0	\$0	\$14,613	\$1,039,642
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$331,545	\$1,709	\$300,000	\$45,664	\$907,239
<i>Outreach, Education, and Training Portfolio</i>	\$162,764	\$485,093	\$671,867	\$1,363,694	\$538,172	\$0	\$61,389	\$3,282,980
Non-Targeted Energy Awareness and Information	\$18,315	\$13,737	\$402,939	\$0	\$0	\$0	\$22,894	\$457,885
School-Based Energy Education	\$12,516	\$50,062	\$25,031	\$0	\$538,172	\$0	\$0	\$625,781
Tree Planting	\$2,601	\$26,010	\$19,608	\$843,924	\$0	\$0	\$10,404	\$902,547
Hometown Rewards	\$15,606	\$78,030	\$130,050	\$270,504	\$0	\$0	\$26,010	\$520,200
Builder Training	\$48,000	\$18,000	\$48,000	\$6,000	\$0	\$0	\$0	\$120,000

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Energy Efficiency Dealer Network	\$8,323	\$156,060	\$41,616	\$0	\$0	\$0	\$2,081	\$208,080
Bright Ideas	\$4,624	\$13,872	\$4,624	\$208,080	\$0	\$0	\$0	\$231,200
Research, Development, and Demonstration	\$52,779	\$129,322	\$0	\$35,186	\$0	\$0	\$0	\$217,287
<i>Demand Response Portfolio</i>	\$53,185	\$840,366	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$229,667	\$2,678,000	\$0	\$0	\$0	\$0	\$125,667	\$3,033,334
Legislative Assessment	\$0	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$1,600,000
EM&V	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$1,000,000
Next Plan	\$229,667	\$78,000	\$0	\$0	\$0	\$0	\$125,667	\$433,334
Total	\$1,300,721	\$7,452,519	\$3,252,164	\$60,148,497	\$3,393,845	\$3,263,587	\$1,287,480	\$80,098,813

Table 2.20 Total Plan Budget by Program (2017)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$878,204	\$3,529,031	\$2,613,311	\$33,800,370	\$2,881,283	\$3,304,744	\$1,047,169	\$48,054,112
Residential Prescriptive Rebates	\$267,385	\$1,203,233	\$935,848	\$10,829,097	\$0	\$0	\$133,693	\$13,369,256
Home Energy Assessments	\$40,774	\$163,096	\$122,322	\$2,038,706	\$375,860	\$704,801	\$0	\$3,445,559
Change-a-Light	\$26,318	\$289,497	\$131,589	\$2,105,430	\$0	\$0	\$78,954	\$2,631,788
Appliance Recycling	\$0	\$17,762	\$35,524	\$532,863	\$0	\$1,132,333	\$35,524	\$1,754,006
New Home Construction	\$9,766	\$9,766	\$68,365	\$820,382	\$0	\$0	\$150,000	\$1,058,279
Multifamily	\$1,407	\$14,072	\$9,850	\$7,036	\$30,650	\$93,161	\$2,814	\$158,990
Weatherization	\$0	\$899,970	\$0	\$0	\$2,017,057	\$301,399	\$12,500	\$3,230,926
EnergyWise Education	\$0	\$2,834	\$0	\$0	\$91,625	\$0	\$0	\$94,459
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$681	\$0	\$5,106	\$20,433	\$62,108	\$5,559	\$93,887
Home Energy Savers	\$5,333	\$69,331	\$21,333	\$0	\$200,340	\$170,660	\$69,331	\$536,328
Nonresidential Prescriptive Rebates	\$187,147	\$327,508	\$280,721	\$8,374,843	\$0	\$0	\$187,147	\$9,357,366
Business Assessments	\$32,191	\$42,922	\$85,843	\$196,000	\$143,610	\$540,281	\$32,191	\$1,073,038
Custom Rebates	\$279,179	\$372,238	\$744,476	\$7,630,882	\$0	\$0	\$279,179	\$9,305,954
Commercial New Construction	\$10,438	\$52,191	\$31,315	\$931,085	\$0	\$0	\$14,613	\$1,039,642
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$328,940	\$1,709	\$300,000	\$45,664	\$904,634
<i>Outreach, Education, and Training Portfolio</i>	\$165,055	\$491,819	\$687,998	\$1,388,395	\$540,846	\$0	\$62,845	\$3,336,958
Non-Targeted Energy Awareness and Information	\$18,865	\$14,149	\$415,027	\$0	\$0	\$0	\$23,581	\$471,622
School-Based Energy Education	\$12,578	\$50,311	\$25,156	\$0	\$540,846	\$0	\$0	\$628,891
Tree Planting	\$2,653	\$26,530	\$20,000	\$858,349	\$0	\$0	\$10,612	\$918,144
Hometown Rewards	\$15,918	\$79,591	\$132,651	\$275,914	\$0	\$0	\$26,530	\$530,604
Builder Training	\$48,000	\$18,000	\$48,000	\$6,000	\$0	\$0	\$0	\$120,000
Energy Efficiency Dealer Network	\$8,490	\$159,181	\$42,448	\$0	\$0	\$0	\$2,122	\$212,241

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$4,716	\$14,149	\$4,716	\$212,242	\$0	\$0	\$0	\$235,823
Research, Development, and Demonstration	\$53,835	\$129,908	\$0	\$35,890	\$0	\$0	\$0	\$219,633
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$229,667	\$2,678,000	\$0	\$0	\$0	\$0	\$125,667	\$3,033,334
Legislative Assessment	\$0	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$1,600,000
EM&V	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$1,000,000
Next Plan	\$229,667	\$78,000	\$0	\$0	\$0	\$0	\$125,667	\$433,334
<i>Total</i>	\$1,326,111	\$7,539,217	\$3,327,901	\$61,215,685	\$3,422,130	\$3,304,743	\$1,315,458	\$81,451,245

Table 2.21 Total Plan Budget by Program (2018)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$903,083	\$3,613,695	\$2,676,700	\$34,923,765	\$2,906,994	\$3,346,177	\$1,075,339	\$49,445,753
Residential Prescriptive Rebates	\$274,112	\$1,233,505	\$959,393	\$11,101,543	\$0	\$0	\$137,056	\$13,705,609
Home Energy Assessments	\$42,813	\$171,251	\$128,438	\$2,140,641	\$381,748	\$718,897	\$0	\$3,583,788
Change-a-Light	\$27,634	\$303,972	\$138,169	\$2,210,702	\$0	\$0	\$82,901	\$2,763,378
Appliance Recycling	\$0	\$17,938	\$35,877	\$538,151	\$0	\$1,143,571	\$35,877	\$1,771,414
New Home Construction	\$10,163	\$10,163	\$71,141	\$853,697	\$0	\$0	\$150,000	\$1,095,164
Multifamily	\$1,478	\$14,776	\$10,343	\$7,388	\$30,650	\$93,161	\$2,955	\$160,751
Weatherization	\$0	\$899,970	\$0	\$0	\$2,017,057	\$301,399	\$12,500	\$3,230,926
EnergyWise Education	\$0	\$2,862	\$0	\$0	\$92,547	\$0	\$0	\$95,409
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$681	\$0	\$5,106	\$20,433	\$62,108	\$5,559	\$93,887
Home Energy Savers	\$5,836	\$75,871	\$23,345	\$0	\$219,240	\$186,760	\$75,871	\$586,923
Nonresidential Prescriptive Rebates	\$200,308	\$350,538	\$300,461	\$8,963,767	\$0	\$0	\$200,308	\$10,015,382
Business Assessments	\$32,191	\$42,922	\$85,843	\$196,000	\$143,610	\$540,281	\$32,191	\$1,073,038
Custom Rebates	\$279,844	\$373,125	\$746,250	\$7,649,067	\$0	\$0	\$279,844	\$9,328,130
Commercial New Construction	\$10,438	\$52,191	\$31,315	\$931,085	\$0	\$0	\$14,613	\$1,039,642
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$326,618	\$1,709	\$300,000	\$45,664	\$902,312
<i>Outreach, Education, and Training Portfolio</i>	\$167,396	\$498,682	\$704,572	\$1,413,489	\$543,563	\$0	\$64,339	\$3,392,041
Non-Targeted Energy Awareness and Information	\$19,431	\$14,573	\$427,478	\$0	\$0	\$0	\$24,289	\$485,771
School-Based Energy Education	\$12,641	\$50,564	\$25,282	\$0	\$543,563	\$0	\$0	\$632,050
Tree Planting	\$2,706	\$27,060	\$20,400	\$872,963	\$0	\$0	\$10,824	\$933,953
Hometown Rewards	\$16,236	\$81,182	\$135,304	\$281,432	\$0	\$0	\$27,061	\$541,215
Builder Training	\$48,000	\$18,000	\$48,000	\$6,000	\$0	\$0	\$0	\$120,000

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Energy Efficiency Dealer Network	\$8,659	\$162,365	\$43,297	\$0	\$0	\$0	\$2,165	\$216,486
Bright Ideas	\$4,811	\$14,432	\$4,811	\$216,486	\$0	\$0	\$0	\$240,540
Research, Development, and Demonstration	\$54,912	\$130,506	\$0	\$36,608	\$0	\$0	\$0	\$222,026
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$229,667	\$1,678,000	\$0	\$0	\$0	\$0	\$125,667	\$2,033,334
Legislative Assessment	\$0	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$1,600,000
EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Next Plan	\$229,667	\$78,000	\$0	\$0	\$0	\$0	\$125,667	\$433,334
<i>Total</i>	\$1,353,331	\$6,630,744	\$3,407,864	\$62,364,174	\$3,450,557	\$3,346,177	\$1,345,122	\$81,897,969

Table 2.22 Electric Budget by Program (2014)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$632,403	\$2,022,332	\$1,913,444	\$23,969,618	\$673,791	\$2,013,608	\$674,286	\$31,899,482
Residential Prescriptive Rebates	\$182,419	\$820,884	\$638,465	\$7,387,954	\$0	\$0	\$91,209	\$9,120,931
Home Energy Assessments	\$8,412	\$33,647	\$25,235	\$420,583	\$85,684	\$158,610	\$0	\$732,171
Change-a-Light	\$22,734	\$250,078	\$113,672	\$1,818,750	\$0	\$0	\$68,203	\$2,273,437
Appliance Recycling	\$0	\$17,239	\$34,479	\$517,178	\$0	\$1,099,004	\$34,479	\$1,702,379
New Home Construction	\$954	\$954	\$6,680	\$80,164	\$0	\$0	\$16,500	\$105,252
Multifamily	\$890	\$8,895	\$6,227	\$4,448	\$22,429	\$68,173	\$1,779	\$112,841
Weatherization	\$0	\$186,296	\$0	\$0	\$417,536	\$62,390	\$2,588	\$668,810
EnergyWise Education	\$0	\$1,403	\$0	\$0	\$45,351	\$0	\$0	\$46,754
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$501	\$0	\$3,753	\$15,018	\$45,649	\$4,086	\$69,007
Home Energy Savers	\$403	\$5,233	\$1,610	\$0	\$15,120	\$12,880	\$5,233	\$40,479
Nonresidential Prescriptive Rebates	\$108,371	\$189,650	\$162,557	\$4,849,612	\$0	\$0	\$108,371	\$5,418,561
Business Assessments	\$15,903	\$21,204	\$42,407	\$96,825	\$70,944	\$266,902	\$15,903	\$530,088
Custom Rebates	\$258,501	\$344,668	\$689,337	\$7,065,701	\$0	\$0	\$258,501	\$8,616,708
Commercial New Construction	\$15,550	\$77,750	\$46,650	\$1,387,060	\$0	\$0	\$21,770	\$1,548,780
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$337,590	\$1,709	\$300,000	\$45,664	\$913,284
<i>Outreach, Education, and Training Portfolio</i>	\$122,104	\$358,394	\$505,562	\$1,060,385	\$191,816	\$0	\$47,222	\$2,285,483
Non-Targeted Energy Awareness and Information	\$13,917	\$10,437	\$306,165	\$0	\$0	\$0	\$17,396	\$347,915
School-Based Energy Education	\$4,461	\$17,843	\$8,922	\$0	\$191,816	\$0	\$0	\$223,042
Tree Planting	\$2,015	\$20,153	\$15,192	\$657,478	\$0	\$0	\$8,061	\$702,899
Hometown Rewards	\$12,092	\$60,458	\$100,763	\$209,587	\$0	\$0	\$20,153	\$403,053
Builder Training	\$38,693	\$14,510	\$38,693	\$4,837	\$0	\$0	\$0	\$96,733
Energy Efficiency Dealer Network	\$6,449	\$120,916	\$32,244	\$0	\$0	\$0	\$1,612	\$161,221

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$3,583	\$10,748	\$3,583	\$161,221	\$0	\$0	\$0	\$179,135
Research, Development, and Demonstration	\$40,894	\$103,329	\$0	\$27,262	\$0	\$0	\$0	\$171,485
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$42,724	\$1,304,277	\$0	\$0	\$0	\$0	\$23,377	\$1,370,378
Legislative Assessment	\$0	\$1,289,767	\$0	\$0	\$0	\$0	\$0	\$1,289,767
EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Next Plan	\$42,724	\$14,510	\$0	\$0	\$0	\$0	\$23,377	\$80,611
<i>Total</i>	\$850,416	\$4,525,370	\$2,445,598	\$51,056,923	\$865,607	\$2,013,608	\$824,662	\$62,582,184

Table 2.23 Electric Budget by Program (2015)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$645,033	\$2,065,628	\$1,946,802	\$24,449,271	\$677,110	\$2,029,019	\$685,858	\$32,498,721
Residential Prescriptive Rebates	\$188,198	\$846,889	\$658,691	\$7,621,999	\$0	\$0	\$94,099	\$9,409,876
Home Energy Assessments	\$8,832	\$35,329	\$26,497	\$441,612	\$87,020	\$161,783	\$0	\$761,073
Change-a-Light	\$23,871	\$262,582	\$119,355	\$1,909,688	\$0	\$0	\$71,613	\$2,387,109
Appliance Recycling	\$0	\$17,411	\$34,822	\$522,331	\$0	\$1,109,954	\$34,822	\$1,719,340
New Home Construction	\$993	\$993	\$6,948	\$83,371	\$0	\$0	\$16,500	\$108,805
Multifamily	\$934	\$9,340	\$6,538	\$4,670	\$22,429	\$68,173	\$1,868	\$113,952
Weatherization	\$0	\$186,296	\$0	\$0	\$417,536	\$62,390	\$2,588	\$668,810
EnergyWise Education	\$0	\$1,417	\$0	\$0	\$45,822	\$0	\$0	\$47,239
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$501	\$0	\$3,753	\$15,018	\$45,649	\$4,086	\$69,007
Home Energy Savers	\$443	\$5,756	\$1,771	\$0	\$16,632	\$14,168	\$5,756	\$44,526
Nonresidential Prescriptive Rebates	\$115,204	\$201,606	\$172,806	\$5,155,364	\$0	\$0	\$115,204	\$5,760,184
Business Assessments	\$15,903	\$21,204	\$42,407	\$96,825	\$70,944	\$266,902	\$15,903	\$530,088
Custom Rebates	\$258,974	\$345,299	\$690,597	\$7,078,619	\$0	\$0	\$258,974	\$8,632,463
Commercial New Construction	\$13,415	\$67,075	\$40,245	\$1,196,609	\$0	\$0	\$18,781	\$1,336,125
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$334,430	\$1,709	\$300,000	\$45,664	\$910,124
<i>Outreach, Education, and Training Portfolio</i>	\$123,842	\$363,497	\$517,826	\$1,079,680	\$192,779	\$0	\$48,340	\$2,325,964
Non-Targeted Energy Awareness and Information	\$14,334	\$10,751	\$315,350	\$0	\$0	\$0	\$17,918	\$358,353
School-Based Energy Education	\$4,483	\$17,933	\$8,966	\$0	\$192,779	\$0	\$0	\$224,161
Tree Planting	\$2,056	\$20,556	\$15,496	\$668,811	\$0	\$0	\$8,222	\$715,141
Hometown Rewards	\$12,333	\$61,667	\$102,778	\$213,779	\$0	\$0	\$20,556	\$411,113
Builder Training	\$38,693	\$14,510	\$38,693	\$4,837	\$0	\$0	\$0	\$96,733
Energy Efficiency Dealer Network	\$6,578	\$123,334	\$32,889	\$0	\$0	\$0	\$1,644	\$164,445

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$3,654	\$10,963	\$3,654	\$164,445	\$0	\$0	\$0	\$182,716
Research, Development, and Demonstration	\$41,711	\$103,783	\$0	\$27,808	\$0	\$0	\$0	\$173,302
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$42,724	\$2,114,277	\$0	\$0	\$0	\$0	\$23,377	\$2,180,378
Legislative Assessment	\$0	\$1,289,767	\$0	\$0	\$0	\$0	\$0	\$1,289,767
EM&V	\$0	\$810,000	\$0	\$0	\$0	\$0	\$0	\$810,000
Next Plan	\$42,724	\$14,510	\$0	\$0	\$0	\$0	\$23,377	\$80,611
<i>Total</i>	\$864,784	\$5,383,769	\$2,491,220	\$51,555,871	\$869,889	\$2,029,019	\$837,352	\$64,031,904

Table 2.24 Electric Budget by Program (2016)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$655,502	\$2,096,558	\$1,972,112	\$24,759,916	\$680,418	\$2,044,684	\$695,267	\$32,904,457
Residential Prescriptive Rebates	\$192,752	\$867,383	\$674,631	\$7,806,443	\$0	\$0	\$96,376	\$9,637,585
Home Energy Assessments	\$9,274	\$37,095	\$27,822	\$463,693	\$88,379	\$165,018	\$0	\$791,281
Change-a-Light	\$25,065	\$275,711	\$125,323	\$2,005,172	\$0	\$0	\$75,194	\$2,506,465
Appliance Recycling	\$0	\$17,586	\$35,172	\$527,574	\$0	\$1,121,096	\$35,172	\$1,736,600
New Home Construction	\$1,033	\$1,033	\$7,228	\$86,730	\$0	\$0	\$16,500	\$112,524
Multifamily	\$981	\$9,807	\$6,865	\$4,904	\$22,429	\$68,173	\$1,961	\$115,120
Weatherization	\$0	\$186,296	\$0	\$0	\$417,536	\$62,390	\$2,588	\$668,810
EnergyWise Education	\$0	\$1,431	\$0	\$0	\$46,259	\$0	\$0	\$47,690
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$501	\$0	\$3,753	\$15,018	\$45,649	\$4,086	\$69,007
Home Energy Savers	\$483	\$6,279	\$1,932	\$0	\$18,144	\$15,456	\$6,279	\$48,573
Nonresidential Prescriptive Rebates	\$122,752	\$214,816	\$184,128	\$5,493,160	\$0	\$0	\$122,752	\$6,137,608
Business Assessments	\$15,903	\$21,204	\$42,407	\$96,825	\$70,944	\$266,902	\$15,903	\$530,088
Custom Rebates	\$259,494	\$345,992	\$691,983	\$7,092,830	\$0	\$0	\$259,494	\$8,649,793
Commercial New Construction	\$9,499	\$47,494	\$28,496	\$847,287	\$0	\$0	\$13,298	\$946,074
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$331,545	\$1,709	\$300,000	\$45,664	\$907,239
<i>Outreach, Education, and Training Portfolio</i>	\$125,622	\$368,702	\$530,429	\$1,099,280	\$193,742	\$0	\$49,486	\$2,367,261
Non-Targeted Energy Awareness and Information	\$14,764	\$11,073	\$324,811	\$0	\$0	\$0	\$18,455	\$369,103
School-Based Energy Education	\$4,506	\$18,022	\$9,011	\$0	\$193,742	\$0	\$0	\$225,281
Tree Planting	\$2,097	\$20,967	\$15,806	\$680,291	\$0	\$0	\$8,387	\$727,548
Hometown Rewards	\$12,580	\$62,900	\$104,834	\$218,054	\$0	\$0	\$20,967	\$419,335
Builder Training	\$38,693	\$14,510	\$38,693	\$4,837	\$0	\$0	\$0	\$96,733
Energy Efficiency Dealer Network	\$6,709	\$125,801	\$33,547	\$0	\$0	\$0	\$1,677	\$167,734

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$3,727	\$11,182	\$3,727	\$167,734	\$0	\$0	\$0	\$186,370
Research, Development, and Demonstration	\$42,546	\$104,247	\$0	\$28,364	\$0	\$0	\$0	\$175,157
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$185,135	\$2,162,643	\$0	\$0	\$0	\$0	\$101,300	\$2,449,078
Legislative Assessment	\$0	\$1,289,767	\$0	\$0	\$0	\$0	\$0	\$1,289,767
EM&V	\$0	\$810,000	\$0	\$0	\$0	\$0	\$0	\$810,000
Next Plan	\$185,135	\$62,876	\$0	\$0	\$0	\$0	\$101,300	\$349,311
<i>Total</i>	\$1,019,444	\$5,468,270	\$2,529,133	\$51,886,116	\$874,160	\$2,044,684	\$925,830	\$64,747,637

Table 2.25 Electric Budget by Program (2017)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$671,023	\$2,150,330	\$2,011,631	\$25,471,139	\$684,161	\$2,060,832	\$711,418	\$33,760,534
Residential Prescriptive Rebates	\$197,508	\$888,787	\$691,279	\$7,999,081	\$0	\$0	\$98,754	\$9,875,409
Home Energy Assessments	\$9,738	\$38,950	\$29,213	\$486,878	\$89,762	\$168,319	\$0	\$822,860
Change-a-Light	\$26,318	\$289,497	\$131,589	\$2,105,430	\$0	\$0	\$78,954	\$2,631,788
Appliance Recycling	\$0	\$17,762	\$35,524	\$532,863	\$0	\$1,132,333	\$35,524	\$1,754,006
New Home Construction	\$1,074	\$1,074	\$7,520	\$90,242	\$0	\$0	\$16,500	\$116,410
Multifamily	\$1,030	\$10,298	\$7,208	\$5,149	\$22,429	\$68,173	\$2,060	\$116,347
Weatherization	\$0	\$186,296	\$0	\$0	\$417,536	\$62,390	\$2,588	\$668,810
EnergyWise Education	\$0	\$1,445	\$0	\$0	\$46,729	\$0	\$0	\$48,174
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$501	\$0	\$3,753	\$15,018	\$45,649	\$4,086	\$69,007
Home Energy Savers	\$533	\$6,933	\$2,133	\$0	\$20,034	\$17,066	\$6,933	\$53,632
Nonresidential Prescriptive Rebates	\$131,091	\$229,409	\$196,636	\$5,866,311	\$0	\$0	\$131,091	\$6,554,538
Business Assessments	\$15,903	\$21,204	\$42,407	\$96,825	\$70,944	\$266,902	\$15,903	\$530,088
Custom Rebates	\$260,063	\$346,750	\$693,501	\$7,108,380	\$0	\$0	\$260,063	\$8,668,757
Commercial New Construction	\$9,499	\$47,494	\$28,496	\$847,287	\$0	\$0	\$13,298	\$946,074
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$328,940	\$1,709	\$300,000	\$45,664	\$904,634
<i>Outreach, Education, and Training Portfolio</i>	\$127,442	\$374,014	\$543,377	\$1,119,192	\$194,705	\$0	\$50,660	\$2,409,390
Non-Targeted Energy Awareness and Information	\$15,207	\$11,405	\$334,555	\$0	\$0	\$0	\$19,009	\$380,176
School-Based Energy Education	\$4,528	\$18,112	\$9,056	\$0	\$194,705	\$0	\$0	\$226,401
Tree Planting	\$2,139	\$21,386	\$16,122	\$691,919	\$0	\$0	\$8,554	\$740,120
Hometown Rewards	\$12,832	\$64,158	\$106,931	\$222,416	\$0	\$0	\$21,386	\$427,723
Builder Training	\$38,693	\$14,510	\$38,693	\$4,837	\$0	\$0	\$0	\$96,733
Energy Efficiency Dealer Network	\$6,844	\$128,317	\$34,218	\$0	\$0	\$0	\$1,711	\$171,090

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$3,802	\$11,406	\$3,802	\$171,089	\$0	\$0	\$0	\$190,099
Research, Development, and Demonstration	\$43,397	\$104,720	\$0	\$28,931	\$0	\$0	\$0	\$177,048
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$185,135	\$2,162,643	\$0	\$0	\$0	\$0	\$101,300	\$2,449,078
Legislative Assessment	\$0	\$1,289,767	\$0	\$0	\$0	\$0	\$0	\$1,289,767
EM&V	\$0	\$810,000	\$0	\$0	\$0	\$0	\$0	\$810,000
Next Plan	\$185,135	\$62,876	\$0	\$0	\$0	\$0	\$101,300	\$349,311
<i>Total</i>	\$1,036,785	\$5,527,354	\$2,581,600	\$52,617,251	\$878,866	\$2,060,832	\$943,155	\$65,645,843

Table 2.26 Electric Budget by Program (2018)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$687,777	\$2,207,476	\$2,053,764	\$26,238,353	\$687,927	\$2,077,046	\$728,796	\$34,681,139
Residential Prescriptive Rebates	\$202,477	\$911,148	\$708,670	\$8,200,328	\$0	\$0	\$101,239	\$10,123,862
Home Energy Assessments	\$10,224	\$40,898	\$30,673	\$511,222	\$91,168	\$171,685	\$0	\$855,870
Change-a-Light	\$27,634	\$303,972	\$138,169	\$2,210,702	\$0	\$0	\$82,901	\$2,763,378
Appliance Recycling	\$0	\$17,938	\$35,877	\$538,151	\$0	\$1,143,571	\$35,877	\$1,771,414
New Home Construction	\$1,118	\$1,118	\$7,826	\$93,907	\$0	\$0	\$16,500	\$120,469
Multifamily	\$1,081	\$10,812	\$7,569	\$5,406	\$22,429	\$68,173	\$2,162	\$117,632
Weatherization	\$0	\$186,296	\$0	\$0	\$417,536	\$62,390	\$2,588	\$668,810
EnergyWise Education	\$0	\$1,460	\$0	\$0	\$47,199	\$0	\$0	\$48,659
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$501	\$0	\$3,753	\$15,018	\$45,649	\$4,086	\$69,007
Home Energy Savers	\$584	\$7,587	\$2,335	\$0	\$21,924	\$18,676	\$7,587	\$58,693
Nonresidential Prescriptive Rebates	\$140,309	\$245,541	\$210,464	\$6,278,834	\$0	\$0	\$140,309	\$7,015,457
Business Assessments	\$15,903	\$21,204	\$42,407	\$96,825	\$70,944	\$266,902	\$15,903	\$530,088
Custom Rebates	\$260,682	\$347,577	\$695,153	\$7,125,320	\$0	\$0	\$260,682	\$8,689,414
Commercial New Construction	\$9,499	\$47,494	\$28,496	\$847,287	\$0	\$0	\$13,298	\$946,074
Agriculture Sector	\$18,266	\$63,930	\$146,125	\$326,618	\$1,709	\$300,000	\$45,664	\$902,312
<i>Outreach, Education, and Training Portfolio</i>	\$129,298	\$379,434	\$556,681	\$1,139,421	\$195,683	\$0	\$51,863	\$2,452,380
Non-Targeted Energy Awareness and Information	\$15,663	\$11,747	\$344,592	\$0	\$0	\$0	\$19,579	\$391,581
School-Based Energy Education	\$4,551	\$18,203	\$9,102	\$0	\$195,683	\$0	\$0	\$227,539
Tree Planting	\$2,181	\$21,813	\$16,445	\$703,699	\$0	\$0	\$8,725	\$752,863
Hometown Rewards	\$13,088	\$65,442	\$109,069	\$226,864	\$0	\$0	\$21,814	\$436,277
Builder Training	\$38,693	\$14,510	\$38,693	\$4,837	\$0	\$0	\$0	\$96,733
Energy Efficiency Dealer Network	\$6,980	\$130,883	\$34,902	\$0	\$0	\$0	\$1,745	\$174,510

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$3,878	\$11,634	\$3,878	\$174,511	\$0	\$0	\$0	\$193,901
Research, Development, and Demonstration	\$44,264	\$105,202	\$0	\$29,510	\$0	\$0	\$0	\$178,976
<i>Demand Response Portfolio</i>	\$53,185	\$840,367	\$26,592	\$26,026,920	\$0	\$0	\$79,777	\$27,026,841
Residential DLC	\$53,185	\$717,997	\$26,592	\$1,675,325	\$0	\$0	\$79,777	\$2,552,876
Nonresidential Interruptible	\$0	\$122,370	\$0	\$24,351,595	\$0	\$0	\$0	\$24,473,965
<i>Other Funding Initiatives</i>	\$185,135	\$1,352,643	\$0	\$0	\$0	\$0	\$101,300	\$1,639,078
Legislative Assessment	\$0	\$1,289,767	\$0	\$0	\$0	\$0	\$0	\$1,289,767
EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Next Plan	\$185,135	\$62,876	\$0	\$0	\$0	\$0	\$101,300	\$349,311
<i>Total</i>	\$1,055,395	\$4,779,920	\$2,637,037	\$53,404,694	\$883,610	\$2,077,046	\$961,736	\$65,799,438

Table 2.27 Natural Gas Budget by Program (2014)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$186,188	\$1,306,782	\$545,370	\$7,435,410	\$2,138,578	\$1,175,295	\$308,683	\$13,096,306
Residential Prescriptive Rebates	\$64,538	\$290,423	\$225,884	\$2,613,803	\$0	\$0	\$32,269	\$3,226,917
Home Energy Assessments	\$26,811	\$107,242	\$80,432	\$1,340,528	\$273,102	\$505,540	\$0	\$2,333,655
Change-a-Light	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Appliance Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Home Construction	\$7,721	\$7,721	\$54,050	\$648,601	\$0	\$0	\$133,500	\$851,593
Multifamily	\$326	\$3,261	\$2,282	\$1,630	\$8,221	\$24,988	\$652	\$41,360
Weatherization	\$0	\$713,674	\$0	\$0	\$1,599,521	\$239,009	\$9,912	\$2,562,116
EnergyWise Education	\$0	\$1,348	\$0	\$0	\$43,573	\$0	\$0	\$44,921
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$180	\$0	\$1,353	\$5,415	\$16,459	\$1,473	\$24,880
Home Energy Savers	\$3,623	\$47,093	\$14,490	\$0	\$136,080	\$115,920	\$47,093	\$364,299
Nonresidential Prescriptive Rebates	\$46,341	\$81,097	\$69,512	\$2,073,774	\$0	\$0	\$46,341	\$2,317,065
Business Assessments	\$16,289	\$21,718	\$43,436	\$99,175	\$72,666	\$273,379	\$16,289	\$542,952
Custom Rebates	\$19,001	\$25,335	\$50,670	\$519,364	\$0	\$0	\$19,001	\$633,371
Commercial New Construction	\$1,538	\$7,690	\$4,614	\$137,182	\$0	\$0	\$2,153	\$153,177
Agriculture Sector	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Outreach, Education, and Training Portfolio</i>	\$36,226	\$113,635	\$135,320	\$255,059	\$341,006	\$0	\$11,358	\$892,604
Non-Targeted Energy Awareness and Information	\$3,347	\$2,511	\$73,643	\$0	\$0	\$0	\$4,184	\$83,685
School-Based Energy Education	\$7,930	\$31,722	\$15,861	\$0	\$341,006	\$0	\$0	\$396,519
Tree Planting	\$485	\$4,847	\$3,654	\$158,146	\$0	\$0	\$1,939	\$169,071
Hometown Rewards	\$2,908	\$14,542	\$24,237	\$50,413	\$0	\$0	\$4,847	\$96,947
Builder Training	\$9,307	\$3,490	\$9,307	\$1,163	\$0	\$0	\$0	\$23,267
Energy Efficiency Dealer Network	\$1,551	\$29,084	\$7,756	\$0	\$0	\$0	\$388	\$38,779

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$862	\$2,585	\$862	\$38,779	\$0	\$0	\$0	\$43,088
Research, Development, and Demonstration	\$9,836	\$24,854	\$0	\$6,558	\$0	\$0	\$0	\$41,248
<i>Demand Response Portfolio</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Residential DLC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nonresidential Interruptible	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Other Funding Initiatives</i>	\$10,276	\$313,723	\$0	\$0	\$0	\$0	\$5,623	\$329,622
Legislative Assessment	\$0	\$310,233	\$0	\$0	\$0	\$0	\$0	\$310,233
EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Next Plan	\$10,276	\$3,490	\$0	\$0	\$0	\$0	\$5,623	\$19,389
<i>Total</i>	\$232,690	\$1,734,140	\$680,690	\$7,690,469	\$2,479,584	\$1,175,295	\$325,664	\$14,318,532

Table 2.28 Natural Gas Budget by Program (2015)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$193,006	\$1,330,642	\$564,113	\$7,724,125	\$2,156,896	\$1,196,997	\$317,108	\$13,482,887
Residential Prescriptive Rebates	\$66,583	\$299,623	\$233,040	\$2,696,607	\$0	\$0	\$33,291	\$3,329,144
Home Energy Assessments	\$28,151	\$112,604	\$84,453	\$1,407,554	\$277,360	\$515,650	\$0	\$2,425,772
Change-a-Light	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Appliance Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Home Construction	\$8,030	\$8,030	\$56,212	\$674,545	\$0	\$0	\$133,500	\$880,317
Multifamily	\$342	\$3,424	\$2,397	\$1,712	\$8,221	\$24,988	\$685	\$41,769
Weatherization	\$0	\$713,674	\$0	\$0	\$1,599,521	\$239,009	\$9,912	\$2,562,116
EnergyWise Education	\$0	\$1,362	\$0	\$0	\$44,025	\$0	\$0	\$45,387
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$180	\$0	\$1,353	\$5,415	\$16,459	\$1,473	\$24,880
Home Energy Savers	\$3,985	\$51,802	\$15,939	\$0	\$149,688	\$127,512	\$51,802	\$400,728
Nonresidential Prescriptive Rebates	\$49,263	\$86,210	\$73,894	\$2,204,519	\$0	\$0	\$49,263	\$2,463,149
Business Assessments	\$16,289	\$21,718	\$43,436	\$99,175	\$72,666	\$273,379	\$16,289	\$542,952
Custom Rebates	\$19,036	\$25,381	\$50,762	\$520,314	\$0	\$0	\$19,036	\$634,529
Commercial New Construction	\$1,327	\$6,634	\$3,980	\$118,346	\$0	\$0	\$1,857	\$132,144
Agriculture Sector	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Outreach, Education, and Training Portfolio</i>	\$36,680	\$115,000	\$138,339	\$259,700	\$342,718	\$0	\$11,628	\$904,065
Non-Targeted Energy Awareness and Information	\$3,448	\$2,586	\$75,853	\$0	\$0	\$0	\$4,310	\$86,197
School-Based Energy Education	\$7,970	\$31,881	\$15,940	\$0	\$342,718	\$0	\$0	\$398,509
Tree Planting	\$494	\$4,944	\$3,727	\$160,872	\$0	\$0	\$1,978	\$172,015
Hometown Rewards	\$2,967	\$14,833	\$24,722	\$51,421	\$0	\$0	\$4,944	\$98,887
Builder Training	\$9,307	\$3,490	\$9,307	\$1,163	\$0	\$0	\$0	\$23,267
Energy Efficiency Dealer Network	\$1,582	\$29,666	\$7,911	\$0	\$0	\$0	\$396	\$39,555

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$879	\$2,637	\$879	\$39,555	\$0	\$0	\$0	\$43,950
Research, Development, and Demonstration	\$10,033	\$24,963	\$0	\$6,689	\$0	\$0	\$0	\$41,685
<i>Demand Response Portfolio</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Residential DLC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nonresidential Interruptible	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Other Funding Initiatives</i>	\$10,276	\$503,723	\$0	\$0	\$0	\$0	\$5,623	\$519,622
Legislative Assessment	\$0	\$310,233	\$0	\$0	\$0	\$0	\$0	\$310,233
EM&V	\$0	\$190,000	\$0	\$0	\$0	\$0	\$0	\$190,000
Next Plan	\$10,276	\$3,490	\$0	\$0	\$0	\$0	\$5,623	\$19,389
Total	\$239,962	\$1,949,365	\$702,452	\$7,983,825	\$2,499,614	\$1,196,997	\$334,359	\$14,906,574

Table 2.29 Natural Gas Budget by Program (2016)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$199,606	\$1,352,504	\$581,590	\$7,997,967	\$2,175,255	\$1,218,903	\$325,381	\$13,851,206
Residential Prescriptive Rebates	\$68,194	\$306,874	\$238,679	\$2,761,862	\$0	\$0	\$34,097	\$3,409,706
Home Energy Assessments	\$29,559	\$118,235	\$88,676	\$1,477,932	\$281,692	\$525,964	\$0	\$2,522,058
Change-a-Light	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Appliance Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Home Construction	\$8,354	\$8,354	\$58,477	\$701,725	\$0	\$0	\$133,500	\$910,410
Multifamily	\$359	\$3,595	\$2,516	\$1,797	\$8,221	\$24,988	\$719	\$42,195
Weatherization	\$0	\$713,674	\$0	\$0	\$1,599,521	\$239,009	\$9,912	\$2,562,116
EnergyWise Education	\$0	\$1,375	\$0	\$0	\$44,444	\$0	\$0	\$45,819
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$180	\$0	\$1,353	\$5,415	\$16,459	\$1,473	\$24,880
Home Energy Savers	\$4,347	\$56,511	\$17,388	\$0	\$163,296	\$139,104	\$56,511	\$437,157
Nonresidential Prescriptive Rebates	\$52,491	\$91,859	\$78,736	\$2,348,966	\$0	\$0	\$52,491	\$2,624,543
Business Assessments	\$16,289	\$21,718	\$43,436	\$99,175	\$72,666	\$273,379	\$16,289	\$542,952
Custom Rebates	\$19,074	\$25,432	\$50,864	\$521,359	\$0	\$0	\$19,074	\$635,803
Commercial New Construction	\$939	\$4,697	\$2,818	\$83,798	\$0	\$0	\$1,315	\$93,567
Agriculture Sector	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Outreach, Education, and Training Portfolio</i>	\$37,143	\$116,390	\$141,439	\$264,414	\$344,430	\$0	\$11,902	\$915,718
Non-Targeted Energy Awareness and Information	\$3,551	\$2,663	\$78,128	\$0	\$0	\$0	\$4,439	\$88,781
School-Based Energy Education	\$8,010	\$32,040	\$16,020	\$0	\$344,430	\$0	\$0	\$400,500
Tree Planting	\$504	\$5,043	\$3,802	\$163,633	\$0	\$0	\$2,017	\$174,999
Hometown Rewards	\$3,026	\$15,130	\$25,216	\$52,450	\$0	\$0	\$5,043	\$100,865
Builder Training	\$9,307	\$3,490	\$9,307	\$1,163	\$0	\$0	\$0	\$23,267
Energy Efficiency Dealer Network	\$1,614	\$30,259	\$8,069	\$0	\$0	\$0	\$403	\$40,345

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$897	\$2,690	\$897	\$40,346	\$0	\$0	\$0	\$44,830
Research, Development, and Demonstration	\$10,234	\$25,075	\$0	\$6,822	\$0	\$0	\$0	\$42,131
<i>Demand Response Portfolio</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Residential DLC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nonresidential Interruptible	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Other Funding Initiatives</i>	\$44,531	\$515,357	\$0	\$0	\$0	\$0	\$24,366	\$584,254
Legislative Assessment	\$0	\$310,233	\$0	\$0	\$0	\$0	\$0	\$310,233
EM&V	\$0	\$190,000	\$0	\$0	\$0	\$0	\$0	\$190,000
Next Plan	\$44,531	\$15,124	\$0	\$0	\$0	\$0	\$24,366	\$84,021
Total	\$281,280	\$1,984,251	\$723,029	\$8,262,381	\$2,519,685	\$1,218,903	\$361,649	\$15,351,178

Table 2.30 Natural Gas Budget by Program (2017)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$207,184	\$1,378,701	\$601,680	\$8,329,231	\$2,197,123	\$1,243,912	\$335,753	\$14,293,584
Residential Prescriptive Rebates	\$69,877	\$314,446	\$244,569	\$2,830,016	\$0	\$0	\$34,938	\$3,493,846
Home Energy Assessments	\$31,037	\$124,146	\$93,110	\$1,551,828	\$286,098	\$536,483	\$0	\$2,622,702
Change-a-Light	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Appliance Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Home Construction	\$8,692	\$8,692	\$60,845	\$730,140	\$0	\$0	\$133,500	\$941,869
Multifamily	\$377	\$3,774	\$2,642	\$1,887	\$8,221	\$24,988	\$755	\$42,644
Weatherization	\$0	\$713,674	\$0	\$0	\$1,599,521	\$239,009	\$9,912	\$2,562,116
EnergyWise Education	\$0	\$1,389	\$0	\$0	\$44,896	\$0	\$0	\$46,285
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$180	\$0	\$1,353	\$5,415	\$16,459	\$1,473	\$24,880
Home Energy Savers	\$4,800	\$62,398	\$19,199	\$0	\$180,306	\$153,594	\$62,398	\$482,695
Nonresidential Prescriptive Rebates	\$56,057	\$98,099	\$84,085	\$2,508,532	\$0	\$0	\$56,057	\$2,802,830
Business Assessments	\$16,289	\$21,718	\$43,436	\$99,175	\$72,666	\$273,379	\$16,289	\$542,952
Custom Rebates	\$19,116	\$25,488	\$50,976	\$522,502	\$0	\$0	\$19,116	\$637,198
Commercial New Construction	\$939	\$4,697	\$2,818	\$83,798	\$0	\$0	\$1,315	\$93,567
Agriculture Sector	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Outreach, Education, and Training Portfolio</i>	\$37,614	\$117,806	\$144,623	\$269,204	\$346,142	\$0	\$12,186	\$927,575
Non-Targeted Energy Awareness and Information	\$3,658	\$2,743	\$80,472	\$0	\$0	\$0	\$4,572	\$91,445
School-Based Energy Education	\$8,050	\$32,199	\$16,100	\$0	\$346,142	\$0	\$0	\$402,491
Tree Planting	\$514	\$5,144	\$3,878	\$166,430	\$0	\$0	\$2,058	\$178,024
Hometown Rewards	\$3,086	\$15,432	\$25,720	\$53,499	\$0	\$0	\$5,144	\$102,881
Builder Training	\$9,307	\$3,490	\$9,307	\$1,163	\$0	\$0	\$0	\$23,267
Energy Efficiency Dealer Network	\$1,646	\$30,865	\$8,231	\$0	\$0	\$0	\$412	\$41,154

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$915	\$2,744	\$915	\$41,153	\$0	\$0	\$0	\$45,727
Research, Development, and Demonstration	\$10,438	\$25,189	\$0	\$6,959	\$0	\$0	\$0	\$42,586
<i>Demand Response Portfolio</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Residential DLC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nonresidential Interruptible	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Other Funding Initiatives</i>	\$44,531	\$515,357	\$0	\$0	\$0	\$0	\$24,366	\$584,254
Legislative Assessment	\$0	\$310,233	\$0	\$0	\$0	\$0	\$0	\$310,233
EM&V	\$0	\$190,000	\$0	\$0	\$0	\$0	\$0	\$190,000
Next Plan	\$44,531	\$15,124	\$0	\$0	\$0	\$0	\$24,366	\$84,021
<i>Total</i>	\$289,329	\$2,011,864	\$746,303	\$8,598,435	\$2,543,265	\$1,243,912	\$372,305	\$15,805,413

Table 2.31 Natural Gas Budget by Program (2018)

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
<i>Energy-Efficiency Portfolio</i>	\$215,305	\$1,406,221	\$622,937	\$8,685,412	\$2,219,068	\$1,269,131	\$346,544	\$14,764,618
Residential Prescriptive Rebates	\$71,635	\$322,357	\$250,722	\$2,901,215	\$0	\$0	\$35,817	\$3,581,747
Home Energy Assessments	\$32,588	\$130,354	\$97,765	\$1,629,420	\$290,580	\$547,212	\$0	\$2,727,920
Change-a-Light	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Appliance Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Home Construction	\$9,045	\$9,045	\$63,316	\$759,790	\$0	\$0	\$133,500	\$974,696
Multifamily	\$396	\$3,963	\$2,774	\$1,982	\$8,221	\$24,988	\$793	\$43,117
Weatherization	\$0	\$713,674	\$0	\$0	\$1,599,521	\$239,009	\$9,912	\$2,562,117
EnergyWise Education	\$0	\$1,403	\$0	\$0	\$45,348	\$0	\$0	\$46,751
Low-Income Multifamily and Institutional Efficiency Improvements	\$0	\$180	\$0	\$1,353	\$5,415	\$16,459	\$1,473	\$24,880
Home Energy Savers	\$5,253	\$68,284	\$21,011	\$0	\$197,316	\$168,084	\$68,284	\$528,231
Nonresidential Prescriptive Rebates	\$59,999	\$104,997	\$89,998	\$2,684,933	\$0	\$0	\$59,999	\$2,999,925
Business Assessments	\$16,289	\$21,718	\$43,436	\$99,175	\$72,666	\$273,379	\$16,289	\$542,950
Custom Rebates	\$19,161	\$25,549	\$51,097	\$523,747	\$0	\$0	\$19,161	\$638,716
Commercial New Construction	\$939	\$4,697	\$2,818	\$83,798	\$0	\$0	\$1,315	\$93,568
Agriculture Sector	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Outreach, Education, and Training Portfolio</i>	\$38,097	\$119,249	\$147,892	\$274,069	\$347,880	\$0	\$12,475	\$939,662
Non-Targeted Energy Awareness and Information	\$3,768	\$2,826	\$82,886	\$0	\$0	\$0	\$4,709	\$94,189
School-Based Energy Education	\$8,090	\$32,361	\$16,180	\$0	\$347,880	\$0	\$0	\$404,512
Tree Planting	\$525	\$5,247	\$3,955	\$169,264	\$0	\$0	\$2,099	\$181,089
Hometown Rewards	\$3,148	\$15,741	\$26,235	\$54,568	\$0	\$0	\$5,247	\$104,939
Builder Training	\$9,307	\$3,490	\$9,307	\$1,163	\$0	\$0	\$0	\$23,267
Energy Efficiency Dealer Network	\$1,679	\$31,482	\$8,395	\$0	\$0	\$0	\$420	\$41,976

Programs	Planning and Design	Program Administration	Advertising and Promotion	Incentives	Equipment Costs	Installation Costs	Program Review and Assessment	TOTAL
Bright Ideas	\$933	\$2,798	\$933	\$41,976	\$0	\$0	\$0	\$46,640
Research, Development, and Demonstration	\$10,647	\$25,305	\$0	\$7,098	\$0	\$0	\$0	\$43,050
<i>Demand Response Portfolio</i>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Residential DLC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nonresidential Interruptible	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<i>Other Funding Initiatives</i>	\$44,531	\$325,357	\$0	\$0	\$0	\$0	\$24,366	\$394,254
Legislative Assessment	\$0	\$310,233	\$0	\$0	\$0	\$0	\$0	\$310,233
EM&V	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Next Plan	\$44,531	\$15,124	\$0	\$0	\$0	\$0	\$24,366	\$84,021
<i>Total</i>	\$297,933	\$1,850,827	\$770,829	\$8,959,482	\$2,566,948	\$1,269,131	\$383,385	\$16,098,535

Table 2.32 Annual Electric Impacts by Program

	2014		2015		2016		2017		2018		TOTAL	
	Gas Savings (therms)	Capacity Savings (therms)										
Energy-Efficiency Portfolio												
Residential Prescriptive Rebates	12,432,139	5,318	12,198,931	5,218	12,505,979	5,350	12,827,384	5,487	13,163,705	5,631	63,128,138	27,004
Home Energy Assessments	2,412,222	186	2,484,461	192	2,559,531	198	2,637,561	204	2,718,685	210	12,812,460	990
Change-a-Light	10,294,964	1,779	10,809,712	1,868	11,350,198	1,962	11,917,708	2,060	12,513,593	2,163	56,886,175	9,832
Appliance Recycling	11,096,756	1,408	10,818,470	1,373	10,548,012	1,339	10,285,172	1,305	10,029,744	1,273	52,778,154	6,698
New Home Construction	215,398	202	224,014	211	233,040	219	242,477	228	252,323	237	1,167,253	1,097
Multifamily	151,170	20	151,275	20	151,385	20	151,501	20	151,622	20	756,952	100
Weatherization	2,369,593	442	2,369,593	442	2,369,593	442	2,369,593	442	2,369,593	442	11,847,965	2,210
EnergyWise Education	855,536	160	864,091	161	872,732	163	881,459	164	890,274	166	4,364,092	814
Low-Income Multifamily and Institutional	100,780	13	100,780	13	100,780	13	100,780	13	100,780	13	503,900	65
HES	73,293	14	80,623	15	87,952	16	97,114	18	106,276	20	445,258	83
Nonresidential Prescriptive Rebates	20,852,779	1,661	22,397,179	1,784	24,109,489	1,920	26,005,794	2,071	28,105,243	2,238	121,470,484	9,674
Business Assessments	2,907,140	143	2,907,140	143	2,907,140	143	2,907,140	143	2,907,140	143	14,535,700	715
Custom Rebates	68,567,883	8,834	68,606,449	8,839	68,653,507	8,845	68,709,303	8,852	68,774,098	8,860	343,311,240	44,230
Commercial New Construction	17,000,000	4,323	15,030,000	3,822	10,030,000	2,551	10,030,000	2,551	10,030,000	2,551	62,120,000	15,798
Agriculture Sector	3,698,789	477	3,659,227	471	3,622,908	467	3,589,890	462	3,560,240	459	18,131,054	2,336
Total Energy Efficiency	153,028,442	24,980	152,701,945	24,572	150,102,246	23,648	152,752,876	24,020	155,673,316	24,426	764,258,825	121,646

	2014	2015	2016	2017	2018	TOTAL							
Outreach, Education, and Training Portfolio													
Non-Targeted Energy Awareness	-	-	-	-	-	-	-	-	-	-	-	-	-
School-Based Energy Education	4,156,500	775	4,177,283	779	4,198,169	783	4,219,160	787	4,240,256	791	20,991,368	3,915	
Tree Planting	-	-	-	-	-	-	-	-	-	-	-	-	
Hometown Rewards	-	-	-	-	-	-	-	-	-	-	-	-	
Builder Training	-	-	-	-	-	-	-	-	-	-	-	-	
Energy Efficiency Dealer Network	-	-	-	-	-	-	-	-	-	-	-	-	
Bright Ideas	-	-	-	-	-	-	-	-	-	-	-	-	
Research, Development, & Demonstration	-	-	-	-	-	-	-	-	-	-	-	-	
Total OET	4,156,500	775	4,177,283	779	4,198,169	783	4,219,160	787	4,240,256	791	20,991,368	3,915	
Demand Response Portfolio													
Residential DLC	500,022	44,235	500,022	44,235	500,022	44,235	500,022	44,235	500,022	44,235	2,500,110	N/A	
Nonresidential Interruptible	5,400,000	270,000	5,400,000	270,000	5,400,000	270,000	5,400,000	270,000	5,400,000	270,000	27,000,000	N/A	
Total DR	5,900,022	314,235	29,500,110	N/A									
Other Funding Initiatives													
Legislative Assessment	-	-	-	-	-	-	-	-	-	-	-	-	
EM&V	-	-	-	-	-	-	-	-	-	-	-	-	
Next Plan	-	-	-	-	-	-	-	-	-	-	-	-	
Total Other Funding	-	-											
TOTAL PORTFOLIO	163,084,964	339,990	162,779,250	339,586	160,200,437	338,666	162,872,058	339,042	165,813,594	339,452	814,750,303	125,561	

Table 2.33 Annual Natural Gas Impacts by Program

Programs	2014		2015		2016		2017		2018		TOTAL	
	Gas Savings (therms)	Capacity Savings (therms)										
<i>Energy-Efficiency Portfolio</i>												
Residential Prescriptive Rebates	362,190	4,970	364,405	5,000	366,728	5,032	369,153	5,065	371,673	5,100	1,834,149	25,167
Home Energy Assessments	303,376	3,594	315,609	3,739	328,414	3,890	341,818	4,049	355,852	4,215	1,645,069	19,487
Change-a-Light	-	-	-	-	-	-	-	-	-	-	-	-
Appliance Recycling	-	-	-	-	-	-	-	-	-	-	-	-
New Home Construction	62,525	909	65,026	945	67,646	983	70,385	1,023	73,244	1,064	338,826	4,924
Multifamily	5,883	57	5,883	57	5,883	57	5,883	57	5,883	57	29,415	285
Weatherization	219,645	3,192	219,645	3,192	219,645	3,192	219,645	3,192	219,645	3,192	1,098,225	15,960
EnergyWise Education	27,675	74	27,952	74	28,231	75	28,514	76	28,799	77	141,171	376
Low-Income Multifamily and Institutional	3,922	19	3,922	19	3,922	19	3,922	19	3,922	19	19,610	95
HES	21,390	57	23,529	63	25,668	68	28,341	76	31,015	83	129,943	347
Nonresidential Prescriptive Rebates	611,364	6,471	640,857	6,784	672,944	7,123	707,757	7,492	745,459	7,891	3,378,381	35,761
Business Assessments	51,942	93	51,942	93	51,942	93	51,942	93	51,942	93	259,710	465
Custom Rebates	252,047	737	251,986	737	251,927	737	251,869	737	251,813	736	1,259,642	3,684
Commercial New Construction	168,000	2,948	92,400	1,622	92,400	1,622	92,400	1,622	92,400	1,622	537,600	9,436
Agriculture Sector	-	-	-	-	-	-	-	-	-	-	-	-
Total Energy Efficiency	2,089,959	23,121	2,063,156	22,325	2,115,350	22,891	2,171,629	23,501	2,231,647	24,149	10,671,741	115,987
<i>Outreach, Education, and Training Portfolio</i>												

Programs	2014		2015		2016		2017		2018		TOTAL	
Non-Targeted Energy Awareness and Information	-	-	-	-	-	-	-	-	-	-	-	-
School-Based Energy Education	247,350	659	248,587	662	249,830	665	251,079	669	252,334	672	1,249,180	3,327
Tree Planting	-	-	-	-	-	-	-	-	-	-	-	-
Hometown Rewards	-	-	-	-	-	-	-	-	-	-	-	-
Builder Training	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency Dealer Network	-	-	-	-	-	-	-	-	-	-	-	-
Bright Ideas	-	-	-	-	-	-	-	-	-	-	-	-
Research, Development, & Demonstration	-	-	-	-	-	-	-	-	-	-	-	-
Total OET	247,350	659	248,587	662	249,830	665	251,079	669	252,334	672	1,249,180	3,327
<i>Demand Response Portfolio</i>												
Residential DLC	-	-	-	-	-	-	-	-	-	-	-	N/A
Nonresidential Interruptible	-	-	-	-	-	-	-	-	-	-	-	N/A
Total DR	-	-	-	-	-	-	-	-	-	-	-	N/A
<i>Other Funding Initiatives</i>												
Legislative Assessment	-	-	-	-	-	-	-	-	-	-	-	-
EM&V	-	-	-	-	-	-	-	-	-	-	-	-
Next Plan	-	-	-	-	-	-	-	-	-	-	-	-
Total Other Funding	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL PORTFOLIO	2,337,309	23,780	2,311,743	22,987	2,365,180	23,556	2,422,708	24,170	2,483,981	24,821	11,920,921	119,314

Table 2.34 Plan Cost-Effectiveness Results

Programs	<i>Total</i>				<i>Electric</i>				<i>Gas</i>			
	Societal	Participant	Utility	Ratepayer	Societal	Participant	Utility	Ratepayer	Societal	Participant	Utility	Ratepayer
<i>Energy-Efficiency Portfolio</i>												
Residential Prescriptive Rebates	1.59	1.32	1.63	0.83	1.99	1.42	1.99	0.97	0.52	1.05	0.57	0.34
Home Energy Assessments	1.12	1.59	1.05	0.48	2.01	2.52	1.63	0.58	0.91	1.37	0.87	0.43
Change-a-Light	1.63	1.89	1.92	0.75	1.63	1.89	1.92	0.75	N/A	N/A	N/A	N/A
Appliance Recycling	3.94	4.58	2.32	0.75	3.94	4.58	2.32	0.75	N/A	N/A	N/A	N/A
New Home Construction	0.84	0.91	1.08	0.62	4.86	1.74	6.17	1.92	0.35	0.81	0.45	0.29
Multifamily	0.91	1.69	0.73	0.42	0.92	1.64	0.75	0.44	0.85	1.83	0.66	0.37
Weatherization	1.81	2.43	1.27	0.57	5.22	4.51	3.72	0.95	0.92	1.88	0.63	0.35
EnergyWise Education	6.41	5.58	5.34	0.94	10.85	7.98	9.01	1.10	1.79	3.08	1.52	0.49
Low-Income Multifamily and Institutional Efficiency Improvements	1.01	1.71	0.80	0.45	1.03	1.67	0.83	0.47	0.96	1.83	0.74	0.39
Home Energy Savers	0.60	1.50	0.47	0.30	2.49	2.59	1.91	0.76	0.39	1.38	0.31	0.21
Nonresidential Prescriptive Rebates	1.46	1.33	2.37	0.71	1.47	1.25	2.71	0.78	1.42	1.65	1.56	0.54
Business Assessments	1.51	2.16	1.22	0.54	2.47	2.72	2.11	0.69	0.43	1.50	0.34	0.23
Custom Rebates	3.52	2.26	6.72	1.02	4.74	3.03	7.08	1.05	0.28	0.34	2.12	0.54
Commercial New Construction	5.45	2.50	13.94	1.38	5.73	2.52	14.63	1.44	2.64	2.28	6.97	0.76
Agriculture Sector	1.32	1.29	2.14	0.78	1.32	1.29	2.14	0.78	N/A	N/A	N/A	N/A
<i>Total Energy Efficiency</i>	<i>2.36</i>	<i>1.80</i>	<i>3.15</i>	<i>0.89</i>	<i>3.03</i>	<i>2.09</i>	<i>4.06</i>	<i>0.99</i>	<i>0.73</i>	<i>1.10</i>	<i>0.94</i>	<i>0.44</i>
<i>Outreach, Education, and Training Portfolio</i>												
Non-Targeted Energy Awareness and Information	N/A											
School-Based Energy Education	12.65	9.46	9.06	0.96	27.34	16.43	19.47	1.19	4.39	5.54	3.22	0.58
Tree Planting	N/A											

Programs	Total				Electric				Gas				
Hometown Rewards	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Builder Training	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Energy Efficiency Dealer Network	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bright Ideas	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Research, Development, and Demonstration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total OET	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>Demand Response Portfolio</i>													
Residential DLC	4.67	N/A	4.25	4.18	4.67	N/A	4.25	4.18	N/A	N/A	N/A	N/A	N/A
Nonresidential Interruptible	2.99	2.52	2.72	2.29	2.99	2.52	2.72	2.29	N/A	N/A	N/A	N/A	N/A
Total DR	3.15	N/A	2.86	2.44	3.15	N/A	2.86	2.44	N/A	N/A	N/A	N/A	N/A
<i>Other Funding Initiatives</i>													
Legislative Assessment	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EM&V	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Next Plan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Other Funding	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3. Energy Efficiency Portfolio

IPL's Energy Efficiency Portfolio comprises the largest portion of its Plan, representing 94 percent of electric savings and 90 percent of natural gas savings over the Plan delivery period. These savings represent 1.16 percent of electric sales and 0.93 percent of natural gas sales in 2018.

IPL's Energy Efficiency Portfolio includes 15 programs targeting single family and multifamily residential, low-income residential, commercial, industrial, and agriculture customers. The portfolio offers a range of programmatic options that include direct financial incentives, direct installation measures, and technical assistance. IPL designed its Energy-Efficiency Portfolio to offer customers in every sector the flexibility to participate at many levels, based on their individual needs and building type.

IPL's Energy Efficiency Portfolio includes three new programs:

1. The Change-a-Light Program expands and emphasizes IPL's point-of-purchase (POP) residential lighting campaign, formally a component of the Residential Prescriptive Rebates Program;
2. The Multifamily Program offers a holistic approach to multifamily energy efficiency, a hard-to-reach market segment; and
3. The Business Assessments Program consolidates all of IPL's nonresidential building assessments under a single program umbrella.

Further, IPL added enhancements to several programs, including:

1. Adding two new components to the Residential Energy Assessments Program: electric-only energy assessments to serve homes where the heating fuel is not provided by IPL; and comprehensive energy assessments, which include diagnostic and post-installation testing.
2. Incorporating new measures into the Residential and Nonresidential Prescriptive Rebates programs.
3. Adjusting the New Home Construction Program to accommodate anticipated new building energy codes.
4. Adjusting the eligibility requirements in all low-income programs to track the income requirements associated with federal energy assistance.

Table 3.1 and Table 3.2 provide an overview of the projected costs, impacts, and cost-effectiveness associated with the programs in IPL's Energy Efficiency Portfolio.

Table 3.1 Energy Efficiency Portfolio Benefits and Costs by Program

Energy Efficiency Portfolio	2014-2018 Cumulative Energy Savings		Total Costs (\$MM)
	Electricity (GWh)	Natural Gas ('000 therms)	
<i>Residential</i>			
Residential Prescriptive Rebates	63.13	1,834,148	\$65.21
Home Energy Assessments	12.81	1,645,068	\$16.60
Change-a-Light	56.89	0	\$12.56
Appliance Recycling	52.78	0	\$8.68
New Home Construction	1.17	338,826	\$5.12
Multifamily	0.76	29,414	\$0.79
<i>Low-Income</i>			
Weatherization	11.85	1,098,226	\$16.15
EnergyWise Education	4.36	141,170	\$0.47
Low Income Multifamily and Institutional Efficiency Improvements	0.50	19,609	\$0.47
Home Energy Savers	0.45	129,943	\$2.46
<i>Nonresidential</i>			
Nonresidential Prescriptive Rebates	121.47	3,378,382	\$44.09
Business Assessments	14.54	259,709	\$5.37
Custom Rebates	343.31	1,259,641	\$46.44
Commercial New Construction	62.12	537,600	\$6.29
Agriculture Sector	18.13	0	\$4.54
TOTAL PORTFOLIO	764.25	10,671,736	\$235.24

Table 3.2 summarizes the projected benefits and costs in IPL's Energy Efficiency Portfolio by Plan year.

Table 3.2 Energy Efficiency Portfolio Benefits and Costs by Plan Year

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Energy Savings (kWh)	153,028,442	152,701,943	150,102,245	152,752,873	155,673,316	764,258,820
Capacity Savings (kW)	24,979	24,572	23,646	24,020	24,425	121,641
Natural Gas Savings (therms)	2,089,985	2,063,155	2,155,349	2,171,629	2,231,645	10,671,763
Capacity Savings (therms)	23,120	22,323	22,891	23,499	24,148	115,980
Participant Cost Net of Incentives	\$37,896,118	\$38,404,516	\$38,845,816	\$40,550,740	\$42,394,623	\$198,091,814
Direct Utility Costs	\$44,995,786	\$45,981,604	\$46,755,657	\$48,054,112	\$49,445,755	\$235,232,913
Planning and Design	\$818,590	\$838,036	\$855,105	\$878,205	\$903,082	\$4,293,018
Program Administration	\$3,329,112	\$3,396,268	\$3,449,059	\$3,529,030	\$3,613,695	\$17,317,164
Advertising and Promotion	\$2,458,814	\$2,510,916	\$2,553,704	\$2,613,312	\$2,676,701	\$12,813,447
Incentives	\$31,405,029	\$32,173,397	\$32,757,882	\$33,800,369	\$34,923,765	\$165,060,442
Equipment	\$2,812,369	\$2,834,006	\$2,855,673	\$2,881,284	\$2,906,994	\$14,290,326
Installation	\$3,188,903	\$3,226,016	\$3,263,586	\$3,304,744	\$3,346,178	\$16,329,426
Program Review & Assessment	\$982,969	\$1,002,965	\$1,020,648	\$1,047,169	\$1,075,340	\$5,129,090
Total Societal Cost	\$82,891,904	\$84,386,120	\$85,601,473	\$88,604,852	\$91,840,378	\$433,324,727
<i>Electric Savings as a % of Total Sales*</i>	<i>1.09</i>	<i>1.09</i>	<i>1.07</i>	<i>1.09</i>	<i>1.11</i>	
<i>Natural Gas Savings as a % of Total Sales*</i>	<i>0.84</i>	<i>0.84</i>	<i>0.87</i>	<i>0.90</i>	<i>0.93</i>	

* Includes savings from School-Based Energy Education Program energy-efficiency kits.

Table 3.3 presents the overall cost-effectiveness of IPL's Energy Efficiency Portfolio.

Table 3.3 Energy Efficiency Portfolio Cost-Effectiveness

	Societal	Participant	Utility	Rate-Impact Measure
Net Present Value Benefits	\$1,000,049,417	\$618,156,944	\$668,942,709	\$668,942,709
Net Present Value Costs	\$422,967,834	\$342,782,008	\$212,233,410	\$748,153,322
Benefit/Cost Ratio	2.4	1.8	3.2	0.9

The following sections describe each program in IPL's Energy Efficiency Portfolio, including all details as required by 199 IAC Chapter 35.

3.1. Residential Prescriptive Rebates Program

3.1.1. Program Description

The Residential Prescriptive Rebates Program is one of IPL's longest-running and most successful energy-efficiency programs. IPL attributes the program's success to a simple participation process and generous incentives offered to IPL's residential customers for a range of energy-efficiency options. This program offers prescriptive rebates in the form of prepaid VISA[®] cards⁷ to customers who purchase high-efficiency electric or natural gas equipment, and also offers incentive checks to IPL's participating Dealers who sell high-efficiency electric or natural gas equipment. Customers have immediate access to the prepaid card funds everywhere VISA[®] is accepted as payment.

To help mitigate the potential effects of first costs as a barrier to program participation, IPL offers low-interest financing to eligible customers on qualifying, energy-saving equipment and measures. Customers must choose between receiving the rebate or the low-interest loan.

Key changes to this program in the 2014 to 2018 Energy Efficiency Plan include:

- Adding prescriptive incentives for new measures, including: air-to-air heat exchangers, Wi-Fi programmable thermostats, whole house fans, and tune ups for existing central air conditioners and heat pumps.

⁷ Prepaid VISA cards are issued for rebates in amounts from \$5 to \$1,000. Prepaid cards expire one year from the date issued. Customers who are opposed to using a prepaid card for purchases can opt out and accept their rebates via direct deposits into their bank accounts or via printed checks delivered by the United States Postal Service. There are both a telephone and an online service to initiate the opt-out process.

- Eliminating measures that are not cost-effective and/or do not offer sufficient economic potential to justify budget expenditures, such as boilers, certain consumer electronics and appliances, lighting fixtures, and windows.
- Integrating a requirement for Heating, Ventilation and Air Conditioning (HVAC) System Adjustment for Verification Efficiency (SAVE) certified installation for all qualified HVAC systems.
- Moving the Change-a-Light promotion from the Residential Prescriptive Rebates Program to a stand-alone program.
- Moving the multifamily program component from the Residential Prescriptive Rebates Program to a stand-alone program.
- Integrating a low-interest financing option into the Residential Prescriptive Rebates Program, rather than offering financing as a stand-alone program.

3.1.2. Operations

Customers who purchase qualifying high-efficiency measures directly from equipment dealers and retailers are eligible for prescriptive rebates. Customers participating in the program must submit a program rebate application with documentation on the equipment purchase and installation to IPL's rebate processing center. In order to qualify for an incentive, applicable HVAC equipment must be installed by a SAVE-certified HVAC installer following quality installation protocols. The installation contractor must also verify that the customer and measures meet all applicable program eligibility requirements.

Because the program's success is highly dependent on promotion and support from the Energy Efficiency Dealer Network (Dealer Network), IPL also offers incentives to Dealers who facilitate customer purchases of qualifying equipment.

IPL facilitates low-interest financing for those customers interested in the financing option, by helping customers submit the required documentation to a third-party lending partner.

3.1.3. Value Proposition

Customers participating in the program receive three main benefits:

- The process is ***simple and straightforward***. Equipment rebates are available to any qualifying customer for any qualifying equipment.
- Customers ***save money*** in the short term through rebates or financing, and in the long term through lower utility bills.
- Trade allies ***receive incentives and training*** when they participate in IPL's program, giving them a competitive advantage.

3.1.4. Customer Targets

The program targets the equipment replacement market and/or dealers of high-efficiency equipment. Participants must be IPL residential customers in Iowa. Table 3.4 outlines customer eligibility requirements.

Table 3.4 Customer Eligibility Parameters

	Eligible Customers	
	Electric Measures	Natural Gas Measures
Customer Class	Residential electric	Residential natural gas
Customer Status	All	All
Building Type	Single family; Manufactured home; Multifamily	Single family; Manufactured home; Multifamily
Building Vintage	All	All
Geography	IPL's Iowa service territory	IPL's Iowa service territory

3.1.5. Trade Ally Targets

Program delivery relies on trade allies to market and sell qualifying equipment. IPL works closely with trade allies to keep them informed of program activities and changes, and offers incentives to participating equipment Dealers and installers for facilitating customer purchases. The following types of trade allies are the primary participants in IPL's program:

- HVAC Dealers;
- SAVE-certified contractors; and
- Retail outlets and distributors.

3.1.6. Incentive Structure and Process

IPL offers prescriptive incentives for each qualifying measure, with tiered incentives for some measures intended to encourage customers to purchase higher-efficiency models. Customers apply for rebates via a mail-in program application, submitted with documentation on the qualified equipment purchase and installation to IPL's rebate processing center.

Incentives are also available to Dealers who sell high-efficiency electric and natural gas equipment, and include their Dealer identification (ID) on the relevant customer application. IPL verifies and processes customer applications, and tracks the Dealer IDs. On a quarterly basis, IPL mails incentive checks to Dealers who sold eligible equipment and participate in IPL's Dealer Network.

3.1.7. Eligible Measures and Incentives

The Residential Prescriptive Rebates Program offers a wide range of energy-efficiency measures for electric and natural gas customers. In most cases, the utility rebate is designed to cover approximately 50 percent of the incremental measure cost. To be eligible, a measure must save energy that is supplied by IPL. Instead of a rebate, customers may opt for low-interest financing via a third party. Additionally, Dealer incentives of up to 20 percent of the customer rebate amount are offered for qualifying measures.

Table 3.5 provides eligible measures, qualification standards, and incentive levels for equipment in this program.

Table 3.5 Incentive Summary

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
Replacement Doors	ENERGY STAR rated Solid doors \leq R-4.8	\$10 per door (maximum of five)	\$2
	ENERGY STAR rated Thermal doors \leq R-10	\$25 per door (maximum of five)	\$5
Air-Source Heat Pump	CEE Tier 2 SEER/EER 15/12.5 and HSPF 8.5 (Split System) Must be SAVE installed	\$400	\$80
	ENERGY STAR SEER/EER 14.5/12 and HSPF 8.2 (Split System) Must be SAVE installed	\$300	\$60
	Enhanced SEER/EER 16/13 and HSPF 9.0 (Split System)	\$300	\$60

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
	Must be SAVE installed		
Desuperheater	Add on for air-source heat pump	\$150	\$30
Air-to-Air Heat Exchanger**	New installation	\$300	\$60
Central Air Conditioner	ENERGY STAR SEER/EER 14.5/12 (Split System) Must be SAVE installed	\$200	\$40
	CEE Tier 2 SEER/EER 15/12.5 (Split System) Must be SAVE installed	\$350	\$70
	CEE Tier 3 SEER/EER 16/13 (Split System) Must be SAVE installed	\$500	\$100
	Enhanced SEER/EER 18/14 (Split System) Must be SAVE installed	\$650	\$130
Room Air Conditioner	ENERGY STAR \leq 10.8 EER	\$20	N/A
Furnace	\leq 92% AFUE Must be SAVE installed	\$150	\$30
Thermostat	Programmable setback thermostat 5-1-1, 5-2, or 7-Day	\$10 (maximum of five)	\$2
	Wi-Fi programmable thermostat**	\$50	\$10
Geothermal (Ground-Source Heat Pumps)	Water-to-air/closed loop ENERGY STAR \geq EER 17.1 and 3.6 COP Retrofit only	\$5,000	\$500
	Water-to-air/open loop ENERGY STAR \geq EER 21 and 4.1 COP Retrofit only		
	Water-to-water/closed loop ENERGY STAR EER \geq 16.1 and 3.1 COP Retrofit only		
	Water-to-water/open loop ENERGY STAR $>$ EER 20.1 and 3.5 COP Retrofit only		
Desuperheater	Add on for geothermal system	\$150	\$30
HVAC System Tune-up**	Professionally conducted central air conditioner, air-source heat pump, ground-source heat pump, furnace, or boiler system clean and tune	\$50	\$10
Efficient Fan Motor	Installed on qualifying air conditioner, furnace, or air-source heat pump	\$50 plus applicable HVAC equipment rebate	\$10
Water Heaters	Heat pump water heater ENERGY STAR EF = 2.0	\$300	\$30
	Storage ENERGY STAR EF = 0.67, 40 Gallon, and = 75,000 Btu/hour	\$75	\$7.50
	Tankless ENERGY STAR EF = 0.82	\$300	\$30
Whole House Fan**	New installation	\$125	\$25
Low-Interest Financing			

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
Low-Interest Financing	All financed measures must meet the efficiency qualifications outlined in program materials. Equipment financed through low-interest financing program is not eligible for rebates. Customers must meet third-party lending requirements.	Minimum loan amount is \$1,500, maximum is \$25,000. Loan terms range from 0-60 months, with a corresponding annual percentage rate of 0-6.9.	N/A

* Rebates may not exceed 50 percent of applicable equipment cost.

** This is a new measure in the 2014 to 2018 Energy Efficiency Plan.

CEE: Consortium for Energy Efficiency

SEER: seasonal energy efficiency ratio

EER: energy efficiency ratio

HSPF: Heating Seasonal Performance Factor

AFUE: annual fuel utilization efficiency

COP: coefficient of performance

EF: energy factor

3.1.8. Market Barriers

Table 3.6 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.6 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher first cost of energy-efficient equipment	Offer rebates and discounted financing; Educate customers on the long-term energy cost-saving benefits of higher-efficiency equipment
Time required to fill out rebate forms	Simplify rebate forms as much as possible; Allow trade allies to fill out rebate forms for customers at the time of equipment purchase
Customers do not bother to look for qualifying measures/fill out rebate forms	Offer trade ally training to help customers quickly identify appropriate measures and products; Promote appropriate products through POP materials; Market the program and general efficiency awareness to customers; Use marketing messages that encourage customers to look for rebates first, before purchasing energy-using equipment
Trade allies not upselling to high-efficiency equipment	Conduct recruiting outreach to expand Dealer network, particularly targeting smaller retailers and equipment Dealers; Provide trade ally training and outreach to explain the benefits of selling higher-efficiency equipment; Market the program and general efficiency awareness to trade allies
Lack of uptake/lack of availability of certain qualifying equipment	Eliminate measures that are not popular with customers and that have administrative costs outweighing benefits; Promote programs to customers so they ask for qualifying equipment and dealers stock it; Offer trade ally training
Changing standards impact available savings and the cost-effectiveness of certain measures	Continue to evaluate emerging/proven residential high-efficiency equipment options and facilitate the transition to new products as they become available; Explore new measures and consumer preferences for higher-efficiency alternatives as new standards take effect; Eliminate certain measures that are not cost-effective.

3.1.9. Marketing and Promotion

The program is promoted using a two-pronged approach that incorporates downstream and upstream marketing strategies. For its downstream marketing strategy, IPL relies on direct mailings to residential customers and general advertising in broadcast, print, and online media. It pairs this approach with upstream marketing by encouraging trade allies to stock and upsell eligible equipment. IPL focuses upstream marketing on:

- Continuing to build IPL's Dealer Network to increase the list of qualified dealers and installation contractors eligible to participate in the program;
- Providing ongoing education to local dealers and contractors about program procedures and benefits, qualifying measures, and equipment and rebate structures;
- Conducting seminars and workshops to familiarize participating dealers and contractors with new technologies and proper installation and operation and maintenance practices;
- Providing retail partners with applicable POP materials to facilitate the sales of energy-efficient equipment; and
- Marketing to dealers through direct contact, trade journals, trade shows, and ad hoc special events, such as educational seminars.

3.1.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at:

- www.alliantenergy.com/rebates
- www.alliantenergy.com/financing

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.1.11. Outside Services

In the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.7.

Table 3.7 Outside Service Providers

Vendor	Role
A-Tec	On-site verification inspections of a percentage of equipment installations
Michaels Energy	Energy-efficiency hotline and rebate processing
Alliant Credit Union	Third-party financing

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.1.12. Participation

Table 3.8 provides program participation assumptions in terms of the number of measures installed by fuel type.

Table 3.8 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Electric Measures	21,622	22,143	22,727	23,381	24,110	113,984
Natural Gas Measures	10,916	10,940	10,971	11,008	11,051	54,885
Total	32,538	33,082	33,698	34,389	35,162	168,870

3.1.13. Energy and Demand Savings

This program is expected to produce 63,128 MWh of electricity savings and 1,834,148 therms of natural gas savings over the course of the Plan. This program accounts for 8 percent of electricity savings and 17 percent of natural gas savings in the energy-efficiency portfolio. Table 3.9 provides energy and demand savings goals.

Table 3.9 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	12,432,139	12,198,931	12,505,979	12,827,384	13,163,705	63,128,138
Peak Demand (kW)	5,318	5,218	5,350	5,487	5,631	27,004
Natural Gas Impacts						
Incremental Annual Energy (therms)	362,190	364,405	366,728	369,153	371,673	1,834,148
Peak-Day Demand (therms)	4,970	5,000	5,032	5,065	5,100	25,166

3.1.14. Budget

The total budget for the program is estimated at \$65 million. Table 3.10 provides program budget assumptions.

Table 3.10 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$182,419	\$188,198	\$192,752	\$197,508	\$202,477	\$963,353
Administration	\$820,884	\$846,889	\$867,383	\$888,787	\$911,148	\$4,335,090
Advertising and Promotion	\$638,465	\$658,691	\$674,631	\$691,279	\$708,670	\$3,371,736
Customer Incentive	\$7,387,954	\$7,621,999	\$7,806,443	\$7,999,081	\$8,200,328	\$39,015,806
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$91,209	\$94,099	\$96,376	\$98,754	\$101,239	\$481,677
Electric Total	\$9,120,931	\$9,409,876	\$9,637,585	\$9,875,409	\$10,123,862	\$48,167,661
Natural Gas Budget						
Planning and Design	\$64,538	\$66,583	\$68,194	\$69,877	\$71,635	\$340,827
Administration	\$290,423	\$299,623	\$306,874	\$314,446	\$322,357	\$1,533,723
Advertising and Promotion	\$225,884	\$233,040	\$238,679	\$244,569	\$250,722	\$1,192,895
Customer Incentive	\$2,613,803	\$2,696,607	\$2,761,862	\$2,830,016	\$2,901,215	\$13,803,503
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$32,269	\$33,291	\$34,097	\$34,938	\$35,817	\$170,414
Natural Gas Total	\$3,226,918	\$3,329,144	\$3,409,706	\$3,493,846	\$3,581,747	\$17,041,361
Total Budget						
Planning and Design	\$246,957	\$254,780	\$260,946	\$267,385	\$274,112	\$1,304,180
Administration	\$1,111,306	\$1,146,512	\$1,174,256	\$1,203,233	\$1,233,505	\$5,868,812
Advertising and Promotion	\$864,349	\$891,731	\$913,310	\$935,848	\$959,393	\$4,564,632
Customer Incentive	\$10,001,757	\$10,318,606	\$10,568,305	\$10,829,097	\$11,101,543	\$52,819,308
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$123,478	\$127,390	\$130,473	\$133,693	\$137,056	\$652,090
Total	\$12,347,848	\$12,739,020	\$13,047,290	\$13,369,255	\$13,705,609	\$65,209,023

Table 3.11 provides a forecast of staffing needs and costs for this program in terms of full-time equivalent (FTE) employees.

Table 3.11 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	63	\$78,750	Program-specific management
Energy Efficiency Programs Management	31	\$38,750	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Trade Ally Management	30	\$37,500	Outreach, communications with trade allies
Communications Manager	56.25	\$70,313	Marketing and communications support
Total	184.25	\$230,313	

3.1.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that the combined electric and natural gas program is cost-effective from a societal perspective, with a benefit/cost (B/C) ratio of 1.59 to 1. The program is also justified by its benefits from the participant and utility points of view. Table 3.12 provides program cost-effectiveness results.

Table 3.12 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$86,590,652	\$71,698,191	\$86,590,652	\$130,059,947
Costs	\$43,427,180	\$50,613,313	\$88,945,452	\$65,486,547
Net Benefits	\$21,084,878	\$21,084,878	-\$2,354,801	\$64,573,401
B/C Ratio	1.99	1.42	0.97	1.99
\$/kWh	\$0.086	\$0.119	\$0.176	\$0.097
Natural Gas Program				
Benefits	\$8,337,842	\$19,801,099	\$8,337,842	\$12,483,135
Costs	\$14,750,553	\$18,858,231	\$24,888,254	\$24,188,206
Net Benefits	-\$6,412,712	\$942,868	-\$16,550,413	-\$11,705,071
B/C Ratio	0.57	1.05	0.34	0.52
\$/therm	\$1.173	\$1.782	\$1.979	\$1.420
Total Program				
Benefits	\$94,928,494	\$91,499,290	\$94,928,494	\$142,543,082
Costs	\$58,177,733	\$69,471,544	\$113,833,707	\$89,674,753
Net Benefits	\$36,750,761	\$22,027,747	-\$18,905,213	\$52,868,329
B/C Ratio	1.63	1.32	0.83	1.59

3.2. Home Energy Assessments Program

3.2.1. Program Description

Through the Home Energy Assessments Program, IPL promotes energy efficiency among residential customers by offering energy assessments by professional energy assessors, coupled with the installation of free energy-efficiency measures, and customer education. All customers who participate in the Home Energy Assessments Program are eligible to receive:

- Information on their home's energy performance and expert advice to help them prioritize investments in energy-efficiency upgrades for their home;
- Free, direct installation of energy-efficiency measures that produce immediate savings;
- One-on-one education on energy use and conservation;
- Rebates on home envelope measures (e.g. insulation);
- A bonus rebate (for the comprehensive assessment only), which encourages customers to take a whole-house approach to improving efficiency; and
- A customized report that recommends and prioritizes energy-efficiency upgrades, provides a life-cycle cost analysis for recommended measures, and indicates measures that may be eligible for IPL rebates.

IPL also provides a link on its website to the free United States Department of Energy (DOE)-sponsored online audit, Home Energy Saver, for those customers who are unable to participate in an on-site energy assessment.

Recognizing the varying economic conditions, heating system types, and interest levels among IPL's customers, the program provides three on-site assessment tracks:

Basic Assessment

During a basic assessment, a professional energy assessor conducts a visual inspection of the home and evaluates major energy using equipment (e.g., lighting systems, space conditioning and hot water heating equipment, and appliances) to identify areas for cost-effective efficiency upgrades.

Comprehensive Assessment

The comprehensive assessment includes the same visual evaluations included in the basic assessment, and also offers diagnostic tests including blower door, duct blaster, and thermal camera. This track also includes a verification assessment at the completion of any energy-efficiency retrofits to measure the improvement in the home's energy performance and verify that all safety standards are met. Assessors performing comprehensive assessments must be certified by the Building Performance Institute (BPI) or another industry-accredited organization.

Electric Only Assessment

For natural gas heating customers who do not receive natural gas service from IPL,⁸ IPL offers an electric-only energy assessment. Electric-only customers may choose to participate in either a basic or comprehensive assessment focused on electric efficiency measures and the home's envelope.

All three assessment options are delivered on-site by trained, professional energy assessors. Customers in each assessment track receive free, direct installation of a range of low-cost energy-efficiency measures, on-site energy conservation education by their assessor, and a customized report. The report recommends and prioritizes energy-efficiency upgrades, provides a life-cycle cost analysis for recommended measures, and indicates measures that may be eligible for IPL rebates.

Customers who participate in the Home Energy Assessments Program are also eligible for rebates that address the home's shell (e.g., insulation and infiltration reduction). Customers who participate in the comprehensive assessment and install more than one of the top three priority recommendations are eligible to receive a bonus rebate.

Key changes to this program in the Plan include:

- Adding electric-only and comprehensive assessment tracks.

⁸ Eligible customers must have propane heat and central air conditioning.

- Eliminating the Home Performance with ENERGY STAR[®] Program pilot, which has been replaced with the comprehensive assessment track and is offered throughout IPL's territory.⁹
- Adding new measures to the direct installation program component, including a smart strip (with on-site education) and water heater thermostat setback.
- Adding duct sealing to the eligible prescriptive measures for the home's shell measures.
- Adding a bonus rebate for customers who participate in the comprehensive assessment to reward them for implementing multiple efficiency measures.

3.2.2. Operations

IPL implements the program's technical component through a third-party contractor specializing in energy assessments. The contractor recruits, trains, and hires qualifying energy experts to conduct basic assessments, and recruits BPI-certified assessors to conduct comprehensive assessments.

IPL's Rebate and Call Center explains the Home Energy Assessments Program to an interested customer, verifies eligibility, and schedules the assessment. IPL's contractor deploys an assessor to conduct the on-site energy assessment and install applicable direct installation measures. Customers are asked to participate in the assessment process with the assessor, who explains the home's energy uses, points out areas for improvement, and provides energy-savings tips. As part of the energy

⁹ IPL will continue to evaluate market activity associated with the Home Performance with ENERGY STAR Program, and will consider collaborating with other IOUs in Iowa on a statewide program if it is determined the program would benefit IPL customers.

assessment, the energy assessor analyzes a participant's utility billing history, inspects the home, and conducts diagnostic tests to identify energy-efficiency opportunities in various areas, including:

- The home's shell;
- Heating and cooling systems;
- Insulation levels;
- Kitchen and laundry appliances;
- Lighting;
- Water heating equipment; and
- Windows and doors.

Following the assessment, the customer receives a customized home energy report that identifies priority energy-efficiency improvements for the home, including efficient equipment upgrades and retrofits, equipment maintenance or tune-ups, and behavioral tips.

Home Energy Assessments Program participants are eligible for prescriptive rebates on recommended insulation and infiltration measures,¹⁰ as well as any prescriptive rebates available through IPL's residential programs. Customers installing recommended measures select and hire a qualified contractor to perform any installation services needed, and then submit a rebate application with documentation on the measure purchased and installed to IPL's rebate processing center.

¹⁰ An energy assessment is a prerequisite for customers installing home shell measures.

In order to capture the potential savings resulting from measures installed following recommendations, IPL follows up with customers who completed an assessment but did not install any energy-efficiency measures recommended by the assessor. Currently, this involves follow-up phone calls geared specifically toward encouraging the installation of insulation. IPL will pursue other cost-effective methods of customer follow up after a home energy assessment is completed.

IPL coordinates with the other utilities in the state, including those who serve IPL customers (i.e., customers serviced by multiple utilities), on certain program design and delivery elements, and to provide information about energy-efficiency programs available to their shared customers. In many communities, IPL conducts assessments jointly with municipal utilities and rural electric cooperatives, which allows the utilities to offer customers a seamless, comprehensive assessment and to share costs and savings. IPL will continue to offer joint agreements with municipalities and rural electric cooperatives in shared communities.

3.2.3. Value Proposition

Customers participating in the program receive three main benefits:

1. ***Immediate savings through the direct installation*** of low-cost lighting, water heating, and other energy-saving measures.
2. ***Long-term savings, increased comfort, and increased property values*** by installing insulation, lighting, and other efficiency projects that are eligible for IPL rebates.

3. **Site-specific diagnostic tests and one-on-one energy education** specific to each customer’s home and energy usage characteristics, conducted by skilled and knowledgeable technicians.

3.2.4. Customer Targets

Any customer may participate in the program whose home is 10 years or older, with heating fuel delivered by IPL or propane customers receiving electric service from IPL. Customers receiving assistance through the Low Income Weatherization Program are not eligible for home energy assessments through this program. Table 3.13 outlines customer eligibility requirements.

Table 3.13 Customer Eligibility Parameters

	Eligible Customers			
	Basic Assessment and Comprehensive Assessment	Electric Only Assessment	Insulation and Infiltration Measures	Bonus Rebate
Customer Class	Residential electric and/or natural gas			
Customer Status	Non-low income; Homeowner or tenant with owner approval			
Building Type	Single family			
Building Vintage	10 years or older			
Geography	IPL's Iowa service territory	IPL's Iowa electric service territory	IPL's Iowa service territory	
Other	Primary heating fuel delivered by IPL	Must have propane heat and central air conditioning	Must have completed an assessment prior to installation; Rebate based on assessment or recommendation	Must install two or more recommended measures; At least one installed measure must be in top three priority

3.2.5. Trade Ally Targets

Trade allies for this program include contractors qualified to install equipment recommended during an assessment. Trade allies may also market the program to their

customers. IPL conducts outreach to these trade allies to inform them of program opportunities and changes.

The following types of trade allies are the primary participants in IPL's program:

- HVAC participating Dealers and contractors;
- Insulation and infiltration contractors;
- Lighting equipment Dealers; and
- Retail outlets providing home improvement products.

3.2.6. Incentive Structure and Process

IPL offers rebates that subsidize the full cost of basic assessments and a portion of the cost of comprehensive assessments. Customers are asked to contribute a small portion of the cost for the comprehensive assessment to confirm their commitment to follow through with energy-efficiency actions. All direct install measures are installed at no cost to customers for all assessment levels.

IPL designed the rebates for qualifying home envelope measures to cover a sizable portion of customers' out-of-pocket costs, as these measures can generate significant savings. Customers apply for home shell rebates via a mail-in program application, which they submit with documentation on the installation to IPL's rebate processing center. Customers may also qualify for rebates available through any other of IPL's residential programs. Incentives are also available to Dealers who participate in the Dealer Network and install qualifying measures, when their Dealer ID number is indicated on the relevant customer application. IPL verifies and processes customer

applications, and tracks the Dealer IDs. On a monthly basis, IPL mails incentive checks to Dealers who sold eligible equipment.

IPL also offers a performance bonus rebate to encourage customers to take a whole-house approach to energy efficiency. Customers installing more than one recommended measure are eligible to receive an additional rebate, which is designed to reimburse customers for the full cost of a comprehensive assessment.

3.2.7. Eligible Measures and Incentives

The Home Energy Assessments Program offers assessment services at a very low cost, and direct installation measures at no cost to IPL's residential customers. Additional rebates are available to any customer installing any qualifying measure.

Table 3.14 provides eligible measures, qualification standards, and incentive levels for each program component and equipment included in this program.

Table 3.14 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Assessments		
Basic Energy Assessment	Home > 10 years old Primary heating fuel delivered by IPL	Free to customer
Basic Electric-Only Assessment*	Home > 10 years old Must have propane heat and central air conditioning	
Comprehensive Energy Assessment	Home > 10 years old Primary heating fuel delivered by IPL	\$100 customer co-pay
Comprehensive Electric-Only Assessment*	Home > 10 years old Must have propane heat and central air conditioning	
Direct Installation Measures		
Low-flow Showerheads	≤ 2.0 GPM; Water heating fuel delivered by IPL	Free to customer; quantities vary based on energy assessment results
Faucet Aerators		
Water Heater - Pipe Insulation	R-4; Water heating fuel delivered by IPL	
Water Heater - Tank Wrap	R-13; Water heating fuel delivered by IPL	
Water Heater - Thermostat Setback*	120 °F	
Compact Fluorescent Lamps	ENERGY STAR-rated	
Smart Strip*	4 to 8 plug strip with education	
Thermostat - Programmable	5+2 day settings	
Prescriptive Measures		
Insulation <ul style="list-style-type: none"> • Ceiling Insulation • Foundation Insulation • Wall Insulation 	Home energy assessment required Measures based on assessor recommendation Owners' approval required for tenant-occupied homes	70 percent of installed cost; \$750 cap
Infiltration Reduction <ul style="list-style-type: none"> • Caulking • Weather Stripping • Lighting Fixture Sealing 		70 percent of installed cost; \$200 cap
Duct Sealing*		
Bonus Incentive		
Performance Incentive	Must participate in comprehensive assessment Must install more than one measure from top three priority measures recommended	\$100

3.2.8. Market Barriers

Table 3.15 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.15 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of customer program awareness and awareness of energy-efficiency benefits and practices	Provide direct customer marketing and outreach; Conduct outreach to appropriate trade allies; Encourage customers to participate in their assessment; Give information about simple behavioral changes and maintenance tips that provide ongoing savings; Provide financial analysis of recommended efficiency upgrades to demonstrate long-term benefits
Limited time, resources, and awareness of how to act on recommendations	Provide robust Dealer Network and referral program to help identify appropriate contractors; Provide follow up through phone calls, letters, and other strategies to encourage customers to move through installation steps; Train assessors to discuss next steps and provide information and resources to support customers acting on recommendations
Low trade ally awareness	Provide outreach and education to dealers
High incremental cost of retrofit measures	Provide no cost direct installation measures for immediate savings; Provide rebates and financing for more expensive measures
Customers take an incremental approach to efficiency	Provide performance bonus incentives to encourage customers to take a whole-house approach to efficiency

3.2.9. Marketing and Promotion

IPL uses a variety of promotional methods for this program, including direct mail, mass media advertising, door-to-door campaigning, posters, fliers, and trade ally seminars. They distribute brochures describing program benefits and enrollment procedures to residential customers annually. IPL also conducts upstream marketing through its Dealer Network, through outreach to insulation and HVAC contractors about program procedures and benefits, qualifying measures, and equipment and rebate structures.

3.2.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL’s 2009-2013 EEP can be found at: www.alliantenergy.com/rebates.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.2.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.16.

Table 3.16 Outside Service Providers

Vendor	Role
A-Tec	On-site energy assessment provider

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.2.12. Participation

Table 3.17 provides program participation assumptions by program component.

Table 3.17 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Audits	4,350	4,437	4,526	4,616	4,709	22,638
Direct Install Measures Electric	43,998	44,856	45,731	46,623	47,533	228,739
Direct Install Measures Natural Gas	8,532	8,628	8,724	8,822	8,921	43,626
Prescriptive Measures Electric	389	408	429	450	473	2,149
Prescriptive Measures Natural Gas	2,711	2,847	2,989	3,139	3,295	14,981
Total	59,980	61,175	62,398	63,649	64,930	312,133

3.2.13. Energy and Demand Savings

This program is expected to produce 12,812 MWh of electricity savings and 1,645,068 therms of natural gas savings over the course of the Plan. This program accounts for 2 percent of electricity savings and 15 percent of natural gas savings in the energy-efficiency portfolio. Table 3.18 provides energy and demand savings goals.

Table 3.18 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	2,412,222	2,484,461	2,559,531	2,637,561	2,718,685	12,812,459
Peak Demand (kW)	186	192	198	204	210	990
Natural Gas Impacts						
Incremental Annual Energy (therms)	303,376	315,609	328,414	341,818	355,852	1,645,068
Peak-Day Demand (therms)	3,594	3,739	3,890	4,049	4,215	19,488

3.2.14. Budget

The total budget for the program is estimated at \$16.5 million. Table 3.19 provides program budget assumptions.

Table 3.19 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$8,412	\$8,832	\$9,274	\$9,738	\$10,224	\$46,480
Administration	\$33,647	\$35,329	\$37,095	\$38,950	\$40,898	\$185,919
Advertising and Promotion	\$25,235	\$26,497	\$27,822	\$29,213	\$30,673	\$139,439
Customer Incentive	\$420,583	\$441,612	\$463,693	\$486,878	\$511,222	\$2,323,988
Equipment Cost	\$85,684	\$87,020	\$88,379	\$89,762	\$91,168	\$442,013
Installation Cost	\$158,610	\$161,783	\$165,018	\$168,319	\$171,685	\$825,414
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Electric Total	\$732,171	\$761,073	\$791,281	\$822,858	\$855,870	\$3,963,254
Natural Gas Budget						
Planning and Design	\$26,811	\$28,151	\$29,559	\$31,037	\$32,588	\$148,145
Administration	\$107,242	\$112,604	\$118,235	\$124,146	\$130,354	\$592,581
Advertising and Promotion	\$80,432	\$84,453	\$88,676	\$93,110	\$97,765	\$444,436
Customer Incentive	\$1,340,528	\$1,407,554	\$1,477,932	\$1,551,828	\$1,629,420	\$7,407,262
Equipment Cost	\$273,102	\$277,360	\$281,692	\$286,098	\$290,580	\$1,408,832
Installation Cost	\$505,540	\$515,650	\$525,964	\$536,483	\$547,212	\$2,630,849
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$2,333,654	\$2,425,774	\$2,522,056	\$2,622,702	\$2,727,920	\$12,632,105
Total Budget						
Planning and Design	\$35,222	\$36,983	\$38,832	\$40,774	\$42,813	\$194,625
Administration	\$140,889	\$147,933	\$155,330	\$163,096	\$171,251	\$778,500
Advertising and Promotion	\$105,667	\$110,950	\$116,497	\$122,322	\$128,438	\$583,875
Customer Incentive	\$1,761,111	\$1,849,167	\$1,941,625	\$2,038,706	\$2,140,641	\$9,731,250
Equipment Cost	\$358,786	\$364,380	\$370,071	\$375,860	\$381,748	\$1,850,846
Installation Cost	\$664,150	\$677,433	\$690,982	\$704,801	\$718,897	\$3,456,263
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Total *	\$3,065,825	\$3,186,847	\$3,313,338	\$3,445,560	\$3,583,790	\$16,595,359

Table 3.20 provides a forecast of staffing needs and costs for this program.

Table 3.20 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	9	\$11,250	Program-specific management
Energy Efficiency Programs Management	5	\$6,250	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	22.5	\$28,125	Marketing and communications support
Total	40.5	\$50,625	

3.2.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that the overall program is cost-effective from a societal perspective, with a B/C ratio of 1.12 to 1. The program's overall costs are also justified by its benefits from the participant and utility points of view. Table 3.21 provides program cost-effectiveness results.

Table 3.21 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$5,654,423	\$8,368,901	\$5,654,423	\$8,185,136
Costs	\$3,469,849	\$3,314,605	\$9,793,579	\$4,077,591
Net Benefits	\$2,184,574	\$5,054,296	-\$4,139,156	\$4,107,545
B/C Ratio	1.63	2.52	0.58	2.01
\$/kWh	\$0.041	\$0.045	\$0.115	\$0.037
Natural Gas Program				
Benefits	\$9,908,579	\$19,149,497	\$9,908,579	\$15,323,090
Costs	\$11,361,018	\$13,949,759	\$22,786,416	\$16,835,092
Net Benefits	-\$1,452,439	\$5,199,737	-\$12,877,837	-\$1,512,002
B/C Ratio	0.87	1.37	0.43	0.91
\$/therm	\$0.838	\$1.244	\$1.681	\$0.894
Total Program				
Benefits	\$15,563,002	\$27,518,397	\$15,563,002	\$23,508,226
Costs	\$14,830,867	\$17,264,364	\$32,579,994	\$20,912,683
Net Benefits	\$732,135	\$10,254,033	-\$17,016,992	\$2,595,543
B/C Ratio	1.05	1.59	0.48	1.12

3.3. Change-a-Light Program

3.3.1. Program Description

Change-a-Light is an upstream program for which IPL provides incentives directly to lighting manufacturers to reduce the purchase price of ENERGY STAR-rated, high-efficiency lighting products at participating retailer locations. The upstream incentive mechanism helps mitigate first costs as a barrier to program participation, makes purchasing high-efficiency lighting simple for customers, and is offered year around.

IPL partners with retailers throughout its service territory to offer program-discounted compact fluorescent lamps (CFLs) and LEDs, and to promote the program to customers. Product discounts are applied at the register. IPL works with an implementation contractor to negotiate and coordinate with manufacturers and retailers, develop and lead promotional efforts, provide training and other on-site support to participating retailers, and report sales data.

Key changes to this program in the Plan include:

- Shifting the CAL Program from a component under Residential Prescriptive Rebates to a stand-alone program.
- Moving away from a formal program affiliation with the national ENERGY STAR's Change a Light, Change the World Campaign, while continuing to specify ENERGY STAR-rated bulbs as a quality assurance measure for the program.

- Adding eligible measures for upstream incentives (e.g., LEDs and specialty CFL bulbs).
- Eliminating mail-in rebates for CFL bulbs that can be purchased through the CAL Program.
- Increasing the use of customer-facing educational materials related to new/evolving consumer lighting standards.

3.3.2. Operations

An implementation contractor manages the CAL Program, including negotiating bulk pricing, recruitment, coordinating with retail stores, marketing and outreach to retailers, and tracking and providing program reports. The implementation contractor works with a broad range of retailers, including big-box stores and smaller local and independent stores throughout IPL's service territory.

At the beginning of each program year, program retailers submit a list of the program-qualified lighting products they wish to offer to IPL's implementation contractor. The implementation contractor negotiates with manufacturers for those products, coordinates incentive payments, and manages the development, distribution, and maintenance of all in-store marketing efforts. The implementation contractor also provides periodic in-store training and other support to retail sales personnel. Customers may purchase discounted lighting products at any participating retailer, and discounts are applied at the register. Retailers provide documentation of qualifying product sales data to the implementation contractor, who in turn reports program participation and savings to IPL.

3.3.3. Value Proposition

Customers participating in the program receive three main benefits:

1. The process is ***simple and straightforward***. Customers need not take any special action to receive eligible product discounts.
2. Customers ***save money*** through the upstream incentive that significantly reduces the cost of eligible measures.
3. Customers receive ***high-quality lighting products*** that are rated by the ENERGY STAR program.

3.3.4. Customer Targets

The program targets residential customers, but is available to all customers through retailers located in IPL's Iowa service territory. The upstream incentive mechanism does not allow for customer eligibility screening. Table 3.22 outlines customer eligibility requirements.

Table 3.22 Customer Eligibility Parameters

	Eligible Customers
Customer Class	All
Customer Status	All
Building Type	All
Building Vintage	All
Geography	IPL's Iowa service territory

3.3.5. Trade Ally Targets

Program delivery relies on an implementation contractor to administer the program and lighting manufacturers to source eligible products. Retailers, which market and sell

products to customers, are the program’s primary trade allies. The following types of trade allies are the primary participants in IPL’s program:

- Big-box stores (e.g., Home Depot);
- Chain stores (e.g., Ace Hardware);
- Grocery stores (e.g., Hy-Vee);
- Discount stores (e.g., Wal-Mart); and
- Small independent retailers.

3.3.6. Incentive Structure and Process

IPL provides upstream incentives to its implementation contractor, who in turn distributes program funds to participating manufacturers in the amounts needed to buy down qualifying CFLs and LEDs in the quantity required by participating retailers.

3.3.7. Eligible Measures and Incentives

The CAL Program offers a wide range of eligible lighting products. Retailers may request any type or wattage of ENERGY STAR-rated CFL or LED bulbs, in as many varieties as they desire, including interior, exterior, and specialty bulbs.

Table 3.23 provides eligible measures, qualification standards, and incentive levels for products in this program.

Table 3.23 Incentive Summary

Program/Measure	Qualification	Customer Incentive
CFLs	ENERGY STAR-rated	Buy down total customer cost to approximately \$1/bulb
LEDs	ENERGY STAR-rated or DesignLights™ Consortium-qualified	\$10*

* Rebates may not exceed 50 percent of applicable equipment cost

3.3.8. Market Barriers

Table 3.24 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.24 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher cost of energy-efficient bulbs	Provide upstream incentive
Lack of customer awareness	Distribute compelling and robust marketing materials, including POP promotions
Willingness of retailer to stock CFLs	Implementation contractor outreach to retailers to solicit participation
Customer concerns associated with lighting quality, proper disposal, and/or changing lighting standards	Ongoing retailer communications, training, outreach, and education; Provide customer education and outreach on lighting products, benefits, proper disposal, and changing lighting standards
Changing standards impact available savings and the cost-effectiveness of certain measures	Continue to evaluate emerging/proven residential lighting options and facilitate transition to new lighting product as available; Explore new measures and consumer preferences for higher efficiency alternatives as new standards take effect; Eliminate certain measures that are not cost-effective

3.3.9. Marketing and Promotion

For its upstream marketing strategy, IPL relies on its implementation contractor to manage, implement, and maintain marketing and outreach efforts through retailer partners/POP tactics and broadcast, print, and online media.

Program marketing includes:

- Providing in-store advertising and POP marketing materials to facilitate the sale of eligible products;
- Providing ongoing education for participating retailers and their sales personnel about program benefits and qualifying measures;

- Providing in-store educational materials on the benefits of energy-efficient lighting, lighting products, and ongoing product changes;
- Promoting the program through IPL’s website, the PowerHouse Program, and customer newsletters; and
- Mass media advertising through radio and print channels as program needs dictate.

3.3.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL’s 2009-2013 EEP can be found at: www.alliantenergy.com/rebates.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed, based on program adjustments and market characteristics.

3.3.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.25.

Table 3.25 Outside Service Providers

Vendor	Role
Wisconsin Energy Conservation Corporation	Implementation contractor

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.3.12. Participation

Table 3.26 provides program participation assumptions in terms of the number of measures purchased through the program.

Table 3.26 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Electric Measures	640,000	672,000	705,600	740,880	777,924	3,536,404
Natural Gas Measures	-	-	-	-	-	-
Total	640,000	672,000	705,600	740,880	777,924	3,536,404

3.3.13. Energy and Demand Savings

This program is expected to produce 56,886 MWh of electricity savings over the course of the Plan. This program accounts for 7 percent of electricity savings in the energy-efficiency portfolio. Table 3.27 provides energy and demand savings goals.

Table 3.27 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	10,294,964	10,809,712	11,350,198	11,917,708	12,513,593	56,886,175
Peak Demand (kW)	1,779	1,868	1,962	2,060	2,163	9,831

3.3.14. Budget

The total budget for the program is estimated at \$12.5 million. Table 3.28 provides program budget assumptions.

Table 3.28 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$22,734	\$23,871	\$25,065	\$26,318	\$27,634	\$125,622
Administration	\$250,078	\$262,582	\$275,711	\$289,497	\$303,972	\$1,381,840
Advertising and Promotion	\$113,672	\$119,355	\$125,323	\$131,589	\$138,169	\$628,109
Customer Incentive	\$1,818,750	\$1,909,688	\$2,005,172	\$2,105,430	\$2,210,702	\$10,049,742
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$68,203	\$71,613	\$75,194	\$78,954	\$82,901	\$376,865
Electric Total	\$2,273,438	\$2,387,109	\$2,506,465	\$2,631,788	\$2,763,377	\$12,562,177
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$0	\$0	\$0	\$0	\$0	\$0
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$0	\$0	\$0	\$0	\$0	\$0
Total Budget						
Planning and Design	\$22,734	\$23,871	\$25,065	\$26,318	\$27,634	\$125,622
Administration	\$250,078	\$262,582	\$275,711	\$289,497	\$303,972	\$1,381,840
Advertising and Promotion	\$113,672	\$119,355	\$125,323	\$131,589	\$138,169	\$628,109
Customer Incentive	\$1,818,750	\$1,909,688	\$2,005,172	\$2,105,430	\$2,210,702	\$10,049,742
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$68,203	\$71,613	\$75,194	\$78,954	\$82,901	\$376,865
Total	\$2,273,438	\$2,387,109	\$2,506,465	\$2,631,788	\$2,763,377	\$12,562,177

Table 3.29 provides a forecast of staffing needs and costs for this program.

Table 3.29 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	4.5	\$5,625	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Total	12.5	\$15,625	

3.3.15. Cost-Effectiveness Results

A comparison of the program’s costs and life-cycle benefits indicates that the program is cost-effective from a societal perspective, with a B/C ratio of 1.63 to 1. The program’s costs are also justified by its benefits from the participant and utility points of view. Table 3.30 provides program cost-effectiveness results.

Table 3.30 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$21,400,170	\$24,366,651	\$21,400,170	\$27,531,493
Costs	\$11,173,611	\$12,869,419	\$28,534,159	\$16,859,931
Net Benefits	\$10,226,559	\$11,497,232	-\$7,133,989	\$10,671,562
B/C Ratio	1.92	1.89	0.75	1.63
\$/kWh	\$0.048	\$0.061	\$0.122	\$0.062

3.4. Appliance Recycling Program

3.4.1. Program Description

The Appliance Recycling Program is designed to eliminate old, inefficient refrigerators, freezers, and room air conditioners (collectively referred to as equipment) from use, to ensure their safe disposal, and to prevent such equipment from being sold in a secondary market. Through the program, IPL offers its electric customers a service to remove and safely dispose of their old and inefficient equipment when they purchase new equipment or eliminate a second unit that may not be needed. All removed equipment is disposed of in an environmentally responsible manner by certified agents. The process involves removing chlorofluorocarbon-based refrigerant and other hazardous materials, preparing them for reclamation, and recycling various material components such as metals, foam, and plastic.

Key changes to this program in the Plan include:

- No changes are planned at this time.

3.4.2. Operations

IPL uses a third-party contractor specializing in appliance recycling to implement the Appliance Recycling Program as a turnkey service. The program contractor is responsible for scheduling, picking up and verifying the eligibility of each unit, transporting appliances to a recycling facility, recycling applicable components and safely disposing of remaining components, and tracking and reporting results to IPL.

3.4.3. Value Proposition

Customers participating in the program receive three main benefits:

1. Customers ***eliminate the hassle and cost*** associated with disposing of large, inefficient, and unwieldy appliances.
2. Customers ***save money*** through rebates and reduced energy bills.
3. Customers ***can trust*** that the materials in their old appliances are recycled to the greatest extent possible and disposed of properly.

3.4.4. Customer Targets

The program primarily targets residential electric customers in two markets: those who currently own and operate secondary equipment and those purchasing new equipment. Additionally, commercial customers with residential-sized equipment are also eligible to participate. One of the program's main objectives is to prevent customers who currently have only one refrigerator from keeping their existing units when they purchase a new one. Table 3.31 outlines customer eligibility requirements.

Table 3.31 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Residential and commercial electric rate
Customer Status	All
Building Type	Single family; Manufactured home; Multifamily, Commercial property
Building Vintage	All
Geography	IPL's Iowa service territory
Other	Appliances must be operational and 10 cubic feet or larger

3.4.5. Trade Ally Targets

Trade allies play a key role in promoting the program. The following types of trade allies are the primary participants in IPL's program:

- Appliance retailers and Dealers;
- Home improvement centers; and
- Retail outlets selling refrigerators, freezers and room air conditioners.

3.4.6. Incentive Structure and Process

IPL's incentives for the Appliance Recycling Program include free pick up and disposal of equipment, as well as prescriptive rebates for each of three qualifying equipment measures: refrigerators, freezers and room air conditioner units. To be eligible for a program rebate, the equipment must be in working order¹¹ at the time of pick up. IPL set the program incentives at a level high enough to dissuade customers from selling the used equipment or using it as a secondary unit. IPL's program contractor delivers the incentives to participating customers at the time of the equipment pick up.

3.4.7. Eligible Measures and Incentives

Through the Appliance Recycling Program, IPL offers a cash rebate to electric customers. Table 3.32 provides eligible measures, qualification standards, and incentive levels for equipment in this program.

¹¹ Working order, for the purpose of this program, means that the motor runs and the unit cools.

Table 3.32 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Refrigerators	Appliance must be in working condition at the time of pick up. Refrigerators and freezers must be 10 cubic feet or larger. Maximum of two of each type of appliance per customer account per year	\$50 + free removal
Freezers		\$50 + free removal
Room Air Conditioners		\$25 + free removal

3.4.8. Market Barriers

Table 3.33 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.33 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of customer awareness	Conduct consumer education and outreach; Continue program promotion and advertising; Promote this program through other residential programs; Continue trade ally outreach, education, and training
Low dealer awareness	Provide ongoing Dealer communications, outreach, and education
Trade allies are not selling program	Provide trade ally training and outreach to explain the benefits of participating in the program; Market program and general efficiency awareness to trade allies
Customers feel they need an extra refrigerator	Provide customized educational materials that highlight the cost to operate an old refrigerator or freezer; Display POP materials about the benefits of eliminating inefficient appliances; Explain the environmental benefits of eliminating inefficient appliances

3.4.9. Marketing and Promotion

IPL’s program contractor has responsibilities that include assisting with marketing and outreach for the program by working in collaboration with IPL’s energy-efficiency staff. The two target markets each warrant a distinct marketing strategy. To target customers purchasing new appliances, IPL works with appliance Dealers to identify and

recruit potential program participants who intend to replace or dispose of their existing equipment. To target customers who currently own and operate secondary equipment, IPL promotes the program through a variety of channels, including:

- Direct mail;
- Mass media advertising;
- POP materials such as posters and flyers; and
- Alliant Energy website.

3.4.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/appliancerecycling.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.4.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with Conservation Services Group to provide turnkey services, which include scheduling, picking up, and decommissioning equipment.

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.4.12. Participation

Table 3.34 provides program participation assumptions in terms of equipment recycled through the program.

Table 3.34 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Electric Measures	11,442	11,556	11,672	11,789	11,907	58,366
Natural Gas Measures	-	-	-	-	-	-
Total	11,442	11,556	11,672	11,789	11,907	58,366

3.4.13. Energy and Demand Savings

This program is expected to produce 52,778 MWh of electricity savings over the course of the Plan. This program accounts for 7 percent of electricity savings in the energy-efficiency portfolio. Table 3.35 provides energy and demand savings goals.

Table 3.35 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	11,096,756	10,818,470	10,548,012	10,285,172	10,029,744	52,778,154
Peak Demand (kW)	1,408	1,373	1,339	1,305	1,273	6,699

3.4.14. Budget

The total budget for the program is estimated at \$8.6 million. Table 3.36 provides program budget assumptions.

Table 3.36 Budget

	\$2,014	\$2,015	\$2,016	\$2,017	\$2,018	Total
Electric Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$17,239	\$17,411	\$17,586	\$17,762	\$17,938	\$87,937
Advertising and Promotion	\$34,479	\$34,822	\$35,172	\$35,524	\$35,877	\$175,873
Customer Incentive	\$517,178	\$522,331	\$527,574	\$532,863	\$538,151	\$2,638,098
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$1,099,004	\$1,109,954	\$1,121,096	\$1,132,333	\$1,143,571	\$5,605,958
Monitoring and Evaluation	\$34,479	\$34,822	\$35,172	\$35,524	\$35,877	\$175,873
Electric Total	\$1,702,379	\$1,719,340	\$1,736,599	\$1,754,007	\$1,771,414	\$8,683,739
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$0	\$0	\$0	\$0	\$0	\$0
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$0	\$0	\$0	\$0	\$0	\$0
Total Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$17,239	\$17,411	\$17,586	\$17,762	\$17,938	\$87,937
Advertising and Promotion	\$34,479	\$34,822	\$35,172	\$35,524	\$35,877	\$175,873
Customer Incentive	\$517,178	\$522,331	\$527,574	\$532,863	\$538,151	\$2,638,098
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$1,099,004	\$1,109,954	\$1,121,096	\$1,132,333	\$1,143,571	\$5,605,958
Monitoring and Evaluation	\$34,479	\$34,822	\$35,172	\$35,524	\$35,877	\$175,873
Total *	\$1,702,379	\$1,719,340	\$1,736,599	\$1,754,007	\$1,771,414	\$8,683,739

Table 3.37 provides a forecast of staffing needs and costs for this program.

Table 3.37 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	4.5	\$5,625	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	11.25	\$14,063	Marketing and communications support
Total	23.75	\$29,688	

3.4.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that the program is cost-effective from a societal perspective, with a B/C ratio of 3.94 to 1. The program's costs are also justified by its benefits from the participant and utility points of view. Table 3.38 provides program cost-effectiveness results.

Table 3.38 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$18,057,632	\$22,106,077	\$18,057,632	\$22,978,103
Costs	\$7,797,144	\$4,822,756	\$24,217,959	\$5,826,965
Net Benefits	\$10,260,488	\$17,283,321	-\$6,160,327	\$17,151,137
B/C Ratio	2.32	4.58	0.75	3.94
\$/kWh	\$0.034	\$0.023	\$0.107	\$0.022

3.5. New Home Construction Program

3.5.1. Program Description

IPL designed the New Home Construction Program to create long-term energy savings by encouraging home builders to incorporate high-performance building practices into new home construction. Through the program, IPL offers incentives to single family homeowners and to builders and developers who design and build new homes to higher energy-efficiency standards than are required by residential building codes in IPL's service territory.

The program offers two participation options: a measure-based (prescriptive) approach and a performance-based approach. For the measure-based option, homeowners or builders must meet the program specifications by installing the prescriptive measures included in a builder option package (BOP). The performance-based option focuses on achieving a minimum Home Energy Rating System (HERS) score in one of two performance tiers.

Measure-Based – Builder Option Package

Builders participating in the BOP must agree to implement energy-efficiency measures from a pre-specified set of options in three categories: heating, cooling, and water heating. IPL provides prescriptive incentives, based on the fuel(s) it will provide to the new home, for implementing the full package of measures. IPL verifies compliance through an on-site inspection before issuing a rebate.

Performance-Based – Home Energy Rating System

In the performance-based approach, IPL uses a whole-home efficiency score to qualify eligible homes, giving participants the flexibility to implement any of a range of measures to achieve program compliance. Under this program track, homeowners and builders choose the most appropriate energy-saving features for the home to meet the requirements for one of two performance tiers: the Advanced Performance Home and the High Performance Home. To demonstrate compliance, a Residential Energy Services Network (RESNET[®])-accredited professional energy rater must model the home's performance using the HERS guidelines, procedures, and tools.

IPL designed the New Home Construction Program under the assumption that the State of Iowa will adopt IECC 2012 standards within the first 18 months of IPL implementing its Plan. The New Home Construction Program is designed to exceed the new code by specifying higher efficiency equipment in the BOP, by reducing the required minimum HERS score required for compliance with a performance path, and by reducing incentive levels for all program components.

Key changes to this program in the Plan include:

- Replacing the program's reliance on ENERGY STAR New Homes with a simpler, HERS-based compliance mechanism.
- Consolidating two prescriptive paths (i.e., BOP and Advanced BOP) into a single path that relies on the highest efficiency equipment options in the market.

- Eliminating building shell and lighting measures from the BOP (as these measures are code in the IECC 2012).
- Adding two performance paths with tiered incentive levels to encourage builders to construct homes to the highest cost-effective efficiency level.
- Conducting quality control checks on field verifiers to confirm their compliance with program quality requirements.

3.5.2. Operations

IPL delivers this program with support from independent, third-party builders and developers who design and build new single family homes to a higher energy-efficiency standard. Builders may either install the prescriptive measures specified in the BOP or incorporate any combination of high-efficiency design features, building shell measures, and equipment measures that contribute to achieving the HERS scores required by the program's performance path. HERS ratings must be performed by a certified RESNET professional.

Customers participating in the program must select a program option and notify IPL prior to beginning construction on the new home. When construction is complete, customers submit a program application with all required program documentation (e.g., HERS report) to IPL's rebate processing center. Prior to issuing rebates, IPL uses a third-party program contractor to conduct field verification following construction to confirm that participants met equipment requirements under the BOP or to verify that the HERS ratings meet one of IPL's performance tiers.

3.5.3. Value Proposition

Customers participating in the program receive three main benefits:

1. **Financial benefits** in the form of rebates to offset equipment costs and lower monthly energy bills.
2. **Better quality** new homes as a result of high performance design, installation of energy-efficient equipment, and independent verification by a trained professional.
3. **Greater comfort and potentially higher housing values** due to energy-efficient features that help maintain consistent interior temperatures, reduce drafts, improve lighting quality, and improve sound attenuation.

3.5.4. Customer Targets

This program targets homeowners and builders constructing new single family homes.¹² Table 3.39 outlines customer eligibility requirements.

Table 3.39 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Residential electric or natural gas
Customer Status	Homeowners; builders; developers
Building Type	Single family
Building Vintage	New construction
Geography	IPL's Iowa service territory

¹² Builders interested in new construction of multifamily housing may be eligible for incentives through IPL's Commercial New Construction Program.

3.5.5. Trade Ally Targets

IPL works with trade allies who provide services to the new homes market to promote and deliver the New Home Construction Program. IPL conducts outreach to these trade allies to inform them of program opportunities and changes. The following types of trade allies are the primary participants in IPL's program:

- Home builders and contractors;
- Home energy raters;
- Building trade professionals (e.g., electricians, HVAC installers, plumbers);
- Real estate developers; and
- Real estate firms.

3.5.6. Incentive Structure and Process

IPL offers incentives based on the type(s) of heating and cooling fuel(s) it delivers to the new home, and based on the program track each participant selects. Participants in the performance-based track may choose between two tiers, whereby IPL offers higher incentives for the tier requiring a higher efficiency level (via lower HERS score). IPL set incentives at levels determined to cover a portion of the incremental costs of building to a higher energy-performance standard.¹³ Customers apply for rebates via a mail-in program application, submitted with all required program documentation.

¹³ These incremental costs are based on modeling residential construction scenarios using efficiency features that exceed IECC 2012.

3.5.7. Eligible Measures and Incentives

The New Home Construction Program offers incentives based on: 1) the program track chosen; and 2) the type(s) of heating fuel delivered to the new home by IPL. Customers who participate in the BOP must install a qualifying measure from each of three equipment categories: heating, cooling, and hot water. All heating and cooling measures must be SAVE installed. Table 3.40 provides eligible measures and qualifications standards for equipment in the BOP.

Table 3.40. Builder Option Package

Program/Measure	Qualification
Heating	
Furnace	≥ 94 percent AFUE; Must be SAVE installed
Air-Source Heat Pump	CEE Tier 2 SEER/EER 15/12.5 and HSPF 8.5 (Split System); Must be SAVE installed
	Enhanced SEER/EER 16/13 and HSPF 9.0 (Split System); Must be SAVE installed
Geothermal	Water-to-air/closed loop. ENERGY STAR ≥ EER 17.1 and 3.6 COP; Must be SAVE installed
	Water-to-air/open loop. ENERGY STAR ≥ EER 21 and 4.1 COP; Must be SAVE installed
	Water-to-water/closed loop. ENERGY STAR EER ≥ 16.1 and 3.1 COP; Must be SAVE installed
	Water-to-water/open loop. ENERGY STAR > EER 20.1 and 3.5 COP; Must be SAVE installed
Cooling	
Central Air Conditioning	CEE Tier 2 SEER/EER 15/12.5 (Split System); Must be SAVE installed
	CEE Tier 3 SEER/EER 16/13 (Split System); Must be SAVE installed
	Enhanced SEER/EER 18/14 (Split System); Must be SAVE installed
Hot Water	
Water Heaters	Storage ENERGY STAR EF = 0.67, 40 gallon, and = 75,000 Btu/hour
	Heat pump water heater ENERGY STAR EF = 2.0
	Tankless ENERGY STAR EF = 0.82
	Drain water heat recovery system

AFUE: Annual Fuel Utilization Efficiency
 CEE: Consortium for Energy Efficiency
 SEER: Seasonal Energy Efficiency Ratio
 EER: Energy Efficiency Ratio

HSPF: Heating Seasonal Performance Factor
 COP: Coefficient of Performance
 EF: Energy Factor

Customers participating in the performance-based approach must achieve the HERS score required for the performance levels indicated. Table 3.41 provides details on the program components, qualification standards, and incentive levels for this program.

Table 3.41. Incentive Summary

Customer Class	Qualification	Customer Incentive
Builder Option Package		
Heating and Cooling Customers (Electric)	Must install one measure from each equipment category: heating, cooling, and hot water, plus drain water heat recovery system Home must meet IECC 2012 requirements Equipment installation must be verified by on-site inspection	\$1,000
Heating and Cooling Customers (Electric and Natural Gas)		\$1,000
Heating Only (Natural Gas)		\$700
Cooling Only (Electric)		\$300
Advanced Performance Home		
Heating and Cooling Customers (Electric)	Must achieve a HERS rating of ≤ 60 Home must meet IECC 2012 requirements	\$1,400
Heating and Cooling Customers (Electric and Natural Gas)		\$1,400
Heating Only (Natural Gas)		\$980
Cooling Only (Electric)		\$420
High Performance Home		
Heating and Cooling Customers (Electric)	Must achieve a HERS rating of ≤ 55 Home must meet IECC 2012 requirements	\$1,750
Heating and Cooling Customers (Electric and Natural Gas)		\$1,750
Heating Only (Natural Gas)		\$1,225
Cooling Only (Electric)		\$525

3.5.8. Market Barriers

Table 3.42 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.42 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher first cost of energy-efficient equipment	Offer rebates to help offset measure incremental costs; Educate customers on the long-term energy cost-savings, comfort, and quality benefits of higher efficiency equipment
Time required to fill out rebate forms	Use a streamlined, efficient, and responsive program process
Lack of customer and trade ally awareness of high-efficiency alternatives	Provide ongoing outreach to builders and other trade allies; Support the program with education targeted to different types of program participants (builders, homeowners, etc.)
Customers value design features and finishes over high-efficiency equipment	Raise customer awareness through educational materials showing the long-term financial, comfort, and social benefits of efficient homes; Focus on the long-term benefits of energy-efficiency features; Provide rebates to lower the incremental cost of efficiency features
Higher energy-efficiency building codes reduce program savings potential and cost-effectiveness	Limit measures to those that offer cost-effective energy savings beyond minimum building code requirements; Offer flexible options that allow builders to design their own participation path; Reduce incentive levels to compensate for fewer program requirements and lower available energy savings; Monitor the new homes market to ensure that the program continues to achieve savings and offer a viable path to builders
Housing market slowdown impacts program participation	Provide ongoing outreach to builders and other trade allies to expand their awareness; Support the program with education targeted to different types of program participants (builders, homeowners, etc.); Raise customer awareness through educational materials showing the long-term financial, comfort, and social benefits of efficient homes

3.5.9. Marketing and Promotion

Through a combination of education and direct outreach, IPL works with building and related industries to promote the program through multiple channels that target both the demand and supply sides of the residential new construction market. On the demand side, IPL promotes the program to prospective homeowners through tactics such as direct mail, mass media advertising, and home shows.

On the supply side, IPL focuses its marketing efforts on direct outreach and communication with various market participants. IPL has cultivated good working

relationships with a large network of professionals in the building sector, which is further supported by its Dealer Network and the Builder Training Program.

- **Builders:** IPL conducts outreach to builders participating in its Dealer Network and in the Builder Training Program, as well as to a wide range of builders and contractors throughout its territory, to inform them about the program features and benefits. IPL emphasizes outreach to smaller builders, who may be less aware of the program than builders of tract homes or developments.
- **Support organizations:** Appraisers, lenders, and real estate agents all influence the price and value of a home. IPL educates these groups on the value and costs of energy-efficient construction, and on the secondary benefits available to homeowners, through IPL's Builder Training Program and Dealer Network. IPL conducts outreach via direct mail in an effort to encourage these groups to communicate this value to potential homebuyers.

3.5.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/homeconstruction.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.5.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.43.

Table 3.43 Outside Service Providers

Vendor	Role
A-Tec	On-site verification inspections of homes participating in the BOP

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.5.12. Participation

Table 3.44 provides program participation assumptions in terms of the number of new homes constructed through the program.

Table 3.44 Participation Assumptions

	2014	2015	2016	2017	2018	Total
New Homes	525	546	568	591	615	2,845

3.5.13. Energy and Demand Savings

This program is expected to produce 1,167 MWh of electricity savings and 338,826 therms of natural gas savings over the course of the Plan. This program accounts for 0.15 percent of electricity savings and 3 percent of natural gas savings in the energy-efficiency portfolio. Table 3.45 provides energy and demand savings goals.

Table 3.45 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	215,398	224,014	233,040	242,477	252,323	1,167,252
Peak Demand (kW)	202	211	219	228	237	1,097
Natural Gas Impacts						
Incremental Annual Energy (therms)	62,525	65,026	67,646	70,385	73,244	338,826
Peak-Day Demand (therms)	909	945	983	1,023	1,064	4,924

3.5.14. Budget

The total budget for the program is estimated at \$5.1 million. Table 3.46 provides program budget assumptions.

Table 3.46 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$954	\$993	\$1,033	\$1,074	\$1,118	\$5,172
Administration	\$954	\$993	\$1,033	\$1,074	\$1,118	\$5,172
Advertising and Promotion	\$6,680	\$6,948	\$7,228	\$7,520	\$7,826	\$36,201
Customer Incentive	\$80,164	\$83,371	\$86,730	\$90,242	\$93,907	\$434,414
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$16,500	\$16,500	\$16,500	\$16,500	\$16,500	\$82,500
Electric Total	\$105,253	\$108,803	\$112,523	\$116,411	\$120,468	\$563,458
Natural Gas Budget						
Planning and Design	\$7,721	\$8,030	\$8,354	\$8,692	\$9,045	\$41,843
Administration	\$7,721	\$8,030	\$8,354	\$8,692	\$9,045	\$41,843
Advertising and Promotion	\$54,050	\$56,212	\$58,477	\$60,845	\$63,316	\$292,900
Customer Incentive	\$648,601	\$674,545	\$701,725	\$730,140	\$759,790	\$3,514,802
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$133,500	\$133,500	\$133,500	\$133,500	\$133,500	\$667,500
Natural Gas Total	\$851,594	\$880,318	\$910,410	\$941,869	\$974,696	\$4,558,888
Total Budget						
Planning and Design	\$8,676	\$9,023	\$9,386	\$9,766	\$10,163	\$47,014
Administration	\$8,676	\$9,023	\$9,386	\$9,766	\$10,163	\$47,014
Advertising and Promotion	\$60,730	\$63,160	\$65,705	\$68,365	\$71,141	\$329,101
Customer Incentive	\$728,766	\$757,916	\$788,455	\$820,382	\$853,697	\$3,949,216
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$750,000
Total	\$956,848	\$989,122	\$1,022,932	\$1,058,280	\$1,095,164	\$5,122,346

Table 3.47 provides a forecast of staffing needs and costs for this program.

Table 3.47 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	27	\$33,750	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	11.25	\$14,063	Marketing and communications support
Total	46.25	\$57,813	

3.5.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that the electric component of the program is cost-effective, but that neither the natural gas component nor the combined program is cost-effective from a societal perspective, with an overall B/C ratio of 0.84 to 1.

IPL designed the New Home Construction Program under the assumption that the State of Iowa will adopt IECC 2012 standards within the first 18 months of IPL implementing its Plan. Therefore, IPL modeled measure-level and program-level cost-effectiveness against the IECC 2012 baseline. A combination of the new baseline coupled with very low avoided natural gas costs contribute to the program's lack of cost-effectiveness. Table 3.48 provides program cost-effectiveness results.

Table 3.48 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$3,097,364	\$1,295,039	\$3,097,364	\$4,657,465
Costs	\$501,611	\$744,026	\$1,615,320	\$959,008
Net Benefits	\$2,595,753	\$551,013	\$1,482,045	\$3,698,458
B/C Ratio	6.17	1.74	1.92	4.86
\$/kWh	\$0.049	\$0.087	\$0.159	\$0.070
Natural Gas Program				
Benefits	\$1,824,409	\$4,861,103	\$1,824,409	\$2,682,402
Costs	\$4,058,489	\$6,019,844	\$6,289,468	\$7,759,244
Net Benefits	-\$2,234,079	-\$1,158,742	-\$4,465,059	-\$5,076,842
B/C Ratio	0.45	0.81	0.29	0.35
\$/therm	\$1.453	\$2.566	\$2.252	\$2.071
Total Program				
Benefits	\$4,921,774	\$6,156,142	\$4,921,774	\$7,339,867
Costs	\$4,560,100	\$6,763,870	\$7,904,788	\$8,718,251
Net Benefits	\$361,674	-\$607,728	-\$2,983,014	-\$1,378,385
B/C Ratio	1.08	0.91	0.62	0.84

3.6. Multifamily Program

3.6.1. Program Description

Beginning in 2014, IPL will offer a comprehensive suite of energy-efficiency services to address the unique needs of multifamily property owners, property managers, and landlords, supplementing its current program offering to the low-income multifamily sector. The new Multifamily Program will expand IPL's energy-efficiency services to multifamily customers who do not qualify for low-income assistance. The program targets existing multifamily buildings with three¹⁴ or more units as well as new construction of multifamily buildings. The Multifamily Program includes three components:

1. A free energy assessment with direct installation of low-cost energy-efficiency measures for tenant units and common areas;
2. Prescriptive rebates for all non-low-income customers; and
3. A custom rebate component where recommended or warranted.

Multifamily property owners and developers constructing new multifamily facilities will be directed to participate in IPL's Commercial New Construction Program.

3.6.2. Operations

The Multifamily Program will offer comprehensive energy-efficiency services for multifamily properties. These services include customer education, energy

¹⁴ IPL defines buildings with three vertically-stacked units as multifamily; buildings with three collinear units are defined as single family. All buildings with four or more units are defined as multifamily.

assessments, direct installation of low-cost measures, recommendations for larger energy-efficient building upgrades, and access to a broad range of prescriptive and custom incentives.

Through the Multifamily Program, IPL will offer on-site energy assessments to any property owner that is willing to consider and is financially able to pursue recommended improvements. IPL will have a qualified contractor with experience in energy uses, technologies, and energy-system interactions common in multifamily facilities deliver the on-site energy assessments.

While on the site, the energy assessor will install a range of free measures in common areas and tenant units, and will provide energy educational materials and information on energy-efficient behaviors to the property manager or landlord. The energy assessor will also provide a comprehensive energy assessment report that identifies recommended building efficiency upgrades, such as heating and cooling systems, lighting equipment, and building shell measures, and will assist customers to identify qualified installation contractors and to access applicable IPL incentives.

Multifamily customers may be eligible for additional incentives through IPL's Nonresidential Prescriptive Rebates, Residential Prescriptive Rebates, or Custom Rebates programs for applicable projects in qualifying facilities. Customers will work directly with installation contractors to install the recommended measures.

IPL will conduct a competitive solicitation to identify a qualified third-party program implementer to deliver the program. Upon reviewing contractor proposals, IPL may

utilize a single contractor to provide turnkey services, or may implement the program using a combination of existing contractors to deliver services that are similar to those offered in other programs.

3.6.3. Value Proposition

Customers participating in the program receive three main benefits:

1. ***Trustworthy energy-savings recommendations*** from trained energy assessors.
2. ***Immediate savings through the direct installation*** of low-cost lighting, water heating, and other energy-saving measures.
3. ***Significant savings, increased comfort, and increased property values*** through rebates on insulation, lighting, and other efficiency upgrades.

3.6.4. Customer Targets

This program targets property owners and managers in non-low-income multifamily buildings where IPL provides the primary heating fuel. Table 3.49 outlines customer eligibility requirements.

Table 3.49 Customer Eligibility Parameters

	Eligible Customers	
	Electric Measures	Natural Gas Measures
Customer Class	Nonresidential electric	Nonresidential natural gas
Customer Status	Property owner or property manager with owner's approval	Property owner or property manager with owner's approval
Building Type	Multifamily	Multifamily
Building Vintage	Existing and new construction	Existing and new construction
Geography	IPL's Iowa service territory	IPL's Iowa service territory

3.6.5. Trade Ally Targets

The following types of trade allies are the primary participants in IPL's program:

- HVAC Dealers and installers;
- Insulation contractors;
- Home improvement centers;
- Major appliance dealers;
- Lighting Dealers and installers; and
- Mechanical and electrical contractors.

3.6.6. Incentive Structure and Process

For existing buildings, energy assessments and direct install measures will be provided at no cost to the customer by a third-party implementation contractor. Customers wishing to install larger, more costly building efficiency upgrades that were identified in their energy assessment report will be eligible for the same incentives available to both residential and nonresidential customers through IPL's prescriptive and custom programs.¹⁵ Participants will be subject to all rules and participation requirements associated with the applicable residential or nonresidential program; however, the costs and savings associated with larger installations in multifamily buildings will accrue to the Multifamily Program. Instead of cash incentives, customers may opt for low-interest financing via a third-party financier.

¹⁵ Please see: Section 3.1 for a complete description of the Residential Prescriptive Rebates Program; Section 3.11 for a complete description of the Nonresidential Prescriptive Rebates Program; and Section 3.13 for a complete description of the Custom Rebates Program.

3.6.7. Eligible Measures and Incentives

The Multifamily Program energy assessor will provide a free, comprehensive, total property energy assessment, identifying cost-effective energy-efficiency upgrades and direct install measures. The energy assessor will install direct install measures where possible, and may leave additional measures with landlords to install in individual tenant units, as necessary. Table 3.50 provides eligible measures, qualification standards, and incentive levels for this program.

Table 3.50 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Energy Assessment	Walk through	Free to customers
Direct Installation Measures		
Low-Flow Showerheads	≤ 2.0 GPM; Water heating fuel delivered by IPL	Free to customers
Faucet Aerators		
Thermostat – Programmable	Setback thermostat 5-1-1, 5-2, or 7-Day	
Water Heater - Pipe Insulation	R-4; Water heating fuel delivered by IPL	
Water Heater - Tank Insulation	R-13; Water heating fuel delivered by IPL	
Water Heater - Thermostat Setback*	120 degrees; Water heating fuel delivered by IPL	
Lighting – CFL	ENERGY STAR-rated	
Exit Sign – LED	Must replace CFL or incandescent exist sign (maximum 5)	
Retrofits		
Qualifying Residential Prescriptive Measures	Based on assessor's recommendation	See program details in Section 3.1
Qualifying Nonresidential Prescriptive Measures		See program details in Section 3.11
Qualifying Custom Project		See program details in Section 3.13
New Construction		
Design Assistance	DOE-2 building performance simulation modeling	See program details in Section 3.14
Design Team Incentive	N/A	
Construction Incentive	Savings > 15 percent of state energy code	
Advanced Performance Incentive	HERS rating of 60 in tenant units and common areas IECC compliant HVAC measures SAVE certified	See program details in Section 3.5
High Performance Incentive	HERS rating of 55 in tenant units and common areas IECC compliant HVAC measures SAVE certified	

* This is a new measure for this program in the 2014 to 2018 Energy Efficiency Plan.
GPM: gallons per minute

3.6.8. Market Barriers

Table 3.51 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.51 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher initial cost of energy-efficient equipment	Provide free direct installation measures; Offer rebates and financing to building owners; Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment
Lack of customer and dealer awareness	Provide customer marketing and outreach; Provide efficiency and energy usage education; Provide free energy assessments; Provide free design assistance for new construction projects; Promote IPL's average use online tool so customers can look up usage before renting; Promote through other programs; Conduct Dealer and service provider outreach and sales training
Time required to fill out rebate forms	Provide simple rebate forms through a variety of medium (mail-in, online, etc.); Provide customer support to facilitate the program application process
Getting customers to commit to a project	Provide expert, third-party analysis and recommendations; Provide general education and information about operational and behavioral changes that provide ongoing energy savings; Offer financing as an alternative to rebates; Follow up to encourage customers to install recommendations
Split-incentive (i.e., rental property owners own the building but tenants pay energy bills)	Provide free energy assessments and direct installation measures; Provide financial incentives for energy-efficiency upgrades; Educate landlords about the benefits of energy efficiency to their bottom line (e.g., increased property value, improved rentability); Focus on both individual units and common areas
Difficulty reaching decision maker	Provide customer marketing and outreach targeting building owners; Conduct direct outreach to the largest property owners and homeowner's associations; Conduct outreach to equipment trade allies and contractors focused on common multifamily equipment
Variability in building types and configurations	Offer flexible incentive options that allow customers to participate in any applicable program to install any available measure
Limited time to engage in long construction design process	Offer incentives to design team as a compensation for their time; Use a streamlined, efficient, and responsive program process; Help the design team bring added value to their customers

3.6.9. Marketing and Promotion

IPL plans to conduct targeted marketing to multifamily property managers, landlords, and renters to encourage energy efficiency and participation in the program.

The program will be promoted through a variety of channels, such as:

- Advertising targeted to multifamily channels, such as Apartments.com and ApartmentFinder.com;
- Outreach to participating Dealers and contractors who serve the multifamily sector;
- Promotion at events;
- Alliant Energy website; and
- Direct mail targeted to multifamily associations, such as the Iowa Landlords Association (Des Moines) and the Landlords Association of Iowa (Dubuque).

3.6.10. Key Participation Information

Because the Multifamily Program is new as of this Plan, IPL has not defined detailed information on eligibility, measures, incentives, or other participation criteria in the 2009-2013 EEP. IPL will make this detailed information available on January 1, 2014, located at www.alliantenergy.com/multifamily.

Customers seeking new rental properties can access IPL's online Residential Average Energy Use and Cost tool at: www.alliantenergy.com/averageuse.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.6.11. Outside Services

IPL will evaluate the need for a multifamily contractor to implement the program and, if appropriate, will issue a request for proposals. IPL may use its existing

contractors to assist with the delivery of specific program components that are provided under other programs, as outlined in Table 3.52.

Table 3.52 Outside Service Providers

Vendor	Role
A-Tec	Conducts multifamily facility assessments for the Multifamily and Institutional Efficiency Improvements Program
The Weidt Group	Provides design assistance services for the Commercial New Construction Program

3.6.12. Participation

Table 3.53 provides program participation assumptions by program component.

Table 3.53 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Audit	60	60	60	60	60	300
Direct Install Electric Measures	3,622	3,622	3,622	3,622	3,622	18,108
Direct Install Natural Gas Measures	176	176	176	176	176	882
Retrofit General	6	6	7	7	7	33
Total	3,864	3,864	3,865	3,865	3,865	19,323

3.6.13. Energy and Demand Savings

This program is expected to produce 756 MWh of electricity savings and 29,414 therms of natural gas savings over the course of the Plan. Table 3.54 provides energy and demand savings goals.

Table 3.54 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	151,170	151,275	151,385	151,501	151,622	756,952
Peak Demand (kW)	20	20	20	20	20	98
Natural Gas Impacts						
Incremental Annual Energy (therms)	5,883	5,883	5,883	5,883	5,883	29,414
Peak-Day Demand (therms)	57	57	57	57	57	285

3.6.14. Budget

The total budget for the program is estimated at \$786,978. Table 3.55 provides program budget assumptions.

Table 3.55 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$890	\$934	\$981	\$1,030	\$1,081	\$4,915
Administration	\$8,895	\$9,340	\$9,807	\$10,298	\$10,812	\$49,153
Advertising and Promotion	\$6,227	\$6,538	\$6,865	\$7,208	\$7,569	\$34,407
Customer Incentive	\$4,448	\$4,670	\$4,904	\$5,149	\$5,406	\$24,576
Equipment Cost	\$22,429	\$22,429	\$22,429	\$22,429	\$22,429	\$112,143
Installation Cost	\$68,173	\$68,173	\$68,173	\$68,173	\$68,173	\$340,865
Monitoring and Evaluation	\$1,779	\$1,868	\$1,961	\$2,060	\$2,162	\$9,831
Electric Total	\$112,840	\$113,952	\$115,120	\$116,346	\$117,633	\$575,890
Natural Gas Budget						
Planning and Design	\$326	\$342	\$359	\$377	\$396	\$1,802
Administration	\$3,261	\$3,424	\$3,595	\$3,774	\$3,963	\$18,017
Advertising and Promotion	\$2,282	\$2,397	\$2,516	\$2,642	\$2,774	\$12,612
Customer Incentive	\$1,630	\$1,712	\$1,797	\$1,887	\$1,982	\$9,008
Equipment Cost	\$8,221	\$8,221	\$8,221	\$8,221	\$8,221	\$41,105
Installation Cost	\$24,988	\$24,988	\$24,988	\$24,988	\$24,988	\$124,941
Monitoring and Evaluation	\$652	\$685	\$719	\$755	\$793	\$3,603
Natural Gas Total	\$41,361	\$41,768	\$42,196	\$42,646	\$43,117	\$211,088
Total Budget						
Planning and Design	\$1,216	\$1,276	\$1,340	\$1,407	\$1,478	\$6,717
Administration	\$12,156	\$12,764	\$13,402	\$14,072	\$14,776	\$67,170
Advertising and Promotion	\$8,509	\$8,935	\$9,381	\$9,850	\$10,343	\$47,019
Customer Incentive	\$6,078	\$6,382	\$6,701	\$7,036	\$7,388	\$33,585
Equipment Cost	\$30,650	\$30,650	\$30,650	\$30,650	\$30,650	\$153,248
Installation Cost	\$93,161	\$93,161	\$93,161	\$93,161	\$93,161	\$465,806
Monitoring and Evaluation	\$2,431	\$2,553	\$2,680	\$2,814	\$2,955	\$13,434
Total	\$154,201	\$155,720	\$157,316	\$158,991	\$160,750	\$786,978

Table 3.56 provides a forecast of staffing needs and costs for this program.

Table 3.56 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	27	\$33,750	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	45	\$56,250	Marketing and communications support
Total	80	\$100,000	

3.6.15. Cost-Effectiveness Results

A comparison of the program’s costs and life-cycle benefits indicates that the program is not cost-effective from a societal perspective, with an overall B/C ratio of 0.91 to 1. Table 3.57 provides program cost-effectiveness results.

Table 3.57 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$387,291	\$723,359	\$387,291	\$540,737
Costs	\$515,495	\$440,489	\$875,147	\$585,974
Net Benefits	-\$128,204	\$282,870	-\$487,857	-\$45,238
B/C Ratio	0.75	1.64	0.44	0.92
\$/kWh	\$0.111	\$0.108	\$0.188	\$0.100
Natural Gas Program				
Benefits	\$123,374	\$274,884	\$123,374	\$172,485
Costs	\$188,002	\$150,093	\$332,789	\$201,904
Net Benefits	-\$64,627	\$124,791	-\$209,415	-\$29,419
B/C Ratio	0.66	1.83	0.37	0.85
\$/therm	\$1.039	\$0.952	\$1.838	\$0.886
Total Program				
Benefits	\$510,665	\$998,243	\$510,665	\$713,222
Costs	\$703,497	\$590,583	\$1,207,936	\$787,878
Net Benefits	-\$192,832	\$407,661	-\$697,271	-\$74,656
B/C Ratio	0.73	1.69	0.42	0.91

3.7. Weatherization Program

3.7.1. Program Description

The Weatherization Program is a collaborative utility program implemented jointly through the IUA. IPL contributes program funding through the Iowa Department of Human Rights (DHR), which in turn, supports Community Action Program (CAP) agencies to perform energy assessments and purchase and install qualifying energy-efficiency measures in residences occupied by low-income families.

The Weatherization Program is delivered to homeowners and renters whose income level is at or below 200 percent of the federal poverty level (FPL). Homes occupied by the elderly, disabled, and families with children under the age of six are prioritized for weatherization assistance, as are households with high energy usage. The CAP agencies market and deliver the program to low-income customers, and the DHR's Division of Community Action Agencies (DCAA) administers the program.

Key changes to this program in the Plan include:

- No changes are planned at this time.

3.7.2. Operations

The Weatherization Program offers a comprehensive energy audit with installation of cost-effective energy-efficiency upgrades. IPL, through the DHR, contributes funding to the Weatherization Program. Nineteen CAP agencies across the state (and 16 in IPL's service territory) market and deliver the program to low-income customers, which includes verifying customer eligibility, scheduling and conducting energy audits, and

installing qualifying energy-efficiency measures in residences occupied by low-income families. CAP agency energy auditors install a range of low-cost direct installation measures and provide energy education to participants at the time of the energy audit. The DHR administers the program on behalf of the collaborative utilities and IUA, through the DHR's DCAA.

3.7.3. Value Proposition

Customers participating in the program receive three main benefits:

1. ***Trustworthy energy-savings recommendations*** from trained auditors.
2. ***Immediate savings*** through the direct installation of low-cost lighting, water heating, and other energy-saving measures at the time of the audit.
3. ***Significant savings, increased comfort, and increased property values*** through the installation of insulation, lighting, and other efficiency projects recommended by the auditor.

3.7.4. Customer Targets

This program targets customers with a household income at or below 200 percent of the FPL in areas where one of the funding utilities provides the primary heating fuel. Table 3.58 outlines customer eligibility requirements.

Table 3.58 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Residential electric or natural gas
Customer Status	Homeowners and renters (with landlord approval)
Building Type	Single family; Duplex
Building Vintage	All
Geography	Iowa: IPL, MEC, or BHE service territories
Other	households \leq 200 percent of FPL

3.7.5. Trade Ally Targets

Trade ally targets for IPL's low-income programs include CAP agencies and other human services organizations that support and help low-income populations. Additionally, equipment installers and Dealers provide equipment for qualified participants. The following types of trade allies are the primary participants in IPL's program:

- HVAC Dealers and installers;
- Insulation installers;
- Lighting Dealers and installers; and
- Window Dealers and installers.

3.7.6. Incentive Structure and Process

Energy audits and all measures are provided at no cost to customers and are delivered by CAP agencies. IPL provides program funding to the DHR, which distributes funds to CAP agencies in compliance with program rules.

3.7.7. Eligible Measures and Incentives

The program provides a comprehensive home energy audit and the installation of cost-effective energy-efficiency measures, including: wall, attic, and foundation insulation; furnace replacement; refrigerator and freezer replacement and/or removal; water heater replacement; water heater insulation wrap; hot water pipe insulation; low-flow showerheads; faucet aerator replacement; and CFLs. Other services provided that are outside the involvement of the utilities include the evaluation of the health and safety of the home; exhaust ventilation; installation of smoke and carbon monoxide detectors; and some minor home repairs. All measures are free to customers. Upon completion of weatherization work and equipment installation, CAP agencies conduct a final home inspection to ensure quality work.

Table 3.59 provides eligible measures, qualification standards, and incentive levels for this program.

Table 3.59 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Energy Audit	Walk through	Free to customers
Direct Installation Measures		
Low-Flow Showerheads	≤ 2.0 GPM; Water heating fuel delivered by IPL	Free to customers
Faucet Aerators		
Programmable Thermostat	Setback Thermostat 5-1-1, 5-2, or 7- day	
Water Heater - Pipe Insulation	R-4	
Water Heater - Tank Blanket/Insulation	R-13	
Water Heater - Thermostat Setback	120 degrees	
Lighting – CFLs	ENERGY STAR rated	
Retrofits		
Energy-Efficiency Upgrades	Any eligible measure* based on auditor recommendation	Free to customers

* As dictated by the IPL's contract with the Iowa DHR.

GPM: gallons per minute

3.7.8. Market Barriers

Table 3.60 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.60 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher first cost of energy-efficient equipment	Provide free weatherization and equipment measures; Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment
Lack of customer awareness	Provide customer marketing and outreach; Provide efficiency and energy usage education; Provide free energy audits
Customers reluctant to ask for help	Work through CAP agencies, which have existing relationships with customers; Provide discrete program qualification and implementation process

3.7.9. Marketing and Promotion

CAP agencies lead marketing for the Weatherization Program.

3.7.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/weatherization.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.7.11. Outside Services

There are 19 CAP agencies that provide Weatherization Program services in Iowa; 16 serve IPL's customers. Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.61.

Table 3.61 Outside Service Providers

Vendor	Role
CAPs	Marketing and program delivery
DHR	Program administration on behalf of the collaborative utilities and IUA

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.7.12. Participation

Table 3.62 provides program participation assumptions in terms of the number of homes addressed by the program.

Table 3.62 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Electric Home	1,354	1,354	1,354	1,354	1,354	6,770
Gas Home	684	684	684	684	684	3,420
Total	2,038	2,038	2,038	2,038	2,038	10,190

3.7.13. Energy and Demand Savings

This program is expected to produce 11,847 MWh of electricity savings and 1,098,226 therms of natural gas savings over the course of the Plan. This program accounts for 2 percent of electricity savings and 10 percent of natural gas savings in the energy-efficiency portfolio. Table 3.63 provides energy and demand savings goals.

Table 3.63 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	2,369,593	2,369,593	2,369,593	2,369,593	2,369,593	11,847,963
Peak Demand (kW)	442	442	442	442	442	2,209
Natural Gas Impacts						
Incremental Annual Energy (therms)	219,645	219,645	219,645	219,645	219,645	1,098,226
Peak-Day Demand (therms)	3,192	3,192	3,192	3,192	3,192	15,959

3.7.14. Budget

The total budget for the program is estimated at \$16 million. Table 3.64 provides program budget assumptions.

Table 3.64 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$186,296	\$186,296	\$186,296	\$186,296	\$186,296	\$931,480
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$417,536	\$417,536	\$417,536	\$417,536	\$417,536	\$2,087,679
Installation Cost	\$62,390	\$62,390	\$62,390	\$62,390	\$62,390	\$311,952
Monitoring and Evaluation	\$2,588	\$2,588	\$2,588	\$2,588	\$2,588	\$12,938
Electric Total	\$668,810	\$668,810	\$668,810	\$668,810	\$668,810	\$3,344,048
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$713,674	\$713,674	\$713,674	\$713,674	\$713,674	\$3,568,370
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$1,599,521	\$1,599,521	\$1,599,521	\$1,599,521	\$1,599,521	\$7,997,607
Installation Cost	\$239,009	\$239,009	\$239,009	\$239,009	\$239,009	\$1,195,045
Monitoring and Evaluation	\$9,912	\$9,912	\$9,912	\$9,912	\$9,912	\$49,562
Natural Gas Total	\$2,562,117	\$2,562,117	\$2,562,117	\$2,562,117	\$2,562,117	\$12,810,584
Total Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$899,970	\$899,970	\$899,970	\$899,970	\$899,970	\$4,499,849
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$2,017,057	\$2,017,057	\$2,017,057	\$2,017,057	\$2,017,057	\$10,085,286
Installation Cost	\$301,399	\$301,399	\$301,399	\$301,399	\$301,399	\$1,506,997
Monitoring and Evaluation	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$62,500
Total	\$3,230,926	\$3,230,926	\$3,230,926	\$3,230,926	\$3,230,926	\$16,154,632

Table 3.65 provides a forecast of staffing needs and costs for this program.

Table 3.65 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	2.25	\$2,813	Program-specific management
Energy Efficiency Programs Management	2	\$2,500	Overall Plan and portfolio management
Analyst	4	\$5,000	
Total	8.25	\$10,313	

3.7.15. Cost-Effectiveness Results

A comparison of the program’s costs and life-cycle benefits indicates that the program is cost-effective from a societal perspective, with an overall B/C ratio of 1.81 to 1. The program’s costs are also justified by its benefits from the participant and utility points of view. Table 3.66 provides program cost-effectiveness results.

Table 3.66 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$11,091,024	\$9,332,758	\$11,091,024	\$16,715,273
Costs	\$2,982,946	\$2,067,558	\$11,732,732	\$3,201,122
Net Benefits	\$8,108,078	\$7,265,200	-\$641,708	\$13,514,150
B/C Ratio	3.72	4.51	0.95	5.22
\$/kWh	\$0.029	\$0.024	\$0.113	\$0.023
Natural Gas Program				
Benefits	\$7,150,442	\$14,924,117	\$7,150,442	\$11,316,328
Costs	\$11,427,251	\$7,920,528	\$20,194,070	\$12,263,055
Net Benefits	\$4,276,809	\$7,003,590	-\$13,043,628	-\$946,726
B/C Ratio	0.63	1.88	0.35	0.92
\$/therm	\$1.086	\$0.923	\$1.919	\$0.817
Total Program				
Benefits	\$18,241,466	\$24,256,875	\$18,241,466	\$28,031,601
Costs	\$14,410,196	\$9,988,086	\$31,926,801	\$15,464,177
Net Benefits	\$3,831,269	\$14,268,789	-\$13,685,336	\$12,567,424
B/C Ratio	1.27	2.43	0.57	1.81

3.8. EnergyWise Education Program

3.8.1. Program Description

The EnergyWise Education Program is implemented jointly by IPL, BHE, and MEC through the IUA. The objective of this adult energy education initiative is to increase energy awareness among low-income customers, thus improving efficiency and reducing their energy expenditures. Local CAP agencies provide energy education workshops for participating households. Participants receive a free kit containing multiple low-cost, easy-to-install energy-efficiency measures and a survey about participants' experience with the program.

The program is offered free-of-charge to eligible households with incomes at or below 200 percent of the FPL. Participants may be renters or homeowners.

Key changes to this program in the Plan include:

- Adding new measures to the EnergyWise kits: one additional 13-watt CFL and a window film kit;
- CAP agencies performing one-on-one consultations with customers who are not able to attend group training; and
- Adjusting program income qualification each year of the Plan to match CAP agencies' FPL limits for existing low-income weatherization programs.

3.8.2. Operations

Nineteen CAP agencies across the state deliver the EnergyWise Education Program to low-income qualified participants, with 16 agencies active in IPL's service territory. CAP agencies qualify the income eligibility of low-income customers seeking energy assistance, and then invite eligible customers to an energy-efficiency group workshop session. When customers attend the one-hour training, they receive energy-saving tips and information, as well as kits containing several low-cost, easy-to-install energy-efficiency measures. CAP agencies ask customers to fill out and return a survey, which includes questions on the measures installed and feedback on the program. CAP agencies collect completed surveys from program participants and provide them to IPL's program vendor for tracking and reporting purposes. IPL provides a \$10 incentive to the CAP agencies for each completed survey submitted.

If customers seeking energy assistance are not able to attend the group training session, CAP agency staff will provide them with one-on-one training and provide a kit.

A third-party vendor develops the EnergyWise workshop curriculum, trains CAP agency staff to lead energy-efficiency workshops, provides energy-saving kits to the CAP agencies, collects the surveys, and reports the results to IPL.

3.8.3. Value Proposition

Customers participating in the program receive three main benefits:

1. Participants ***receive trustworthy energy-savings tips and information*** from credible sources.

2. Participants gain **immediate savings** when they install high-efficiency lighting, water-savings measures (which provide indirect energy savings), and other energy-saving measures from their kit.
3. Participants expand their **energy-efficiency knowledge** and awareness.

3.8.4. Customer Targets

This program targets customers at or below 200 percent of the FPL in areas where one of the funding utilities provides the primary heating fuel. Table 3.67 outlines customer eligibility requirements.

Table 3.67 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Residential electric or natural gas
Customer Status	Homeowners and renters
Building Type	All
Building Vintage	All
Geography	IPL, MEC, or BHE service territory
Other	Households \geq 200 percent of FPL

3.8.5. Trade Ally Targets

Trade ally targets for IPL's low-income programs include CAP agencies and other human services organizations that support and help low-income populations.

3.8.6. Incentive Structure and Process

The CAP agencies provide kits and energy-saving workshops at no cost to customers. Short surveys are included in the kits, which customers fill out and return by mail to the CAP agencies. The CAP agencies then forward completed surveys to IPL's

program vendor, which tabulates survey responses and reports the results to IPL. IPL provides a \$10 incentive to the CAP agencies for each completed survey submitted. Payment to CAP agencies is coordinated through the IUA.

3.8.7. Eligible Measures and Incentives

All measures in the EnergyWise Education Program are provided free to customers. The utilities offer an incentive of \$10 to CAP agencies for each survey they return. Table 3.68 provides eligible measures, qualification standards, and incentive levels for the measures in the kits.

Table 3.68 Incentive Summary

Program/Measure	Qualification	Incentive
CFL 14 watt	ENERGY STAR	Free to customers
CFL 18 watt		
CFL 13 watt		
Showerhead	2.0 GPM	
Kitchen Faucet Aerator		
Bathroom Faucet Aerator	1.3 GPM	
Air Filter Alarm		
Roll of Rope Caulk		
Digital Thermometer		
Water Flow Measurement Bag		
Window Film Kit		

GPM: gallons per minute

3.8.8. Market Barriers

Table 3.69 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.69 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher initial cost of energy-efficient equipment	Provide free low-cost measures through EnergyWise kits; Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment
Lack of customer awareness	Provide customer marketing and outreach through CAP agencies; Provide efficiency and energy usage education
Customers reluctant to ask for help	Work with CAP agencies, which have existing relationships with customers; Provide discrete program qualification and implementation process
Low survey return rate	Offer a \$10 incentive to CAP agencies for returning surveys
Some CAP staff are not knowledgeable about energy efficiency, so workshops are not effective	Identify a small number of knowledgeable, interested staff at each CAP agency to receive in-depth energy-efficiency training and designate those individuals as the customer training providers
Customers may be reluctant to share income status by attending a group meeting	CAP agencies offer one-on-one educational sessions as an option for customers who prefer not to attend workshops

3.8.9. Marketing and Promotion

CAP agencies lead marketing for the EnergyWise Education Program. Program details are presented at designated meetings and community gatherings. A grassroots, word-of-mouth effort also plays an important role in reaching appropriate customers, in which past participants share their experiences with others and direct them to CAP agencies for more information.

3.8.10. Key Participation Information

Not applicable.

3.8.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.70.

Table 3.70 Outside Service Providers

Vendor	Role
CAP Agencies	Income qualification, provide one-one-one and group energy-efficiency education, collect customer surveys
The Cadmus Group, Inc.	Train CAP agency staff to conduct workshops, collect and tabulate survey results, report results to IPL, process CAP survey incentives
Resource Action Programs	Construct kits and distribute to CAP agencies
Iowa Utilities Association	Coordinate the IOUs contract and payments

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.8.12. Participation

Table 3.71 provides program participation assumptions in terms of the number of kits distributed by the program.

Table 3.71 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Energy Wise Kit	1,350	1,364	1,377	1,391	1,405	6,886

3.8.13. Energy and Demand Savings

This program is expected to produce 4,364 MWh of electricity savings and 141,170 therms of natural gas savings over the course of the Plan. This program accounts for 0.57 percent of electricity savings and 1.32 percent of natural gas savings in the energy-efficiency portfolio. Table 3.72 provides energy and demand savings goals.

Table 3.72 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	855,536	864,091	872,732	881,459	890,274	4,364,091
Peak Demand (kW)	160	161	163	164	166	814
Natural Gas Impacts						
Incremental Annual Energy (therms)	27,675	27,952	28,231	28,514	28,799	141,170
Peak-Day Demand (therms)	74	74	75	76	77	376

3.8.14. Budget

The total budget for the program is estimated at \$467,677. Table 3.73 provides program budget assumptions.

Table 3.73 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$1,403	\$1,417	\$1,431	\$1,445	\$1,460	\$7,155
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$45,351	\$45,822	\$46,259	\$46,729	\$47,199	\$231,360
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Electric Total	\$46,754	\$47,239	\$47,689	\$48,174	\$48,659	\$238,515
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$1,348	\$1,362	\$1,375	\$1,389	\$1,403	\$6,875
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$43,573	\$44,025	\$44,444	\$44,896	\$45,348	\$222,287
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$44,921	\$45,386	\$45,819	\$46,285	\$46,751	\$229,162
Total Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$2,750	\$2,779	\$2,805	\$2,834	\$2,862	\$14,030
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$88,925	\$89,847	\$90,703	\$91,625	\$92,547	\$453,647
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$91,675	\$92,625	\$93,508	\$94,459	\$95,410	\$467,677

Table 3.74 provides a forecast of staffing needs and costs for this program.

Table 3.74 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	2.25	\$2,813	Program-specific management
Energy Efficiency Programs Management	2	\$2,500	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Total	8.25	\$10,313	

3.8.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that both the electric and natural gas components of the program are cost-effective from a societal perspective, with an overall program B/C ratio of 6.41 to 1. The program's costs are also justified by its benefits from the participant and utility points of view. Table 3.75 provides program cost-effectiveness results.

Table 3.75 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$1,930,640	\$1,588,611	\$1,930,640	\$2,498,133
Costs	\$214,310	\$199,037	\$1,750,324	\$230,228
Net Benefits	\$1,716,330	\$1,389,574	\$180,316	\$2,267,906
B/C Ratio	9.01	7.98	1.10	10.85
\$/kWh	\$0.011	\$0.011	\$0.086	\$0.010
Natural Gas Program				
Benefits	\$313,933	\$589,230	\$313,933	\$396,151
Costs	\$205,906	\$191,231	\$645,507	\$221,199
Net Benefits	\$108,027	\$397,998	-\$331,573	\$174,952
B/C Ratio	1.52	3.08	0.49	1.79
\$/therm	\$0.332	\$0.34	\$1.041	\$0.305
Total Program				
Benefits	\$2,244,574	\$2,177,841	\$2,244,574	\$2,894,285
Costs	\$420,216	\$390,268	\$2,395,831	\$451,427
Net Benefits	\$1,824,357	\$1,787,572	-\$151,257	\$2,442,858
B/C Ratio	5.34	5.58	0.94	6.41

3.9. Low-Income Multifamily and Institutional Efficiency Improvements Program

3.9.1. Program Description

Through its Multifamily and Institutional Efficiency Improvements (MIEI) Program, IPL provides funding to support energy-efficiency improvements in eligible multifamily properties and institutional facilities where low-income customers reside. MIEI includes two components:

1. A free assessment with direct installation of low-cost energy-efficiency measures for both tenant units and common areas; and
2. Enhanced prescriptive rebates for multifamily buildings that meet Section 8¹⁶ housing qualifications.

Key changes to this program in the Plan include:

- No changes are planned at this time.

3.9.2. Operations

The MIEI Program targets property owners in existing multifamily and institutional buildings that qualify for Section 8 housing subsidies. IPL administers and implements the program with support from a program contractor. IPL also coordinates this program with MEC, BHE, and the IUA.

¹⁶ Defined as housing with four or more units where a minimum of 60 percent of residents meet federal qualifications for receiving low-income assistance.

The program contractor recruits potential property owners who are willing to consider and are financially able to pursue the recommended improvements. The Iowa Finance Authority (IFA) may also provide referrals to the program contractor.

The contractor schedules and conducts a total-property energy assessment, installs free energy-efficiency measures, and provides a comprehensive assessment report identifying cost-effective energy-efficiency upgrades in both tenant units and common spaces. The contractor also matches their recommendations to available utility incentives, grants, and/or tax incentives to help property owners fund the improvements.

Once an assessment is completed, customers work directly with their installation contractors to install the recommended measures. IPL's program funding covers approximately 40 percent of installed measure costs and customers are responsible for the remaining 60 percent of the total cost.

3.9.3. Value Proposition

Customers participating in the program receive three main benefits:

1. ***Trustworthy energy-savings recommendations*** from trained assessors.
2. ***Immediate savings*** through the direct installation of low-cost lighting, water heating, and other energy-saving measures.
3. ***Significant savings, increased comfort, and increased property values*** through rebates on insulation, lighting, and other efficiency projects.

3.9.4. Customer Targets

The MIEI Program targets multifamily property owners in Section 8 housing and institutional housing such as shelters, prisons, and halfway houses, where IPL provides the primary heating fuel. Table 3.76 outlines customer eligibility requirements.

Table 3.76 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Residential and nonresidential electric and natural gas where IPL provides the primary heating fuel
Customer Status	Property owner
Building Type	Multifamily; Institutional
Building Vintage	All
Geography	IPL's Iowa service territory
Other	Building meets Section 8 housing qualifications

3.9.5. Trade Ally Targets

The following types of trade allies are the primary participants in IPL's program:

- CAP agencies and other human services organizations that support and help low-income populations;
- IFA; and
- Equipment contractors who are qualified to provide services to multifamily properties, such as:
 - HVAC Dealers and installers;
 - Insulation contractors; and
 - Lighting Dealers and installers.

3.9.6. Incentive Structure and Process

IPL provides energy assessments and direct install measures at no cost to the customer. Following measure installation, customers submit a program application and documentation of the equipment purchase to IPL's rebate processing center. IPL's program contractor conducts verification site visits to ensure that all equipment upgrades were installed properly prior to IPL issuing program incentives.

3.9.7. Eligible Measures and Incentives

The program offers a comprehensive energy assessment and direct install measures at no cost to customers. IPL determines incentives on a per-measure basis; however, the total utility incentive for each project is targeted to be 40 percent of the total cost of upgrades. Table 3.77 provides eligible measures, qualification standards, and incentive levels for each component of this program.

Table 3.77 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Energy Assessment	Walk through	Free to customers
Direct Installation Measures		
Low-Flow Showerheads	≤ 2.0 GPM; Water heating fuel delivered by IPL	Free to customers
Faucet Aerators		
Thermostat - Programmable	5-1-1, 5-2, or 7-Day	
Water Heater - Pipe Insulation	R-4; Water heating fuel delivered by IPL	
Water Heater - Tank Blanket/Insulation	R-13; Water heating fuel delivered by IPL	
Water Heater - Thermostat Setback*	120 °F; Water heating fuel delivered by IPL	
Lighting – CFLs	ENERGY STAR-rated	
Exit Sign – LED	Must replace CFL or incandescent exist sign (maximum 5)	
Retrofits		
Energy-efficiency upgrades	Based on assessor recommendation	Incentive paid up to 40 percent of total project cost

* This is a new measure for this program in the Plan.
GPM: gallons per minute

3.9.8. Market Barriers

Table 3.78 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.78 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher initial cost of energy-efficient equipment and customers' limited investment capacity	Provide free direct install measures; Offer enhanced rebates for building owners; Educate customers on the long-term energy cost-saving benefits of higher-efficiency equipment
Lack of customer awareness	Provide customer marketing and outreach; Provide efficiency and energy usage education; Provide free energy assessments; Conduct Dealer and service provider outreach sales training
Customers are reluctant to ask for help/ Customers are hard to identify	Provide a discrete program qualification and implementation process; Explore new ways to reach customer targets through nonprofit groups; Increase outreach to institutional facilities such as halfway houses, assisted living, etc.
Split incentive barrier	Target more customers for whom split incentives are not an issue (e.g., nonprofits who own buildings and pay utilities); Provide free energy assessments and direct installation measures; Provide financial incentives for energy-efficiency upgrades
Persuading customers to commit to a project and pay their share of the cost	Identify grants, tax incentives, and other potential financial support mechanisms to supplement utility incentives; Educate customers on the long-term benefits of energy efficiency

3.9.9. Marketing and Promotion

IPL markets the MIEI Program directly to multifamily property managers, landlords, and renters in Section 8 housing, as well as to health and human services agencies and nonprofit organizations that own and/or manage eligible institutional housing facilities. IPL's program contractor leads marketing with assistance from the IFA, who provides referrals to eligible properties. IPL also promotes their low-income programs to CAP

agencies. IPL will work with MEC, BHE, and the IUA to coordinate joint marketing and promotion.

3.9.10. Key Participation Information

Marketing materials detailing information on eligibility, measures, and other participation criteria are currently being developed and will be available on IPL's customer website on January 1, 2014.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.9.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.79.

Table 3.79 Outside Service Providers

Vendor	Role
The Energy Group	Leads marketing and administers the program, provides multifamily facility audits and conducts verification services.

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.9.12. Participation

Table 3.80 provides program participation assumptions by program component.

Table 3.80 Participation Assumptions

	2014	2015	2016	2017	2018
Audit	40	40	40	40	40
Direct Install Electric Measures	2,414	2,414	2,414	2,414	2,414
Direct Install Natural Gas Measures	118	118	118	118	118
Section 8 Retrofits	4	4	4	4	4
Total	2,576	2,576	2,576	2,576	2,576

3.9.13. Energy and Demand Savings

This program is expected to produce 504 MWh of electricity and 19,609 therms of natural gas savings. Table 3.81 provides energy and demand savings goals.

Table 3.81 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	100,780	100,780	100,780	100,780	100,780	503,899
Peak Demand (kW)	13	13	13	13	13	65
Natural Gas Impacts						
Incremental Annual Energy (therms)	3,922	3,922	3,922	3,922	3,922	19,609
Peak-Day Demand (therms)	19	19	19	19	19	93

3.9.14. Budget

The total budget for the program is estimated at \$469,431. Table 3.82 provides program budget assumptions.

Table 3.82 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$501	\$501	\$501	\$501	\$501	\$2,503
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$3,753	\$3,753	\$3,753	\$3,753	\$3,753	\$18,763
Equipment Cost	\$15,018	\$15,018	\$15,018	\$15,018	\$15,018	\$75,091
Installation Cost	\$45,649	\$45,649	\$45,649	\$45,649	\$45,649	\$228,245
Monitoring and Evaluation	\$4,086	\$4,086	\$4,086	\$4,086	\$4,086	\$20,429
Electric Total	\$69,006	\$69,006	\$69,006	\$69,006	\$69,006	\$345,031
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$180	\$180	\$180	\$180	\$180	\$902
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$1,353	\$1,353	\$1,353	\$1,353	\$1,353	\$6,765
Equipment Cost	\$5,415	\$5,415	\$5,415	\$5,415	\$5,415	\$27,074
Installation Cost	\$16,459	\$16,459	\$16,459	\$16,459	\$16,459	\$82,293
Monitoring and Evaluation	\$1,473	\$1,473	\$1,473	\$1,473	\$1,473	\$7,366
Natural Gas Total	\$24,880	\$24,880	\$24,880	\$24,880	\$24,880	\$124,400
Total Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$681	\$681	\$681	\$681	\$681	\$3,405
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$5,106	\$5,106	\$5,106	\$5,106	\$5,106	\$25,528
Equipment Cost	\$20,433	\$20,433	\$20,433	\$20,433	\$20,433	\$102,165
Installation Cost	\$62,108	\$62,108	\$62,108	\$62,108	\$62,108	\$310,538
Monitoring and Evaluation	\$5,559	\$5,559	\$5,559	\$5,559	\$5,559	\$27,795
Total	\$93,886	\$93,886	\$93,886	\$93,886	\$93,886	\$469,431

Table 3.83 provides a forecast of staffing needs and costs for this program.

Table 3.83 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	9	\$11,250	Program-specific management
Energy Efficiency Programs Management	2	\$2,500	Overall Plan and portfolio management
Analyst	4	\$5,000	
Total	15	\$18,750	

3.9.15. Cost-Effectiveness Results

A comparison of the program’s costs and life-cycle benefits indicates the overall program is cost effective from a societal perspective, with a B/C ratio of 1.01 to 1. Table 3.84 provides program cost-effectiveness results.

Table 3.84 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$256,532	\$484,656	\$256,532	\$357,900
Costs	\$309,980	\$290,442	\$549,114	\$347,234
Net Benefits	-\$53,448	\$194,215	-\$292,582	\$10,667
B/C Ratio	0.83	1.67	0.47	1.03
\$/kWh	\$0.100	\$0.107	\$0.177	\$0.089
Natural Gas Program				
Benefits	\$82,249	\$183,256	\$82,249	\$114,990
Costs	\$111,762	\$100,062	\$208,287	\$119,971
Net Benefits	-\$29,513	\$83,194	-\$126,037	-\$4,981
B/C Ratio	0.74	1.83	0.39	0.96
\$/therm	\$0.926	\$0.952	\$1.726	\$0.790
Total Program				
Benefits	\$338,781	\$667,912	\$338,781	\$472,890
Costs	\$421,742	\$390,504	\$757,401	\$467,205
Net Benefits	-\$82,960	\$277,408	-\$418,620	\$5,685
B/C Ratio	0.80	1.71	0.45	1.01

3.10. Home Energy Savers Program

3.10.1. Program Description

Initially launched in 2010 as a pilot in two communities called the Targeted Residential Energy Efficiency Opportunity, the HES Program is IPL's newest offering to support limited-income customers. Through the program, IPL extends weatherization services to limited-income customers who receive their heating fuel from IPL by raising the program income eligibility threshold. The program is intended to encourage energy-efficient practices in the homes of limited-income customers, defined as households with incomes that are 50 percent to 100 percent above the current limit associated with federal weatherization assistance guidelines. HES is marketed and delivered to these limited-income customers by CAP agencies.

Key changes to this program in the Plan include:

- Expanding the program from two pilot communities to IPL's entire service territory; and
- Identifying a third-party administrator to manage program operations and work with CAP agencies across IPL's service territory.

3.10.2. Operations

IPL offers this program with the support of CAP agencies that deliver the program in conjunction with the federal weatherization program. CAP agencies first screen potential program participants to ensure they meet the program income qualifications. The CAP agencies then schedule and conduct energy audits and install qualifying

energy-efficiency measures in residences occupied by limited-income families. CAP agency energy auditors install a range of low-cost direct installation measures, provide energy education to participants, and may recommend additional efficient equipment or weatherization retrofits at the time of the energy audit.

3.10.3. Value Proposition

Customers participating in the program receive three main benefits:

1. **Trustworthy energy-savings recommendations** from trained auditors.
2. **Expanded energy-efficiency knowledge** through the educational component of the energy audit.
3. **Significant energy cost savings, increased home comfort, and increased property values** through free, direct installation of low-cost efficiency measures and the significantly reduced cost of efficient equipment and weatherization measures.

3.10.4. Customer Targets

HES targets limited-income customers, who are ineligible for traditional federal energy assistance programs. Table 3.85 outlines customer eligibility requirements.

Table 3.85 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Residential electric or natural gas
Customer Status	Homeowners
Building Type	Single family
Building Vintage	All
Geography	IPL's Iowa service territory
Other	IPL must provide heating fuel; Limited income customers

3.10.5. Trade Ally Targets

The trade ally targets for IPL's low-income programs include CAP agencies and other human services organizations that support low-income populations. Additionally, IPL leverages qualified equipment installers, as well as equipment dealers to help promote and deliver the program. The following types of trade allies are the primary participants in IPL's program:

- HVAC participating Dealers and installers;
- Insulation installers;
- Lighting participating Dealers and installers; and
- Window participating Dealers and installers.

3.10.6. Incentive Structure and Process

IPL pays the costs of all program measures and services directly to the CAP agencies. The customer pays their CAP agency for any costs for energy-efficiency upgrades beyond those covered by IPL. The remaining customer payment for project costs may be a significant barrier to program participation. Therefore, CAP agencies provide financial counseling to help customers determine the viability of the project and develop budgets and payment arrangements.

Income qualifications for this program are set at between 50 percent and 100 percent above the FPL qualification for weatherization assistance.¹⁷ IPL will review the participation and budget allocations for this program annually, and may adjust income guidelines for the program as a way to manage program saturation.

¹⁷ The current income qualification for weatherization assistance is 200 percent of FPL.

3.10.7. Eligible Measures and Incentives

IPL pays the full cost for audits and direct installation measures, and covers 90 percent of the installed cost of energy-efficiency measures recommended by CAP agency energy auditors. Eligible measures include wall, attic, and foundation insulation; furnace replacement; refrigerator and freezer replacement and/or removal; water heater replacement; water heater insulation wrap; pipe insulation; low-flow showerheads; faucet aerator replacement; and CFLs. CAP agencies may also evaluate the health and safety of the home,¹⁸ install smoke and carbon monoxide detectors, and perform minor home repairs. Upon completion of the weatherization work and equipment installation, the CAP agency conducts a final home inspection to ensure quality work.

Table 3.86 provides eligible measures, qualification standards, and incentive levels for each program component and equipment included in this program.

Table 3.86 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Energy Audit	Walk through	Free to customers
Direct Installation Measures		
Low-Flow Showerheads	≤ 2.0 GPM; Water heating fuel delivered by IPL	Free to customers
Faucet Aerators		
Programmable Thermostat	Setback thermostat 5-1-1, 5-2, or 7-Day	
Water Heater - Pipe Insulation	R-4; Water heating fuel delivered by IPL	
Water Heater - Tank Blanket/Insulation	R-13; Water heating fuel delivered by IPL	
Water Heater - Thermostat Setback*	120 degrees; Water heating fuel delivered by IPL	
Lighting – CFL	ENERGY STAR rated	
Retrofits		
Energy-efficiency upgrades	Any available measure, based on auditor recommendation	90 percent of measure cost

* This is a new measure for this program in the Plan.
GPM: gallons per minute

¹⁸ Health and safety services are supported with non-utility funds.

3.10.8. Market Barriers

Table 3.87 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially offset the identified barriers.

Table 3.87 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher initial cost of energy-efficient equipment	Provide subsidies to significantly reduce the cost of equipment measures; Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment
Lack of customer awareness	Provide customer marketing and outreach
Customers reluctant to ask for help	Work through local CAP agencies, who have the ability to identify qualifying customers; Provide discrete program qualification and implementation process; Promote the program through other initiatives CAP agencies are involved with
Customers have trouble paying 10 percent of equipment cost	CAP agencies provide financial counseling to help customers budget equipment costs

3.10.9. Marketing and Promotion

Because HES customers fall outside the formal definition of low income, the program's limited-income target customers may be difficult to identify. For that reason, IPL coordinates closely with CAP agencies to market the program directly to those limited-income customers. This grassroots, word-of-mouth effort has an important role in reaching appropriate customers.

3.10.10. Key Participation Information

Marketing materials detailing information on eligibility, measures, and other participation criteria are currently being developed and will be available on IPL's customer website prior to launching the Plan.

3.10.11. Outside Services

IPL works with CAP agencies and/or a program administrator to market and deliver this program throughout IPL's service territory.

3.10.12. Participation

Table 3.88 provides program participation assumptions in terms of the number of homes in the program.

Table 3.88 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Homes	40	44	48	53	58	243

3.10.13. Energy and Demand Savings

This program is expected to produce 445 MWh of electricity savings and 129,943 therms of natural gas savings over the course of the Plan. Table 3.89 provides energy and demand savings goals.

Table 3.89 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	73,293	80,623	87,952	97,114	106,276	445,258
Peak Demand (kW)	14	15	16	18	20	83
Natural Gas Impacts						
Incremental Annual Energy (therms)	21,390	23,529	25,668	28,341	31,015	129,943
Peak-Day Demand (therms)	57	63	68	76	83	346

3.10.14. Budget

The total budget for the program is estimated at \$2.4 million. Table 3.90 provides program budget assumptions.

Table 3.90 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$403	\$443	\$483	\$533	\$584	\$2,445
Administration	\$5,233	\$5,756	\$6,279	\$6,933	\$7,587	\$31,787
Advertising and Promotion	\$1,610	\$1,771	\$1,932	\$2,133	\$2,335	\$9,781
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$15,120	\$16,632	\$18,144	\$20,034	\$21,924	\$91,854
Installation Cost	\$12,880	\$14,168	\$15,456	\$17,066	\$18,676	\$78,246
Monitoring and Evaluation	\$5,233	\$5,756	\$6,279	\$6,933	\$7,587	\$31,787
Electric Total	\$40,478	\$44,525	\$48,573	\$53,633	\$58,692	\$245,901
Natural Gas Budget						
Planning and Design	\$3,623	\$3,985	\$4,347	\$4,800	\$5,253	\$22,007
Administration	\$47,093	\$51,802	\$56,511	\$62,398	\$68,284	\$286,087
Advertising and Promotion	\$14,490	\$15,939	\$17,388	\$19,199	\$21,011	\$88,027
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$136,080	\$149,688	\$163,296	\$180,306	\$197,316	\$826,686
Installation Cost	\$115,920	\$127,512	\$139,104	\$153,594	\$168,084	\$704,214
Monitoring and Evaluation	\$47,093	\$51,802	\$56,511	\$62,398	\$68,284	\$286,087
Natural Gas Total	\$364,298	\$400,727	\$437,157	\$482,694	\$528,231	\$2,213,107
Total Budget						
Planning and Design	\$4,025	\$4,428	\$4,830	\$5,333	\$5,836	\$24,452
Administration	\$52,325	\$57,558	\$62,790	\$69,331	\$75,871	\$317,874
Advertising and Promotion	\$16,100	\$17,710	\$19,320	\$21,333	\$23,345	\$97,808
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$151,200	\$166,320	\$181,440	\$200,340	\$219,240	\$918,540
Installation Cost	\$128,800	\$141,680	\$154,560	\$170,660	\$186,760	\$782,460
Monitoring and Evaluation	\$52,325	\$57,558	\$62,790	\$69,331	\$75,871	\$317,874
Total	\$404,775	\$445,253	\$485,730	\$536,327	\$586,924	\$2,459,008

Table 3.91 provides a forecast of staffing needs and costs for this program.

Table 3.91 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	6.75	\$8,438	Program-specific management
Energy Efficiency Programs Management	2	\$2,500	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	11.25	\$14,063	Marketing and communications support
Total	24	\$30,000	

3.10.15. Cost-Effectiveness Results

A comparison of the program’s costs and life-cycle benefits indicates that only the electric component of the program is cost-effective from a societal perspective. The overall program B/C ratio is 0.60 to 1. Table 3.92 provides program cost-effectiveness results.

Table 3.92 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$413,790	\$414,191	\$413,790	\$627,847
Costs	\$216,764	\$160,010	\$543,025	\$251,834
Net Benefits	\$197,026	\$254,181	-\$129,235	\$376,013
B/C Ratio	1.91	2.59	0.76	2.49
\$/kWh	\$0.056	\$0.050	\$0.141	\$0.049
Natural Gas Program				
Benefits	\$595,057	\$1,992,340	\$595,057	\$878,489
Costs	\$1,950,858	\$1,440,087	\$2,787,104	\$2,266,494
Net Benefits	-\$1,355,801	\$552,253	-\$2,192,048	-\$1,388,006
B/C Ratio	0.31	1.38	0.21	0.39
\$/therm	\$1.835	\$1.617	\$2.622	\$1.583
Total Program				
Benefits	\$1,008,846	\$2,406,531	\$1,008,846	\$1,506,336
Costs	\$2,167,621	\$1,600,097	\$3,330,129	\$2,518,329
Net Benefits	-\$1,158,775	\$806,434	-\$2,321,283	-\$1,011,993
B/C Ratio	0.47	1.50	0.30	0.60

3.11. Nonresidential Prescriptive Rebates Program

3.11.1. Program Description

IPL's prescriptive rebate programs generate significant energy savings and are among its most popular programs with customers. The Nonresidential Prescriptive Rebates Program features a simple participation process and significant incentives on a range of energy-efficiency measures for IPL's nonresidential customers. Through this program, IPL offers prescriptive rebates to encourage nonresidential customers to purchase high-efficiency electric and natural gas equipment and adopt energy-efficient behaviors. Although the program is available to all nonresidential customers, the program's focus is to provide simple solutions for the non-managed, small business customer group, which is commonly identified as the customer segment that is most difficult to reach.

Nonresidential IPL customers who purchase qualifying commercial equipment and appliances receive prescriptive rebates in the form of a check. IPL also offers incentive checks to Dealers who sell or install high-efficiency electric or natural gas equipment. To help mitigate the potential effects of first costs as a barrier to program participation, IPL offers low-interest financing to eligible customers on qualifying, energy-saving equipment and measures. Customers must choose between receiving the incentive or the low-interest loan.

Key changes to this program in the Plan include:

- Adding prescriptive incentives for new measures, such as anti-sweat heater controls, bi-level lighting controls, new hospitality industry measures (e.g., broiler, hotel key card activated systems), chiller pipe insulation, scroll compressor, drain water heat recovery, duct repair and sealing, and HVAC equipment tune-ups.
- Eliminating measures that are not cost-effective and/or do not offer sufficient economic potential to justify budget expenditures, for example refrigerated case lighting, cooling towers, and water heater tank and pipe insulation.
- Simplifying rebates for some measures by eliminating the need to conduct complicated calculations to determine incentives.
- Moving business energy assessments from the Nonresidential Prescriptive Rebates Program to a new stand-alone Business Assessments Program.
- Moving the multifamily housing program component from the Nonresidential Prescriptive Rebates Program to a new stand-alone Multifamily Portfolio Program.
- Exploring an upstream incentive mechanism for motors and variable-speed drives.
- Launching a marketing campaign targeting motor distributors and vendors.

3.11.2. Operations

Customers who purchase qualifying high-efficiency measures directly from equipment vendors and retailers are eligible for prescriptive rebates. Customers

participating in the program must submit a program rebate application with documentation on the equipment purchase and installation to IPL's rebate processing center. The installation contractor also verifies that the customer and measures meet all applicable program eligibility requirements.

As the program's success is highly dependent upon promotion and support from trade allies, IPL also offers incentives to Dealers who facilitate customer purchases of qualifying equipment.

IPL also facilitates low-interest financing by helping customers submit the required documentation to a third-party lending partner.

3.11.3. Value Proposition

Customers participating in the program receive three main benefits:

1. The process is ***simple and straightforward***. Equipment rebates are available to any qualifying customer for any qualifying equipment.
2. Customers ***save money*** in the short term through rebates or financing, and in the long term through lower utility bills.
3. Trade allies ***receive incentives and training*** when they participate in IPL's program, which may give them a competitive advantage.

3.11.4. Customer Targets

The program targets the equipment replacement market and/or vendors of high-efficiency equipment. Participants must be IPL nonresidential customers in Iowa. Table 3.93 outlines customer eligibility requirements.

Table 3.93 Customer Eligibility Parameters

	Eligible Customers	
	Electric Measures	Natural Gas Measures
Customer Class	Nonresidential electric	Nonresidential natural gas
Customer Status	Building or business owners and landlords of customers	Building or business owners and landlords of customers
Building Type	Commercial; Industrial	Commercial; Industrial
Building Vintage	All	All
Geography	IPL's Iowa service territory	IPL's Iowa service territory

3.11.5. Trade Ally Targets

Because trade allies have the most influence over business customers' purchasing decisions, IPL works to build strong ties with its network of trade allies and relies on them to help market and sell qualifying equipment. The following types of trade allies are the primary participants in IPL's program:

- HVAC Dealers and installation contractors;
- Insulation Dealers and installation contractors;
- Water heater Dealers and installation contractors;
- Home improvement centers and equipment distributors;
- Lighting vendors and installation contractors;
- Commercial kitchen and appliance dealers; and
- Motor and motor drive system suppliers.

3.11.6. Incentive Structure and Process

IPL offers prescriptive incentives for each qualifying measure, with tiered incentives for some measures to encourage customers to purchase higher-efficiency

models. IPL designed the program incentives to cover approximately 50 percent of the incremental measure cost. Customers apply for rebates via a mail-in program application, which they submit with documentation on their qualified equipment purchase to IPL's rebate processing center. The customer may receive their IPL rebate as a VISA debit card or request a check. Customers may also opt for low-interest financing via a third party instead of a rebate.

Incentives are also available to Dealers who sell high-efficiency electric and natural gas equipment and include their Dealer ID number on the relevant customer application. Dealer incentives are generally set at 20 percent of the customer incentive for eligible measures. IPL verifies and processes customer applications, and tracks the Dealer ID. On a monthly basis, IPL mails incentives checks to Dealers who sold eligible equipment and participate in the Dealer Network.

3.11.7. Eligible Measures and Incentives

The Nonresidential Prescriptive Rebates Program offers a wide range of energy-efficiency measures for electric and natural gas customers. All measures must save energy supplied by IPL. Renters must obtain the owner's approval for any permanently installed measure. Table 3.94 provides eligible measures, qualification standards, and incentive levels for equipment in this program.

Table 3.94 Incentive Summary

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
Appliances and Commercial Food Service			
Clothes Washers	ENERGY STAR rated Commercial grade Maximum of six washers	\$200	\$40
Commercial Dishwashers	ENERGY STAR rated Under counter and door type	\$250	\$50
	ENERGY STAR rated single tank and multi-tank conveyor	\$125	\$25
Commercial Convection Oven	ENERGY STAR rated Natural gas: 44 percent cooking energy efficiency Electric: 70 percent cooking energy efficiency	\$200	\$40
Commercial Conveyor Oven	Natural gas: 40 percent efficient with thermostatic controls	\$1,000	\$200
Natural Gas Fryer	ENERGY STAR rated	\$500	\$100
Broiler**	Infrared	\$100	\$20
Ice Machines	ENERGY STAR rated Air-cooled ice-maker; Ice-making head (IMH) ice machines only	\$70	\$15
Glass Door Refrigerators	ENERGY STAR rated <15 cubic feet	\$15	\$5
	ENERGY STAR rated 15-29 cubic feet	\$150	\$30
	ENERGY STAR rated 30-49 cubic feet	\$300	\$60
	ENERGY STAR rated ≥ 50 cubic feet	\$325	\$65
Solid Door Refrigerators	ENERGY STAR rated 15-29 cubic feet	\$25	\$5
	ENERGY STAR rated 30-50 cubic feet	\$100	\$20
	ENERGY STAR rated > 50 cubic feet	\$200	\$40
Solid Door Freezers	ENERGY STAR rated <15 cubic feet	\$75	\$15
	ENERGY STAR rated 15-29 cubic feet	\$125	\$25
	ENERGY STAR rated 30-50 cubic feet	\$150	\$30
	ENERGY STAR rated > 50 cubic feet	\$300	\$60
Steam Cooker	ENERGY STAR rated electric or natural gas	\$800	\$160

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
Heating and Cooling			
Natural Gas Boiler < 300 MMBtu	85 percent AFUE - 89 percent AFUE	\$300	\$60
	90 percent AFUE or greater	\$800	\$160
Vent Damper**	Automatic air flue damper	\$150	\$30
Heat Pump	Premium efficiency air source Minimum 11.1 EER and 3.3 COP	\$150/ton Cap: 20 tons	\$30/ton Cap: 20 tons
	Premium efficiency water source Minimum 12.0 EER and 4.2 COP		
Package Terminal Heat Pump	Minimum 10.5 EER and 3.0 COP	\$75	\$15
Package Terminal Air Conditioner	Minimum 10.5 EER	\$40	\$10
Chiller	Water-cooled \geq 150 tons and < 300 tons Cooling efficiency \leq 0.63 kW/ton	\$7/ton	\$1.40/ton
	Water-cooled \geq 300 tons Cooling efficiency \leq 0.58 kW/ton	\$15/ton	\$3/ton
	Air-cooled with condenser Cooling efficiency \leq 1.25 kW/ton	\$25/ton	\$5/ton
Chiller Pipe Insulation**	R-11; must exceed code	\$2/linear foot	N/A
Programmable Thermostats	Minimum 5+2 setting	\$50	\$10
Central Air Conditioner Rooftop DX Unit	\leq CEE Tier 1 and 11.5 EER	\$50/ton	\$10/ton
Furnace	92 percent AFUE – 93 percent AFUE	\$175	\$35
	\leq 94 percent AFUE	\$200	\$40
ECM Motor**	Installed on electric furnace, natural gas furnace, or central air conditioner	\$100	\$20
HVAC System Tune-up**	Electric equipment: air source heat pump or chiller	\$20/ton	\$4/ton
	Natural Gas equipment: boiler or furnace	\$0.35/kBtu	\$0.07/kBtu
Hotel Activated Key Card System**	Controls room HVAC and lighting	\$70/control	\$15/control
Refrigeration			
Anti-Sweat Heater Controls**	Must sense the relative humidity in the air surrounding the display case and reduce or turn off the anti-sweat heaters on the glass door (if applicable) and door frame during periods of low humidity	\$35/control	\$7/control
Case Fans with ECM Motors**	Must replace existing standard efficiency shaded- pole evaporator fan motors in refrigerated display cases and walk-in coolers	\$100	\$20
Scroll Compressor**	Must replace reciprocating compressor	\$70	\$15
Strip Curtains for Walk-ins**	New strip curtains must be installed on doorways of refrigerated spaces (conditioned to less than 50° F)	\$5/SF	\$1/SF
Evaporator Fans for Walk-ins**	Must manage a minimum fan load of 1/20 horsepower when the fan(s) operate continuously at full speed Must reduce fan motor power by at least 75	\$65	\$7

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
	percent when the compressor(s) cycle off		
Night covers for display cases**	Must install a cover on an existing open refrigerated display case to decrease cooling load of the refrigerated case during off hours	\$7/LF	\$1.40/LF
Hot Water			
Water Heaters	ENERGY STAR-rated heat pump water heater EF = 2.0	\$500	\$100
	Electric tank; 40 gallon minimum EF ≤ 0.95	\$20	\$5
	Natural gas tank; 40 gallon minimum ≤ 75 MMBtu and EF ≤ 0.67	\$70	\$15
	Natural gas tankless EF ≤ 0.82	\$200	\$40
Drain Water Heat Transfer System**	N/A	\$400	\$80
Swimming Pool Covers**	Transparent	\$0.50/SF	\$0.10/SF
Spa/Hot Tub Covers**	R-14	\$7/SF	\$1.40/SF
Insulation and Infiltration			
Replacement Doors	U-Factor = 0.10	\$200	\$40
	U-Factor = 0.35	\$25	\$5
Duct Repair and Sealing**	Reduction in duct losses to 5 percent Retrofit only	\$0.15/LF of duct	N/A
Duct Insulation**	R-8 (unconditioned spaces) Retrofit only	\$0.30/LF of duct	N/A
Infiltration Control	Weather-stripping, spray foam sealing, etc.	70 percent of installed cost Cap: \$1,500	N/A
Insulation	Roof R-20 Business assessment or pre-installation assessment required	70 percent of installed cost Cap: \$5,000	N/A
	Wall R-13 Business assessment or pre-installation assessment required		
Plug Loads			
Computer	ENERGY STAR rated Minimum purchase of 10 units	\$10	\$5
Computer Network Energy Management System	Must provide energy savings estimate generated by the software or another assessment tool; Network system must control a minimum of 10 units	\$6/computer	N/A
Server	ENERGY STAR rated	\$10	N/A
Vending Machine**	ENERGY STAR rated	\$75	\$15
Vending Machine Controller	Vending Mi\$er™ or comparable brand For indoor machines that dispense non-perishable cold beverages only	\$50	\$10

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
Lighting			
LED Lamps	ENERGY STAR rated	\$10	\$2
LED Fixtures	ENERGY STAR rated or DesignLights™ Consortium qualified Exterior only	\$30	\$6
CFL Lamps	ENERGY STAR rated Minimum purchase of 10 bulbs Minimum purchase price of \$1 per bulb	50 percent of purchase price	20 percent of customer incentive
CFL Fixtures	ENERGY STAR rated Indoor only	\$20	\$4
High Performance T8 (4 ft.)	Must replace T8 lamps and ballasts for existing systems only Ballasts must be less than 0.79 Ballast Factor Lamp and ballast combinations must be listed on the CEE High-Performance T8 Qualifying Products list	\$2.50/lamp	\$0.50/lamp
Reduced Wattage T8 (4 ft.)**		\$3.50/lamp	\$0.70/lamp
High Performance T8 (4 ft.)	Must replace T12 lamps and ballasts for existing systems only Ballasts must be less than 0.79 Ballast Factor Lamp and ballast combinations must be listed on the CEE High-Performance T8 Qualifying Products list	\$5.50/lamp	\$1.10/lamp
Reduced Wattage T8 (4 ft.)**		\$6.50/lamp	\$1.30/lamp
High Bay T8 fixture (4 ft.)	Existing building Fixtures above 15 feet (ceiling height)	\$14/lamp	\$2.80/lamp
High Bay T5 High Output (T5HO) fixture (4 ft.)		\$15/lamp	\$3/lamp
High Bay T8 fixture (4 ft.)	New Construction Fixtures above 15 feet (ceiling height)	\$7/lamp	\$1.40/lamp
High Bay T5 High Output (T5HO) fixture (4 ft.)		\$8/lamp	\$1.60/lamp
T12 De-lamping	Completed project must result in a net reduction in the quantity of lamps De-Lamping must be accompanied by lamp and ballast replacement/retrofit The total number of lamps claimed for de-lamping cannot be more than the number of replacement lamps installed	\$1/foot	20 percent of customer incentive
T8 De-lamping		\$0.50/foot	
High Bay De-lamping		\$0.05/rated fixture watt	
Pulse Start or Ceramic Metal Halide ≤ 320 watts	Must replace probe start fixtures The retrofit kit must include lamp and ballast Retrofit to Pulse Start or Ceramic Metal Halide	\$25	\$5
Pulse Start or Ceramic Metal Halide > 320 watts		\$50	\$10
Metal halide replacement lamps < 360 watts	Lamp replacement of an existing 400 watt metal halide	\$3	\$0.60
LED replacement exit signs	Existing construction only	\$5	\$1
Photoluminescent exit signs**	Must replace incandescent or CFL exit sign	\$10	\$2
Traffic lights: Red 10" or 12" lamp	Yellow lights do not qualify	\$25/lamp	\$5/lamp
Traffic lights: Red 8" lamp	Only replacement projects qualify for rebates	\$20/lamp	\$4/lamp
Traffic lights: Green 10" or 12" lamp	New construction projects are not eligible	\$50/lamp	\$10/lamp

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
Traffic lights: Green 8" lamp		\$40/lamp	\$8/lamp
Traffic lights: Green arrow lamp		\$40/lamp	\$8/lamp
Traffic lights: 12" don't walk lamp		\$25/lamp	\$5/lamp
Traffic lights: 8" don't walk lamp		\$20/lamp	\$4/lamp
Bi-level control for stairwell lighting**	Bi-level stairwell occupancy sensor control, 50% lighting power during unoccupied time	\$25/control	\$5/control
Daylighting controls with daylight harvesting ballasts	Minimum 45 Watts Controlled Per Control	\$25/control	\$5/control
Occupancy sensors	Wall-switch, fixture-mounted, remote-mounted Controlling < 500 watts and > 45 watts	\$20/control	\$4/control
	Wall-switch, fixture-mounted, remote-mounted Controlling \geq to 500 watts	\$40/control	\$8/control
Time clocks and timers for lighting	Minimum 45 watts controlled per control Commercial grade	\$20/control	\$4/control
Motors			
Motors	Ultra Premium-rated motors and drives 20 to 350 HP	Variable	20 percent of customer incentive
Low Interest Financing			
Low-Interest Financing	All measures financed must meet efficiency qualifications outlined in program materials Equipment financed through low-interest financing is not eligible for cash-back rewards Loan terms range from 0-60 months; corresponding APR ranges from 0-6.9 percent	Loans range from \$1,500 to \$25,000	Based on equipment installed

* Rebates may not exceed 50 percent of applicable equipment cost.

** This is a new measure for this program year.

AFUE: annual fuel utilization efficiency

EER: energy efficiency ratio

COP: coefficient of performance

CEE: Consortium for Energy Efficiency

EF: energy factor

SF: square foot

LF: linear foot

HP: horse power

3.11.8. Market Barriers

Table 3.95 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.95 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher first cost of energy-efficient equipment	Offer rebates and discounted financing; Educate customers on the long-term energy cost-saving benefits of higher efficiency equipment
Time required to fill out rebate forms	Provide simple rebate forms through a variety of mediums (mail-in, online fillable forms); Implement instant rebate process for appropriate measures
Lack of customer awareness	Continue customer education and outreach; Build strong relationships with trade allies and provide sales training so they promote programs and educate customers on the benefits of energy efficiency; Market program and general efficiency awareness
Lack of uptake/lack of availability of certain qualifying equipment	Eliminate measures that are not popular with customers and where administrative costs outweigh benefits; Promote programs to customers so they ask for qualifying equipment and vendors stock it; Trade ally training
Low Dealer awareness	Continue ongoing Dealer communications, outreach, and education
Trade allies not up-selling to high-efficiency equipment	Provide trade ally training and outreach to explain the benefits of selling higher efficiency equipment; Market program and general efficiency awareness
Changing standards impact available savings and cost-effectiveness of certain measures	Continue to evaluate emerging, proven high-efficiency equipment options and facilitate transition to new products as they become available; Explore new measures and consumer preferences for higher efficiency alternatives as new standards take effect; Eliminate certain measures that are not cost-effective
Energy is small part of overall operating costs	Provide targeted marketing materials and education efforts
Procurement policies that specify low first-cost instead of life-cycle cost	Provide lists of preferred products; Explain life-cycle benefits in financial terms that support decision, such as return on investment and payback
Lack of availability of premium equipment	Promote programs to customers so they ask for better quality/high-efficiency equipment; Conduct trade ally training
Customers do not understand the long-term value of high-efficiency equipment	Train trade allies to explain life-cycle costs to customers; Market program and general efficiency awareness to customers; Provide efficiency education to customers

3.11.9. Marketing and Promotion

IPL markets this program directly to end-use customers, as well as to trade allies. IPL is aware that trade allies have significant influence on business customers' purchasing decisions, and therefore focuses considerable effort on recruiting vendors

and contractors who are eligible to participate in the program, and on building strong, long-lasting relationships with them. IPL's trade ally outreach efforts are explained in greater detail in the Dealer Network Section of this Plan (Section 4.6).

In addition to the Dealer Network, IPL promotes the program through a variety of channels, including:

- Conducting direct customer outreach through direct mailings and by key account managers (KAMs) and business account specialists.
- Providing general advertising through broadcast, print, and online media.
- Distributing program information and rebate claim forms by Energy Efficiency Dealers, and having that information available on Alliant Energy's website.
- Continuing to build IPL's Dealer Network to increase the list of qualified Dealers and installation contractors who are eligible to participate.
- Providing ongoing education for local vendors and contractors about program procedures and benefits, qualifying measures, and equipment and rebate structures.
- Conducting seminars and workshops to familiarize participating Dealers and contractors with new technologies, proper installation, and operation and maintenance practices.
- Providing retail partners applicable POP materials to facilitate the sales of energy-efficient equipment.

- Marketing to Dealers through direct contact, trade journals, trade shows, and ad hoc special events, such as educational seminars and home shows.

3.11.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/rebates.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.11.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.96.

Table 3.96 Outside Service Providers

Vendor	Role
A-Tec	Performs assessments to verify eligibility of insulation projects; on-site verification inspections of a percentage of equipment installations
Michaels Energy	Energy-efficiency hotline and rebate processing
Alliant Credit Union	Third-party financing

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.11.12. Participation

Table 3.97 provides program participation assumptions in terms of the number of participants by fuel type.

Table 3.97 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Electric Customers	6,100	6,476	6,911	7,412	7,990	34,889
Natural Gas Customers	1,943	2,025	2,119	2,224	2,341	10,653
Total	8,043	8,502	9,030	9,636	10,331	45,542

3.11.13. Energy and Demand Savings

This program is expected to produce 121,470 MWh of electricity savings and 3,378,382 therms of natural gas savings over the course of the Plan. This program accounts for 16 percent of electricity and 32 percent of natural gas savings in the energy-efficiency portfolio. Table 3.98 provides energy and demand savings goals.

Table 3.98 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	20,852,779	22,397,179	24,109,489	26,005,794	28,105,243	121,470,485
Peak Demand (kW)	1,661	1,784	1,920	2,071	2,238	9,674
Natural Gas Impacts						
Incremental Annual Energy (therms)	611,364	640,857	672,944	707,757	745,459	3,378,382
Peak-Day Demand (therms)	6,471	6,784	7,123	7,492	7,891	35,761

3.11.14. Budget

The total budget for the program is estimated at \$44 million. Table 3.99 provides program budget assumptions.

Table 3.99 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$108,371	\$115,204	\$122,752	\$131,091	\$140,309	\$617,727
Administration	\$189,650	\$201,606	\$214,816	\$229,409	\$245,541	\$1,081,022
Advertising and Promotion	\$162,557	\$172,806	\$184,128	\$196,636	\$210,464	\$926,590
Customer Incentive	\$4,849,612	\$5,155,364	\$5,493,160	\$5,866,311	\$6,278,834	\$27,643,281
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$108,371	\$115,204	\$122,752	\$131,091	\$140,309	\$617,727
Electric Total	\$5,418,560	\$5,760,184	\$6,137,609	\$6,554,538	\$7,015,457	\$30,886,348
Natural Gas Budget						
Planning and Design	\$46,341	\$49,263	\$52,491	\$56,057	\$59,999	\$264,150
Administration	\$81,097	\$86,210	\$91,859	\$98,099	\$104,997	\$462,263
Advertising and Promotion	\$69,512	\$73,894	\$78,736	\$84,085	\$89,998	\$396,225
Customer Incentive	\$2,073,774	\$2,204,519	\$2,348,966	\$2,508,532	\$2,684,933	\$11,820,724
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$46,341	\$49,263	\$52,491	\$56,057	\$59,999	\$264,150
Natural Gas Total	\$2,317,066	\$2,463,150	\$2,624,543	\$2,802,829	\$2,999,925	\$13,207,513
Total Budget						
Planning and Design	\$154,713	\$164,467	\$175,243	\$187,147	\$200,308	\$881,877
Administration	\$270,747	\$287,817	\$306,675	\$327,508	\$350,538	\$1,543,285
Advertising and Promotion	\$232,069	\$246,700	\$262,865	\$280,721	\$300,461	\$1,322,816
Customer Incentive	\$6,923,386	\$7,359,883	\$7,842,126	\$8,374,843	\$8,963,767	\$39,464,005
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$154,713	\$164,467	\$175,243	\$187,147	\$200,308	\$881,877
Total	\$7,735,626	\$8,223,333	\$8,762,152	\$9,357,367	\$10,015,382	\$44,093,861

Table 3.100 provides a forecast of staffing needs and costs for this program.

Table 3.100 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	60.75	\$75,938	Program-specific management
Energy Efficiency Programs Management	19.5	\$24,375	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Trade Ally Management	20	\$25,000	Outreach, communications with trade allies
Key Account Management	105	\$131,250	Nonresidential customer liaison and program delivery support
Communications Manager	56.25	\$70,313	Marketing and communications support
Total	265.5	\$331,875	

3.11.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that both the electric and natural gas components of the program are cost-effective from a societal perspective, with an overall program B/C ratio of 1.46 to 1. Table 3.101 provides program cost-effectiveness results.

Table 3.101 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$75,570,353	\$81,935,252	\$75,570,353	\$114,071,438
Costs	\$27,902,479	\$65,638,774	\$97,509,522	\$77,409,676
Net Benefits	\$47,667,875	\$16,296,477	-\$21,939,169	\$36,661,762
B/C Ratio	2.71	1.25	0.78	1.47
\$/kWh	\$0.029	\$0.082	\$0.103	\$0.061
Natural Gas Program				
Benefits	\$18,330,008	\$28,488,664	\$18,330,008	\$29,391,094
Costs	\$11,785,821	\$17,232,248	\$33,925,962	\$20,734,890
Net Benefits	\$6,544,187	\$11,256,416	-\$15,595,954	\$8,656,204
B/C Ratio	1.56	1.65	0.54	1.42
\$/therm	\$0.433	\$0.759	\$1.245	\$0.550
Total Program				
Benefits	\$93,900,361	\$110,423,916	\$93,900,361	\$143,462,532
Costs	\$39,688,300	\$82,871,022	\$131,435,484	\$98,144,566
Net Benefits	\$54,212,062	\$27,552,894	-\$37,535,123	\$45,317,966
B/C Ratio	2.37	1.33	0.71	1.46

3.12. Business Assessments Program

3.12.1. Program Description

The Business Assessments Program offers free energy assessments by professional energy assessors, installation (where applicable) of free energy-efficiency measures, and customer education to promote energy efficiency among IPL's nonresidential customers. Customers who participate in the Business Assessments Program may be eligible to receive:

- Information on their facility's energy performance and advice to help them prioritize investments in energy-efficiency upgrades;
- One-on-one education on energy use and conservation;
- Free, direct installation of energy-efficiency measures and enhanced incentives for installing lighting measures through the Small Business Direct Install Lighting Program; and
- A customized report that recommends and prioritizes energy-efficiency upgrades, provides a life-cycle cost analysis for recommended measures, and indicates measures that may be eligible for IPL rebates.

Recognizing the varying customer characteristics, building types, and assessment needs among IPL's nonresidential customers, the program provides three on-site assessment tracks. Assessment tracks generally target different sizes of customer facilities, with larger facilities receiving assessments that assume more complicated energy-using equipment and building interactions. IPL staff may use discretion to

determine the most appropriate assessment track for a given building based on its characteristics, regardless of the building size.

Small Business Assessment

This track targets small, non-managed accounts with facilities smaller than 20,000 square feet, such as small offices and retail businesses. Audits include an on-site facility walk-through assessment by an energy professional, evaluation of energy use at the facility, and recommendations on ways to use energy more efficiently and reduce annual energy bills. Small business customers who participate in the Business Assessments Program are also eligible for the Small Business Direct Install Lighting Program, as well as for nonresidential prescriptive rebates for insulation and building sealing.

Mid-Size Business Assessment

The Mid-Size Business Assessment track targets nonresidential facilities that are between 20,000 and 50,000 square feet, or those that include a more complicated energy system due to size or usage, such as schools, strip malls, and small hotels. IPL offers a customized energy assessment for mid-size businesses, focused primarily on identifying opportunities for lighting and HVAC system upgrades.

Commercial and Industrial Energy Audit

The Commercial and Industrial Energy Audit track targets customers whose facilities are larger than 50,000 square feet and all manufacturing facilities. Large business audits are conducted by an engineering firm with experience evaluating more complex energy-using systems and industrial processes.

Key changes to this program in the Plan include:

- Shifting small business assessments from a component under the Nonresidential Prescriptive Rebates Program and shifting commercial and industrial energy audits from a component under the Custom Rebates Program to this stand-alone Business Assessments Program;
- Adding water heater thermostat setback to the available measures in the direct installation program component for the Small Business Assessment track; and
- Adding a Small Business Direct Install Lighting Program with turnkey lighting upgrades and enhanced incentives.

3.12.2. Operations

IPL manages and administers the Business Assessments Program, with technical and implementation support from third-party contractors specializing in energy assessments of specific-sized buildings. IPL will continue to use contractors to deliver these program components.

IPL's KAMs recruit participants into the Business Assessments Program, or customers may enter the program by contacting IPL's Business Resource Center (BRC). One of IPL's program contractors schedules an on-site assessment and deploys a professional energy analyst to conduct an on-site energy assessment and install applicable direct installation measures (for Small Business Assessments only).

As part of the energy assessment, the energy assessor analyzes a participant's utility billing history, inspects the facility, and may conduct diagnostic tests to identify energy-efficiency opportunities in various areas, including, but not limited to:

- Lighting;
- Building shell;
- Heating and cooling systems;
- Water heating equipment; and
- Process equipment.

Following the business assessment, the customer receives a customized energy assessment report that identifies priority energy-efficiency improvements for the building, including energy-efficient equipment upgrades, retrofits, and equipment maintenance or tune-ups.

Small commercial customers are eligible for the Small Business Direct Install Lighting Program which offers enhanced rebates on recommended lighting packages.

All Business Assessments Program participants may be eligible to participate in any program in IPL's nonresidential portfolio.

3.12.3. Value Proposition

Customers participating in the program receive three main benefits:

1. **Immediate savings through the direct installation** of low-cost lighting, water heating, and other energy-saving measures (for Small Business Assessments only).
2. **Long-term savings and increased comfort** with low capital investment by installing lighting and other efficiency projects that are eligible for IPL rebates.
3. A **whole building energy assessment and savings recommendations** specific to their building and energy usage characteristics, conducted by skilled and knowledgeable technicians.

3.12.4. Customer Targets

Any nonresidential IPL customer may participate in the program. IPL uses building size to qualify customers for the appropriate assessment type. However, the IPL staff uses discretion to determine the most appropriate assessment track for each customer based on building characteristics. Table 3.102 outlines customer eligibility requirements.

Table 3.102 Customer Eligibility Parameters

Eligible Customers				
	Small Commercial Assessment	Mid-size Business Assessment	Commercial and Industrial Energy Audit	Small Business Direct Install Lighting Program
Customer Class	Nonresidential electric	Nonresidential electric	Nonresidential electric	Nonresidential electric
Customer Status	Building or business owners and landlords of IPL customers	Building or business owners and landlords of IPL customers	Building or business owners and landlords of IPL customers	Building or business owners and landlords of IPL customers
Building Type	Commercial < 20,000 square feet	Commercial 20,000 to 50,000 and light manufacturing < 50,000 square feet	Commercial and industrial > 50,000 square feet	Commercial < 20,000 square feet
Building Vintage	Existing	Existing	Existing	Existing
Geography	IPL's Iowa service territory	IPL's Iowa service territory	IPL's Iowa service territory	IPL's Iowa service territory

3.12.5. Trade Ally Targets

Trade allies for this program include contractors who are qualified to install insulation. IPL conducts outreach to these trade allies to inform them of program opportunities and changes.

3.12.6. Incentive Structure and Process

IPL offers all business assessments and applicable direct installation measures at no cost to customers. IPL customers can call IPL's BRC to request a business assessment.

IPL's Small Business Direct Install Lighting Program specifically targets the hard-to-reach small business sector, and covers a significant portion of out-of-pocket costs to help overcome market barriers and capture the significant savings potential available in this sector. IPL works with its small business assessment contractor to provide lighting assessments and turnkey project management for implementation.

All customers may also qualify for a rebate available through any of IPL's other nonresidential programs. Participants are subject to all the rules and participation requirements associated with applicable nonresidential programs.

3.12.7. Eligible Measures and Incentives

This program is available to any nonresidential customer whose primary heating or cooling energy is delivered by IPL. Renters must have owner's approval to qualify.

Table 3.103 provides eligible measures, qualification standards, and incentive levels for each program component and equipment included in this program.

Table 3.103 Incentive Summary

Program/Measure	Qualification	Customer Incentive	Dealer Incentive
Assessment Tracks			
Small Business Assessment	Non-manufacturing facility < 20,000 square feet	Free to customer	N/A
Mid-Size Business Assessment*	Facilities between 20,000 and 50,000 square feet and manufacturing facilities < 50,000 square feet		
Commercial and Industrial Energy Audit	Facilities > 50,000 square feet		N/A
Direct Installation Measures			
Low-Flow Showerheads	2.0 GPM; Water heating fuel delivered by IPL	Free to Small Business Assessment customer; quantities vary based on assessment results.	N/A
Faucet Aerators			
Water Heater - Pipe Insulation	R-4; Water heating fuel delivered by IPL		
Water Heater - Thermostat Setback*	120 °F; Water heating fuel delivered by IPL		
LED Exit Sign	ENERGY STAR-rated		
CFL(s)	ENERGY STAR-rated Up to 20		
Thermostat - Programmable	5-1-1, 5-2, or 7-day settings		
Prescriptive Measures			
Small Business Direct Install Lighting package	Based on assessor's recommendation Only lighting measures included in IPL's Nonresidential Prescriptive Rebates Program	70 percent of installed cost	N/A

* This is a new measure in the Plan.
GPM: gallons per minute

3.12.8. Market Barriers

Table 3.104 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.104 Market Barriers and Strategies

Market Barriers	Program Strategies
High incremental cost of retrofit measures and limited available capital for building upgrades among business customers	<ul style="list-style-type: none"> Provide free business assessments that include no-cost direct installation measures where applicable for immediate savings; Provide enhanced rebates on lighting measures for small business customers, who are the least likely to have available capital for building expenditures; Emphasize the long-term energy-savings benefits of installing energy-efficiency measures; Provide customized assessment reports that include an analysis of recommendations in financial terms commonly used by businesses; Provide access to all of IPL's available program rebates and financing for more expensive measures
Lack of customer program awareness and awareness of energy-efficiency benefits and practices	<ul style="list-style-type: none"> Provide direct customer marketing and outreach; Conduct outreach to appropriate trade allies; Give information about simple behavioral changes and maintenance tips that provide ongoing savings; Provide financial analysis of recommended efficiency upgrades to demonstrate the long-term benefits
Limited time, resources, and awareness on how to act on recommendations	<ul style="list-style-type: none"> Provide a robust Dealer Network and a referral program to help customers identify appropriate contractors; Provide a streamlined participation process and simple rebate forms; Conduct direct outreach to business customer decision makers; Provide follow up through phone calls, letters, and other strategies to encourage customers to move through the recommended installation steps; Train assessors to discuss next steps and provide information and resources to support customers acting on recommendations
Low trade ally awareness	<ul style="list-style-type: none"> Provide outreach and education to trade allies; Emphasize dealer incentives in trade ally outreach
Energy is small part of overall operating costs	<ul style="list-style-type: none"> Provide targeted marketing materials and education efforts

3.12.9. Marketing and Promotion

IPL markets this program directly to end-use customers and trade allies. IPL uses a variety of promotional methods for this program, including:

- Conducting direct customer outreach through direct mailings and by KAMs and the BRC;
- Providing general advertising through broadcast, print, and online media;
- Distributing information on the program and rebate claim forms by Dealers, and having that information available on Alliant Energy's website; and
- Providing ongoing education for vendors and contractors about program procedures and benefits, qualifying measures, and equipment and rebate structures.

3.12.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at:

- www.alliantenergy.com/energyassessment
- www.alliantenergy.com/smallbusiness

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.12.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with outside services vendors outlined in Table 3.105.

Table 3.105 Outside Service Providers

Vendor	Role
A-Tec	Small Business Assessment provider
To Be Determined	Small Business Direct Install Lighting Program provider
The Energy Group	Mid-Size Business Assessment provider
Michaels Energy	Commercial and Industrial Energy Audit provider

IPL anticipates soliciting additional contractor proposals that include turnkey program delivery services for the Small Business Assessment track and the Small Business Direct Install Lighting Program.

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.12.12. Participation

Table 3.106 provides program participation assumptions by program component.

Table 3.106 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Direct Install Measures Electric	17,377	17,377	17,377	17,377	17,377	86,885
Direct Install Measures Natural Gas	2,203	2,203	2,203	2,203	2,203	11,015
Audits	1,215	1,215	1,215	1,215	1,215	6,075
Lighting Retrofit Projects	400	400	400	400	400	2,000
Total	21,195	21,195	21,195	21,195	21,195	105,975

3.12.13. Energy and Demand Savings

This program is expected to produce 14,535 MWh of electricity savings and 259,709 therms of natural gas savings over the course of the Plan. This program accounts for 2 percent of electricity savings and 2 percent of natural gas savings in the energy-efficiency portfolio. Table 3.107 provides energy and demand savings goals.

Table 3.107 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	2,907,140	2,907,140	2,907,140	2,907,140	2,907,140	14,535,700
Peak Demand (kW)	143	143	143	143	143	715
Natural Gas Impacts						
Incremental Annual Energy (therms)	51,942	51,942	51,942	51,942	51,942	259,709
Peak-Day Demand (therms)	93	93	93	93	93	463

3.12.14. Budget

The total budget for the program is estimated at \$5.3 million. Table 3.108 provides program budget assumptions.

Table 3.108 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$15,903	\$15,903	\$15,903	\$15,903	\$15,903	\$79,513
Administration	\$21,204	\$21,204	\$21,204	\$21,204	\$21,204	\$106,018
Advertising and Promotion	\$42,407	\$42,407	\$42,407	\$42,407	\$42,407	\$212,035
Customer Incentive	\$96,825	\$96,825	\$96,825	\$96,825	\$96,825	\$484,126
Equipment Cost	\$70,944	\$70,944	\$70,944	\$70,944	\$70,944	\$354,722
Installation Cost	\$266,902	\$266,902	\$266,902	\$266,902	\$266,902	\$1,334,511
Monitoring and Evaluation	\$15,903	\$15,903	\$15,903	\$15,903	\$15,903	\$79,513
Electric Total	\$530,088	\$530,088	\$530,088	\$530,088	\$530,088	\$2,650,438
Natural Gas Budget						
Planning and Design	\$16,289	\$16,289	\$16,289	\$16,289	\$16,289	\$81,443
Administration	\$21,718	\$21,718	\$21,718	\$21,718	\$21,718	\$108,590
Advertising and Promotion	\$43,436	\$43,436	\$43,436	\$43,436	\$43,436	\$217,180
Customer Incentive	\$99,175	\$99,175	\$99,175	\$99,175	\$99,175	\$495,874
Equipment Cost	\$72,666	\$72,666	\$72,666	\$72,666	\$72,666	\$363,329
Installation Cost	\$273,379	\$273,379	\$273,379	\$273,379	\$273,379	\$1,366,893
Monitoring and Evaluation	\$16,289	\$16,289	\$16,289	\$16,289	\$16,289	\$81,443
Natural Gas Total	\$542,950	\$542,950	\$542,950	\$542,950	\$542,950	\$2,714,751
Total Budget						
Planning and Design	\$32,191	\$32,191	\$32,191	\$32,191	\$32,191	\$160,956
Administration	\$42,922	\$42,922	\$42,922	\$42,922	\$42,922	\$214,608
Advertising and Promotion	\$85,843	\$85,843	\$85,843	\$85,843	\$85,843	\$429,215
Customer Incentive	\$196,000	\$196,000	\$196,000	\$196,000	\$196,000	\$980,000
Equipment Cost	\$143,610	\$143,610	\$143,610	\$143,610	\$143,610	\$718,051
Installation Cost	\$540,281	\$540,281	\$540,281	\$540,281	\$540,281	\$2,701,404
Monitoring and Evaluation	\$32,191	\$32,191	\$32,191	\$32,191	\$32,191	\$160,956
Total	\$1,073,038	\$1,073,038	\$1,073,038	\$1,073,038	\$1,073,038	\$5,365,189

Table 3.109 provides a forecast of staffing needs and costs for this program.

Table 3.109 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	27	\$33,750	Program-specific management
Energy Efficiency Programs Management	5	\$6,250	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Key Account Management	190	\$237,500	Nonresidential customer liaison and program delivery support
Communications Manager	22.5	\$28,125	Marketing and communications support
Total	248.5	\$310,625	

3.12.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that the overall program is cost-effective from a societal perspective, with a B/C ratio of 1.51 to 1. The program's costs are also justified by its benefits from the participant and utility points of view. Table 3.110 provides program cost-effectiveness results.

Table 3.110 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$5,012,400	\$6,074,490	\$5,012,400	\$7,295,123
Costs	\$2,372,273	\$2,234,478	\$7,281,212	\$2,952,084
Net Benefits	\$2,640,128	\$3,840,012	-\$2,268,812	\$4,343,038
B/C Ratio	2.11	2.72	0.69	2.47
\$/kWh	\$0.035	\$0.038	\$0.106	\$0.034
Natural Gas Program				
Benefits	\$823,884	\$2,881,257	\$823,884	\$1,120,050
Costs	\$2,429,835	\$1,918,037	\$3,534,730	\$2,607,899
Net Benefits	-\$1,605,952	\$963,220	-\$2,710,846	-\$1,487,849
B/C Ratio	0.34	1.50	0.23	0.43
\$/therm	\$1.655	\$1.486	\$10.065	\$5.552
Total Program				
Benefits	\$5,836,284	\$8,955,747	\$5,836,284	\$8,415,173
Costs	\$4,802,108	\$4,152,515	\$10,815,942	\$5,559,983
Net Benefits	\$1,034,176	\$4,803,232	-\$4,979,658	\$2,855,190
B/C Ratio	1.22	2.16	0.54	1.51

3.13. Custom Rebates Program

3.13.1. Program Description

The Custom Rebates Program promotes energy-efficiency products and practices among commercial and industrial customers. The program's custom incentive structure gives energy users the flexibility to install a broad range of high-efficiency equipment that is not included in IPL's Nonresidential Prescriptive Rebates Program, or to implement equipment optimization and/or operational and process changes that reduce energy consumption and peak demand.

Custom rebates are available to IPL nonresidential customers who are replacing standard-efficiency equipment with equipment and measures that provide energy and/or demand savings. The program also offers energy-efficient training for facility managers and operators. The program offers incentives for:

- Any measure or project not included in IPL's Nonresidential Prescriptive Rebates Program or Agriculture Sector Program due to size, scope, or the unique characteristics of the energy-efficiency equipment or measure;
- New construction, additions, and remodeling projects that have progressed beyond the early design phase;¹⁹
- Design assistance to improve the efficiency of industrial processes;
- Cost-effective and qualified combined heat and power projects;

¹⁹ Projects that are beyond the early design phase are no longer eligible for IPL's Commercial New Construction Program.

- Training on efficient building operations and efficient technologies for operations and maintenance staff; and
- Equipment optimization, retro-commissioning, or other operational and maintenance improvements that ensure customer facilities' continued performance over time.

Key changes to this program in the Plan include:

- Moving commercial and industrial energy audits to IPL's new Business Assessments Program;
- Moving custom projects implemented by agriculture-sector customers to the Custom Rebates Program; and
- Increasing marketing efforts targeted to mid-sized customers.

3.13.2. Operations

Operations for the Custom Rebates Program vary depending on which program component customers wish to participate in and/or the size and type of project they plan to install. IPL's account managers, energy-efficiency staff, and trade allies conduct outreach to IPL's large and mid-sized customers to promote the program. IPL's Business Assessments Program may also be an entry point for participants into the Custom Rebates Program.

Customers must obtain IPL's approval prior to taking action under the program. IPL uses a third-party engineering firm to support customers interested in participating in any non-training component of the Custom Rebates Program by analyzing project

documentation, calculating expected energy savings and incentive amounts, and conducting pre- and post-installation metering and verification as needed. The typical operational processes are summarized below for each program component.

Feasibility Studies

The Custom Rebates Program provides support for customers interested in having an investment-grade feasibility study performed to quantify the benefits of their potential energy-saving project. Qualified third-party firms selected by the customer may perform feasibility studies. IPL provides incentives to offset a portion of the cost of the feasibility study following its completion, when customers complete a required amount of recommended improvements and submit all required program documentation.

Energy-Efficient Equipment Measures and Combined Heat and Power Projects

The Custom Rebates Program offers incentives for a comprehensive set of energy-efficiency measures and projects for existing buildings and new construction. Eligible efficiency measures may include compressed air, energy management controls, HVAC, lighting, insulation, processing equipment, refrigeration systems, variable frequency drives, ventilation systems, waste heat recovery systems, and process heating and cooling.

The Custom Rebates Program also offers incentives for on-site combined heat and power projects that are properly sized for the customer's facility, and for which 100 percent of the energy produced is consumed at the customer's facility. All customers interested in installing a combined heat and power system must obtain either a

feasibility assessment or a site assessment conducted by a qualified engineering firm or installation contractor, and submit the project documentation to IPL for pre-approval.

Prior to installation, customers must submit project specifications and all applicable program documentation. IPL's third-party engineering firm reviews the documentation and calculates the anticipated energy and cost benefits that will result from the installed project. If approved, IPL presents the customer with a contract agreement that includes energy savings and the rebate amount. IPL provides custom equipment incentives following installation, and verifies the equipment installation, where appropriate.

Retro-Commissioning

IPL offers incentives for retro-commissioning for large commercial buildings and industrial facilities. Retro-commissioning is a cost-effective method to fine tune or correct problems in direct digital control systems, often resulting in significant energy and cost savings.

IPL provides incentives to reimburse the full cost of retro-commissioning studies that identify potential operational improvements and equipment optimization opportunities, as well as for retro-commissioning projects for which building owners commit to implementing all energy-saving measures identified in the engineering study that have a combined payback of two years or less.

Building Operator Certification

IPL partners with the Midwest Energy Efficiency Alliance (MEEA) to offer the Building Operator Certification (BOC) component of the Custom Rebates Program. BOC is a nationally-recognized, competency-based training and certification program

for operations and maintenance staff working in commercial, institutional, or industrial buildings. BOC achieves energy savings by training individuals responsible for the maintenance of energy-using equipment and day-to-day building operations. The training program includes exams at the conclusion of each training module and outside project assignments participants must successfully complete to earn certification.

The Northwest Energy Efficiency Council (NEEC), a non-profit business association of the energy-efficiency industry, holds the copyright for the BOC trademark and all BOC products. NEEC makes BOC training available through license agreements with state and regional partners. MEEA administers the BOC program for the State of Iowa, and the Iowa Energy Center (IEC) holds the BOC license for the state. IPL provides participants in BOC training with tuition reimbursement following satisfactory completion of the program.

Average energy savings achieved by certified program participants are documented²⁰ as 0.18 kWh and 0.71 therms per square foot of a participant's facility.

Technology Training

IPL partners with the IEC, Center for Industrial Research and Service, MEC, Central Iowa Power Cooperative, Corn Belt Power Cooperative, Iowa Association of Electric Cooperatives, Iowa Association of Municipal Utilities, and Iowa State University to offer training for industrial customers to improve the energy efficiency of their industrial energy-using equipment. This group, known as the Partnership for Industrial Energy Efficiency (PIE²), conducts monthly conference calls to plan the customer

²⁰ RLW Analytics, Impact and Process Evaluation, Building Operator Training and Certification (BOC) Program, Final Report, Prepared for Northeast Energy Efficiency Partnerships, p v, June 2005.

training, generally offering three topics every year. Topics may include any of the following:

- Compressed Air Challenge;
- Industrial Refrigeration;
- Lighting;
- Premium Efficiency Motors; and
- TAP Your Steam System

Workshops are generally delivered to facility managers, plant engineers, and supervisors. IPL discounts a portion of the training fee to IPL customers for courses offered through the PIE² initiative.

3.13.3. Value Proposition

Customers participating in the program receive three main benefits:

1. The ***flexibility*** to implement energy-efficiency measures not covered by IPL's other programs.
2. ***Financial benefits*** through incentives that buy down the costs of energy-efficiency projects and training.
3. ***Ongoing energy and utility bill savings*** resulting from installed custom projects and training that help reduce customers' operating expenses and improve their bottom lines.

3.13.4. Customer Targets

The program targets large and mid-sized nonresidential customers in Iowa. Table 3.111 outlines customer eligibility requirements.

Table 3.111 Customer Eligibility Parameters

	Eligible Customers	
	Electric Measures	Natural Gas Measures
Customer Class	Nonresidential retail electric	Nonresidential retail natural gas
Customer Status	Building or business owners; landlords of IPL customers	Building or business owners; landlords of IPL customers
Building Type	Commercial; Industrial; Agricultural	Commercial; Industrial; Agricultural
Building Vintage	Existing and new construction	Existing and new construction
Geography	IPL's Iowa service territory	IPL's Iowa service territory

3.13.5. Trade Ally Targets

Program delivery relies on trade allies to promote the program and sell qualifying custom projects. The following types of trade allies are the primary participants in IPL's program:

- Energy-efficiency consulting firms;
- Engineering firms;
- Equipment Dealers (e.g., lighting, motors, and variable-speed/frequency drives); and
- Project design and implementation contractors, particularly those specializing in large, complex, or non-typical equipment and project types.

3.13.6. Incentive Structure and Process

IPL may offer custom incentives to eligible customers who participate in any Custom Rebates Program component. To qualify for incentives, customers must obtain pre-approval for any program activity and submit all required documentation to IPL for verification and approval. Participants in eligible training components are either reimbursed following satisfactory completion of the program or offered a discount prior to the training.

Feasibility Studies

IPL reimburses 50 percent of pre-approved study costs (up to a maximum of \$7,500) at study completion. If the customer implements measures that account for 75 percent or more of the total energy savings identified by the study, IPL reimburses the customer for the remaining 50 percent of the study costs (up to a maximum of \$7,500).

IPL reimburses the customer for the remaining 50 percent of the study costs (up to a maximum of \$7,500) for on-site combined heat and power projects if the project is properly sized for the customer's facility and 100 percent of the energy produced is consumed at the customer's facility. The maximum reimbursement is \$15,000 per study.

Equipment Measures

IPL offers program incentives for any energy-efficiency equipment, combined heat and power systems, or other projects that do not qualify for prescriptive incentives due to project size, scope, or unique or innovative characteristics of the energy systems involved. Projects must have a minimum simple payback that includes the incentive of more than two years to qualify, and may be subject to on-site verification.

Rebate amounts depend on the level of projected energy savings resulting from the equipment or project, type of service provided to the customer, and the customers' applicable tariff. The incentive equals 150 percent of the customer's one-year energy cost savings resulting from installing any equipment or project with a payback period of two years or more.

For an equipment retrofit or replacement project, IPL calculated the amount of custom rebate based on the energy usage of the equipment being replaced. For combined heat and power projects, IPL calculates the amount of custom rebate based on the total energy cost savings produced by the new system.²¹ For new construction projects, IPL uses American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)-90.1 2004 to determine incentives based on energy or therm savings over a calculated baseline.

Retro-Commissioning

IPL provides incentives to building owners that cover the full cost of retro-commissioning studies. Following completion of the study, IPL reimburses 50 percent of the study cost. Following implementation, IPL reimburses the remaining 50 percent of study costs. Participants must install all energy-saving measures that have a combined payback of two years or less, with no individual measure having greater than a five-year payback.

²¹ Energy costs are normalized based on the date the project is approved by IPL.

Building Operator Certification

IPL provides funding for coordinating and marketing BOC training to its program partners. IPL provides partial tuition rebates to its customers who complete the program and become certified. Tuition reimbursement rates vary based on the type(s) of fuel(s) the participating customer purchases from IPL.

Technology Training

IPL offers 50 percent discounts on the registration fee for customers who participate in technology trainings and workshops sponsored by PIE².

3.13.7. Eligible Measures and Incentives

Through the Custom Rebates Program, IPL offers incentives to electric and natural gas customers for a wide range of energy-efficiency activities. Table 3.112 provides eligible measures, qualification standards, and incentive levels for each program component.

Table 3.112 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Feasibility Studies	Conducted by a certified Professional Engineer or Certified Energy Manager	50 percent of study costs (up to maximum \$7,500). If customer implements measures that are ≤ 75 percent of estimated savings, additional 50 percent is reimbursed (maximum \$15,000 per study)
Retro-Commissioning	Owner must commit to implementing all measures with combined payback \geq two years	100% of study cost; 50 percent of project cost paid upon completion of study, and the remaining 50 percent paid after implementing all applicable measures
Builder Operator Certification	Customers must complete program certification	Tuition reimbursement of: \$200 for natural gas customers \$300 for electric customers \$500 for combination customers
Technology Training		50 percent of participant fee
Other Measures	Minimum two-year payback	150 percent of one-year energy dollar savings

3.13.8. Market Barriers

Table 3.113 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.113 Market Barriers and Strategies

Market Barriers	Program Strategies
High cost of efficient equipment and competing priorities for capital	Offer incentives to help offset a significant portion of the cost of feasibility studies and energy-saving projects and equipment;
Customers less willing to make capital investments due to economic slowdown	Provide technical support to identify energy-saving projects and verify project costs and savings; Conduct robust customer marketing and outreach to a wider target audience
Limited time, resources, and information to consider efficiency in emergency replacement	Provide preliminary approval in a simplified process; Provide free technical consultation to help identify options; Provide targeted, ongoing dealer and customer outreach
Low customer and Dealer awareness	Conduct robust consumer education and outreach; Provide targeted, ongoing Dealer outreach and sales training; Conduct program promotion/advertising
Lack of customer technical knowledge and familiarity with high-efficiency options	Provide targeted, ongoing Dealer outreach; Provide free engineering expertise
Lack of confidence in savings estimates from vendors	Support independent third-party savings estimates; Have an independent savings verification for selected projects
Procurement policies that specify low first-cost instead of life-cycle cost	Conduct marketing and outreach to decision makers focused on long-term savings and the impacts on their operating budgets

3.13.9. Marketing and Promotion

IPL promotes the Custom Rebates Program through the following channels, depending on the customer size and type of business:

- Dedicated KAMs conduct marketing and outreach to large customers, classified as managed accounts;
- IPL's BRC conducts marketing and outreach to mid-sized, non-managed commercial and agricultural accounts;

- Agricultural representatives conduct outreach and promotion to customers in the agriculture sector;
- IPL conducts follow up with customers who have had custom project opportunities identified through commercial and industrial audits but have not followed through with project installation;
- Targeted customer outreach through direct mail, e-newsletters, case studies, and press releases;
- Convention sponsorships;
- The Alliant Energy website; and
- Hosting of IPL's annual Energy Summit and Excellence in Energy Efficiency awards.

3.13.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/customrebates.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.13.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.114.

Table 3.114 Outside Service Providers

Vendor	Role
Michaels Energy	Conducts retro-commissioning studies, provides customer technical support, reviews customer study results, calculates project energy savings and rebates, conducts site verification
MEEA	Administers the BOC program for the State of Iowa
NEEC	Holds the copyrights for the BOC trademark and all BOC products
PIE ²	Coordinates and offers technology training for industrial customers

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.13.12. Participation

Table 3.115 provides program participation assumptions in terms of the number of installed projects by fuel type.

Table 3.115 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Electric Projects	617	617	617	618	618	3,087
Natural Gas Projects	75	78	80	82	85	400
Total	692	695	697	700	703	3,487

3.13.13. Energy and Demand Savings

This program is expected to produce 343,311 MWh of electricity savings and 1,259,641 therms of natural gas savings over the course of the Plan. This program accounts for 45 percent of electricity savings and 12 percent of natural gas savings in the energy-efficiency portfolio. Table 3.116 provides energy and demand savings goals.

Table 3.116 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	68,567,883	68,606,449	68,653,507	68,709,303	68,774,098	343,311,240
Peak Demand (kW)	8,834	8,839	8,845	8,852	8,860	44,229
Natural Gas Impacts						
Incremental Annual Energy (therms)	252,047	251,986	251,927	251,869	251,813	1,259,641
Peak-Day Demand (therms)	737	737	737	737	736	3,684

3.13.14. Budget

The total budget for the program is estimated at \$46.3 million. Table 3.117 provides program budget assumptions.

Table 3.117 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$258,501	\$258,974	\$259,494	\$260,063	\$260,682	\$1,297,714
Administration	\$344,668	\$345,299	\$345,992	\$346,750	\$347,577	\$1,730,285
Advertising and Promotion	\$689,337	\$690,597	\$691,983	\$693,501	\$695,153	\$3,460,571
Customer Incentive	\$7,065,701	\$7,078,619	\$7,092,830	\$7,108,380	\$7,125,320	\$35,470,851
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$258,501	\$258,974	\$259,494	\$260,063	\$260,682	\$1,297,714
Electric Total	\$8,616,709	\$8,632,463	\$8,649,793	\$8,668,756	\$8,689,414	\$43,257,135
Natural Gas Budget						
Planning and Design	\$19,001	\$19,036	\$19,074	\$19,116	\$19,161	\$95,388
Administration	\$25,335	\$25,381	\$25,432	\$25,488	\$25,549	\$127,185
Advertising and Promotion	\$50,670	\$50,762	\$50,864	\$50,976	\$51,097	\$254,369
Customer Incentive	\$519,364	\$520,314	\$521,359	\$522,502	\$523,747	\$2,607,285
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$19,001	\$19,036	\$19,074	\$19,116	\$19,161	\$95,388
Natural Gas Total	\$633,371	\$634,529	\$635,803	\$637,197	\$638,716	\$3,179,616
Total Budget						
Planning and Design	\$277,502	\$278,010	\$278,568	\$279,179	\$279,844	\$1,393,103
Administration	\$370,003	\$370,680	\$371,424	\$372,238	\$373,125	\$1,857,470
Advertising and Promotion	\$740,006	\$741,359	\$742,848	\$744,476	\$746,250	\$3,714,940
Customer Incentive	\$7,585,066	\$7,598,933	\$7,614,189	\$7,630,882	\$7,649,067	\$38,078,136
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$277,502	\$278,010	\$278,568	\$279,179	\$279,844	\$1,393,103
Total	\$9,250,080	\$9,266,992	\$9,285,596	\$9,305,954	\$9,328,130	\$46,436,752

Table 3.118 provides a forecast of staffing needs and costs for this program.

Table 3.118 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	78.75	\$98,438	Program-specific management
Energy Efficiency Programs Management	29	\$36,250	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Key Account Management	950	\$1,187,500	Nonresidential customer liaison and program delivery support
Communications Manager	11.25	\$14,063	Marketing and communications support
Total	1,073	\$1,341,250	

3.13.15. Cost-Effectiveness Results

A comparison of the program’s costs and life-cycle benefits indicates that the overall program is cost-effective from a societal perspective, with a B/C ratio of 3.52 to 1. The program’s costs are also justified by its benefits from the participant and utility points of view. Table 3.119 provides program cost-effectiveness results.

Table 3.119 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$273,216,424	\$215,267,417	\$273,216,424	\$412,465,012
Costs	\$38,610,439	\$71,096,638	\$261,195,269	\$87,096,886
Net Benefits	\$234,605,985	\$144,170,778	\$12,021,156	\$325,368,126
B/C Ratio	7.08	3.03	1.05	4.74
\$/kWh	\$0.013	\$0.028	\$0.087	\$0.022
Natural Gas Program				
Benefits	\$6,296,401	\$9,593,123	\$6,296,401	\$9,258,409
Costs	\$2,976,524	\$28,475,622	\$11,683,577	\$32,655,746
Net Benefits	\$3,319,877	-\$18,882,500	\$5,387,176	-\$23,397,337
B/C Ratio	2.12	0.34	0.54	0.28
\$/therm	\$0.265	\$3.014	\$1.039	\$2.165
Total Program				
Benefits	\$279,512,825	\$224,860,540	\$279,512,825	\$421,723,421
Costs	\$41,586,963	\$99,572,261	\$272,878,846	\$119,752,632
Net Benefits	\$237,925,862	\$125,288,279	\$6,633,979	\$301,970,789
B/C Ratio	6.72	2.26	1.02	3.52

3.14. Commercial New Construction Program

3.14.1. Program Description

The Commercial New Construction Program promotes long-term energy savings by encouraging the adoption of high-performance building practices in the new construction of nonresidential facilities in IPL's territory. Through the program, IPL offers energy design assistance (EDA) and construction incentives to commercial builders and developers who design and build new energy-efficient buildings and facilities that exceed the current State of Iowa commercial building energy code. The program targets projects in the planning stage that have enough time to integrate new ideas and strategies into the design. The program offers the components outlined below.

Energy Design Assistance

IPL's program contractors work with customers and their architects and developers during the planning and design stage to incorporate energy-efficient design features into the building's pre-construction drawings and to specify energy-efficient equipment in the building's plans.

Design Team Incentives

Because architect and design engineers must allocate significant resources to the energy design process, IPL provides incentives to cover all or most of the design team's cost to participate in EDA, rather than having them pass the additional costs onto the customer.

Construction Incentives

IPL provides incentives to participants when they achieve a target level of energy savings above the current State of Iowa building energy code. Construction incentives are designed to offset the additional cost of constructing high-performance commercial buildings.

Recognizing the varying needs of program participants, IPL now offers four program tracks based on the planned project size and end use:

1. **Program Track I** targets the construction of commercial buildings up to 15,000 square feet in size that are primarily design/build or design/bid/build construction projects. Participants in this track must exceed current commercial energy-efficient code requirements by 15 percent.
2. **Program Track II** (formerly encompassed within the Custom Track) targets buildings larger than 15,000 square feet that are straightforward in design and may be on a fast design schedule. Track II provides evaluation of efficiency options for one type of mechanical system solution. IPL works with developers in this track to achieve energy savings between 15 and 40 percent above the current commercial energy code.
3. **Program Track III** (formerly Custom Track) targets buildings larger than 15,000 square feet that require more customized energy design. The program provides energy modeling of custom efficiency strategies selected by the owner/design team. IPL works with developers in this track to achieve energy

savings between 15 and 40 percent above the current commercial energy code.

4. **Program Track IV** (formerly Custom Plus Track) offers incentives and assistance to help building owners or developers achieve energy savings that are 40 to 60 percent above current energy code. This track also provides technical and certification support for participants to meet the requirements of Leadership in Energy and Environmental Design (LEED), ENERGY STAR, Energy Policy Act of 2005, 2030 Challenge, and other built-environment initiatives.

Key changes to this program in the Plan include:

- No changes are planned at this time

3.14.2. Operations

IPL, in collaboration with the other two Iowa IOUs, relies on a professional commercial design consulting firm for delivery of Tracks II, III, and IV. IPL administers Track I independent of the other Iowa IOUs using a different program contractor. Both program contractors provide customer outreach, EDA, project management, and verification. The contractors work with IPL to qualify the design assistance track selected. Both program contractors use a similar process and tools to assess projects in all tracks, provide consistency, and promote repeat participation. IPL internal staff support data tracking and rebate processing.

Customers interested in participating in the Commercial New Construction Program begin by assembling an internal design team to work with IPL and its program contractors; the design team then compiles general information and specifications about the planned project. Following a review and approval²² of the project, IPL's program contractors provide EDA based on the building's size:

- For participants in **Track I**, IPL's program contractor provides three prescriptive style plans, based on the building type and needs, for the architect or general contractor to present to the customer.
- For **Track II, III, and IV**, IPL's program contractor presents customers with a range of available design and construction strategies that may achieve the desired minimum savings level. Additionally, IPL's program contractor conducts engineering analysis and the DOE-2 building performance simulation modeling for the strategies the customer would like to explore. The analysis includes modeling the performance of bundles of energy-savings design strategies and equipment measures to calculate the customer's relative energy savings, incremental costs, estimated incentives, and paybacks, and to support the customer's final design decisions.

Following this analysis, the customer's design team works with IPL's program contractor to identify the prescriptive plans or bundle of energy-efficiency strategies that the customer will incorporate into the project construction documents. The customer must submit completed construction documents to IPL's program contractor for review

²² If the project is either too far along in the design process, or is not a good candidate for effective energy-efficient design strategies, IPL may direct customers to available incentives through its Nonresidential Prescriptive Rebates or Custom Rebates Program.

and verification that the strategies have been included and will result in the expected savings. The resulting construction document report initiates IPL's internal program contract approval and triggers distribution of the customer's design team incentive.

Following construction of the project, IPL's program contractors provide customers with information to support long-term energy savings (e.g., appropriate system settings and maintenance), and they conduct field verifications of the new building to ensure that energy-efficient systems and components are installed and functioning properly. After the program contractors perform these tasks, IPL calculates and issues the customer's construction incentive.

3.14.3. Value Proposition

Customers participating in the program receive three main benefits:

1. ***Financial benefits*** in the form of:
 - a. Free EDA and modeling;
 - b. Construction incentives that reduce the payback period of selected energy-efficiency measures; and
 - c. Increased property values due to lower monthly operating costs, investment in advanced efficiency technologies, and improved building operation and comfort.
2. ***Decision support*** in the form of:
 - a. Information on the benefits and costs of incorporating customized energy-efficiency strategies; and

- b. Detailed design specifications for selected building plans or measures.
3. **Confidence** in their final design decision due to:
- a. Owner/developer involvement in measure selection and review; and
 - b. Independent verification of design specifications, construction documents, and final installation.

3.14.4. Customer Targets

The program targets builders and developers engaged in new construction or major renovations of buildings in the commercial sector, including qualifying multifamily residential housing and industrial facilities. Table 3.120 outlines customer eligibility requirements.

Table 3.120 Customer Eligibility Parameters

	Eligible Customers	
	Electric Measures	Natural Gas Measures
Customer Class	Nonresidential retail electric (can be single service or in combination with retail natural gas service)	Nonresidential retail natural gas (must be in combination with retail electric service)
Customer Status	Building owners	Building owners
Building Type	Commercial; Multifamily; Industrial	Commercial; Multifamily; Industrial
Building Vintage	New construction; major renovations	New construction; major renovations
Geography	IPL's Iowa service territory	IPL's Iowa service territory

3.14.5. Trade Ally Targets

IPL works with trade allies who provide services to the new commercial construction market to promote and deliver the Commercial New Construction Program. IPL conducts outreach to these trade allies to inform them of program opportunities and

changes. The following types of trade allies are the primary participants in IPL's program:

- Architectural and engineering firms;
- Construction firms and commercial building contractors;
- Design/build contractors;
- Developers; and
- Mechanical, electrical, and equipment contractors.

3.14.6. Incentive Structure and Process

Participants work closely with IPL energy-efficiency staff. IPL provides incentives throughout the design and implementation process, under the following protocols:

- **EDA:** IPL provides free consulting to help customers identify the optimal mix of cost-effective energy-efficiency strategies, such as building shell/envelope, window glazing, day-lighting design and control, lighting design and control, heating and cooling systems, motors and pumps, compressed air, and outside air. IPL pays incentives for design assistance services directly to the third-party consultant.
- **Design Team Incentive:** IPL provides a prescriptive design team incentive based on the customer's construction track. This incentive is intended to offset most or all of the expenses incurred by participating in the EDA process. IPL provides the design team incentive following submittal and review of construction documents.

- **Construction Incentives:** IPL designed its construction incentives to cover a portion of the cost of implementing strategies that result in energy savings of at least 15 percent above the State of Iowa commercial building energy code. Incentive levels are based on the completed building's verified savings, and are paid approximately 60 days following occupancy of the new building.

3.14.7. Eligible Measures and Incentives

The program offers incentives for projects resulting in at least 15 percent energy savings above code, based on ASHRAE-90.1-2004 and a simple payback of one year. Incentives increase with savings, from \$0.06/kWh and \$0.60/therm to \$0.19/kWh and \$1.90/therm for savings ranging from 15 percent to 35 percent above baseline.

Table 3.121 provides eligible measures, qualification standards, and incentive levels for this program.

Table 3.121. Incentive Summary

Customer Class	Qualification	Customer/Construction Incentive	Design Team Incentive
Energy Design Assistance	DOE-2 building performance simulation modeling, provided by third-party consulting firm	Free to customer	N/A
Track I	Buildings \leq 15,000 square feet Building must achieve energy savings \geq 15 percent above current state energy code ¹ and a simple payback of one year	\$0.06/kWh above code	\$1,000
		\$0.60/therm above code	
Track II	Building must achieve energy savings \geq 15 percent above current energy code ¹ and a simple payback of one year	\$0.06/kWh above code	\$3,500
		\$0.60/therm above code	
Track III	Building must achieve energy savings \geq 15 percent above current energy code ¹ and a simple payback of one year	\$0.06/kWh above code	\$5,500
		\$0.60/therm above code	
Track IV	Building must achieve energy savings \geq 40 percent above current energy code ¹ and a simple payback of one year.	\$0.19/kWh above code	\$7,500-\$8,500
		\$1.90/therm above code	

¹ The current energy code is based on ASHRAE-90.1-2004.

3.14.8. Market Barriers

Table 3.122 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.122 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher cost of building to higher energy-efficiency performance standards	Offer incentives to help offset costs at both the design and construction project stages
Limited time to engage in long design process	Offer incentives to design team as compensation for time; Use a streamlined, efficient, and responsive program process; Provide incentives to help the design team bring added value to their customers
Lack of customer awareness of alternative design strategies	Provide free design assistance; Encourage decision-maker involvement throughout the design process; Support the program with education appropriate to different types of program participants (e.g., designers, owners)
Customers value design features over efficiency and are reluctant to spend resources on energy features	Raise customer awareness through the EDA process; Focus on the long-term benefits of energy-efficiency features; Provide rebates to lower the incremental cost of efficiency features
Low customer and trade ally awareness of the program	Provide ongoing trade ally communications and outreach; Conduct marketing and outreach to targeted customers
Late project involvement in program	Strengthen project screening procedures and emphasize the energy-savings goals; Educate designers' and developers' on program requirements and commitments; Provide an alternative path to efficiency through other programs for projects that do not engage in design assistance early enough

3.14.9. Marketing and Promotion

IPL's third-party program contractor facilitates joint utility marketing efforts for Tracks II, III, and IV through a combination of education and direct outreach, targeting both the demand and supply sides of the commercial new construction market. IPL facilitates the marketing, education, and outreach efforts for Track I.

IPL also leverages its relationships with appropriate participants in its Dealer Network and Builder Training Program to promote the entire program. IPL uses the following marketing tactics to increase program awareness and participation in the program:

- Direct outreach to IPL customers through its account management channels to commercial building owners, the nonresidential building community, and related industries (e.g., architectural and engineering firms, builders, contractors);
- Promotional and educational initiatives, such as workshops for building owners and members of trade ally organizations;
- Participation in architectural and building industry conferences and trade shows;
- E-newsletter to architects and design professionals;
- Advertising in trade magazines, newspapers, and via sponsorships; and
- Earned media through press releases and customer success stories.

3.14.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/newconstruction.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.14.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.123.

Table 3.123 Outside Service Providers

Vendor	Role
The Weidt Group	Answer customer calls, calculate rebates, provide design assistance consulting services for facilities > 15,000 square feet, and verify project results
Michaels Energy	Answer customer calls, calculate rebates, provide design assistance consulting services for facilities < 15,000 square feet, and verify project results

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.14.12. Participation

Table 3.124 provides program participation assumptions in terms of new facilities that participate in the program.

Table 3.124 Participation Assumptions

	2014	2015	2016	2017	2018	Total
New Facilities	38	38	38	38	38	190

3.14.13. Energy and Demand Savings

This program is expected to produce 62,120 MWh of electricity savings and 537,600 therms of natural gas savings over the course of the Plan. This program accounts for 8 percent of electricity savings and 5 percent of natural gas savings in the energy-efficiency portfolio. Table 3.125 provides energy and demand savings goals.

Table 3.125 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	17,000,000	15,030,000	10,030,000	10,030,000	10,030,000	62,120,000
Peak Demand (kW)	4,323	3,822	2,551	2,551	2,551	15,797
Natural Gas Impacts						
Incremental Annual Energy (therms)	168,000	92,400	92,400	92,400	92,400	537,600
Peak-Day Demand (therms)	2,948	1,622	1,622	1,622	1,622	9,435

3.14.14. Budget

The total budget for the program is estimated at \$6.2 million. Table 3.126 provides program budget assumptions.

Table 3.126 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$15,550	\$13,415	\$9,499	\$9,499	\$9,499	\$57,461
Administration	\$77,750	\$67,075	\$47,494	\$47,494	\$47,494	\$287,306
Advertising and Promotion	\$46,650	\$40,245	\$28,496	\$28,496	\$28,496	\$172,383
Customer Incentive	\$1,387,060	\$1,196,609	\$847,287	\$847,287	\$847,287	\$5,125,530
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$21,770	\$0	\$0	\$0	\$0	\$21,770
Electric Total	\$1,548,780	\$1,317,344	\$932,775	\$932,775	\$932,775	\$5,664,450
Natural Gas Budget						
Planning and Design	\$1,538	\$1,327	\$939	\$939	\$939	\$5,683
Administration	\$7,690	\$6,634	\$4,697	\$4,697	\$4,697	\$28,415
Advertising and Promotion	\$4,614	\$3,980	\$2,818	\$2,818	\$2,818	\$17,049
Customer Incentive	\$137,182	\$118,346	\$83,798	\$83,798	\$83,798	\$506,921
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$2,153	\$0	\$0	\$0	\$0	\$2,153
Natural Gas Total	\$153,176	\$130,287	\$92,253	\$92,253	\$92,253	\$560,220
Total Budget						
Planning and Design	\$17,088	\$14,742	\$10,438	\$10,438	\$10,438	\$63,144
Administration	\$85,440	\$73,708	\$52,191	\$52,191	\$52,191	\$315,720
Advertising and Promotion	\$51,264	\$44,225	\$31,315	\$31,315	\$31,315	\$189,432
Customer Incentive	\$1,524,242	\$1,314,955	\$931,085	\$931,085	\$931,085	\$5,632,451
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$23,923	\$0	\$0	\$0	\$0	\$23,923
Total	\$1,701,956	\$1,447,630	\$1,025,028	\$1,025,028	\$1,025,028	\$6,224,671

Table 3.127 provides a forecast of staffing needs and costs for this program.

Table 3.127 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	22.5	\$28,125	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Total	190	\$237,500	

3.14.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that both the electric and natural gas components of the program are cost-effective from a societal perspective, with an overall program B/C ratio of 5.45 to 1. Table 3.128 provides program cost-effectiveness results.

Table 3.128 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$99,139,902	\$57,654,396	\$99,139,902	\$150,104,457
Costs	\$6,775,344	\$22,842,568	\$69,014,342	\$26,188,787
Net Benefits	\$92,364,558	\$34,811,828	\$30,125,560	\$123,915,669
B/C Ratio	14.63	2.52	1.44	5.73
\$/kWh	\$0.009	\$0.037	\$0.093	\$0.026
Natural Gas Program				
Benefits	\$4,672,824	\$5,139,875	\$4,672,824	\$6,850,029
Costs	\$670,089	\$2,259,155	\$6,141,882	\$2,590,100
Net Benefits	\$4,002,735	\$2,880,720	-\$1,469,058	\$4,259,929
B/C Ratio	6.97	2.28	0.76	2.64
\$/therm	\$0.096	\$0.385	\$0.882	\$0.278
Total Program				
Benefits	\$103,812,726	\$62,794,271	\$103,812,726	\$156,954,486
Costs	\$7,445,433	\$25,101,724	\$75,156,224	\$28,778,887
Net Benefits	\$96,367,293	\$37,692,548	\$28,656,502	\$128,175,598
B/C Ratio	13.94	2.50	1.38	5.45

3.15. Agriculture Sector Program

3.15.1. Program Description

The Agriculture Sector Program is designed to help IPL's farm and agribusiness electric customers improve the overall energy efficiency and reduce the operating costs of their facilities. Through the program, IPL provides farm energy assessments and prescriptive incentives to agricultural customers for a comprehensive suite of energy-efficiency products and services. The program also provides incentives to trade allies who sell and install energy-efficient farm equipment.

The program offers technical support and incentives to IPL agriculture-sector customers interested in replacing standard efficiency equipment with equipment and measures that provide energy and/or demand savings. The program offers:

- **Farm energy assessments**, performed by an IPL agribusiness representative (Ag Rep) or IPL's program contractor, to identify areas of energy waste, recommend energy-savings opportunities, and provide information on incentives available from IPL. IPL also offers specialized assessments to help customers comply with application requirements for state and federal energy-efficiency loan and grant programs.
- **Agriculture-specific prescriptive rebates** for specialized energy-efficiency equipment installed in existing facilities and for new construction projects.

- **Dealer incentives** for agribusiness trade allies (Ag Trade Allies) who sell and install energy-efficient farm equipment.²³

Key changes to this program in the Plan include:

- Providing between six and eight free CFLs as part the farm energy assessment for the customer to install as needed;
- Adding ultra-premium-rated motors to the list of available prescriptive measures;
- Shifting agricultural custom projects to the Custom Rebates Program;
- Eliminating measures that are not cost-effective and/or do not offer sufficient economic potential to justify budget expenditures, such as clothes washers, dishwashers, and programmable thermostats; and
- Following up with all customers three to six months after their farm energy assessments to encourage measure installation.

3.15.2. Operations

This program relies on IPL's Ag Reps, Ag Trade Allies, equipment Dealers, specialized energy auditors, and energy analysts that serve the agricultural sector to recruit customers and deliver the program. The following briefly describes operations for each component of the program.

²³ Dealer incentives are available for prescriptive measures only.

Farm Energy Assessments

IPL provides free on-farm energy assessments to agriculture and agribusiness customers who contact IPL to request an assessment. IPL's BRC directs these customers to the program contractor, who schedules and conducts assessments and provides customized energy-efficiency recommendations. Energy assessments are typically performed by IPL's Ag Reps or by IPL's program contractor, who all have expertise in building envelope and energy-using equipment, as well as specialized farm equipment.

Walk-through energy assessments include visual inspections of all energy-using equipment. The energy assessor then provides the customer with up to eight free CFLs to install in their facilities, a written report recommending cost-effective energy-efficiency upgrades, and information about IPL's rebate and energy-efficiency programs. Resulting energy-efficiency recommendations are frequently eligible for prescriptive or custom incentives through IPL's energy-efficiency programs.

The energy assessors direct customers interested in installing individual energy-efficient measures to IPL's agriculture prescriptive rebates. They direct customers interested in installing custom projects to IPL's Custom Rebates Program. To encourage equipment installation, IPL conducts marketing and outreach follow up with assessment participants within three to six months after assessments are completed.

IPL also offers specialized energy audits to help customers comply with application requirements for state and federal energy-efficiency programs, such as United States

Department of Agriculture (USDA) 9007 Energy-Efficiency Grants and Loans.²⁴ USDA energy audits are more rigorous than walkthrough assessments, and involve detailed data collection and calculations to determine the exact efficiencies of the existing equipment compared to the new equipment being considered. IPL has assisted agriculture customers with USDA applications since 2005 and plans to continue to offer the service if the program is renewed in future farm bills. IPL will continue to monitor other government agriculture energy-efficiency programs that become available to identify additional energy-efficiency-related services for qualifying agriculture customers.

Agriculture-Specific Prescriptive Rebates and Dealer Incentives

IPL offers prescriptive incentives for customers and trade allies through the program. Customers receive a rebate when they purchase qualifying high-efficiency equipment and submit a rebate application with required documentation on the original purchase to IPL. As the program's success is highly dependent on promotion and support from trade allies, IPL also offers incentives to vendors who participate in IPL's Dealer Network, facilitate customer purchases of qualifying equipment, and include their Dealer ID number on the relevant customer application. On a monthly basis, IPL mails incentives checks to Dealers who sold eligible equipment.

Agricultural customers may be eligible for additional incentives through IPL's Nonresidential Prescriptive Rebates, Residential Prescriptive Rebates, and Custom Rebates programs for applicable projects in qualifying facilities. IPL also facilitates low-

²⁴ Electric-only agricultural customers pay a portion of the cost for USDA energy audits.

interest financing for interested customers by helping them submit the required documentation to a third-party lending partner.

3.15.3. Value Proposition

Customers participating in the program receive four main benefits:

1. Customers receive ***trustworthy energy-savings recommendations*** from trained IPL Ag Reps, energy auditors, and energy analysts.
2. Customers ***save money*** in the short term through rebates and financing and in the long term through lower utility bills.
3. Customers may ***increase their production capacity and profits*** by installing equipment upgrades.
4. Customers receive ***accurate qualifying documentation*** needed to complete application materials for state and federal energy-efficiency programs.

3.15.4. Customer Targets

This program targets agricultural sector customers with specialized products and services tailored for farms and agribusinesses. Table 3.129 outlines customer eligibility requirements.

Table 3.129 Customer Eligibility Parameters

	Eligible Customers	
	Electric Measures	Natural Gas Measures
Customer Class	Residential or nonresidential electric	Residential or nonresidential natural gas
Customer Status	Owners or tenants with owner approval	Owners or tenants with owner approval
Building Type	Agricultural	Agricultural
Building Vintage	Existing buildings and new construction	Existing buildings and new construction
Geography	IPL's Iowa service territory	IPL's Iowa service territory

3.15.5. Trade Ally Targets

As with many of its other programs, IPL relies on Ag Trade Allies to promote energy-efficiency products for agriculture customers. The following types of trade allies are the primary participants in IPL's program:

- Contractors and engineering firms specializing in facility upgrade and new construction projects in the swine, poultry, dairy, and beef industries;
- Farm equipment supply centers;
- Lighting vendors and installation contractors;
- Ventilation vendors and installation contractors;
- Motor and drive suppliers; and
- Grant writers.

3.15.6. Incentive Structure and Process

IPL offers incentives for equipment replacement or for the purchase of new high-efficiency equipment. Incentives are also available for constructing new facilities or

expanding and upgrading existing facilities for various and diverse operations, such as grain facilities, swine, poultry, dairy, and beef operations.

IPL's walkthrough energy assessments are offered free to agriculture customers whose electric usage is at least 50 percent dedicated to agriculture operations. For USDA audits, IPL requires a contribution from its electric-only customers to cover a portion of the cost of a required analysis of liquid propane use, which is supplied by other providers. USDA audits are free for electric and natural gas combination customers, since IPL provides both services.

Agriculture-specific prescriptive rebates are available for both electric and natural gas agriculture customers. Rebates are structured to cover approximately 50 percent of measure incremental cost. Customers apply for rebates via a mail-in program application, submitted with documentation on the qualified equipment purchase to IPL's rebate processing center. IPL provides incentives for eligible equipment in the form of a check. Customers also may choose low-interest financing as an alternative to receiving a rebate.

Dealer incentives are also available to Ag Trade Allies who sell high-efficiency equipment and include their Dealer ID on the relevant customer application. Dealer incentives are set at 20 percent of the customer rebate amounts for eligible prescriptive measures. IPL verifies and processes customer applications, and tracks the Dealer IDs. On a monthly basis, IPL mails incentives checks to Ag Trade Allies who sold eligible equipment and participate in the Dealer Network.

3.15.7. Eligible Measures and Incentives

Qualifying measures in this program include energy-efficient farm and agricultural production equipment, as well as many of the measures offered under the Nonresidential Prescriptive Rebates Program. Additionally, all agriculture customers are eligible for applicable residential prescriptive rebates²⁵ for equipment installed in residential buildings, and are eligible for nonresidential prescriptive and custom rebates²⁶ for equipment installed in nonresidential buildings (in addition to the agriculture-specific incentives listed below). Table 3.130 provides eligible measures, qualification standards, and incentive levels for each program component and equipment included in this program.

Table 3.130 Incentive Summary

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
Farm Energy Assessments			
Walkthrough Farm Assessment	≥ 50 percent of electric usage must be for agriculture uses	Free	N/A
USDA Farm Audit	Electric and Natural Gas Customers	Free	N/A
	Electric-Only Customers	\$600 customer cost	N/A
CFLs	ENERGY STAR-Rated	Free (6-10 bulbs)	N/A
Dairy Equipment			
Automatic Milker Takeoff	Dry cows not eligible	\$5/cow	20 percent of customer rebate amount
Milk Precooler – Dairy Plate Cooler	Dry cows not eligible	\$3.40/cow	20 percent of customer rebate amount
Variable-Speed Drives for Dairy Vacuum Pumps/Milking Machines	Must be controlled by UL-listed device which meets applicable IEEE standards for harmonic control Dry cows not eligible.	\$5/cow	20 percent of customer rebate amount
Heat Reclaimer	Qualifying units: Century-therm, Heat Bank, Fe-Heater, Sunset, Therma-store, and	\$5/cow	20 percent of customer rebate

²⁵ See Section 3.1 for a complete list of residential measures.

²⁶ See Section 3.11 for a complete list of nonresidential measures. See Section 3.13 for a description of the Custom Rebates Program eligibility requirements and project protocols.

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
	Superheater Dry cows not eligible		amount
Dairy Scroll Compressor	Must replace reciprocating compressor	\$250	\$50
Fans and Ventilation Systems			
High Volume Low Speed Fans	Sized 16 feet or larger	\$750	\$150
High-Efficiency Ventilation System	14-23 inch; 11.0 cfm/watt	\$45	\$9
	24-35 inch; 13.0 cfm/watt	\$75	\$15
	36-47 inch; 17.0 cfm/watt	\$125	\$25
	≥ 48 inch - 19.5 cfm/watt	\$150	\$30
Programmable Ventilation Controller	Must control a ventilation fan	\$20	\$4
Circulating Fans	12-23 inch; 11.0cfm/watt	\$25	\$5
	24-35 inch; 16.5 cfm/watt		
	34-47 inch; 18.2 cfm/watt	\$50	\$10
	48-49 inch; 22.0 cfm/watt	\$75	\$15
≥ 50 inch; 27.0 cfm/watt			
Heating and Cooling			
Heat Lamps	<175 watts Agricultural Applications only	\$5 or 50 percent of cost	20 percent of customer rebate amount
Air-Source Heat Pump	ENERGY STAR SEER 14.5, EER 112, and HSPF 8.2 (Split System)	\$300	\$60
	CEE Tier 2 SEER 15, EER 12.5, and HSPF 8.5 (Split System)	\$400	\$80
	Enhanced SEER 16, EER 13, and HSPF 9.0 (Split System)	\$600	\$120
	Desuperheater for Air-Source Heat Pump	\$150 plus heat pump rebate	\$30
Geothermal – Residential-sized (Ground-Source Heat Pumps)	Water-to-air/closed loop ENERGY STAR > EER 17.1 and 3.6 COP	\$5,000	\$500
	Water-to-air/open loop ENERGY STAR > EER 21.1 and 4.1 COP		
	Water-to-water/closed loop ENERGY STAR EER > 16.1 and 3.1 COP		
	Water-to-water/open loop ENERGY STAR EER > 20.1 and 3.1 COP		
Motors and Drives			
Variable-Speed/Frequency Drive	5 to 350 HP.	\$35/HP	20 percent of customer rebate amount
Motors	Ultra-premium-rated motors and drives 20 to 350 HP	Incentives vary	20 percent of customer rebate amount
Waterers and Irrigation			
Low Pressure Irrigation	Must operate on < 50% pressure	\$20/acre	\$4/acre

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
	Replacement systems only		
Livestock Waterers	Must have > 2-inch insulation surrounding inside of water heater and an electric heating element, plus an adjustable thermostat with an element > 250 watts	\$40	\$8
Lighting			
CFL Indoor Fixture	ENERGY STAR-rated Hard-wired	\$20	\$4
CFL and Specialty CFL Bulbs	ENERGY STAR-rated Minimum purchase of 10 bulbs Minimum purchase price \$1 per bulb	50 percent of purchase price	20 percent of customer rebate amount
LED Lamps	ENERGY STAR rated	\$10	\$2
LED Fixtures	ENERGY STAR-rated or DesignLights Consortium-qualified; exterior only	\$30	\$6
Time clocks and timers for lighting	Minimum 45 Watts Controlled Per Control Commercial grade	\$20/control	\$4/control
Fluorescent Fixtures and Ballasts Packages	Replacement only Qualifications vary by lamp and ballast replaced Lamp and ballast combinations must be listed on the CEE High-Performance T8 Qualifying Products list	Incentives vary by length and number of lamps	20 percent of customer rebate amount
High Bay Fluorescent High Output Packages	Replacement only Fixtures above 15 feet (ceiling height)		20 percent of customer rebate amount
Pulse Start or Ceramic Metal Halide Lighting Packages	Replacement only Qualifications vary by equipment replaced	Incentives vary by wattage	20 percent of customer rebate amount
High Pressure Sodium Fixture <250 watts	Agricultural applications only. Less than 250 watts; must use electronic ballast.	\$20	\$4
High Pressure Sodium Fixture 250-400 watts	Agricultural applications only. 250-400 watt fixtures; must use electronic ballast.	\$30	\$6
Other Retrofits			
Qualifying Residential Prescriptive Measures	Based on assessor's recommendation	See program details in Section 3.1	
Qualifying Nonresidential Prescriptive Measures		See program details in Section 3.11	
Any Custom Measure or Project	Measures not included in prescriptive measure list Minimum two-year payback	See program details in Section 3.13	N/A
Low-Interest Financing			
Low-Interest Financing	All measures financed must meet efficiency qualifications outlined in program materials Equipment financed through low-interest financing is not eligible for cash-back rewards Loan terms range from 0-60 months	Loans range from \$1,500 - \$25,000	Based on equipment installed

Program/Measure	Qualification	Customer Incentive*	Dealer Incentive
	Corresponding annual percentage rate ranges from 0-6.9 percent		

* Rebates may not exceed 50 percent of applicable equipment cost

** This is a new measure in the 2014 to 2018 Energy Efficiency Plan.

UL: Underwriters Laboratories

IEEE: Institute of Electrical and Electronics Engineers

cfm: cubic feet per minute

COP: coefficient of performance

SEER: seasonal energy efficiency ratio

EER: energy efficiency ratio

HSPF: Heating Seasonal Performance Factor

HP: horse power

3.15.8. Market Barriers

Table 3.131 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 3.131 Market Barriers and Strategies

Market Barriers	Program Strategies
Higher first cost of energy-efficient equipment	Offer rebates set at levels to help offset costs; Offer support to obtain discounted financing; Educate customers on the long-term energy cost-saving benefits of higher-efficiency equipment
Limited time and information to consider efficiency in emergency replacement	Conduct targeted Dealer outreach; Encourage agriculture-sector Dealers to stock high-efficiency equipment; Maintain low-hassle program requirements
Lack of customer and dealer awareness	Promote the program through customer education and outreach; Continue ongoing Dealer communications and outreach; Educate Dealers and contractors about program procedures and benefits; Use traditional and nontraditional marketing approaches
Customers do not trust energy-savings calculations	Provide case studies of actual projects with energy savings where appropriate; Support independent third-party savings estimates for custom projects
Customers work on a seasonal business cycle, and efficiency projects can be disruptive	Focus on conducting installation efforts during off-season periods
Energy is a small part of overall operating costs	Target new purchases and equipment replacement markets
Agriculture-sector equipment is highly industrial and site-specific and does not readily fit into prescriptive rebate programs	Offer a combination of prescriptive and custom incentives; Support leveraging additional funds through the farm bill and other programs
Agricultural equipment may be used heavily during short time periods (e.g., during harvest) and therefore does not always fit into incremental cost versus savings eligibility criteria	Offer a combination of prescriptive and custom incentives; Support leveraging additional funds through the farm bill and other programs

3.15.9. Marketing and Promotion

IPL’s Ag Reps and program contractor lead promotional efforts for the Agriculture Sector Program. IPL takes a multipronged approach to marketing, which includes:

- Direct outreach to key Ag Trade Allies and market stakeholders;
- Promoting dealer incentives to participating Dealers;
- Conducting webinars and other events for participating Dealers and contractors to educate them on the program’s structure and procedures;

- Promoting the program at trade shows, community meetings, builder open houses, commodity expos, fairs, retail store phone calls, and farm visits (to make direct contact),
- Participating in and speaking at energy-efficiency conferences, workshops, seminars, and agricultural events around the state; and
- Direct outreach aimed at forming long-term relationships with and educating farm and agribusiness customers.

Farmers frequently wait to replace equipment until it fails, so trade allies who stock energy-efficient equipment and persuade farmers to invest in energy efficiency are valuable program marketing assets. IPL will continue to build its existing relationships and seek out new relationships with dealers and contractors who carry and install qualified high-efficiency equipment, particularly farm-specific equipment.

3.15.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/ag.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

3.15.11. Outside Services

Pursuant to its 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 3.132.

Table 3.132 Outside Service Providers

Vendor	Role
Franklin Energy	Third-party implementation; farm assessments; follow up
Alliant Credit Union	Third-party financing

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

3.15.12. Participation

Table 3.133 provides program participation assumptions in terms of the number of audits conducted and measures that are installed by fuel type.

Table 3.133 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Farm Audit	200	200	200	200	200	1,000
Electric Customers	796	798	800	802	805	4,000
Natural Gas Customers	-	-	-	-	-	-
Total	996	998	1,000	1,002	1,005	5,000

3.15.13. Energy and Demand Savings

This program is expected to produce 18,131 MWh of electricity savings over the course of the Plan. This program accounts for 2.37 percent of electricity savings in the energy-efficiency portfolio. There are no natural gas savings associated with this program. Table 3.134 provides energy and demand savings goals.

Table 3.134 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	3,698,789	3,659,227	3,622,908	3,589,890	3,560,240	18,131,054
Peak Demand (kW)	477	471	467	462	459	2,336

3.15.14. Budget

The total budget for the program is estimated at \$4.5 million. Table 3.135 provides program budget assumptions.

Table 3.135 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$18,266	\$18,266	\$18,266	\$18,266	\$18,266	\$91,328
Administration	\$63,930	\$63,930	\$63,930	\$63,930	\$63,930	\$319,649
Advertising and Promotion	\$146,125	\$146,125	\$146,125	\$146,125	\$146,125	\$730,627
Customer Incentive	\$337,590	\$334,430	\$331,545	\$328,940	\$326,618	\$1,659,123
Equipment Cost	\$1,709	\$1,709	\$1,709	\$1,709	\$1,709	\$8,543
Installation Cost	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,500,000
Monitoring and Evaluation	\$45,664	\$45,664	\$45,664	\$45,664	\$45,664	\$228,321
Electric Total	\$913,284	\$910,124	\$907,239	\$904,633	\$902,312	\$4,537,592
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$0	\$0	\$0	\$0	\$0	\$0
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$0	\$0	\$0	\$0	\$0	\$0
Total Budget						
Planning and Design	\$18,266	\$18,266	\$18,266	\$18,266	\$18,266	\$91,328
Administration	\$63,930	\$63,930	\$63,930	\$63,930	\$63,930	\$319,649
Advertising and Promotion	\$146,125	\$146,125	\$146,125	\$146,125	\$146,125	\$730,627
Customer Incentive	\$337,590	\$334,430	\$331,545	\$328,940	\$326,618	\$1,659,123
Equipment Cost	\$1,709	\$1,709	\$1,709	\$1,709	\$1,709	\$8,543
Installation Cost	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,500,000
Monitoring and Evaluation	\$45,664	\$45,664	\$45,664	\$45,664	\$45,664	\$228,321
Total *	\$913,284	\$910,124	\$907,239	\$904,633	\$902,312	\$4,537,592

Table 3.136 provides a forecast of staffing needs and costs for this program.

Table 3.136 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	90	\$112,500	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	22.5	\$28,125	Marketing and communications support
Total	120.5	\$150,625	

3.15.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that the electric program is cost-effective from a societal perspective, with a B/C ratio of 1.32 to 1. The program's costs are also justified by its benefits from the participant and utility points of view. There are no natural gas costs or benefits for this program. Table 3.137 provides program cost-effectiveness results.

Table 3.137 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$8,665,109	\$8,968,511	\$8,665,109	\$11,974,700
Costs	\$4,047,879	\$6,932,995	\$11,178,121	\$9,050,167
Net Benefits	\$4,617,230	\$2,035,516	-\$2,513,012	\$2,924,532
B/C Ratio	2.14	1.29	0.78	1.32
\$/kWh	\$0.040	\$0.077	\$0.109	\$0.072
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$0	\$0	\$0	\$0
Net Benefits	\$0	\$0	\$0	\$0
B/C Ratio	-	-	-	-
\$/therm	\$0	\$0	\$0	\$0
Total Program				
Benefits	\$8,665,109	\$8,968,511	\$8,665,109	\$11,974,700
Costs	\$4,047,879	\$6,932,995	\$11,178,121	\$9,050,167
Net Benefits	\$4,617,230	\$2,035,516	-\$2,513,012	\$2,924,532
B/C Ratio	2.14	1.29	0.78	1.32

4. Outreach, Education, and Training Portfolio

IPL has encouraged customers to reduce their energy use and develop sustainable behaviors since launching its first energy-efficiency programs in 1990. IPL understands the importance of education and training to increase customer awareness of energy-efficient technologies and conservation strategies, as well as to increase trade allies' knowledge of best practice equipment installation techniques. IPL's Outreach, Education, and Training Portfolio includes eight programs, which are designed to facilitate customer awareness by leveraging multiple delivery channels, including schools, trade allies, builders, communities, affinity organizations, and mass media.

In general, IPL does not measure savings resulting from the programs in its Outreach, Education, and Training Portfolio. In many cases, educational initiatives may complement IPL's technology-based energy-efficiency programs by educating participants to use and maintain energy-efficient equipment. In other cases, IPL uses these programs to increase customer awareness of general energy-efficiency benefits and to encourage customers to adopt energy-efficient behaviors. Only the School-Based Energy Education Program generates direct energy savings through energy-efficiency kits distributed to students.

The following tables provide an overview of the projected costs, impacts, and cost-effectiveness associated with the programs in IPL's Outreach, Education, and Training Portfolio.

Table 4.1 Outreach, Education, and Training Benefits and Costs by Program

Outreach, Education, and Training Portfolio	2014-2018 Cumulative Energy Savings		Total Costs (\$MM)
	Electricity (GWh)	Natural Gas ('000 therms)	
Non-Targeted Energy Awareness and Information	0	0	\$2.29
School-Based Energy Education	20.99	1,249,179	\$3.13
Tree Planting	0	0	\$4.51
Hometown Rewards	0	0	\$2.60
Builder Training	0	0	\$0.60
Energy Efficiency Dealer Network	0	0	\$1.04
Bright Ideas	0	0	\$1.16
Research, Development, and Demonstration	0	0	\$1.09
TOTAL PORTFOLIO	20.99	1,249,179	\$16.42

Table 4.2 provides a summary of projected benefits and costs by program year.

Table 4.2 Outreach, Education, and Training Portfolio Benefits and Costs by Program Year

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Electric Savings (kWh)*	4,156,500	4,177,283	4,198,169	4,219,160	4,240,256	20,991,367
Capacity Savings (kW)*	775	779	783	787	791	3,914
Natural Gas Savings (therms)*	247,350	248,587	249,830	251,079	252,334	1,249,179
Capacity Savings (therms)*	659	662	665	669	672	3,327
Participant Cost Net of Incentives (\$)	N/A	N/A	N/A	N/A	N/A	N/A
Direct Utility Costs (\$)	\$3,178,087	\$3,230,029	\$3,282,981	\$3,336,960	\$3,392,041	\$16,420,097
Planning and Design	\$158,330	\$160,523	\$162,765	\$165,055	\$167,396	\$814,068
Program Administration	\$472,029	\$478,497	\$485,093	\$491,819	\$498,683	\$2,426,122
Advertising and Promotion	\$640,882	\$656,166	\$671,868	\$687,999	\$704,572	\$3,361,486
Incentives	\$1,315,444	\$1,339,379	\$1,363,694	\$1,388,395	\$1,413,490	\$6,820,401
Equipment	\$532,823	\$535,497	\$538,172	\$540,846	\$543,563	\$2,690,900
Installation	\$0	\$0	\$0	\$0	\$0	\$0
Program Review & Assessment	\$58,580	\$59,967	\$61,389	\$62,846	\$64,338	\$307,120
Total Societal Cost	\$3,178,087	\$3,178,087	\$3,178,087	\$3,178,087	\$3,178,087	\$16,420,097

*Energy and capacity savings derive from School-Based Energy Education Only.

Table 4.3 presents the overall cost-effectiveness of IPL's Outreach, Education, and Training Portfolio.

Table 4.3 Outreach, Education, and Training Portfolio Cost-Effectiveness

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits*	\$38,046,013	\$21,904,339	\$25,393,499	\$25,393,499
Net Present Value Costs	\$14,974,237	\$2,316,017	\$13,544,752	\$37,131,025
Benefit/Cost Ratio	N/A	N/A	N/A	N/A

* Net present value benefits result from the School-Based Energy Education Program only.

The following sections describe each program in IPL's Outreach, Education, and Training Portfolio, including all details as required by 199 IAC Chapter 35.

4.1. Non-Targeted Energy Awareness and Information Program

4.1.1. Program Description

Customers are becoming increasingly aware of the economic and environmental costs of using energy, and of the opportunities to capture energy savings through efficiency. IPL designed its Non-Targeted Energy Awareness and Information Program to get more energy-efficiency information into the hands of all customers. The program includes the components outlined below.

PowerHouse®

Since 1996, IPL has produced PowerHouse, an educational television (TV) program that focuses on energy efficiency for the home. Airing every weekend on four TV stations, the program offers: useful tips on improving home energy use through more efficient heating, cooling, and lighting technologies; seasonal energy-efficiency topics; new technologies; information on IPL's energy-efficiency portfolio of programs; and more. In this Plan, IPL is considering adding specific key topics to its PowerHouse programming schedule, including:

- Requirements of the Energy Independence and Security Act, a federally established ruling on energy management goals and requirements; and
- Benefits of IPL's HVAC SAVE Program.

In addition to the PowerHouse TV program, IPL also hosts a PowerHouse website with supplemental articles, energy-related facts, energy-savings calculators,

and links to other informational websites, as well as a PowerHouse YouTube channel and Facebook page.

PowerHouse and promotional commercials for the show air on the following four TV stations:

1. KCRG-TV serving Cedar Rapids, Dubuque, and Waterloo;
2. WHO-TV serving Ames and Des Moines;
3. KTVO-TV serving Ottumwa; and
4. KAAL-TV serving Mason City.

Speakers Bureau

IPL also supports a Speakers Bureau, a collection of knowledgeable IPL staff who give presentations on the benefits of energy efficiency and conservation, with tips and real-world examples, to interested organizations. Topics of their presentations include:

- *What's Up with Natural Gas Prices?*
- *Energy Efficiency; Energy, and the Environment;*
- *Electricity 101;*
- *Renewable Energy Update;* and
- *Alliant Energy's Generation Plan.*

The presentations are designed for all types of audiences with content that is easily understandable to lay people. IPL makes these presentations to organizations such as the Rotary and Kiwanis Clubs, schools, and businesses.

Sponsorship

IPL sponsors various events in and around its service territory that promote or educate people about energy efficiency. Examples include home shows, business expositions, and local community events. IPL evaluates sponsorship opportunities on a case-by-case basis.

Advertising

IPL uses advertising to promote general energy awareness to its customers. The advertising conducted for this program provides general information and education on energy use, promotes energy efficiency and conservation, and provides useful tips to help customers save energy. For example, IPL conducted an advertising campaign focused on educating consumers about energy consumption from plug loads.

IPL uses a broad range of advertising channels to deliver the program, including the PowerHouse TV program and its YouTube channel, Twitter, Facebook, local sponsorships, participation in events, speaker engagements, and mass media advertising.

Key changes to this program in the Plan include:

- No changes are planned at this time.

4.1.2. Operations

PowerHouse is produced by a third-party contractor and airs once each weekend across four Iowa TV markets. IPL often includes contractors and homeowners on the

show for testimonies and demonstration about energy-efficiency improvements, do-it-yourself projects, and new technologies.

The website for PowerHouse and the Speakers Bureau page on the Alliant Energy website were created and are maintained by IPL staff.

Stakeholders interested in having IPL sponsors speak at an event can request IPL's participation by filling out a speaker request on the Alliant Energy website, by calling the Alliant Energy Call Center or by submitting an expression of interest to IPL's energy-efficiency staff. IPL reviews these opportunities on a case-by-case basis and selects those that offer an opportunity to reach a broad audience. IPL's staff works with local organizations to coordinate speaking topics, sponsorship levels, logistics, etc. for each opportunity.

4.1.3. Value Proposition

Customers participating in the program receive three main benefits:

1. Participants ***expand their energy-efficiency knowledge and awareness.***
2. Participants ***learn immediately applicable energy-savings tips*** from credible sources.
3. Participants ***save energy*** by incorporating energy-saving behaviors into their everyday lives, and potentially by learning about and participating in IPL's other energy-efficiency programs.

4.1.4. Customer Targets

This program is available to all IPL customers. While the PowerHouse component is primarily targeted to residential customers and the Speakers Bureau is targeted to community groups and organizations, IPL does not utilize specific eligibility verification protocols to screen customers.

4.1.5. Trade Ally Targets

There are no traditional trade allies involved in the delivery of this program; however, IPL does coordinate with a variety of stakeholders and community partners to deliver the program. The following types of partners are the primary participants in IPL's program:

- Community groups and organizations (e.g., churches, rotary clubs);
- Businesses interested in hosting a speaker from the Speakers Bureau; and
- Participants in IPL's Dealer Network may be featured on PowerHouse.

4.1.6. Incentive Structure and Process

This program does not provide traditional rebates or incentives; rather, all program components are offered for free to all participants.

4.1.7. Eligible Measures and Incentives

There are no specific measures associated with this program. The PowerHouse TV program and the Speakers Bureau are provided free to customers and generate savings by encouraging energy-efficient behaviors among customers, by encouraging participation in IPL's energy-efficiency service and rebate programs.

4.1.8. Market Barriers

Table 4.4 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 4.4 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of customer awareness of educational opportunities	Create a comprehensive marketing strategy; Conduct customer outreach and marketing through traditional and nontraditional mechanisms
Lack of time and resources to participate in educational opportunities	Streamline programs to ensure efficient use of participants' time

4.1.9. Marketing and Promotion

IPL markets PowerHouse through on-air promotions, as well as in various energy-efficiency marketing materials. PowerHouse videos are available on YouTube. In addition, IPL provides DVDs of the shows to area libraries for check-out, further extending the PowerHouse brand. Additional marketing initiatives include:

- Social media such as Facebook, Twitter, and YouTube;
- Speakers Bureau, which is primarily promoted on the Alliant Energy website and by word-of-mouth; and
- General awareness conducted through mass media and online advertising.

4.1.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at:

- www.powerhousetv.com
- www.youtube.com/user/aepowerhousetv
- www.facebook.com/aepowerhouse
- www.alliantenergy.com/speakersbureau

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

4.1.11. Outside Services

IPL currently utilizes the KCRG studio in Cedar Rapids to produce the PowerHouse show.

4.1.12. Participation

Not applicable.

4.1.13. Energy and Demand Savings

IPL does not measure savings from its outreach, education, and training programs. These initiatives generate energy savings by inducing changes in customer behavior and the way they think about and use energy. These initiatives also complement the technology-based energy-efficiency programs by educating participants to use and maintain energy-efficient equipment.

4.1.14. Budget

The total budget for the program is estimated at \$2.3 million. Table 4.5 provides program budget assumptions.

Table 4.5 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$13,917	\$14,334	\$14,764	\$15,207	\$15,663	\$73,885
Administration	\$10,437	\$10,751	\$11,073	\$11,405	\$11,747	\$55,414
Advertising and Promotion	\$306,165	\$315,350	\$324,811	\$334,555	\$344,592	\$1,625,474
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$17,396	\$17,918	\$18,455	\$19,009	\$19,579	\$92,356
Electric Total	\$347,915	\$358,353	\$369,103	\$380,176	\$391,582	\$1,847,129
Natural Gas Budget						
Planning and Design	\$3,347	\$3,448	\$3,551	\$3,658	\$3,768	\$17,772
Administration	\$2,511	\$2,586	\$2,663	\$2,743	\$2,826	\$13,329
Advertising and Promotion	\$73,643	\$75,853	\$78,128	\$80,472	\$82,886	\$390,982
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$4,184	\$4,310	\$4,439	\$4,572	\$4,709	\$22,215
Natural Gas Total	\$83,685	\$86,196	\$88,782	\$91,445	\$94,189	\$444,298
Total Budget						
Planning and Design	\$17,264	\$17,782	\$18,315	\$18,865	\$19,431	\$91,657
Administration	\$12,948	\$13,336	\$13,737	\$14,149	\$14,573	\$68,743
Advertising and Promotion	\$379,809	\$391,203	\$402,939	\$415,027	\$427,478	\$2,016,456
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$21,580	\$22,227	\$22,894	\$23,581	\$24,289	\$114,571
Total	\$431,601	\$444,549	\$457,885	\$471,622	\$485,770	\$2,291,427

Table 4.6 provides a forecast of staffing needs and costs for this program.

Table 4.6 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	49.5	\$61,875	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	5	\$6,250	Marketing and communications support
Total	62.5	\$78,125	

4.1.15. Cost-Effectiveness Results

In the 2014 to 2018 program delivery period, IPL does not intend to measure energy savings resulting from the Non-targeted Energy Awareness and Information program. Because the program is primarily for education and outreach, with energy savings serving a secondary role, it is not required to achieve the cost-effectiveness threshold outlined in 199 IAC Chapter 35. Table 4.7 provides program cost-effectiveness results.

Table 4.7 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$1,490,710	\$0	\$1,490,710	\$1,661,707
Net Benefits	-\$1,490,710	\$0	-\$1,490,710	-\$1,661,707
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$358,567	\$0	\$358,567	\$399,697
Net Benefits	-\$358,567	\$0	-\$358,567	-\$399,697
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$1,849,276	\$0	\$1,849,276	\$2,061,405
Net Benefits	-\$1,849,276	\$0	-\$1,849,276	-\$2,061,405
B/C Ratio	N/A	N/A	N/A	N/A

4.2. School-Based Energy Education Program

4.2.1. Program Description

IPL's School-Based Energy Education Program includes two initiatives: Alliant Energy Kids and LivingWise®.

Alliant Energy Kids

Through classroom curriculum and educational materials, fourth- and fifth-grade students learn about the science of electricity and natural gas, the importance of conserving energy, and the relationship between energy and the environment. IPL provides free curriculum and educational materials to teachers who enroll in the program, including:

- Energy education kits – teaching materials and lesson plans; and
- Energy Zone magazine – a 20-page student resource with energy-savings tips, safety messages, stories, and activities.

These in-class activities are further enhanced with an online learning tool: alliantenergykids.com. The interactive website hosts teaching tools, games, and hands-on activities for kids.

LivingWise

LivingWise is a hands-on approach to learning about energy efficiency and home energy use offered to sixth-grade students and has been implemented in several IPL

communities. Its goals include increasing students' knowledge and awareness about energy production and use, as well as promoting the adoption of energy conservation actions, including the installation of energy-efficiency measures at home. Each participating student receives a kit with low-cost measures, such as a kitchen aerator, digital thermostat, low-flow showerhead, and CFL, as well as educational materials, such as a resource fact chart and installation booklet.

Through the program, IPL also provides curriculum for teachers designed for middle school-aged children that is integrated with the kit and includes in-class and at-home assignments. Kits also include a survey that participating students and their parents are asked to fill out and return, which allows IPL to track which measures are installed by participants, as well as obtain customer feedback on the program. IPL offers a \$50 grant to participating LivingWise schools when teachers return completed surveys.

Information, education, and training are integral to IPL's Plan. These initiatives provide savings opportunities by encouraging changes in customers' behavior and the ways they think about and use energy. These initiatives also complement the technology-based, energy-efficiency programs by educating participants about opportunities to save energy through all of IPL's residential programs.

Key changes to this program in the Plan include:

- Expanding outreach and recruiting for Alliant Energy Kids teachers; and
- Expanding the promotion of LivingWise in nonparticipating communities.

4.2.2. Operations

Alliant Energy Kids: IPL reaches out to teachers once a year to identify those interested in participating. Teachers can also request to participate independently. In the fall, IPL sends energy education kits and materials to fourth- and fifth-grade teachers who wish to participate. Teachers incorporate the educational materials into their curriculum where it best fits. A third-party vendor, specializing in educational curriculum and supported by a Teacher Advisory Board,²⁷ developed the curriculum and materials for IPL's program.

LivingWise: Each year, IPL identifies those communities that qualify for the LivingWise Program and provides a list of eligible schools to its third-party program administrator. The program contractor reaches out by phone and e-mail to enroll teachers and answer questions, develops the curriculum, and assembles energy-saving kits. Participating teachers coordinate all educational activities, encourage students to install the kit measures in their homes, and collect completed surveys and return them to IPL's program contractor for tabulation and verification of energy savings.

4.2.3. Value Proposition

Customers participating in the program receive three main benefits:

1. The program is an ***investment in future generations*** by promoting energy-efficiency education and the adoption of energy-savings actions by the next generation of energy users.

²⁷ IPL selected educators from its service territory to engage in the development process as part of the Teacher Advisory Board.

2. Participants **expand their energy-efficiency knowledge and awareness.**
3. Participants gain **immediate savings** when they install high-efficiency lighting, water heating, and other energy-saving measures from their LivingWise kit.

4.2.4. Customer Targets

IPL targets schools in its Iowa electric and natural gas service territories to deliver the components of its School-Based Energy Education Program. The Alliant Energy Kids Program targets fourth- and fifth-grade students. LivingWise targets sixth-grade students. Table 4.8 outlines customer eligibility requirements.

Table 4.8 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Residential natural gas and/or electric
Customer Status	Students and their parents
Building Type	All residential
Building Vintage	All
Geography	IPL's Iowa service territory

4.2.5. Trade Ally Targets

The following types of trade allies are the primary participants in IPL's program:

- Educators; and
- School administrators.

4.2.6. Incentive Structure and Process

All educational materials, curriculum, and energy-saving kits are provided at no cost to schools or students when teachers agree to participate in the program. IPL provides a \$50 grant to each LivingWise school when a participating teacher returns completed surveys to IPL.

4.2.7. Eligible Measures and Incentives

The Alliant Energy Kids program component does not include traditional energy-efficiency measures. All educational materials available through Alliant Energy Kids and LivingWise are free to participants.

Table 4.9 provides eligible measures, qualification standards, and incentive levels for the LivingWise kits distributed by the program.

Table 4.9 Incentive Summary

Program/Measure	Qualification	Incentive
LivingWise Kit		
Interior Standard CFL (qty. 3)	13-watt; ENERGY STAR	Free to students
Showerhead	1.75 GPM	
Faucet Aerators (qty. 2)	1.5 GPM	
Digital Thermometer	N/A	
Teflon Tape	N/A	
Water Flow Measurement Bag	N/A	

GPM: gallons per minute

4.2.8. Market Barriers

Table 4.10 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 4.10 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of time and resources to participate	Provide full subsidies for educational materials; and Streamline programs to ensure efficient use of time
Limited classroom time for teachers	Alliant Energy Kids offers flexibility by sending energy education materials directly to the teacher to integrate into existing curricula, and also offers interactive activities online to keep up with new technology and allow students to learn at their own pace and schedule; and LivingWise provides flexibility by sending energy education kits and materials directly to teachers to integrate into existing curricula, rather than delivering the information in person

4.2.9. Marketing and Promotion

IPL promotes its School-Based Energy Education Program through direct outreach to targeted schools and teachers. IPL’s marketing activities include:

- Bookmarks containing simple energy-efficiency tips;
- A dedicated program webpage;
- Direct outreach to middle-school teachers by the LivingWise program administrator; and
- Direct outreach to fourth- and fifth-grade teachers by IPL to recruit teachers to participate in the Alliant Energy Kids program.

4.2.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL’s Energy Efficiency Plan, Docket No. EEP-08-1, can be found at:

- www.alliantenergy.com/schools
- www.alliantenergykids.com

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

4.2.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 4.11.

Table 4.11 Outside Service Providers

Vendor	Role
Resource Action Programs	LivingWise program administration, teacher recruitment, kit assembly and distribution
The Cadmus Group, Inc.	Savings verification and reporting

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

4.2.12. Participation

Table 4.12 provides program participation assumptions in terms of the number of students who participate in the Alliant Energy Kids program component and number of kits distributed through the LivingWise program component.

Table 4.12 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Alliant Energy Kids	7,650	7,650	7,650	7,650	7,650	38,250
LivingWise Kits	12,750	12,814	12,878	12,942	13,007	64,391

4.2.13. Energy and Demand Savings

This program is expected to produce 20,991 MWh of electricity savings and 1,249,179 therms of natural gas savings over the course of the Plan through the distribution of LivingWise kits. Table 4.13 provides energy and demand savings goals.

Table 4.13 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	4,156,500	4,177,283	4,198,169	4,219,160	4,240,256	20,991,367
Peak Demand (kW)	775	779	783	787	791	3,914
Natural Gas Impacts						
Incremental Annual Energy (therms)	247,350	248,587	249,830	251,079	252,334	1,249,179
Peak-Day Demand (therms)	659	662	665	669	672	3,327

4.2.14. Budget

The total budget for the program is estimated at \$3.1 million. Table 4.14 provides program budget assumptions.

Table 4.14 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$4,461	\$4,483	\$4,506	\$4,528	\$4,551	\$22,528
Administration	\$17,843	\$17,933	\$18,022	\$18,112	\$18,203	\$90,114
Advertising and Promotion	\$8,922	\$8,966	\$9,011	\$9,056	\$9,102	\$45,057
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$191,816	\$192,779	\$193,742	\$194,705	\$195,683	\$968,724
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Electric Total	\$223,042	\$224,162	\$225,281	\$226,401	\$227,538	\$1,126,423
Natural Gas Budget						
Planning and Design	\$7,930	\$7,970	\$8,010	\$8,050	\$8,090	\$40,051
Administration	\$31,722	\$31,881	\$32,040	\$32,199	\$32,361	\$160,202
Advertising and Promotion	\$15,861	\$15,940	\$16,020	\$16,100	\$16,180	\$80,101
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$341,006	\$342,718	\$344,430	\$346,142	\$347,880	\$1,722,176
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$396,519	\$398,509	\$400,500	\$402,490	\$404,512	\$2,002,530
Total Budget						
Planning and Design	\$12,391	\$12,453	\$12,516	\$12,578	\$12,641	\$62,579
Administration	\$49,565	\$49,814	\$50,062	\$50,311	\$50,564	\$250,316
Advertising and Promotion	\$24,782	\$24,907	\$25,031	\$25,156	\$25,282	\$125,158
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$532,823	\$535,497	\$538,172	\$540,846	\$543,563	\$2,690,900
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$619,561	\$622,671	\$625,781	\$628,891	\$632,049	\$3,128,953

Table 4.15 provides a forecast of staffing needs and costs for this program.

Table 4.15 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	18	\$22,500	Program-specific management
Energy Efficiency Programs Management	2	\$2,500	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	22.5	\$28,125	Marketing and communications support
Total	46.5	\$58,125	

4.2.15. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that both the electric and natural gas components of the program are cost-effective from a societal perspective, with an overall program B/C ratio of 12.65 to 1. Table 4.16 provides program cost-effectiveness results.

Table 4.16 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$19,624,400	\$13,685,541	\$19,624,400	\$29,584,520
Costs	\$1,008,160	\$833,063	\$16,489,603	\$1,082,177
Net Benefits	\$18,616,239	\$12,852,478	\$3,134,797	\$28,502,343
B/C Ratio	19.47	16.43	1.19	27.34
\$/kWh	\$0.005	\$0.005	\$0.090	\$0.004
Natural Gas Program				
Benefits	\$5,769,099	\$8,218,798	\$5,769,099	\$8,461,493
Costs	\$1,793,751	\$1,482,954	\$9,898,582	\$1,926,254
Net Benefits	\$3,975,348	\$6,735,845	-\$4,129,483	\$6,535,239
B/C Ratio	3.22	5.54	0.58	4.39
\$/therm	\$0.173	\$0.170	\$0.957	\$0.139
Total Program				
Benefits	\$25,393,499	\$21,904,339	\$25,393,499	\$38,046,013
Costs	\$2,801,912	\$2,316,017	\$26,388,185	\$3,008,431
Net Benefits	\$22,591,588	\$19,588,322	-\$994,686	\$35,037,582
B/C Ratio	9.06	9.46	0.96	12.65

4.3. Tree Planting Program

4.3.1. Program Description

IPL will continue to offer its existing tree-planting programs—Branching Out, Operation ReLeaf, Trees for Kids, and Storm Fund—through its education, outreach, and training portfolio. Details about these components of the Tree Planting Program are outlined below.

Branching Out

IPL offers grants of between \$1,000 and \$10,000 to help fund community tree-planting projects. Communities can receive grants for projects located at parks, nature trails, schools, libraries, and more. Community tree planting events and planting demonstrations emphasize correct placement for energy savings, safe planting techniques, and ongoing care for the trees.

Operation ReLeaf

Through Operation ReLeaf, IPL offers its residential customers the opportunity to purchase landscape trees at a discounted price. IPL makes approximately 5,000 trees available annually to customers on a first-come, first-serve basis for only \$25.²⁸ Along with each tree, IPL provides brochures with tips for planting trees to maximize energy savings, such as the best location, and details about safe planting practices, and ongoing care for the trees.

²⁸ Retail prices for equivalent trees would be approximately \$65 to \$100.

Trees for Kids

With Trees for Kids, IPL provides funding for educational curriculum and tree planting projects at new and existing schools to promote energy efficiency, planting safety, and ongoing tree care, while improving school grounds and encouraging student involvement.

Storm Fund

IPL provides funding to replace trees in communities recovering from natural disasters such as tornados, ice storms, and straight-line winds. IPL allocates funds to Iowa communities to help re-plant community trees in public and private areas. IPL also offers educational information to affected communities on the energy-efficiency benefits of trees and planting tips for the location, tree variety, and safety.

Key changes to this program in the Plan include:

- Discontinuing the Industrial Tree Planting Grant Program, the Iowa Hometown Celebrations Program, and the Growing Kids, Growing Tree components; and
- Discontinuing claiming savings for the Tree Planting Program based on the 2009 to 2013 EM&V recommendations.

4.3.2. Operations

IPL staff manages each component of the tree programs, including providing strategic oversight and coordination with third-party program administrators.

Branching Out is administered and delivered by Trees Forever in conjunction with IPL. Trees Forever helps IPL solicit and review applications, and works with communities to help plan projects, select trees, and coordinate the planting events.

The Iowa Department of Natural Resources (IDNR), Bureau of Forestry administers Operation ReLeaf and Trees for Kids. Residential customers wishing to participate in Operation ReLeaf fill out an application online and make payments to the IDNR for the trees they wish to purchase. The IDNR collects customer payments, reviews applications to verify customer eligibility, and ensures the availability of the selected trees. The IDNR also organizes pick-up events, coordinates sourcing and delivery of the trees, and provides customers with information about their tree, planting instructions, and follow-up care.

The IDNR solicits and collects Trees for Kids program applications from schools, evaluates applications for schools to receive grants, and coordinates the planting process.

IPL's internal staff manages operations for IPL's **Storm Fund**, which includes evaluating community requests, overseeing funding allocations, and coordinating planting with affected communities.

4.3.3. Value Proposition

Customers participating in the program receive three main benefits:

1. Customers *beautify their communities, parks, schools, and homes* by planting trees.

2. Customers **help protect the environment** by planting trees that improve air quality, provide shade to reduce summer cooling energy, provide a wind break to reduce winter heating costs, absorb carbon dioxide, and help protect the soil.
3. Customers **can count on tree programs** each year. Each of the programs provides a consistent, known quantity of trees or grant amounts through a simple application process. Cities can apply for grants each year as they plan community beautification projects on a yearly or ongoing basis.

4.3.4. Customer Targets

The Branching Out and Storm Fund programs are designed for communities, while the Operation ReLeaf targets individual residential customers. Trees for Kids targets schools. Table 4.17 outlines customer eligibility requirements.

Table 4.17 Customer Eligibility Parameters

	Eligible Customers
Branching Out	Communities
Operation ReLeaf	Residential customers
Trees for Kids	Schools
Storm Fund	Communities

4.3.5. Trade Ally Targets

The tree programs primarily work with community groups and other non-traditional trade allies to help spread the word about various program opportunities, implement the distribution of trees, and educate IPL customers about the benefits and proper care of trees. The following types of trade allies are the primary participants in IPL's program:

- Community groups;
- Educators and school administrators;
- The IDNR;
- Municipalities and city/town administrators;
- Community foresters;
- Nonprofit organizations; and
- Trees Forever.

4.3.6. Incentive Structure and Process

The incentive structure and application process varies for each individual program component.

Branching Out: IPL accepts applications twice per year and reviews them with support from Trees Forever. Trees Forever assists those communities selected for grant funding with carrying out their project.

Operation ReLeaf: Customers order one or two trees online and pick up the tree(s) from a designated location on a designated day. IPL provides funding directly to the IDNR to subsidize the cost of trees.

Trees for Kids: Schools apply for tree planting grant funding through an online application process administered by the IDNR. IPL provides funding directly to the IDNR to subsidize the cost of trees.

Storm Funding: IPL reserves funds for rebuilding projects to help communities affected by natural disasters. All account managers are aware of this resource and can suggest communities if the need arises. There is no application process; IPL helps communities in its service territory as needed.

4.3.7. Eligible Measures and Incentives

Table 4.18 provides eligible measures, qualification standards, and incentive levels for initiatives provided through the program.

Table 4.18 Incentive Summary

Program/Measure	Qualification	Incentive
Branching Out	Projects located at parks, nature trails, schools, libraries, etc.	Grants between \$1,000 and \$10,000
Operation ReLeaf	Must be an IPL customer	Trees are \$25 for customers
Trees for Kids	School building must receive utility services from IPL	Grants between \$1,000 and \$5,000
Storm Fund	Community affected by a natural disaster	Grants up to \$10,000

4.3.8. Market Barriers

Table 4.19 presents the key market barriers to successful programs, as well as strategies the programs use to address each barrier. Note that these programs' strategies can only partially mitigate the identified barriers.

Table 4.19 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of customer awareness of programs	Provide one-on-one community outreach and education through local events; Conduct market research to identify towns that do not currently participate in one of the programs and send them program information; Work with local conservation organizations, cities, and extension agents to increase local marketing through newsletters, websites, and events
Lack of customer awareness of proper tree selection and planting practices	Provide educational information on proper selection, siting, safety, and tree planting and care
Ensuring adequate supply to meet demand	Coordinate with the IDNR to ensure enough trees are ordered to meet demand; Reach out to new nurseries to provide trees for the programs

4.3.9. Marketing and Promotion

IPL markets its tree programs through:

- Partnerships with Trees Forever and the IDNR, including but not limited to those companies' marketing and promotional pieces and websites;
- Alliant Energy website;
- Advertising in Iowa newspapers; and
- Educational events (IPL-sponsored energy-efficiency seminars, trade shows, fairs, conferences, etc.).

4.3.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at:

- alliantenergy.com/branchingout
- alliantenergy.com/releaf
- alliantenergy.com/schools

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

4.3.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 4.20.

Table 4.20 Outside Service Providers

Vendor	Role
Trees Forever	Administers the Branching Out Program
IDNR	Administers Operation ReLeaf and Trees for Kids programs

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

4.3.12. Participation

Not applicable.

4.3.13. Energy and Demand Savings

IPL does not measure savings from its outreach, education, and training programs. These initiatives generate energy savings by inducing changes in customer behavior and the way they think about and use energy. These initiatives also complement the technology-based energy-efficiency programs by educating participants to use and maintain energy-efficient equipment.

4.3.14. Budget

The total budget for this program is estimated at \$4.5 million. Table 4.21 provides program budget assumptions.

Table 4.21 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$2,015	\$2,056	\$2,097	\$2,139	\$2,181	\$10,487
Administration	\$20,153	\$20,556	\$20,967	\$21,386	\$21,813	\$104,874
Advertising and Promotion	\$15,192	\$15,496	\$15,806	\$16,122	\$16,445	\$79,060
Customer Incentive	\$657,478	\$668,811	\$680,291	\$691,919	\$703,699	\$3,402,198
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$8,061	\$8,222	\$8,387	\$8,554	\$8,725	\$41,950
Electric Total	\$702,899	\$715,140	\$727,547	\$740,120	\$752,864	\$3,638,570
Natural Gas Budget						
Planning and Design	\$485	\$494	\$504	\$514	\$525	\$2,523
Administration	\$4,847	\$4,944	\$5,043	\$5,144	\$5,247	\$25,226
Advertising and Promotion	\$3,654	\$3,727	\$3,802	\$3,878	\$3,955	\$19,017
Customer Incentive	\$158,146	\$160,872	\$163,633	\$166,430	\$169,264	\$818,345
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$1,939	\$1,978	\$2,017	\$2,058	\$2,099	\$10,090
Natural Gas Total	\$169,071	\$172,016	\$175,000	\$178,024	\$181,089	\$875,200
Total Budget						
Planning and Design	\$2,500	\$2,550	\$2,601	\$2,653	\$2,706	\$13,010
Administration	\$25,000	\$25,500	\$26,010	\$26,530	\$27,060	\$130,100
Advertising and Promotion	\$18,846	\$19,223	\$19,608	\$20,000	\$20,400	\$98,077
Customer Incentive	\$815,624	\$829,683	\$843,924	\$858,349	\$872,963	\$4,220,543
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$10,000	\$10,200	\$10,404	\$10,612	\$10,824	\$52,040
Total	\$871,970	\$887,156	\$902,547	\$918,144	\$933,953	\$4,513,770

Table 4.22 provides a forecast of staffing needs and costs for this program.

Table 4.22 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	22.5	\$28,125	Program-specific management
Energy Efficiency Programs Management	2	\$2,500	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	11.25	\$14,063	Marketing and communications support
Total	39.75	\$49,688	

4.3.15. Cost-Effectiveness Results

In the 2014 to 2018 program delivery period, IPL does not intend to measure energy savings resulting from the Tree Planting Program. Because the Tree Planting Program is primarily for education and outreach, with energy savings serving a secondary role, they are not required to achieve the cost-effectiveness threshold outlined in 199 IAC Chapter 35. Table 4.23 provides program cost-effectiveness results.

Table 4.23 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$2,941,699	\$0	\$2,941,699	\$3,276,155
Net Benefits	-\$2,941,699	\$0	-\$2,941,699	-\$3,276,155
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$707,579	\$0	\$707,579	\$788,027
Net Benefits	-\$707,579	\$0	-\$707,579	-\$788,027
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$3,649,278	\$0	\$3,649,278	\$4,064,182
Net Benefits	-\$3,649,278	\$0	-\$3,649,278	-\$4,064,182
B/C Ratio	N/A	N/A	N/A	N/A

4.4. Hometown Rewards Program

4.4.1. Program Description

IPL designed the community-based Hometown Rewards Program to encourage a community-wide commitment to energy efficiency and sustainability. Using IPL's program as a vehicle for grassroots initiatives to reduce energy use in the community, participating communities commit to meeting energy-efficiency and sustainability goals. The program targets small to mid-sized communities, which often lack the infrastructure or resources to implement initiatives independently. IPL's goals for the program include:

- Maintaining a strong educational component;
- Offering the program in multiple communities at the same time;
- Assisting communities to attain energy-efficiency and sustainability goals;
- Providing a delivery channel for IPL's energy-efficiency programs; and
- Simplifying the program for participants, while ensuring that the program is robust enough to impact those participants' energy usage.

The Hometown Rewards Program uses the power of social norms to activate behavior change among a target audience. The program theory is based on normative messaging, which suggests that individuals are more influenced to take a desired action by hearing about or receiving a recommendation from others in their social networks than by traditional forms of marketing. By working with communities, IPL leverages the

excitement created by the community group dynamic to foster excitement in its energy-efficiency programs.

Communities participating in Hometown Rewards work with IPL to sets goals for energy reduction and other community impacts. IPL helps the communities reach their goals by providing technical assistance, outreach and education support, streamlined access to the full range of IPL's program incentives, and incentives when participating communities meet their goals.

The program provides funding to coordinate community initiatives for two years. IPL based this timeline on pilot program results, which showed that communities need more than 12 months to achieve their energy-saving goals.

Key changes to this program in the Plan include:

- Targeting smaller towns with populations between 5,000 and 25,000.

4.4.2. Operations

IPL mails program information and an application to all eligible communities in its service territory. Interested communities submit an application by IPL's established deadline. A committee comprised of IPL energy-efficiency staff, account managers, and the program contractor reviews and scores applications and selects one to two communities for participation each year. The selected town then appoints a volunteer steering committee to manage and implement the Hometown Rewards Program in its community.

IPL's program contractor works with the steering committee to gather data on energy consumption and usage in order to identify potential energy-saving opportunities and calculate an energy baseline from which to measure the community's progress. Participating communities develop an action plan that includes specific activities to educate members of the community, sets goals for energy-reduction and other community impacts, and proposes a community energy-efficiency project to be completed if the goals are met. IPL supports these community efforts by providing technical assistance on the development of action plans and goal setting, creating outreach and education strategies, helping coordinate community events and initiatives, providing streamlined access to the full range of IPL's program incentives, and by offering incentives when participating communities meet their goals.

The community has two years to meet its energy-savings goal. It may leverage any available IPL energy-efficiency or demand response program during the implementation phase. If a community reaches its goal, IPL provides an additional incentive for implementing the community energy-efficiency project chosen at the beginning of the planning period. IPL energy-efficiency staff coordinates extensively with representatives from the steering committee to help guide them toward applicable IPL programs, and they manage the majority of direct program activity, which varies based on the community's action plan and goals.

IPL assesses the Hometown Rewards Program annually to determine whether program or design changes are needed to ensure the program's success.

4.4.3. Value Proposition

Customers participating in the program may receive a variety of benefits depending on the initiative. These benefits may include:

- Participants ***expand their energy-efficiency knowledge*** through community awareness initiatives.
- Participants ***save energy*** by adopting ***energy-saving behaviors*** and by participating in IPL's other energy-efficiency programs.
- Participants ***invest in their communities*** by promoting energy-efficiency education throughout their communities.
- Participants can receive ***funding for a community energy-efficiency project*** when they achieve their energy-savings goal.

4.4.4. Customer Targets

This program targets communities in IPL's service territory with populations between 5,000 and 25,000.

4.4.5. Trade Ally Targets

Once the participating communities are identified, IPL works with the steering committee and business representatives to identify local trade allies that will support participation by individual citizens. Trade ally needs vary in each community and may draw from the entire range of residential and commercial energy-efficiency contractors and service providers.

4.4.6. Incentive Structure and Process

The Hometown Rewards Program awards funds to communities during three distinct phases in the participation process:

1. **Planning.** IPL provides a portion of program funds for the development of community action and sustainability plans, goal setting, etc.
2. **Marketing.** These funds are dedicated to supporting implementation of the community's initiatives through marketing and outreach efforts and events.
3. **Reward.** IPL provides additional funds toward the implementation of a community energy-efficiency project, which are matched to the percent of the community's achievement of its goal. For example, if the community reaches 80 percent of its goal, IPL provides 80 percent of the reward funding.

4.4.7. Eligible Measures and Incentives

IPL determines eligible incentive amounts based on the characteristics and needs associated with each community initiative. Generally, the planning incentive is \$5,000 to \$10,000. The marketing and reward incentives are based on the community's action plan and proposed energy-efficiency project. The reward incentive can be up to 100 percent of the project cost if a community reaches its energy-savings goal.

IPL provides all program support, including the energy usage analysis performed by its program contractor, at no cost to the community.

4.4.8. Market Barriers

Table 4.24 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 4.24 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of towns' awareness of opportunities	Conduct outreach and marketing through traditional and non-traditional mechanisms
Lack of time and resources to participate	Streamline the program to ensure efficient use of participants' time
Most impacts are indirect, as they accrue to other relevant programs	Design the program to be a delivery channel for other applicable energy-efficiency programs, with no impact goals

4.4.9. Marketing and Promotion

IPL markets the program via a single mailing to eligible communities each year. The mailing includes a program brochure and application.

4.4.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/hometownrewards.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

4.4.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 4.25.

Table 4.25 Outside Service Providers

Vendor	Role
Sebesta Blomberg	Analyzes community energy data, identifies potential energy-efficiency opportunities, determines energy usage baselines, monitors energy-efficiency savings throughout implementation, and calculates the achievement of goals

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

4.4.12. Participation

IPL works with one to two communities per year.

4.4.13. Energy and Demand Savings

IPL does not measure savings from its outreach, education, and training programs. These initiatives generate energy savings by inducing changes in customer behavior and the way they think about and use energy. These initiatives also complement the technology-based energy-efficiency programs by educating participants to use and maintain energy-efficient equipment.

4.4.14. Budget

The total budget for the program is estimated at \$2.6 million. Table 4.26 provides program budget assumptions.

Table 4.26 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$12,092	\$12,333	\$12,580	\$12,832	\$13,088	\$62,925
Administration	\$60,458	\$61,667	\$62,900	\$64,158	\$65,442	\$314,625
Advertising and Promotion	\$100,763	\$102,778	\$104,834	\$106,931	\$109,069	\$524,375
Customer Incentive	\$209,587	\$213,779	\$218,054	\$222,416	\$226,864	\$1,090,700
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$20,153	\$20,556	\$20,967	\$21,386	\$21,814	\$104,875
Electric Total	\$403,052	\$411,113	\$419,336	\$427,722	\$436,277	\$2,097,500
Natural Gas Budget						
Planning and Design	\$2,908	\$2,967	\$3,026	\$3,086	\$3,148	\$15,136
Administration	\$14,542	\$14,833	\$15,130	\$15,432	\$15,741	\$75,678
Advertising and Promotion	\$24,237	\$24,722	\$25,216	\$25,720	\$26,235	\$126,130
Customer Incentive	\$50,413	\$51,421	\$52,450	\$53,499	\$54,568	\$262,351
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$4,847	\$4,944	\$5,043	\$5,144	\$5,247	\$25,226
Natural Gas Total	\$96,948	\$98,887	\$100,864	\$102,882	\$104,939	\$504,520
Total Budget						
Planning and Design	\$15,000	\$15,300	\$15,606	\$15,918	\$16,236	\$78,061
Administration	\$75,000	\$76,500	\$78,030	\$79,591	\$81,182	\$390,303
Advertising and Promotion	\$125,000	\$127,500	\$130,050	\$132,651	\$135,304	\$650,505
Customer Incentive	\$260,000	\$265,200	\$270,504	\$275,914	\$281,432	\$1,353,050
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$25,000	\$25,500	\$26,010	\$26,530	\$27,061	\$130,101
Total	\$500,000	\$510,000	\$520,200	\$530,604	\$541,216	\$2,602,020

Table 4.27 provides a forecast of staffing needs and costs for this program.

Table 4.27 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	22.5	\$28,125	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	22.5	\$28,125	Marketing and communications support
Total	53	\$66,250	

4.4.15. Cost-Effectiveness Results

In the 2014 to 2018 program delivery period, IPL does not intend to measure energy savings resulting from the Hometown Rewards Program. Because the program is primarily for education and outreach, with energy savings serving a secondary role, it is not required to achieve the cost-effectiveness threshold outlined in 199 IAC Chapter 35. Table 4.28 provides program cost-effectiveness results.

Table 4.28 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$1,695,140	\$0	\$1,695,140	\$1,888,233
Net Benefits	-\$1,695,140	\$0	-\$1,695,140	-\$1,888,233
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$407,739	\$0	\$407,739	\$454,184
Net Benefits	-\$407,739	\$0	-\$407,739	-\$454,184
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$2,102,879	\$0	\$2,102,879	\$2,342,417
Net Benefits	-\$2,102,879	\$0	-\$2,102,879	-\$2,342,417
B/C Ratio	N/A	N/A	N/A	N/A

4.5. Builder Training Program

4.5.1. Program Description

IPL trains builders on energy-efficient building practices, meeting building energy codes, and IPL's new construction programs. IPL collaborates with a range of building stakeholders and industry groups to conduct training and education sessions.

A primary feature of the Builder Training Program is IPL's recently launched building conference, Building for Performance, which consists of a one-day training seminar offered in six locations around the state. The conference targets residential home builders to help them understand and comply with energy-efficient building codes as well as the technologies, tools, and strategies associated with a whole-house building approach. Each seminar can accommodate 60 attendees.

IPL also provides periodic builder-focused workshops, brown bag lunch meetings, and webinars targeted to both residential and commercial sector building-industry professionals. IPL works with developers to help them understand the importance of building energy-efficiency measures into their projects and the impacts and value of high performance buildings, like ENERGY STAR and LEED-certified buildings.

Key changes to this program in the Plan include:

- Adding a focus on renovation and retrofits to the Building for Performance curriculum.

4.5.2. Operations

Builder training is conducted by qualified third-party energy-education contractors with expertise in energy-efficiency, building science, the HERS, and building codes and compliance. IPL selects instructors based on their qualifications and the curriculum needs for individual training courses. IPL staff organizes the seminars, scheduling them to avoid conflicts with other conferences, home shows, or trade shows. IPL staff also conducts marketing, recruits participants, moderates the summit, and presents information on IPL's programs.

4.5.3. Value Proposition

Customers participating in the program receive three main benefits:

1. They **expand their employment skills and promote economic development** through technical trainings that increase their energy-efficiency knowledge.
2. They receive **valuable technical information from experts** in the field of energy-efficient construction.
3. They gain new skills that can **increase the quality and value of their services** and allow them to **differentiate their businesses** from others in the marketplace.

4.5.4. Customer Targets

This program targets builders, developers, and other construction industry participants, particularly those with offices in IPL's service territory, as well as Dealer Network participants.

4.5.5. Trade Ally Targets

The following types of trade allies are the primary participants in IPL's program:

- Builders, developers, and construction industry professionals;
- Building energy raters;
- Code officials;
- Realtors, lenders, and assessors; and
- All other trade allies active in IPL's programs.

4.5.6. Incentive Structure and Process

The Building for Performance conference and other educational initiatives are organized and managed by IPL staff, and taught by third-party energy-efficiency experts. IPL subsidizes the cost of the conference to make it affordable for building professionals, and offers tuition discounts to Dealers and representatives from businesses located in its electric and/or natural gas service territory.

IPL offers many of its other builder training initiatives, such as webinars and brown bag lunch meetings, for free to customers or at subsidized rates. IPL's builder training initiatives include classroom and field training and cover a range of topics, such as best

practices with the Energy Code and ENERGY STAR applications, results of common building mistakes, and energy codes and standards.

4.5.7. Eligible Measures and Incentives

Measures under this program include web-based, classroom, and hands-on training, seminars, workshops, and other educational initiatives targeted to building and construction industry professionals. Classes are determined on an as-needed basis.

The cost of the Building for Performance conference is \$150 per person. IPL provides a discount of \$75 to each trade ally located in its service territory.

4.5.8. Market Barriers

Table 4.29 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 4.29 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of customer awareness of educational opportunities	Conduct customer outreach and marketing through traditional and non-traditional mechanisms
Lack of time and resources to participate	Provide full or partial subsidies for educational opportunities; Provide flexible scheduling; Schedule seminars during slower months for building professionals; Streamline the program to ensure efficient use of participants' time
Difficult to reach builders	Market educational opportunities using multiple, diverse channels including e-mail, phone, direct mail, home builders associations, and word-of-mouth
Builders may be resistant to changing their building practices	Emphasize education about compliance with new building codes, which all builders are required to follow; Emphasize the benefits to builders of using green building practices, such as the ability to differentiate their business and building to a higher standard

4.5.9. Marketing and Promotion

IPL leads and implements all marketing for the Building for Performance conference and other builder training initiatives. With its marketing and outreach, IPL targets participants in the Dealer Network and other building industry professionals including contractors, residential and commercial developers, building trades, code officials, HERS raters, realtors, lenders, and assessors. Marketing channels include:

- Direct mail and e-mail campaigns;
- Direct outreach via phone calls;
- Participation in events such as home shows and builders' conferences;
- Collaboration with other organizations such as construction industry groups, chambers of commerce and local business organizations in seminar locations, and other utilities;
- Encouraging word-of-mouth; and
- Alliant Energy website.

4.5.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/buildertraining.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

4.5.11. Outside Services

IPL coordinates all marketing, planning, and delivery of its builder training initiatives. IPL staff selects and hires instructors and guest speakers to participate in training sessions from a varied list of contractors based on the market need and training curriculum. Although not required, IPL welcomes partnerships with other organizations to offer the training initiatives in this program. Partnering organizations may include rural electric cooperatives, municipal utilities, other IOUs, the Center on Sustainable Communities, and the IEC. IPL designed the Builder Training Program to allow partnerships at any level, based on each individual organization's capabilities and willingness to support builder education.

4.5.12. Participation

IPL anticipates offering the Building for Performance conference once per year in multiple locations, and can accommodate 60 participants per session. It determines other building training initiatives on a case-by-case basis, and participation may vary depending on the topic and delivery mechanism.

4.5.13. Energy and Demand Savings

IPL does not measure savings from its outreach, education, and training programs. These initiatives generate energy savings by inducing changes in customer behavior and the way they think about and use energy. These initiatives also complement the technology-based energy-efficiency programs by educating participants to use and maintain energy-efficient equipment.

4.5.14. Budget

The total budget for the program is estimated at \$600,000. Table 4.30 provides program budget assumptions.

Table 4.30 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$38,693	\$38,693	\$38,693	\$38,693	\$38,693	\$193,465
Administration	\$14,510	\$14,510	\$14,510	\$14,510	\$14,510	\$72,549
Advertising and Promotion	\$38,693	\$38,693	\$38,693	\$38,693	\$38,693	\$193,465
Customer Incentive	\$4,837	\$4,837	\$4,837	\$4,837	\$4,837	\$24,183
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Electric Total	\$96,733	\$96,733	\$96,733	\$96,733	\$96,733	\$483,663
Natural Gas Budget						
Planning and Design	\$9,307	\$9,307	\$9,307	\$9,307	\$9,307	\$46,535
Administration	\$3,490	\$3,490	\$3,490	\$3,490	\$3,490	\$17,451
Advertising and Promotion	\$9,307	\$9,307	\$9,307	\$9,307	\$9,307	\$46,535
Customer Incentive	\$1,163	\$1,163	\$1,163	\$1,163	\$1,163	\$5,817
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$23,267	\$23,267	\$23,267	\$23,267	\$23,267	\$116,337
Total Budget						
Planning and Design	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$240,000
Administration	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$90,000
Advertising and Promotion	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$240,000
Customer Incentive	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$30,000
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$600,000

Table 4.31 provides a forecast of staffing needs and costs for this program.

Table 4.31 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	36	\$45,000	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Communications Manager	22.5	\$28,125	Marketing and communications support
Total	66.5	\$83,125	

4.5.15. Cost-Effectiveness Results

In the 2014 to 2018 program delivery period, IPL does not intend to measure energy savings resulting from the Builder Training Program. Because the program is primarily for education and outreach, with energy savings serving a secondary role, it is not required to achieve the cost-effectiveness threshold outlined in 199 IAC Chapter 35. Table 4.32 provides program cost-effectiveness results.

Table 4.32 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$391,993	\$0	\$391,993	\$436,011
Net Benefits	-\$391,993	\$0	-\$391,993	-\$436,011
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$94,288	\$0	\$94,288	\$104,876
Net Benefits	-\$94,288	\$0	-\$94,288	-\$104,876
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$486,281	\$0	\$486,281	\$540,887
Net Benefits	-\$486,281	\$0	-\$486,281	-\$540,887
B/C Ratio	N/A	N/A	N/A	N/A

4.6. Energy Efficiency Dealer Network Program

4.6.1. Program Description

The primary objective of IPL's Dealer Network is to build strategic relationships with dealers and trade organizations that are in a position to sell or upgrade mutual customers to high-efficiency equipment and/or measures. Additionally, the Dealer Network promotes quality installation of energy-saving equipment in homes and businesses, in order to ensure that customers receive the maximum benefit for their energy-efficient investments. Participants in IPL's Dealer Network fall into the following two categories:

1. **Energy Efficiency Dealer:** To achieve Dealer status in the Dealer Network, dealers or contractors must conduct business in IPL's service territory and:
 - a. Be involved in the sale or installation of energy-efficient equipment included among IPL's program measures, such as lighting, building shell measures, and heating and cooling systems, or be involved in the building of energy-efficient homes or businesses; and
 - b. Meet IPL's insurance, certification, licensing, and other participation guidelines.
2. **Energy Efficiency Associate:** Individuals and organizations in this category support IPL products and services more indirectly than Dealers. Trades targeted for the Energy Efficiency Associate status include bankers, realtors, architects, engineers, and wholesale distributors and manufacturers.

Through the Dealer Network, IPL informs trade allies²⁹ about its program activities and program changes, provides support for Dealers to promote IPL's programs to their customers, offers an online technical assistance tool called *Ask The Expert*, promotes Dealers' businesses on the IPL contractor locator website, offers training on a variety of topics, provides training reimbursement to increase Dealer awareness and education about energy-efficiency topics, and supports Dealers' participation in trade shows. The Dealer Network is also a mechanism through which Dealers may access incentives when they encourage their customers to participate in certain energy-efficiency programs.

Key changes to this program in the Plan include:

- Changing the program name from the Trade Ally Network to Dealer Network.

4.6.2. Operations

Through the Dealer Network, IPL recruits and supports trade allies in its service territory who engage in services and install equipment included in IPL's programs. To participate, interested dealers must submit proof of insurance coverage and documentation on all the certifications and licenses required for their business by the State of Iowa.

IPL staff manages all trade ally activities, including conducting direct outreach to trade allies to promote program involvement and organizing trade ally training opportunities and other activities. A program contractor, with input from IPL staff,

²⁹ Trade allies in this program include vendors, equipment dealers, contractors, or trade organizations that are not formal participants in IPL's Dealer Network.

prepares and publishes a monthly trade ally newsletter and staffs the trade ally help line, *Ask the Expert*.

4.6.3. Value Proposition

Trade allies participating in the program receive three main benefits:

1. Increased ***energy-efficiency knowledge and awareness*** through trainings and information on IPL's programs.
2. They can offer customers ***better quality products and services at a lower up-front cost*** by promoting IPL's energy-efficiency incentives.
3. They help stimulate ***market adoption and transformation*** to new energy-efficiency technologies and paradigms.

4.6.4. Customer Targets

This program targets the complete range of trade allies whose businesses include installation, services, maintenance, sales, distribution, or any ancillary services associated with any measure included in IPL's programs.

4.6.5. Trade Ally Targets

The following types of trade allies are the primary participants in IPL's program:

- All trade allies active in IPL's Energy Efficiency Portfolio;
- Trade ally associations and organizations; and
- Trade show sponsors.

4.6.6. Incentive Structure and Process

Through the Dealer Network Program, IPL provides information, marketing support, the technical assistance help line, and other nonfinancial benefits at no cost to participants. IPL provides Dealer incentives to participants who facilitate customer purchases of qualifying equipment and include their Dealer ID number on the relevant customer application. On a monthly basis, IPL mails incentives checks to Dealers who sold eligible equipment. IPL also provides training reimbursement for Dealers who participate in an approved training program and submit documentation to IPL indicating their successful completion of the course.

4.6.7. Eligible Measures and Incentives

One of the primary benefits to participants in IPL's Dealer Network is their ability to access IPL's Dealer incentives when they sell or upgrade IPL customers to high-efficiency equipment or measures in IPL's prescriptive energy-efficiency programs. Although the incentives are offered through the relevant program, Dealers must participate in the Dealer Network to receive these benefits. The Dealer Network offers the following additional program components to participants:

- **Newsletter:** IPL publishes a monthly newsletter with information on its programs, training opportunities, technical energy-efficiency information, success stories, industry news, and other pertinent information.
- **POP Materials:** IPL provides promotional materials designed to increase awareness of energy-efficiency programs and incentives, such as signs and brochures.

- **Training Reimbursement:** IPL reimburses 50 percent of tuition costs for approved advanced energy-efficiency, trade, and technical courses.
- **Energy-Efficiency Dealer Resource Materials:** IPL distributes materials that describe IPL's energy-efficiency programs and Dealer Network benefits.
- **Trade Show Assistance:** IPL reimburses 50 percent of booth space costs at trade shows when trade allies display IPL energy-efficiency program materials and logo.
- **Ask the Expert:** Participants in the Dealer Network have access to IPL's online technical support, which provides assistance with program rules, application requirements, and other program questions.

4.6.8. Market Barriers

Table 4.33 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 4.33 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of trade ally awareness	Provide outreach and education through trade account manager field visits; Provide program marketing materials and outreach through traditional and nontraditional methods
Lack of time and resources to participate	Provide program benefits that directly support trade allies' businesses; Emphasize the direct financial and other benefits of participating
Participating Dealers are not all active in IPL's programs	Maintain good communications and rapport with trade allies; Hold trade allies accountable for keeping their paperwork up-to-date; Use database queries to identify trade allies with strong potential but low participation for targeted marketing; Conduct direct outreach and communications
Limited program staff cover a large territory	Prioritize improving the quality of existing participating trade allies over recruiting new trade allies

4.6.9. Marketing and Promotion

IPL conducts ongoing outreach to educate Dealers and contractors about program procedures and benefits, qualifying measures and equipment, and rebate structures. IPL markets the program to trade allies through:

- Having direct contact by the trade account manager to larger Dealers, trade associations, building organizations, and other industry groups;
- Coordinating seminars on new technologies for proper installation, operation, and maintenance;
- Reaching out to participants in the builder training program to boost builder participation;
- Providing marketing support to trade allies to help them sell energy-efficiency benefits to customers;
- Advertising in trade publications; and
- Participating in trade shows and other appropriate events.

4.6.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: www.alliantenergy.com/dealers.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

4.6.11. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 4.34.

Table 4.34 Outside Service Providers

Vendor	Role
Questline	Produces newsletter and staffs online technical assistance

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

4.6.12. Participation

Not applicable.

4.6.13. Energy and Demand Savings

IPL does not measure savings from its outreach, education, and training programs. The impacts of this program are realized via customer participation in the Residential and Nonresidential Prescriptive Rebate programs.

4.6.14. Budget

The total budget for the program is estimated at \$1 million. Table 4.35 provides program budget assumptions.

Table 4.35 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$6,449	\$6,578	\$6,709	\$6,844	\$6,980	\$33,560
Administration	\$120,916	\$123,334	\$125,801	\$128,317	\$130,883	\$629,250
Advertising and Promotion	\$32,244	\$32,889	\$33,547	\$34,218	\$34,902	\$167,800
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$1,612	\$1,644	\$1,677	\$1,711	\$1,745	\$8,390
Electric Total	\$161,221	\$164,445	\$167,734	\$171,089	\$174,511	\$839,000
Natural Gas Budget						
Planning and Design	\$1,551	\$1,582	\$1,614	\$1,646	\$1,679	\$8,072
Administration	\$29,084	\$29,666	\$30,259	\$30,865	\$31,482	\$151,356
Advertising and Promotion	\$7,756	\$7,911	\$8,069	\$8,231	\$8,395	\$40,362
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$388	\$396	\$403	\$412	\$420	\$2,018
Natural Gas Total	\$38,779	\$39,555	\$40,346	\$41,153	\$41,976	\$201,808
Total Budget						
Planning and Design	\$8,000	\$8,160	\$8,323	\$8,490	\$8,659	\$41,632
Administration	\$150,000	\$153,000	\$156,060	\$159,181	\$162,365	\$780,606
Advertising and Promotion	\$40,000	\$40,800	\$41,616	\$42,448	\$43,297	\$208,162
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$2,000	\$2,040	\$2,081	\$2,122	\$2,165	\$10,408
Total	\$200,000	\$204,000	\$208,080	\$212,242	\$216,486	\$1,040,808

Table 4.36 provides a forecast of staffing needs and costs for this program.

Table 4.36 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	31.5	\$39,375	Program-specific management
Total	31.5	\$39,375	

4.6.15. Cost-Effectiveness Results

In the 2014 to 2018 program delivery period, IPL does not intend to measure energy savings resulting from the Dealer Network. Because the program is primarily for education and outreach, with energy savings serving a secondary role, it is not required to achieve the cost-effectiveness threshold outlined in 199 IAC Chapter 35. Table 4.37 provides program cost-effectiveness results.

Table 4.37 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$678,056	\$0	\$678,056	\$755,293
Net Benefits	-\$678,056	\$0	-\$678,056	-\$755,293
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$163,096	\$0	\$163,096	\$181,674
Net Benefits	-\$163,096	\$0	-\$163,096	-\$181,674
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$841,151	\$0	\$841,151	\$936,967
Net Benefits	-\$841,151	\$0	-\$841,151	-\$936,967
B/C Ratio	N/A	N/A	N/A	N/A

4.7. Bright Ideas Program

4.7.1. Program Description

Through the Bright Ideas Program, IPL provides grant money to affinity organizations to support innovative energy-saving ideas that do not fit within IPL's existing energy-efficiency programs. Affinity organizations may include cities, civic groups, clubs, professional associations, unions, charities, and churches and other religious organizations.

The purpose of Bright Ideas is to stimulate grassroots enthusiasm and innovation around energy conservation and efficient use of electricity and/or natural gas in Iowa homes, farms, businesses, and government-owned buildings.

The objectives of the Bright Ideas Program are to provide grant funding to support the design and implementation of programs that improve market awareness and adoption of new technologies, address underserved markets, and support customers and projects that do not fit into other energy-efficiency programs.

IPL promotes the program, requests applications, and selects applicants that represent a broad cross-section of customers, potential energy impacts, and other criteria.

Key changes to this program in the 2014 to 2018 Energy Efficiency Plan include:

- Changing the program's name from Affinity Bright Ideas to Bright Ideas.

4.7.2. Operations

Affinity groups wishing to apply for grant funding must submit a grant application online, which is reviewed by the program manager and a committee of program stakeholders. IPL typically approves initiatives or projects that would not be eligible for one of its existing energy-efficiency programs, and that proposes a unique approach to increasing customer awareness of energy efficiency. If approved, IPL sends a letter of acceptance to the applicant along with the grant funds. Affinity group programs and initiative-awarded funding through this program are administered and delivered by the awardee, with oversight and management by IPL staff.

4.7.3. Value Proposition

Customers participating in the program receive three main benefits:

1. Participants ***expand their energy-efficiency knowledge*** through affinity organization energy-education programs.
2. Participants ***invest in their communities*** by promoting energy-efficiency education.
3. Participants can ***save energy*** by incorporating ***energy-saving behaviors*** into their everyday lives and by using the affinity education programs as a stepping stone towards IPL's other energy-efficiency programs.

4.7.4. Customer Targets

IPL determines customer targets resulting from Bright Ideas grants based on the proposed initiatives.

4.7.5. Trade Ally Targets

Trade ally targets resulting from Bright Ideas grants vary based on proposed initiatives.

4.7.6. Incentive Structure and Process

Bright Ideas is a grant program and does not include traditional energy-efficiency measures. Depending on the affinity organization and grant request, IPL's financial contribution to Bright Ideas applicants may be in the form of donations, grants, matching grants, or direct incentives.

4.7.7. Eligible Measures and Incentives

There are no specific measures or incentives associated with this program. Because IPL seeks to fund projects that are not eligible for incentives through the existing programs in its Plan, the majority of funding proposals are educational in nature. IPL determines eligible measures and incentives resulting from Bright Ideas grants based on the proposed initiatives.

4.7.8. Market Barriers

Table 4.38 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 4.38 Market Barriers and Strategies

Market Barriers	Program Strategies
Lack of community awareness	Conduct outreach through traditional and nontraditional mechanisms
Lack of resources among affinity organizations	Provide funding for educational opportunities; Encourage affinity groups to seek matching grants or supplemental sources of project funding
Some organizations are looking for ongoing funding and Bright Ideas awards are only one-time grants	Emphasize the program rules in the online application; Encourage affinity groups to seek matching grants or supplemental sources of project funding for ongoing resource needs
Organizations sometime have trouble coming up with new ideas	Provide grant application feedback to applicants whose projects are not funded to encourage them to apply again with ideas that may better fit the program objectives

4.7.9. Marketing and Promotion

IPL primarily markets the program through the program website, word-of-mouth, and direct mail to selected local civic organizations.

4.7.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: alliantenergy.com/BrightIdeas.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

4.7.11. Outside Services

IPL administers the Bright Ideas Program with internal staff. No outside services are used.

4.7.12. Participation

Participation varies by initiative.

4.7.13. Energy and Demand Savings

There are no energy or demand savings associated with this program. If a Bright Ideas project produces energy or demand savings, such savings are reported in the applicable Plan program, such as Residential or Nonresidential Prescriptive Rebates.

4.7.14. Budget

The total budget for the program is estimated at \$1.2 million. Table 4.39 provides program budget assumptions.

Table 4.39 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$3,583	\$3,654	\$3,727	\$3,802	\$3,878	\$18,644
Administration	\$10,748	\$10,963	\$11,182	\$11,406	\$11,634	\$55,933
Advertising and Promotion	\$3,583	\$3,654	\$3,727	\$3,802	\$3,878	\$18,644
Customer Incentive	\$161,221	\$164,445	\$167,734	\$171,089	\$174,511	\$839,000
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Electric Total	\$179,134	\$182,717	\$186,371	\$190,099	\$193,901	\$932,222
Natural Gas Budget						
Planning and Design	\$862	\$879	\$897	\$915	\$933	\$4,485
Administration	\$2,585	\$2,637	\$2,690	\$2,744	\$2,798	\$13,454
Advertising and Promotion	\$862	\$879	\$897	\$915	\$933	\$4,485
Customer Incentive	\$38,779	\$39,555	\$40,346	\$41,153	\$41,976	\$201,808
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$43,088	\$43,950	\$44,829	\$45,725	\$46,640	\$224,231
Total Budget						
Planning and Design	\$4,444	\$4,533	\$4,624	\$4,716	\$4,811	\$23,129
Administration	\$13,333	\$13,600	\$13,872	\$14,149	\$14,432	\$69,387
Advertising and Promotion	\$4,444	\$4,533	\$4,624	\$4,716	\$4,811	\$23,129
Customer Incentive	\$200,000	\$204,000	\$208,080	\$212,242	\$216,486	\$1,040,808
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$222,222	\$226,667	\$231,200	\$235,824	\$240,540	\$1,156,453

Table 4.40 provides a forecast of staffing needs and costs for this program.

Table 4.40 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	2.25	\$2,813	Program-specific management
Energy Efficiency Programs Management	4	\$5,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Total	10.25	\$12,813	

4.7.15. Cost-Effectiveness Results

In the 2014 to 2018 program delivery period, IPL does not intend to measure energy savings resulting from the Bright Ideas Program. Because the program is primarily for education and outreach, with energy savings serving a secondary role, it is not required to achieve the cost-effectiveness threshold outlined in 199 IAC Chapter 35. Table 4.41 provides program cost-effectiveness results.

Table 4.41 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$753,395	\$0	\$753,395	\$839,215
Net Benefits	-\$753,395	\$0	-\$753,395	-\$839,215
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$181,217	\$0	\$181,217	\$201,860
Net Benefits	-\$181,217	\$0	-\$181,217	-\$201,860
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$934,613	\$0	\$934,613	\$1,041,074
Net Benefits	-\$934,613	\$0	-\$934,613	-\$1,041,074
B/C Ratio	N/A	N/A	N/A	N/A

4.8. Research, Development, and Demonstration Program

4.8.1. Program Description

As part of its continuous improvement process, IPL looks for opportunities to enhance its programs by offering new technologies, improving its delivery mechanisms, or incorporating new market intelligence into its Plan. The Research, Development, and Demonstration Program is a mechanism to test promising new technologies and program delivery approaches on a pilot basis.

IPL sets aside funds that are not associated with specific measures, allocated savings, or participation goals to allow for implementation of pilot programs and demonstration projects. IPL actively monitors the market for emerging technologies and program trends and evaluates their fit for the Iowa market. This program model allows IPL to consider new program ideas proposed by its stakeholder community, trade allies, customers, or internal staff. The goals of IPL's research and development activities include:

- Identifying market potential and customer targets appropriate for each target pilot program;
- Understanding the costs and savings associated with pilot technologies and program strategies;
- Identifying external resource needs and market capacity (e.g., qualified trade allies) to deliver new energy-efficient technologies and strategies;

- Gathering input from key customers and stakeholders on the benefits of pilot programs and the barriers to implementation; and
- Identifying technical support, marketing and outreach, training, infrastructure, and other delivery needs to implement a viable program.

Although IPL has not yet determined its priorities for implementing specific pilot programs for the Plan period, it is currently exploring the following potential programs that show promise for delivering energy savings and/or enhancing its customer service offerings:

- **Data centers.** IPL is considering a stakeholder-proposed program that would offer a specific package of energy-efficiency measures and services intended to reduce energy usage and demand associated with data centers. The new program would incorporate measures currently offered in IPL's Nonresidential Prescriptive Rebates Program (e.g., servers, computer network energy management, cooling and lighting equipment) with potential new measures to address this industry's specific energy uses (e.g., uninterruptible power supply, transformers, data storage).
- **Behavior change.** In many jurisdictions, programs designed to encourage energy conservation through behavioral modification have yielded program savings in the range of one to two-and-one-half percent. Through its coordination efforts, IPL is aware that MEC is currently conducting a pilot behavior modification program. IPL will continue to coordinate with MEC and monitor the results of MEC's behavior program pilot and potential customer

benefits. As results become available from the MEC pilot, IPL will assess the benefits and costs of offering a similar initiative.

- **Efficient vehicles.** IPL is currently exploring two opportunities to extend its energy-efficiency initiatives to high-efficiency vehicles.
 - *Plug-in vehicles.* As plug-in hybrid and electric vehicles become more prominent in the consumer market, they have the potential to impose increasing load and energy requirements on IPL's system. With this pilot, IPL would explore how to offset demand increases by offering technical support and/or incentives for distributed generation and efficient electric vehicle recharging station equipment.
 - *Compressed natural gas fleets.* Declining natural gas prices have engendered increasing interest in the use of compressed natural gas to fuel fleet vehicles. IPL will evaluate how to offer technical resources to help its municipal and commercial customers who are interested in developing compressed natural gas fueling stations or other supporting infrastructure. As part of this pilot, IPL may evaluate the benefits and costs of transitioning its own Iowa fleet to compressed natural gas.
- **Transmission and distribution (T&D) optimization and loss reduction.** Utilities' energy delivery systems can offer significant potential for energy savings, often at a higher customer value than traditional energy-efficiency strategies. The opportunities to capture savings from T&D infrastructure falls into two categories:

- *Line-loss avoidance and T&D optimization.* IPL may evaluate measures to improve overall T&D system efficiency to avoid incremental line losses. This may include identifying and strengthening weak areas of the distribution system, reducing the length of transmission lines, installing lower capacity distribution transformers at customer sites, and installing technologies to improve power factors.
- *Conservation voltage regulation.* Through this pilot effort, IPL would aim to reduce electricity usage by strategically lowering voltage at the customer facility (mainly residential) or at the feeder levels.

IPL will continue to monitor market activities on an ongoing basis to identify new efficiency opportunities, and will explore these new technologies and program strategies to assess the potential benefits and costs of launching pilot program initiatives.

IPL will report on the status of the research activities and the implementation of the research findings in its annual report filed on May 1 of each year and in periodic stakeholder meetings.

Key changes to this program in the Plan include:

- No changes are planned at this time.

4.8.2. Operations

IPL researches new program pilot ideas and opportunities on an ongoing basis, and will select those most appropriate to implement based on offering customer benefits and energy-savings potential. IPL considers new technologies and program strategies

based on multiple factors, such as: their ability to produce reliable, cost-effective energy savings and/or significant secondary benefits; whether they contribute to market transformation, underserved markets, or other goals; their market-readiness; and the availability of sufficient market and infrastructure resources to support technology deployment or the pilot approach.

IPL selects pilots for implementation that it determines will contribute to its Plan goals or will achieve significant benefits for its customers. IPL staff typically conducts all planning, coordination, outreach, and other tasks needed to launch and implement a Research, Development, and Demonstration Program pilot. IPL uses both internal and outside technical resources when appropriate. Specific activities vary based on the pilot initiative.

4.8.3. Value Proposition

Customers participating in the program receive three main benefits:

1. Investment in ***future technologies*** that may provide increased energy efficiency and savings for customers.
2. Participants may ***expand their energy-efficiency knowledge and awareness.***
3. Participants contribute to ***market adoption and the transformation*** to new energy-efficiency technologies and paradigms.

4.8.4. Customer Targets

This program does not include specific measures, traditional eligibility parameters, or verification protocols. All customers may potentially benefit from the results of Research, Development, and Demonstration Program pilots.

4.8.5. Trade Ally Targets

Trade allies for this program will depend largely on the unique needs of pilots selected for the program. Since pilots are still under development, or have not yet been identified, specific trade allies are not known at this time. However, IPL often collaborates with appropriate partners on individual pilot initiatives, including:

- The Iowa Office of Consumer Advocate (OCA);
- MEEA;
- IEC;
- Iowa Economic Development Authority (IEDA);
- Environmental Law and Policy Center;
- Wisconsin Energy Conservation Corporation;
- IOUs (i.e., MEC for the behavior change pilot); and
- Municipal and rural cooperative utilities.

4.8.6. Incentive Structure and Process

IPL designs each pilot initiative using available best practices for that initiative and in a way that is best suited to its Iowa customers. Incentive structures and processes

are determined based on the individual market characteristics and customer needs associated with each pilot.

4.8.7. Eligible Measures and Incentives

There are no specific measures or incentives associated with this program.

4.8.8. Market Barriers

Table 4.42 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 4.42 Market Barriers and Strategies

Market Barriers	Program Strategies
Availability of relevant technologies	Employ a rigorous approach to research
Sufficient funding may not be available to test new technologies and program ideas	Provide adequate budget; Design individual pilots initiatives based on their unique market characteristics
Challenges associated with adopting new technologies and practices, which have not been extensively tested or explored	Provide sufficient funds to investigate new technologies and practices thoroughly; Limit specific participation and savings targets to allow program ideas to evolve organically; Conduct a rigorous evaluation of each pilot to determine the overall benefits and costs to IPL customers

4.8.9. Marketing and Promotion

IPL maintains partnerships with the IEC, IEDA, and other utilities in the state to identify collaborative marketing and promotional opportunities. IPL markets individual pilot initiatives to customer sectors using outreach strategies appropriate to individual initiatives. Typical marketing and promotional strategies include distributing program

information and materials through the Alliant Energy website and educational events (e.g., electronically communicated webinars, seminars, and stakeholder meetings).

4.8.10. Key Participation Information

The initiatives of this program are currently under development. Program specifics will be provided as they become available.

4.8.11. Outside Services

IPL will coordinate research and pilot development with a variety of energy-related partners. Pilot programs are under development; therefore the specific partners remain unidentified.

4.8.12. Participation

Participation will vary by initiative.

4.8.13. Energy and Demand Savings

There are no energy-savings goals associated with this program, as pilots do not have specifically defined goals nor are they determined or verified at the pilot stage. If a pilot is successful and offers customer benefits and energy-savings potential, IPL will incorporate the pilot and report its savings.

4.8.14. Budget

The total budget for the program is estimated at \$1 million. Table 4.43 provides program budget assumptions.

Table 4.43 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$40,894	\$41,711	\$42,546	\$43,397	\$44,264	\$212,812
Administration	\$103,329	\$103,783	\$104,247	\$104,720	\$105,202	\$521,281
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$27,262	\$27,808	\$28,364	\$28,931	\$29,510	\$141,874
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Electric Total	\$171,485	\$173,302	\$175,156	\$177,047	\$178,976	\$875,967
Natural Gas Budget						
Planning and Design	\$9,836	\$10,033	\$10,234	\$10,438	\$10,647	\$51,188
Administration	\$24,854	\$24,963	\$25,075	\$25,189	\$25,305	\$125,386
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$6,558	\$6,689	\$6,822	\$6,959	\$7,098	\$34,126
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$41,248	\$41,685	\$42,131	\$42,586	\$43,050	\$210,700
Total Budget						
Planning and Design	\$50,730	\$51,744	\$52,779	\$53,835	\$54,912	\$264,000
Administration	\$128,183	\$128,747	\$129,322	\$129,908	\$130,506	\$646,667
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$33,820	\$34,496	\$35,186	\$35,890	\$36,608	\$176,000
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$212,733	\$214,988	\$217,287	\$219,633	\$222,026	\$1,086,667

Table 4.44 provides a forecast of staffing needs and costs for this program.

Table 4.44 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	4.5	\$5,625	Program-specific management
Energy Efficiency Programs Management	8	\$10,000	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Total	16.5	\$20,625	

4.8.15. Cost-Effectiveness Results

In the 2014 to 2018 program delivery period, IPL does not intend to measure energy savings resulting from the Research, Development, and Demonstration Program. Because the program is primarily for education and outreach, with energy savings serving a secondary role, it is not required to achieve the cost-effectiveness threshold outlined in 199 IAC Chapter 35. Table 4.45 provides program cost-effectiveness results.

Table 4.45 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$708,857	\$0	\$708,857	\$789,075
Net Benefits	-\$708,857	\$0	-\$708,857	-\$789,075
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$170,504	\$0	\$170,504	\$189,799
Net Benefits	-\$170,504	\$0	-\$170,504	-\$189,799
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$879,361	\$0	\$879,361	\$978,874
Net Benefits	-\$879,361	\$0	-\$879,361	-\$978,874
B/C Ratio	N/A	N/A	N/A	N/A

5. Demand Response Portfolio

IPL's Demand Response Portfolio serves two important objectives: (1) to provide IPL with a flexible means of managing its peak load; and (2) to afford its customers the opportunity to reduce their energy bills by reducing usage during critical peak events or high-price periods. IPL's Plan includes demand response programs for both residential and nonresidential customers.

- Through its Residential DLC Program, IPL provides an incentive to residential customers who are willing to allow IPL to control their central air conditioners and/or hot water heaters via a remote-control device during the summer peak season; and
- Through the Nonresidential Interruptible Program, IPL offers incentives to commercial and industrial customers who are able to curtail a minimum of 200 kW when called upon to do so.

Both of these are mature, stable programs with solid customer participation and satisfaction. IPL's objectives in the Plan are to retain customers already in the programs and maintain the programs' excellent records, reinforce the programs' mechanisms and benefits to customers, and continue to test and maintain Residential DLC Program hardware to ensure it achieves ongoing demand savings.

Over the Plan period, IPL estimates that these two programs will provide approximately 314 MW of annual peak load reduction capability and 29.5 GWh of energy savings.

The following tables provide an overview of the projected costs, impacts, and cost-effectiveness associated with the programs in IPL's Demand Response Portfolio.

Table 5.1 Demand Response Portfolio Benefits and Costs by Program

Demand Response Portfolio	2014-2018 Savings		Total Costs (\$MM)
	Cumulative Electricity (GWh)	Demand Savings (MW - Year)	
Residential DLC	2.5	44	\$12.76
Nonresidential Interruptible	27.0	270	\$122.37
TOTAL PORTFOLIO	29.5	314	\$135.13

Table 5.2 Demand Response Portfolio Benefits and Cost by Program Year

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Electric Savings (kWh)	5,900,022	5,900,022	5,900,022	5,900,022	5,900,022	29,500,110
Capacity Savings (kW)	314,235	314,235	314,235	314,235	314,235	N/A
Natural Gas Savings (therms)	0	0	0	0	0	0
Capacity Savings (therms)	0	0	0	0	0	0
Participant Cost Net of Incentives (\$)	\$11,467,986	\$11,467,986	\$11,467,986	\$11,467,986	\$11,467,986	\$57,339,930
Direct Utility Costs (\$)	\$27,026,841	\$27,026,841	\$27,026,841	\$27,026,841	\$27,026,841	\$135,134,211
Planning and Design	\$53,185	\$53,185	\$53,185	\$53,185	\$53,185	\$265,925
Program Administration	\$840,366	\$840,366	\$840,366	\$840,366	\$840,366	\$4,201,830
Advertising & Promotion	\$26,592	\$26,592	\$26,592	\$26,592	\$26,592	\$132,960
Incentives	\$26,026,921	\$26,026,921	\$26,026,921	\$26,026,921	\$26,026,921	\$130,134,605
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Installation	\$0	\$0	\$0	\$0	\$0	\$0
Program Review & Assessment	\$79,777	\$79,777	\$79,777	\$79,777	\$79,777	\$398,885
Total Societal Cost	\$38,494,827	\$38,494,827	\$38,494,827	\$38,494,827	\$38,494,827	\$192,474,135

Table 5.3 presents the overall cost-effectiveness of IPL's Demand Response Portfolio.

Table 5.3 Demand Response Portfolio Cost-Effectiveness

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits	\$388,307,496	\$127,815,225	\$336,796,981	\$336,796,981
Net Present Value Costs	\$123,287,174	\$47,819,958	\$117,670,433	\$137,807,804
Benefit/Cost Ratio	3.15	2.70	2.90	2.40

The following sections describe each program in IPL's Demand Response Portfolio, including all details as required by 199 IAC Chapter 35.

5.1. Residential Direct Load Control Program

5.1.1. Program Description

IPL's Residential DLC Program offers incentives to customers who are willing to reduce their energy consumption during the peak summer season: from May 15 to September 15. A control device, installed on a customer's central air conditioning system and/or water heater, allows the unit to be cycled off during peak periods. During a cycling event, IPL shuts off a participant's air conditioner compressor for half of its normal cycle and then returns the compressor to the individual's thermostat control for the other half. Participant water heaters are turned off for the duration of the cycling event. A typical cycling event lasts six hours (1:00 p.m. to 7:00 p.m.) and never occurs on weekends or holidays.

The DLC Program operates under two decision rules. The first decision rule is in response to system reliability issues, which may include but are not limited to: a Midwest Independent Transmission System Operator, Inc. (MISO) directive; congested transmission; or when available generation cannot meet consumer demand. The second decision rule is based on achieving energy-efficiency goals and is triggered when IPL's electric service territory is forecasted to reach a minimum temperature.

Key changes to this program in the Plan include:

- No changes are planned at this time.

5.1.2. Operations

IPL delivers the DLC Program with the support of several contractors who install and maintain cycling switch devices and provide paging and testing services. Participants have the option to enroll only their central air conditioning unit or to also include their electric water heater. Customers can only enroll their electric water heater in conjunction with their central air conditioning unit.³⁰ Customers with more than one air conditioner or water heater at their residence are required to enroll all air conditioners and, if included, all water heaters at their residence. Participants receive an incentive and cycling switch for each appliance enrolled in the program.

The program utilizes a combination of frequency modulation, very high frequency, and pager cycling switches supported by a paging network. IPL installs the Cannon True Cycle paging switch, which curtails more power than a typical appliance cycling switch (1.04 kW as opposed to 0.8 kW), for all new enrollments or replacements. Equipment is installed by a certified professional at no cost to the customer. Should a participant experience technical problems with a cycling switch, IPL dispatches a certified professional contractor to correct the problem at no cost to the customer.

At approximately 10:00 a.m., Monday through Friday, an IPL staff representative reviews the hourly forecast through 7:00 p.m. for each of three zones (southern zone-Burlington, central zone-Cedar Rapids, northern zone-Mason City) at weather.com (*The Weather Channel*). At that time, if weather.com provides a specific zone forecast that meets one of the temperature triggers shown in Table 5.4, then IPL will initiate a cycling

³⁰ There are several water heater-only participants due to past program parameters. Water heater-only participants will remain grandfathered into the program, and IPL expects natural attrition to occur.

event for the affected zone and issue a public service announcement to warn customers of the day's cycling event.

Table 5.4 Zonal Temperature Triggers

City	Temperature Trigger	Zone
Burlington	94 °F or above	Southern
Cedar Rapids	92 °F or above	Central
Mason City	92 °F or above	Northern

Based on past weather data, IPL anticipates an average of five events per season. A typical cycling event lasts six hours (1:00 p.m. to 7:00 p.m.) and never occurs on weekends or holidays.

To improve the program's savings performance, over a five-year period (2006-2011), IPL completed a maintenance plan, which involved testing installed switches in the entire IPL service territory to verify their operability and replace those that were no longer functioning properly. IPL replaced switches identified as missing or failed through the test. Since results indicated that nearly 35 percent of the installed switches were missing or not functioning, IPL is evaluating the possibility of repeating the maintenance plan.

5.1.3. Value Proposition

Customers participating in the program receive three main benefits:

1. Participants **save energy** by reducing their energy consumption during peak hours.

2. Participants receive a ***financial incentive*** for participation and a free cycling switch for each enrolled appliance.
3. Participants contribute to a ***well-managed electrical system in Iowa*** through the participation in the DLC Program.

5.1.4. Customer Targets

The DLC Program is offered to residential customers throughout IPL’s territory. Participants must have a central air conditioning unit and receive retail electric service to be eligible for the program. Table 5.5 outlines customer eligibility requirements.

Table 5.5 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Residential electric
Customer Status	Homeowners; Tenants
Building Type	Single family
Building Vintage	All
Geography	IPL’s Iowa service territory
Other	Central air conditioning required

5.1.5. Trade Ally Targets

IPL relies on trade allies to promote and deliver the program. The following types of trade allies are the primary participants in IPL’s program:

- Air conditioning installers and service providers; and
- Electrical contractors.

5.1.6. Incentive Structure and Process

Participants receive an aggregated incentive based on the number of enrolled appliances in the form of an electric bill credit each month of the four-month program season (May 15 through September 15). Participants also receive free cycling switches and switch maintenance.

5.1.7. Eligible Measures and Incentives

IPL targets single family homes that are customers' primary residences for participation in the DLC Program. Table 5.6 provides eligible measures, qualification standards, and incentive levels for equipment in this program.

Table 5.6 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Central air conditioner cycling	Switch installed on or near all central air conditioning units	\$8/month for four months (May 15 through September 15)
Electric water heater cycling	Must have central air conditioner cycling switch installed	\$2/month for four months (May 15 through September 15)

5.1.8. Market Barriers

Table 5.7 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

Table 5.7 Market Barriers and Strategies

Market Barriers	Program Strategies
Technical difficulties with DLC devices	Provide ongoing switch maintenance
Ability to maintain comfort levels with air conditioning cycling	Use proven technologies that prevent large temperature swings; Target single family homes (smaller apartments and mobile homes tend to notice temperature increases); Provide ongoing customer education to manage customer expectations, such as tips on how to keep the home cool during the hottest times and during cycling events
Customers do not understand the program	Provide frequent program education, marketing, and awareness to customers, specifically how the program affects or does not affect their equipment
Air conditioning installers and service providers do not understand the program	Host annual program workshops/webinars with trade allies; Provide ongoing communications and outreach about the program
Customers override control devices	Limit customer access to controls

5.1.9. Marketing and Promotion

IPL sends information to existing DLC customers each spring to remind them of their participation in the program and explain how the program works. IPL promotes the DLC Program through multiple channels, including:

- Direct mail targeting customers who meet specific program criteria;
- Bill messaging each spring;
- Promotion on Alliant Energy's PowerHouse[®] TV program;
- Brochures;
- Outreach to central air conditioning installers and electricians; and
- Alliant Energy website.

5.1.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL's 2009-2013 EEP can be found at: alliantenergy.com/appliancecycling.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

5.1.1. Outside Services

Pursuant to the 2009-2013 EEP, IPL contracts with the outside services vendors outlined in Table 5.8.

Table 5.8 Outside Service Providers

Vendor	Role
Blazek Electric, Brockway Co, Brookwood Inc., ESCO Electric, Garvin's LP Gas, Hampton Heating, Kinsella Electric, Laurens Plumbing, Linahon Electric, Moeller Electric, Pfeiler Electric, Quandahl Electric, Swanson Electric, Trebil Electric, Web Electric, and Zemler Electric	Install and maintain cycling switch equipment
Michaels Energy	Maintenance plans, program testing
Cannon Technologies, Inc.	Paging services

IPL regularly reviews its contractor needs and contractual agreements as part of its internal program evaluation process.

5.1.2. Participation

Table 5.9 provides program participation assumptions in terms of the number of participants by technology type.

Table 5.9 Participation Assumptions

	2014	2015	2016	2017	2018	Total
Central Air Conditioners	48,006	48,006	48,006	48,006	48,006	240,030
Electric Water Heaters	7,800	7,800	7,800	7,800	7,800	39,000
Total	55,806	55,806	55,806	55,806	55,806	293,355

5.1.3. Energy and Demand Savings

This program is expected to produce 2,500 MWh of electricity savings and 221 MW of demand savings over the course of the Plan. This program accounts for 14 percent of demand savings in the demand response portfolio. Table 5.10 provides energy and demand savings goals.

Table 5.10 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	500,022	500,022	500,022	500,022	500,022	2,500,110
Peak Demand (kW)	44,235	44,235	44,235	44,235	44,235	N/A

5.1.4. Budget

The total budget for the program is estimated at \$12.8 million. Table 5.11 provides program budget assumptions.

Table 5.11 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$53,185	\$53,185	\$53,185	\$53,185	\$53,185	\$265,925
Administration	\$717,997	\$717,997	\$717,997	\$717,997	\$717,997	\$3,589,983
Advertising and Promotion	\$26,592	\$26,592	\$26,592	\$26,592	\$26,592	\$132,962
Customer Incentive	\$1,675,325	\$1,675,325	\$1,675,325	\$1,675,325	\$1,675,325	\$8,376,627
Equipment Cost*	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost*	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$79,777	\$79,777	\$79,777	\$79,777	\$79,777	\$398,887
Electric Total	\$2,552,877	\$2,552,877	\$2,552,877	\$2,552,877	\$2,552,877	\$12,764,384
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$0	\$0	\$0	\$0	\$0	\$0
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost*	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost*	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$0	\$0	\$0	\$0	\$0	\$0
Total Budget						
Planning and Design	\$53,185	\$53,185	\$53,185	\$53,185	\$53,185	\$265,925
Administration	\$717,997	\$717,997	\$717,997	\$717,997	\$717,997	\$3,589,983
Advertising and Promotion	\$26,592	\$26,592	\$26,592	\$26,592	\$26,592	\$132,962
Customer Incentive	\$1,675,325	\$1,675,325	\$1,675,325	\$1,675,325	\$1,675,325	\$8,376,627
Equipment Cost*	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost*	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$79,777	\$79,777	\$79,777	\$79,777	\$79,777	\$398,887
Total *	\$2,552,877	\$2,552,877	\$2,552,877	\$2,552,877	\$2,552,877	\$12,764,384

* Controllars installed on customer equipment for the Residential DLC Program remain the property of IPL for the duration of a customer's participation in the program; therefore, these costs are not included in equipment and installation cost categories for this program.

Table 5.12 provides a forecast of staffing needs and costs for this program.

Table 5.12 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	56	\$70,000	Program-specific management
Energy Efficiency Programs Management	2	\$2,500	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Total	62	\$77,500	

5.1.5. Cost-Effectiveness Results

A comparison of the program's costs and life-cycle benefits indicates that the program is cost-effective from a societal perspective, with a B/C ratio of 4.67 to 1. The program's costs are also justified by its benefits from the participant and RIM points of view. Table 5.13 provides program cost-effectiveness results.

Table 5.13 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$47,215,947	\$7,155,184	\$47,215,947	\$54,436,936
Costs	\$11,114,803	N/A	\$11,291,577	\$11,645,344
Net Benefits	\$36,101,143	\$7,155,184	\$35,924,370	\$42,791,592
B/C Ratio	4.25	N/A	4.18	4.67

5.2. Nonresidential Interruptible Program

5.2.1. Program Description

The Nonresidential Interruptible Program provides IPL with flexible peak demand resources and supports the reliability of its distribution system. Through the program, IPL offers incentives to its large commercial and industrial customers who reduce their demands during times of system peak conditions or high market prices. Participating customers must commit to providing a minimum of 200 kW of load reduction when called upon to do so by IPL. In most cases, IPL provides participants with two-hour advanced notice of curtailment events and also notifies participants at the time of the interruption and when the event is terminated.

The Nonresidential Interruptible Program is mature, successful, and has proven to be a reliable resource, providing IPL with a flexible means to manage its peak load.

Key changes to this program in the Plan include:

- No changes are planned at this time

5.2.2. Operations

IPL manages, administers, and implements the program using internal staff. Participants receive incentives in the form of a monthly bill credit throughout the entire year.

IPL uses an automated notification system, the Power Manager Communication System, which has the capability to dispatch multiple notifications simultaneously for a

curtailment event, warning, or conclusion. Each participant may assign as many notice recipients as necessary through any or all of the following methods: phone, pager, facsimile, and e-mail. IPL may call curtailment events on the basis of any of four decision rules or conditions listed in IPL electric tariff, *Interruptible Service Option* (a.k.a. Rider INTSERV), as follows:

- **Condition One - Reliability.** Interruptions are necessary to maintain safe and reliable electric system operations and to meet obligations to other interconnected electric systems.
- **Condition Two - Energy Efficiency-Reducing Peak Demand.**³¹ IPL would expect to have a peak demand less than the planning reserve margin for the current year, where (i) the planning reserve margin is defined as the amount by which capacity resources exceed customer firm demand, expressed as a percent of customer firm demand, and (ii) customer firm demand is defined as the load forecast of firm demand assuming normal (or 50-50) summer peak weather.
- **Condition Three - Energy Efficiency-Reducing Energy Usage.** The day-ahead locational marginal price (LMP) for IPL's load zone in the MISO footprint is at the "*running on oil*" level for at least four consecutive hours, or the rolling four-hour average real-time LMP for IPL's load zone exceeds the running on oil level. The running on oil level is a predetermined LMP defined

³¹ As a result of MISO's revised treatment of capacity and planning reserve margin, IPL engaged in a collaborative process with the parties in Docket No. EEP-08-1 to re-evaluate the condition two decision rule. Following this collaboration, on December 29, 2009, IPL proposed a revised condition two rule that was approved, without modification, by the Board on January 28, 2010.

by an assumed heat rate of 13.5 million Btu (MMBtu) per MWh and a spot market price for No. 2 fuel oil.

- **Condition Four - Program Quality Control.** Reasonable interruptions are necessary to test the capabilities of participating customers. If, by August 1 of a given year, there are no interruptions for conditions one, two, or three, then IPL will conduct a test interruption of all participants. The test will be conducted between August 1 and September 16 under circumstances as close as possible to a condition-two or condition-three interruption. Additionally, IPL retains the prerogative to conduct a test of any participant at any time of the year if it determines, in its sound discretion, that such a test is necessary to preserve the integrity of the program.

5.2.3. Value Proposition

Customers participating in the program receive two main benefits:

1. Participants ***help improve system reliability and service*** for all of IPL's electric customers.
2. Participants receive ***lower monthly energy bills*** provided by a bill credit received throughout the entire year.

5.2.4. Customer Targets

The interruptible program is available to large commercial and industrial customers capable of shedding at least 200 kW of load to reach a predetermined, contractual, firm

demand within a specific timeframe. Table 5.14 outlines customer eligibility requirements.

Table 5.14 Customer Eligibility Parameters

	Eligible Customers
Customer Class	Nonresidential electric
Customer Status	Building or business owner
Building Type	Large commercial and industrial
Building Vintage	All
Geography	IPL's Iowa service territory
Other	Able to shed at least 200 kW of load

5.2.5. Trade Ally Targets

This program is primarily delivered by IPL staff; however, trade allies who sell, lease, or service emergency generators or energy management systems may help promote the program to customers.

5.2.6. Incentive Structure and Process

Participants receive an incentive in the form of a bill credit. Incentives are calculated on a monthly basis as a credit per kW multiplied by the difference between actual demand and the customer's contracted firm demand. The program also provides a buy-through provision for conditions two and three, allowing the customer to elect to buy through the curtailment period and be in compliance with the interruptible service Rider INTSERV. The customer buy-through cost is computed at each hourly kW priced at the MISO Alliant West (IPL) load zone node, ALTW.ALTW, real-time LMP price, plus an adder for any incremental administrative and MISO-related charges, less the energy adjustment clause factor for the month.

Participants who fail to respond to an event and have not selected the buy-through option are levied a one-time financial penalty of \$26.27 per kW for each excess kW over their firm contract demand. In such cases, IPL also bills the customer at the buy-through cost³² for any energy (kWh) received during an interruption period above its contract amount. The participant's contract firm demand will then be set at the highest level experienced during the failure to interrupt.

5.2.7. Eligible Measures and Incentives

There are no specific measures prescribed by this program. Rather, customers are asked to implement their own strategies, such as shifting or shedding load or using on-site generators. Those customers who achieve the contracted kW reduction qualify for an interruptible bill credit, calculated each month and reflected on the customer's bill.

Table 5.15 provides eligible measures, qualification standards, and incentive levels for equipment in this program.

Table 5.15 Incentive Summary

Program/Measure	Qualification	Customer Incentive
Peak season curtailment	Customer achieves contracted kW reduction	\$7.06 per kW curtailed
Off-peak curtailment		\$4.55 per kW curtailed

5.2.8. Market Barriers

Table 5.16 presents the key market barriers to a successful program, as well as strategies the program uses to address each barrier. Note that these program strategies can only partially mitigate the identified barriers.

³² As defined in the buy-through provision of IPL's interruptible tariff.

Table 5.16 Market Barriers and Strategies

Market Barriers	Program Strategies
Customers do not understand the program	Increase frequency of program education and awareness to customers
Customer are reluctance to change business practices or impact operations	Provide adequate benefits for participation (e.g., incentives, energy management support)
Ability to maintain comfort levels with air conditioning cycling	Use proven technologies that prevent large temperature swings
Customers fail to interrupt in accordance with their commitments	Ensure that contracts are for firm load reductions and include adequate incentives and penalties; Provide information to help participants understand how their various end-uses impact their consumption

5.2.9. Marketing and Promotion

IPL primarily markets the Nonresidential Interruptible Program through KAMs. Because it is a stable program with a history of exceeding its goals, IPL’s marketing activity primarily targets existing program participants, and is conducted through program partners and direct mail. IPL focuses the program messaging on providing updated program information and retaining participants, rather than recruiting new participants.

5.2.10. Key Participation Information

Detailed information on eligibility and other participation criteria as defined in IPL’s 2009-2013 EEP can be found at: alliantenergy.com/Interruptible.

IPL regularly reviews its customer-facing program information and marketing materials as part of its internal program evaluation process, and adjusts materials as needed based on program adjustments and market characteristics.

5.2.11. Outside Services

IPL manages, administers, and implements the Nonresidential Interruptible Program with internal staffing resources.

5.2.12. Participation

Table 5.17 provides program participation assumptions in terms of the number of participants.

Table 5.17 Participation Assumptions

	2014	2015	2016	2017	2018
Participants	174	174	174	174	174

5.2.13. Energy and Demand Savings

This program is expected to produce 27,000 MWh of electricity savings and 152,545 MW of demand savings over the course of the Plan. This program accounts for 86 percent of demand savings in the demand response portfolio. Table 5.18 provides energy and demand savings goals.

Table 5.18 Incremental Energy and Demand Savings Goals

	2014	2015	2016	2017	2018	Total
Electric Impacts						
Incremental Annual Energy (kWh)	5,400,000	5,400,000	5,400,000	5,400,000	5,400,000	27,000,000
Peak Demand (kW)	270,000	270,000	270,000	270,000	270,000	N/A

5.2.14. Budget

The total budget for the program is estimated at \$122.4 million. Table 5.19 provides program budget assumptions.

Table 5.19 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$122,370	\$122,370	\$122,370	\$122,370	\$122,370	\$611,849
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$24,351,595	\$24,351,595	\$24,351,595	\$24,351,595	\$24,351,595	\$121,757,977
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Electric Total	\$24,473,965	\$24,473,965	\$24,473,965	\$24,473,965	\$24,473,965	\$122,369,826
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$0	\$0	\$0	\$0	\$0	\$0
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$0	\$0	\$0	\$0	\$0	\$0
Total Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$122,370	\$122,370	\$122,370	\$122,370	\$122,370	\$611,849
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$24,351,595	\$24,351,595	\$24,351,595	\$24,351,595	\$24,351,595	\$121,757,977
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$24,473,965	\$24,473,965	\$24,473,965	\$24,473,965	\$24,473,965	\$122,369,826

Table 5.20 provides a forecast of staffing needs and costs for this program.

Table 5.20 Program Staffing

Personnel Classification	FTE (percent)	Annual Labor Cost	Purpose of Work
Product Manager	34	\$42,500	Program-specific management
Energy Efficiency Programs Management	2	\$2,500	Overall Plan and portfolio management
Analyst	4	\$5,000	Analysis of data, regulatory rules, requirements, and reporting
Regulatory Manager	30	\$37,500	Regulatory liaison, reporting, and oversight
Total	70	\$87,500	

5.2.15. Cost-Effectiveness Results

A comparison of the program’s costs and life-cycle benefits indicates that the program is cost-effective from a societal perspective, with a B/C ratio of 2.99 to 1. The program’s costs are also justified by its benefits from the participant, utility, and ratepayer impact points of view. Table 5.21 provides program cost-effectiveness results.

Table 5.21 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$289,581,034	\$120,660,041	\$289,581,034	\$333,870,560
Costs	\$106,555,630	\$47,819,958	\$126,516,227	\$111,641,830
Net Benefits	\$183,025,404	\$72,840,084	\$163,064,808	\$222,228,730
B/C Ratio	2.72	2.52	2.29	2.99

6. Other Funding Initiatives

In addition to the programs described in the previous chapters, IPL allocates funding to additional activities, as described in the following sections. IPL does not measure or report savings resulting from these activities.

The following tables provide an overview of the projected costs and cost-effectiveness associated with the activities described in this section.

Table 6.1 Other Cost Summary by Program Year

Benefit/Cost Component	Plan Year					Total
	2014	2015	2016	2017	2018	
Electric Savings (kWh)	0	0	0	0	0	0
Capacity Savings (kW)	0	0	0	0	0	0
Natural Gas Savings (therms)	0	0	0	0	0	0
Capacity Savings (therms)	0	0	0	0	0	0
Direct Utility Costs	\$1,700,000	\$2,700,000	\$3,033,333	\$3,033,333	\$2,033,333	\$12,500,000
Planning and Design	\$53,000	\$53,000	\$229,667	\$229,667	\$229,667	\$795,000
Program Administration	\$1,618,000	\$2,618,000	\$2,678,000	\$2,678,000	\$1,678,000	\$11,270,000
Advertising & Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Incentives	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Installation	\$0	\$0	\$0	\$0	\$0	\$0
Program Review & Assessment	\$29,000	\$29,000	\$125,667	\$125,667	\$125,667	\$435,000
Total Societal Cost	\$1,700,000	\$2,700,000	\$3,033,333	\$3,033,333	\$2,033,333	\$12,500,000

Table 6.2 Cost-Effectiveness Analysis

	Societal	Participant	Utility	Ratepayer
Net Present Value Benefits	\$0	\$0	\$0	\$0
Net Present Value Costs	\$11,330,772	\$0	\$10,244,106	\$10,244,106
Benefit/Cost Ratio	N/A	N/A	N/A	N/A

The following sections describe the additional funding initiatives in IPL's Plan.

6.1. Legislative Assessment Program

6.1.1. Program Description

The Legislative Assessment Program has budget allocated for two legislatively authorized programs: the IEC at Iowa State University and the Center for Global and Regional Environmental Research (CGRER) at the University of Iowa.

IEC, which is funded in part by IPL customer contributions, works to create a stable energy future through research, education, and demonstration projects. IEC's mission is to advance Iowa's energy-efficiency and renewable energy use through transformative research, education, and demonstration. IEC accomplishes this by investing in projects that help homes, businesses, and industries use energy more efficiently. A large portion of IEC's budget goes towards research and demonstration projects that address the energy needs of all sectors, including residential, commercial, industrial, and agricultural.

The CGRER at the University of Iowa is also funded in part by IPL customers, as well as by government and private sources. CGRER conducts and promotes research on global climate change and consults with state entities, as needed, on climate change issues.

Key changes to this program in the Plan include:

- No changes are planned at this time.

6.1.2. Operations

IPL provides direct funding to IEC and CGRER for research activities and demonstration projects.

6.1.3. Value Proposition

Iowans receive the following main benefits from the programs:

- Expanded ***energy-efficiency knowledge*** and ***conservation resources*** through IPL's investment in demonstration projects that help homes, businesses, and industries run more efficiently.
- Advanced ***energy-efficiency and renewable use*** in the state through investment in research and development projects.

6.1.4. Customer Targets

There are no specific customer targets for this program. However, all customers may benefit from the research and initiatives conducted under IEC and CGRER programs.

6.1.5. Trade Ally Targets

Not applicable.

6.1.6. Incentive Structure and Process

Not applicable.

6.1.7. Eligible Measures and Incentives

Not applicable.

6.1.8. Market Barriers

Not applicable.

6.1.9. Marketing and Promotion

Not applicable.

6.1.10. Key Participation Information

Not applicable.

6.1.11. Outside Services

Not applicable.

6.1.12. Participation

Not applicable.

6.1.13. Energy and Demand Savings

There are no specific measures or savings estimates for this program.

6.1.14. Budget

IPL's remits 0.1 percent of its annual Iowa electric and natural gas total gross operating revenue to the State of Iowa. Of this amount, 85 percent is allocated to the IEC and 15 percent to the CGRER. Table 6.3 provides program budget assumptions.

Table 6.3 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$1,289,767	\$1,289,767	\$1,289,767	\$1,289,767	\$1,289,767	\$6,448,835
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Electric Total	\$1,289,767	\$1,289,767	\$1,289,767	\$1,289,767	\$1,289,767	\$6,448,835
Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$310,233	\$310,233	\$310,233	\$310,233	\$310,233	\$1,551,165
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Natural Gas Total	\$310,233	\$310,233	\$310,233	\$310,233	\$310,233	\$1,551,165
Total Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$8,000,000
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$8,000,000

Table 6.4 provides a forecast of staffing needs and costs for this program.

Table 6.4 Program Staffing

Personnel Classification	FTE	Annual Labor Cost	Purpose of Work
Regulatory Manager	25	\$31,250	Regulatory liaison, reporting, and oversight
Total	25	\$31,250	

6.1.15. Cost-Effectiveness Results

In the 2014 to 2018 program delivery period, IPL does not intend to measure energy savings resulting from the Legislative Assessment initiatives. Because the initiatives are primarily for education and outreach, with energy savings serving a secondary role, they are not required to achieve the cost-effectiveness threshold outlined in 199 IAC Chapter 35. Table 6.5 provides program cost-effectiveness results.

Table 6.5 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$5,226,577	\$0	\$5,226,577	\$5,813,484
Net Benefits	-\$5,226,577	\$0	-\$5,226,577	-\$5,813,484
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$1,257,170	\$0	\$1,257,170	\$1,398,341
Net Benefits	-\$1,257,170	\$0	-\$1,257,170	-\$1,398,341
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$6,483,747	\$0	\$6,483,747	\$7,211,825
Net Benefits	-\$6,483,747	\$0	-\$6,483,747	-\$7,211,825
B/C Ratio	N/A	N/A	N/A	N/A

6.2. Evaluation, Measurement, and Verification

6.2.1. Introduction

IPL understands the great value in having periodic Plan-level evaluations conducted by an independent, third-party evaluator. A formal EM&V process ensures effective program operation and reliably-measured program savings and cost-effectiveness.

All programs in the Plan for which IPL claims savings will undergo two types of EM&V analysis by an impartial, third-party evaluator, as described below.

Process Evaluation

The process evaluation is a qualitative review and assessment of a program's design, implementation approach, and operations. Process evaluations may be general and broad in their scope, and may be targeted at the Plan level or at individual programs, or may be designed to address specific, *ad hoc* issues and concerns, such as barriers and opportunities facing individual programs. Process evaluations typically involve interviews with key program stakeholders; surveys with customers, trade allies, or vendors; and/or reviews of program documentation, quality assurance procedures, data tracking systems, and delivery processes. Process evaluations are further enhanced by evaluator experience and best practices. Process evaluations for new programs will include an evaluability assessment, which entails a comprehensive review of program implementation plans, data-capture protocols, tracking databases, and documentation to determine whether all relevant data required for impact evaluations are being collected properly. Process evaluations may result in recommendations for programmatic changes based on the evaluation findings.

Impact Evaluation

The impact evaluation is a quantitative assessment that measures actual program savings. An impact evaluation focuses on estimating energy and demand savings, using well-established measurement techniques. The specific technique and level of rigor used in the evaluation can vary across programs, and are typically determined based on savings uncertainty, the magnitude of expected savings, the level of customization in program installations, and other criteria to ensure that the evaluation cost is justified by the program need. IPL plans and implements impact evaluations based on standard industry best practices and guidelines established in the International Performance Measurement and Verification Protocols (IPMVP), summarized in Table 6.6.

Table 6.6 Savings Measurement and Verification Options

Method (Option)	Savings Calculation	Typical Applications
A. Accounting	Stipulated savings	Programs with limited participation that do not have sufficient savings to justify a more rigorous approach.
B. On-Site Verification	Stipulated savings adjusted to reflect installation and operating conditions	Prescriptive programs and custom measure installation verification.
C. Energy Simulation and Usage Modeling	Energy use simulation, calibrated with hourly or monthly billing data and/or end-use metering	Multiple measures affecting numerous systems with no base-year data available (e.g., new buildings), or retrofit projects with significant interaction effects (e.g., insulation).
D. Engineering Calculation and/or Metering	Engineering calculations at the measure level that may use short-term or continuous measurements or metering	Custom projects and programs that did not have pre-existing prescriptive savings.
E. Statistical Analysis	Statistical regression techniques applied to consumption histories	Programs involving multiple, interdependent measures, such as residential weatherization and energy assessments.

Generally, prescriptive program evaluations include telephone surveys and/or on-site verification to calculate an adjusted implementation rate.³³ These efforts rely on a sampling plan that ensures achieving a required minimum level of confidence and precision in the results, as determined by the level of savings at risk for the program being evaluated. The assumptions used in calculating the program's *ex ante* savings, such as installation rates, are then compared with the verification results to calculate a savings realization rate, defined as the ratio between the as-found savings and the reported (tracking-based) savings.

IPL will conduct a more exhaustive evaluation of programs featuring the installation of customized measures, new construction, and other non-prescriptive savings estimates. These efforts can entail detailed engineering calculations to re-estimate critical modeling parameters, full building simulations, and billing analysis. IPL will work with its EM&V contractor to specify an evaluation approach on a program-by-program basis, using the IPMVP as a general guide. The EM&V options that might be applied to each program in the Plan are provided in Table 6.7.

Additionally, the DOE has been working with various stakeholders to develop a uniform set of impact verification protocols under its Uniform Methods Project. IPL expects to use these protocols as the basis for developing its impact evaluation protocols.

³³ Telephone surveys and/or on-site verification efforts typically include questions aimed at determining freeridership and spillover, which are incorporated into a program's overall realization rate.

Table 6.7 Proposed Methods for Impact Evaluation, by Program

Program	Measurement and Verification Option				
	Accounting Methods	On-Site Verification	Energy Simulation	Engineering Calculation	Statistical Analysis
Energy Efficiency Portfolio					
Residential					
Residential Prescriptive Rebates		x			x
Home Energy Assessments					x
Change-a-Light		x			x
Appliance Recycling		x			
New Home Construction			x		
Multifamily		x		x	
Low-Income					
Weatherization					x
EnergyWise Education		x		x	
Low-Income Multifamily and Institutional Efficiency Improvements		x		x	
Home Energy Savers					x
Nonresidential					
Nonresidential Prescriptive Rebates		x			
Business Assessments					x
Custom Rebates		x		x	
Commercial New Construction		x	x	x	
Agriculture Sector		x		x	
Outreach, Education, and Training Portfolio					
Non-Targeted Energy Awareness and Information		x		x	
School-Based Energy Education		x		x	
Tree Planting		x	x		
Hometown Rewards	Not Applicable				
Builder Training	Not Applicable				
Energy Efficiency Dealer Network	Not Applicable				
Bright Ideas		x		x	
Research, Development, and Demonstration	Not Applicable				
Demand Response Portfolio					
Residential DLC		x		x	
Nonresidential Interruptible				x	
Other Funding Initiatives					
Legislative Assessment	Not Applicable				
EM&V	Not Applicable				
Next Plan	Not Applicable				

Not applicable indicates that the program is not subject to EM&V and cost-effectiveness analysis.

6.2.2. Evaluation Planning and Timing

The third-party evaluator will conduct process evaluations of all new programs and as needed for existing programs. In order to obtain early feedback on program design features and evaluation data, IPL will initiate EM&V planning during the early phases of new programs and shortly after approval of the Plan. IPL intends to develop high-level evaluation objectives and work scopes for each program. This will ensure that the timing and anticipated activities and methods are clearly defined. IPL will garner input regarding its evaluation objectives from other IOUs and interested stakeholders, particularly the OCA.

IPL will then select an independent third-party evaluator through a competitive bidding process, working jointly with the other Iowa IOUs and the OCA, as noted above. IPL believes that input from the IOUs, the OCA, and other interested parties during the bidding process will ensure that an appropriate, independent third-party evaluator is chosen.

6.2.3. Collaboration

IPL recognizes the potential to gain economies-of-scale and other benefits by implementing a joint evaluation approach in cases where the three IOUs' programs have similar design features. A collaborative approach can foster consistency and clarity in the scope of the evaluation by standardizing the evaluation methodologies based on collaborative definitions by the interested parties, and also facilitates a comparison of the programs' performance. IPL will work closely with MEC and BHE, as

well as the OCA and other interested stakeholders, to determine the benefits of and explore opportunities to collaborate on EM&V efforts and other special research studies that may benefit the energy-efficiency plans of all three IOUs. IPL will balance its collaborative efforts with the need to ensure that evaluations are conducted in a timely fashion and in accordance with Board rules and industry best practices.

6.3. Next Plan

IPL will allocate budget towards the development of its 2019-2023 Energy Efficiency Plan. This includes budget allocations for activities associated with planning; program design; calculation of savings, costs, and cost-effectiveness; and related collaborative activities with Iowa IOUs and other stakeholders. There are no impacts or program descriptions associated with this program.

6.3.1. Statewide Technical Reference Manual

Stakeholders in Iowa have expressed interest in developing a statewide technical reference manual (TRM). The objective of a TRM is to provide a common set of methods and assumptions for deriving costs and savings associated with energy-efficiency measures. TRMs are becoming increasingly common across the country, as they provide a fairly simple means of establishing standardized savings values.

Historically in Iowa, the Assessment has served as a proxy for a TRM. IOUs use savings estimates from the Assessment as the basis for claimed savings estimates. However, each IOU adopts those savings estimates somewhat differently, using customized algorithms to adapt the saving calculations to their specific service territory.

IPL recognizes that TRMs present advantages as well as potential challenges. TRMs provide uniformity across different utilities within a given jurisdiction, so that those utilities base their reported savings on a common source. TRMs reduce risk for a utility in two key areas. First, when they are developed with wide stakeholder buy-in, using a

TRM results in fewer questions about savings assumptions. Second, TRMs provide greater certainty that the projected savings are being realized, thus allowing for better systems planning.

In some jurisdictions, TRMs reduce EM&V costs. The TRM provides savings estimates for certain measures that lend themselves to a deemed approach, rather than requiring rigorous EM&V. In other words, in a TRM-based environment, the EM&V for reported savings is primarily conducted with measure installation verification, rather than a measurement activity. It is important to note, however, that while TRMs largely address prescriptive measures, programs involving custom projects, new construction, or non-standard measures still require rigorous EM&V.

TRMs may also present challenges. Developing TRMs can be a lengthy and costly process, requiring broad stakeholder involvement and consensus. Once established, TRMs need to be updated on a regular basis, requiring ongoing EM&V activities by experienced evaluators who verify the savings estimates in the TRM and modify those estimates as necessary. Although the cost to update the TRM would be somewhat offset by the reduced need to develop subsequent statewide Assessments, the TRM development costs may outweigh its benefits.

IPL recognizes that the potential benefits and costs of developing a statewide TRM are unknown at this time. IPL is interested in working with the Iowa IOUs, the OCA, and other interested stakeholders to conduct further research and analysis to better understand and quantify the potential benefits and costs of developing a statewide TRM.

6.3.2. Budget

Table 6.8 outlines IPL's anticipated budget allocations for developing its 2019-2023 Energy Efficiency Plan.

Table 6.8 Budget

	2014	2015	2016	2017	2018	Total
Electric Budget						
Planning and Design	\$42,724	\$42,724	\$185,135	\$185,135	\$185,135	\$640,853
Administration	\$14,510	\$14,510	\$62,876	\$62,876	\$62,876	\$217,648
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$23,377	\$23,377	\$101,300	\$101,300	\$101,300	\$350,655
Electric Total	\$80,610	\$80,610	\$349,312	\$349,312	\$349,312	\$1,209,157
Natural Gas Budget						
Planning and Design	\$10,276	\$10,276	\$44,531	\$44,531	\$44,531	\$154,147
Administration	\$3,490	\$3,490	\$15,124	\$15,124	\$15,124	\$52,352
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$5,623	\$5,623	\$24,366	\$24,366	\$24,366	\$84,345
Natural Gas Total	\$19,390	\$19,390	\$84,021	\$84,021	\$84,021	\$290,843
Total Budget						
Planning and Design	\$53,000	\$53,000	\$229,667	\$229,667	\$229,667	\$795,000
Administration	\$18,000	\$18,000	\$78,000	\$78,000	\$78,000	\$270,000
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Customer Incentive	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Cost	\$0	\$0	\$0	\$0	\$0	\$0
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$29,000	\$29,000	\$125,667	\$125,667	\$125,667	\$435,000
Total	\$100,000	\$100,000	\$433,333	\$433,333	\$433,333	\$1,500,000

6.3.1. Cost-Effectiveness Results

Table 6.9 provides program cost-effectiveness results.

Table 6.9 Cost-Effectiveness Results

	Utility	Participant	Ratepayer	Societal
Electric Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$937,168	\$0	\$937,168	\$1,069,620
Net Benefits	-\$937,168	\$0	-\$937,168	-\$1,069,620
B/C Ratio	N/A	N/A	N/A	N/A
\$/kWh	N/A	N/A	N/A	N/A
Natural Gas Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$219,830	\$0	\$219,830	\$250,898
Net Benefits	-\$219,830	\$0	-\$219,830	-\$250,898
B/C Ratio	N/A	N/A	N/A	N/A
\$/therm	N/A	N/A	N/A	N/A
Total Program				
Benefits	\$0	\$0	\$0	\$0
Costs	\$1,156,998	\$0	\$1,156,998	\$1,320,518
Net Benefits	-\$1,156,998	\$0	-\$1,156,998	-\$1,320,518
B/C Ratio	N/A	N/A	N/A	N/A