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REPORT BY THE
OFFICE OF CONSUMER ADVOCATE

THE STATUS OF ENERGY EFFICENCY PROGRAMS IN IOWA

OFFICE OF CONSUMER ADVOCATE
REPORT ON STATUS AND EFFECTIVENESS OF
ENERGY EFFICIENCY PROGRAMS IN 2007

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I. IOWA ENERGY EFFICIENCY POLICY

Making Energy Efficiency a Priority Resource

Every public utility is required to furnish reasonably adequate service and facilities. For public utilities furnishing gas or electricity in Iowa, "reasonably adequate service and facilities" includes programs for customers to encourage the use of energy efficiency and renewable energy sources.[1] These requirements extend to Iowa's rate regulated investor owned utilities (IOUs)[2] and non-rate regulated consumer owned utilities (COUs)[3].

Energy Efficiency is a matter of supreme importance today as consumers increasingly struggle to meet fundamental needs for affordable housing and affordable energy. These challenges are heightened by rising and volatile energy costs, broad concerns about the need to address global climate change and associated costs,[4] and the continuing severe impacts of local natural disasters. On top of these extraordinary challenges, Iowa utilities contemplate adding new base load generation, at enormous cost,[5] to meet projected load growth.

It is critical, therefore, to give meaningful consideration to Iowa's cheapest and cleanest energy source – the kilowatt savings derived from cost effective energy efficiency. Utilities and policy makers are increasingly considering massive implementation of energy efficiency as a key least cost strategy to decrease greenhouse gas emissions, as well as an effective mechanism for acquiring least cost resources.

Consumers who bear the economic burden of energy policy and resulting energy resource costs, would benefit from a legislatively based resource policy that prioritizes all cost effective energy efficiency, followed by cost effective renewable energy, and then conventional fossil fuel energy. Energy efficiency does more for the economy than any energy resource,[6] and therefore deserves a priority resource position as a matter of sound public policy.

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[1] Iowa Code § 476.8 (2007).
[2] Black Hills Energy (f/k/a Aquila), Interstate Power and Light Company, and MidAmerican Energy Company.
[3] The COUs include dozens of municipal utilities (MUNIs) and rural electric and gas cooperatives (RECs).
[4] 2007 Iowa Residential Energy Survey, pp. 1, 27 (Dec. 2007)
[5] *Interstate Power and Light Co.*, Office of Consumer Advocate Application for Rehearing, IUB Docket No. GCU-07-1, Office of Consumer Advocate Application for Rehearing (Sept. 9, 2008 (Initial) Sept. 19, 2008 (Supp.)).
[6] Prindle, Bill [Dep. Dir. American Council for an Energy Efficient Economy], "Energy Efficiency: the First Fuel in the Race for Clean and Secure Energy," (Report to Iowa Legislative Interim Committee 2007).

Energy efficiency policy makers, advocates and stakeholders must take account of and address the obstacles to aggressive pursuit and implementation of cost effective energy efficiency as a priority resource.

2008 Session of the Iowa General Assembly

S.F. 2386 calls for an interim study committee to examine the existence and effectiveness of energy efficiency plans and programs implemented by gas and electric utilities, with an emphasis on results achieved by current plans and programs from the demand, or customer, perspective and to make recommendations for additional requirements applicable to energy efficiency plans and programs that would improve such results.

To assist the committee, the Office of Consumer Advocate (OCA)[7] presents this report on 2007 energy efficiency programs offered by Iowa electric and natural gas utilities. This report updates the January 2008 report presented by OCA concerning the effectiveness and cost effectiveness of 2006 programs. Additionally, this report will discuss opportunities for further improvement through the proposed 2009-2013 IOU energy efficiency plans currently pending before the Iowa Utilities Board (IUB or Board).

Current Energy Policy

As detailed in the January 2008 report, Iowa continues to build on a long history of energy efficiency policy.

Iowa policy continues to favor supply side (utility) resources over demand side (customer) resources. Rate-regulated utilities need not evaluate demand side resources on an equal footing with supply side resources in the context of least cost resource planning. Iowa does not enforce or require least cost planning standards for rate-regulated utilities. Instead, Iowa law gives special encouragement to supply side resources.[8]

On approximately five year intervals, Iowa IOUs jointly assess energy efficiency potential and individually propose new energy efficiency plans.

Opportunity Areas in Pending IOU Energy Efficiency Plans (EEPs)

[7] The Office of Consumer Advocate, a division of the Iowa Department of Justice, represents consumers and the public generally in matters within the jurisdiction of the Iowa Utilities Board. Iowa Code § 475A.2 (2007).
[8] Iowa Code § 476.53 (2007).

- 1.5 % savings standard under evaluation; while this is certainly more aggressive than past goals, it should not be considered a ceiling;
- IOU proposed savings objectives for 2009-2013 generally range between 1% and 1.5% of retail sales;
- Expanded low-income programming targeting households with incomes between 150% and 250% of federal poverty level;
- Consideration of renewable energy for inclusion in energy efficiency plans;
- Systematic evaluation and pursuit of cost effective combined heat and power (CHP) in appropriate commercial and industrial settings, within or beyond energy efficiency plans (e.g., through review of tariffs for interconnection and backup power rates);
- Confidence in energy efficiency programs hinges on well-defined and well-executed monitoring and evaluation processes;
- Expanded coordination opportunities in energy efficiency program delivery built on the energy efficiency infrastructure that has developed under the legislative energy efficiency mandate; and
- Process to assist consumers in understanding energy efficiency opportunities, making informed energy efficiency investment decisions, and navigating utility energy efficiency programs.

II. REPORTING VARIATIONS AND SITUATIONAL DIFFERENCES IMPACTING REVIEW

For this report, OCA relied principally on the IOUs' 2008 annual reports to the Board concerning 2007 energy efficiency programs and the COUs' 2008 biennial energy efficiency report to the Board concerning 2006 and 2007 program results and planned changes. Where questions about data arose, OCA sought guidance from the utilities' representatives. Additionally, OCA consulted utility websites for further information about utility administered energy efficiency programs.

In reviewing the efficacy of current energy efficiency programs, it remains important to understand the reporting variations that exist, primarily between the IOUs and COUs. Even among the IOUs, there are variations in reporting that should be noted in making comparisons.

A. IOU REPORTING FORMATS

- 2007 Impacts and Spending Analysis
  The reporting of impacts attributable to new 2007 program participation provides a uniform platform for evaluating *current* IOU energy efficiency efforts and results. To further enhance annual performance review, the

IOUs are required to operate under approved budgets and report annual spending in the following spending categories:

- Planning & Design
- Program Administration
- Advertising and Promotion
- Incentives
- Monitoring and Evaluation

The IOUs report annual expenditures in each of the foregoing categories relative to their IUB approved budgets. (Report Attachment)

- The 2007 new participation impacts and expenditures report does not capture the long-term energy savings provided over the life of various efficiency measures. It is important to also consider the cost effectiveness of programs, which compares the benefits to the costs of the program over the life of the measures, discounted to present value. To evaluate the cost of kWh provided by efficiency compared to supply side alternatives would require recognition of the energy and demand savings provided over the life of the efficiency measure, not just a single year.

- Finally, the IUB's compilation of IOU's reported energy savings from historical EEP participation provides a sense of the energy and demand savings provided through the existence of energy efficiency plans.

B. VARIATION IN IOU PROGRAM OFFERINGS AND PROGRAM DEFINITIONS

The IOUs report the spending and impacts associated with various energy efficiency measures through different program categories and under different program names. For example, IPL offers an agriculture audit program while MEC offers a small commercial audit program. Although both are small commercial audit programs, the target market and associated efficiency measures can and do vary between programs. In general, the residential program offerings are more homogenous among the IOUs while there are significant differences in business energy efficiency programs that make direct comparison difficult.

While there is greater similarity in IOU residential energy efficiency programs (all IOUs offer the same major categories of residential programs), the efficiency measures and associated impacts reported in such programs vary among the IOUs. For example, the impacts of recent strong compact fluorescent lighting (CFL) program participation are evident for both MEC and IPL in 2007, but IPL records

these results under its residential rebate program while MEC reflects CFL spending and impacts under its residential audit program.

C. COU REPORTING FORMATS AND VARIATIONS

- Participation and Energy Impacts Reflected in 2007 Data
  The COU reported data appears to isolate 2007 new participation impacts.

- Definition and Allocation of Administrative Costs
  OCA's January 2008 report noted apparent variation among the RECs concerning the manner in which administrative v. incentive costs are defined for the "ENERGY AUDIT & TECHNICAL SUPPORT PROGRAMS" and the "EDUCATIONAL AND RESEARCH PROGRAMS." This variation is not apparent in the 2007 data because the RECs did not distinguish administrative and incentive expenditures in the joint 2008 Iowa Association of Electric Cooperatives (IAEC) filing. The delineation of expenditure categories is particularly important when a utility devotes significant resources to energy efficiency education because education based programs are typically not credited with energy impacts. Information about the type of expenditure thus becomes important to understanding what is being provided through such programs.

  In keeping with the broad discretion over energy efficiency allowed to non-rate-regulated utilities under current law, the COUs are not required under the Board's rules to further define spending categories under the umbrella of administrative costs. The joint 2008 IAEC report reflects individual program expenditures and impacts for each REC but does not delineate expenditure categories. By contrast, the IOUs individually report program expenditures in the following categories: Planning & Design, Program Administration, Advertising and Promotion, Monitoring and Evaluation. The OCA finds this additional level of detail vitally important to fully understanding program activities and the balance among these essential spending categories.

- Variation in Plan Components and Definition of Energy Efficiency Measures and Practices
  The COUs include as energy efficiency programs certain measures that are not included in IOU plans. Most notably, the RECs include time-of-use (TOU) rates as a Demand Response Program. While the inclusion of TOU rates as a program is permissible under the Board's definition of energy efficiency measures, it has been difficult to quantify associated energy impacts. It is problematic to classify TOU rates as incentives without demonstrable savings

impacts. Midland REC did not attribute savings to its TOU program. The "incentives" for TOU rates are included in REC program expenditures, but are not part of the IOUs programs (and therefore are not reflected as energy efficiency investment) even though a number of IOUs also offer TOU rates.

Another potential difference in program content and reported impacts between the IOUs and COUs, is the RECs' inclusion of exterior lighting programs targeted at securing utility compliance with Iowa Code § 476.62. The IOUs typically do not offer incentives for efficiency measures and practices that are required under the law. The IOUs might depart from this standard if there is reason to believe that current efficiency standards and practices are not reflective of actual standards and/or practices. For example, the IOUs are evaluating the extent to which the new construction market is abiding by more stringent building energy codes to determine whether and to what extent utility energy efficiency incentives remain appropriate for efficient measures and practices that arguably are required under the law.

- Benefit-Cost Ratio Calculation
  The biennial joint IAEC report filed on behalf of dozens of RECs in 2008 did not report benefit-cost ratios and such ratios were not available to OCA for this study. These ratios were reported in OCA's January 2008 report covering 2006 programs.

  A caution about utilizing benefit-cost ratios as a performance comparison tool was set forth in OCA's January 2008 report. It can be useful to compare utility performance with other utilities when the utilities offer similar programs and calculate the ratios using similar methodologies. If there are significant situational or methodological differences, the benefit-cost ratio is useful to evaluate individual utility performance over time, i.e., whether the utility is performing well at efficiently promoting highly cost effective measures and programs.

  By definition, programs must be cost effective. Currently, there are four tests that analyze EE cost effectiveness – each from a different energy stakeholder perspective.

D. DIFFERENT STANDARDS AND SITUATIONAL DIFFERENCES APPLICABLE TO COUS

Legal Requirements
IOUs must offer programs that meet the needs of all customers while also being cost effective as a whole. COU energy efficiency plans must also be cost effective, but

COUs independently determine the amount and type of energy efficiency programs to be offered. Given these differences, a comparison of overall Benefit-Cost results between these utility groups may not be particularly informative.

Situational Differences Impacting Review

A large portion of the REC customer base is residential. The IAMU presents a more diverse customer mix, which can vary from utility to utility among its association. OCA's review and report has focused more on residential programs because these present common areas of energy efficiency opportunities for all utilities and likewise are more useful for a comparison assessment. However, OCA is mindful that Nonresidential electric energy efficiency programs have delivered a majority of the IOUs' electric efficiency results and certainly should not be ignored in looking at the status of energy efficiency and energy efficiency potential.

Conclusion

The variations and lack of definition described above present significant obstacles to an accurate assessment or fair "apples-to-apples" comparison of current energy efficiency efforts, particularly between the IOUs and COUs. Despite these obstacles, it is possible to glean relevant and insightful information about current energy efficiency efforts from the information reported by the utilities and presented in this report.

III. STATUS AND EFFECTIVENESS OF ENERGY EFFICIENCY PROGRAMS IN 2007

The OCA has evaluated the status and effectiveness of utility administered energy efficiency programs offered in Iowa in 2007. While recognizing that IOUs and COUs are subject to different statutory standards and requirements for energy efficiency programs, OCA's report provides information responsive to the following evaluation criteria:

- **Does the utility offer comprehensive energy efficiency programs that meet the needs of all customer classes, and do these programs target and achieve greater efficiency in the primary energy end-uses of the customer classes?**
  Iowa Code § 476.16(6)*a* (applicable only to IOUs)

- **Are the energy efficiency plans and programs cost effective?**
  Iowa Code §§ 476.8, 476.6(14) (applicable to IOUs and COUs)

- **What energy and demand savings are realized through energy efficiency programs as a percentage of retail sales and demand?** In other words, to what extent is energy efficiency contributing to the utilities' ability to meet consumer energy consumption and demand?

- **Are utility energy efficiency programs meeting energy savings and participation goals, taking into consideration the basis for establishing such goals and whether such goals are "stretch" goals for the particular utility?** It is important to take into account efforts by utilities to go above and beyond previously established goals as well as a utility's willingness to adopt goals that may be difficult to attain.

- **What percentage of energy efficiency program spending is devoted to programs and/or expenditure categories that produce desired energy impacts?** While expenditures in areas that do not produce discernable energy impacts are a necessary and important part of a comprehensive energy efficiency plan administration, it is important to evaluate the percentage of energy efficiency investment in programs and expenditure areas that produce desired energy impacts. The need to evaluate this balance is driven primarily by the fact that utilities are motivated to sell more energy and thus may be inclined to invest in and promote more aggressively those energy efficiency programs and measures that have a lesser impact on utility revenues.

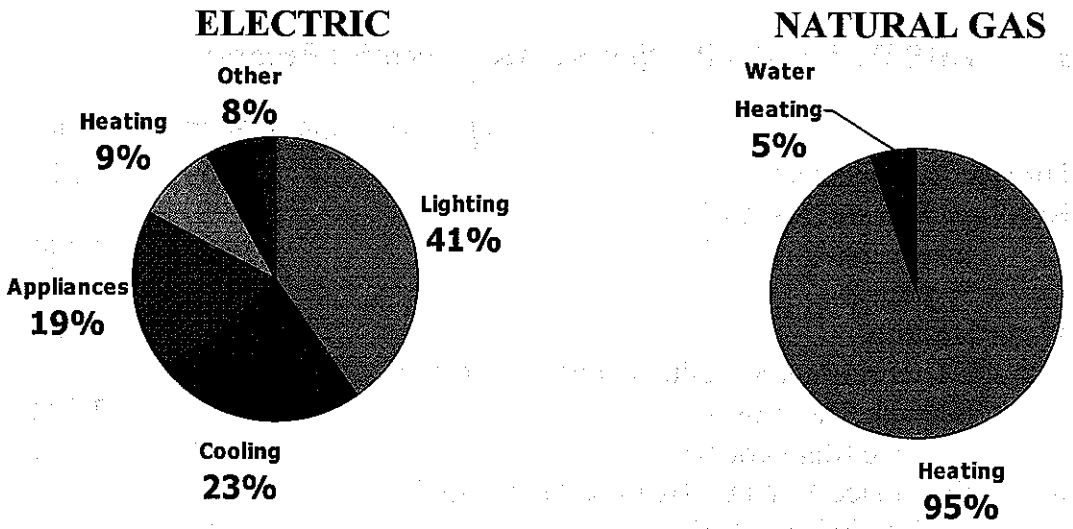
- **Have utilities been improving the cost effectiveness of programs? If so, what factors are contributing to such improvements? Conversely, what factors are contributing to programs being less cost effective?** The performance of an energy efficiency plan and individual programs relative to established performance goals and budgets (IOUs only) will reveal whether a utility is getting increased results from energy efficiency investment.

- **Have the utilities used the built-in flexibility of regulations governing energy efficiency programs and plans to respond to changing market conditions that impact energy efficiency potential?**

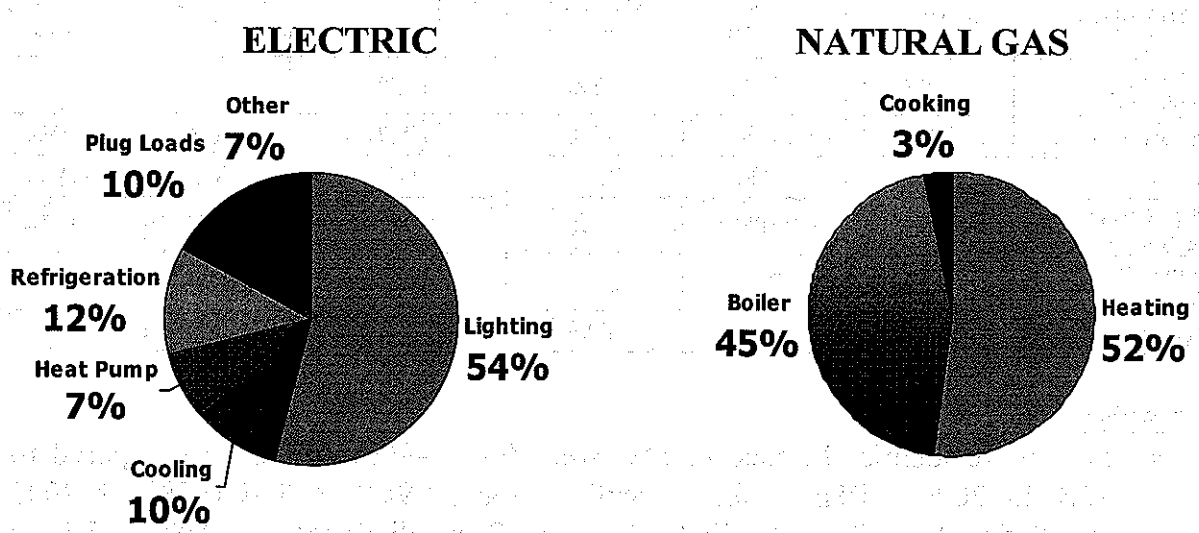
- **Have the utilities incorporated the results of monitoring and evaluation efforts to better align program impacts, performance goals and improve program and overall energy efficiency plan results?**

The IOUs' joint assessment of energy efficiency potential reveals the following energy savings opportunities:

Iowa Residential Electric and Gas Economic Potential by End-Use



Iowa Nonresidential Electric and Gas Economic Potential by End-Use



It is important to keep in mind these opportunity areas in reviewing the efficiency measures promoted by utility energy efficiency programs and considering whether the programs are comprehensively addressing the most significant efficiency opportunities in Iowa.

A. ENERGY EFFICIENCY PROGRAMS (2007)

1. RESIDENTIAL REBATE/INCENTIVE PROGRAMS

Programs evaluated under this category do not include residential load management programs.

a. BHE Residential Heating Rebates/Incentive Program:

	Units Rebated in 2007:	2006:
Furnace Replacement	2,386	2,540
Envelope Measures Retrofit		
Insulation	704	2,056
Windows	201	2,609
Water Heating	190	223
Setback Thermostats & Maintenance of Furnaces		
Setback Thermostat	2,434	2,702
Furnace Maintenance	2,374	1,743
Innovative Space & Water Heating Technologies		
High Efficiency Boiler	54	89
Integrated Space and Water Heat	28	24
Tankless Water Heater	46	41

BHE Measure	Societal B/C	$Exp. % of Budget	$Exp. Direct Incentives	Participation % of Goal	Energy % of Goal	Demand % of Goal
Furnace Replacement	2.08	137%	56%	112%	127%	128%
Envelope	2.64	210%	58%	176%	220%	219%
Water Heating	2.77	64%	25%	71%	60%	219%
Thermostat Furnace Maint	6.05	258%	71%	398%	665%	316%
Innovative Heating	2.14	126%	64%	126%	199%	98%
Overall	3.97		37%			

Notably:

- 51% of residential furnace rebates were for 94-96% AFUE as compared to 37% in 2006. BHE offers incentives for 92-94% AFUE (45% of 2007 installations), 94-96% AFUE (51% of 2007 installations) and 96% AFUE or higher (five percent of 2007 installations).
- BHE recorded 46 tankless water heater installations in 2007 versus 41 in 2006.
- BHE recorded 905 envelope measure installations in 2007 versus 4,665 in 2006.

b. IPL Residential Rebate Program[9]

IPL's Residential Prescriptive Rebate program provides a range of energy efficiency incentives that address several major end-uses, including: heating and cooling, lighting, replacement windows, washers, water heaters and clock programmable thermostats.

	Units Rebated in 2007	2006
ENERGY STAR® clothes washer	8,666	8,579
ENERGY STAR® compact fluorescent light bulbs	169,372	197,300
High Efficiency Air Source Heat Pump		
High Efficiency Cooling Equipment	5,047	4,029
High Efficiency Ground Source Heat Pump	238	248
High Efficiency Heating Equipment	4,293	4,205
ENERGY STAR® Clock Programmable Thermostat	5,101	3,848
High Efficiency Water Heating Equipment	858	625
Window Air Conditioners	1,069	1,114
Replacement Windows/Sashes/Doors	53,384	42,030
Refrigerators and Freezers	6,915	3,541
Boilers	133	142
Lighting Fixture/Ceiling Fan	711	354

IPL Rebate Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	2.38	106%	77%	387%	246%	173%

IPL Rebate Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	1.42	95%	84%	113%	82%

Notably:

- IPL's Residential Prescriptive Rebate Program delivered a significant portion of IPL's planned kWh and therm savings goals. The program achieved far greater kWh, kW and participation in 2006 than projected with results ranging from 173% to 387% of goal, much of which is due to increased promotion of efficient lighting

[9] Customer must utilize the IOU as the predominant source of heating fuel in order to qualify for rebates on measures that improve heating efficiency.

measures. IPL's Residential Prescriptive Rebate program fell short of natural gas therm savings goals by approximately 18%. The goal was considered ambitious when established and has proven especially challenging with few new natural gas equipment opportunities.

IPL utilized a third-party to evaluate its 2005 prescriptive rebate programs and, with the approval of its 2006 program modification filing, implemented many of the recommendations coming out of this evaluation including the addition of ENERGY STAR®-rated ceiling fans, doors, freezers, light fixtures, refrigerators, storm and patio doors to its rebate program.

- IPL developed comprehensive marketing piece and claim forms to support plans to increase customer awareness of all programs through cross marketing.

c. MEC Residential Rebate/Equipment Program

Like IPL, MEC residential equipment program provides a range of energy efficiency incentives that address several major end-uses. The utility must be the direct provider of the end-use fuel for eligible equipment to qualify for rebates or financing.

	2007 Units	2006 Units
Central air conditioners	5,042	4,347
Window air conditioners	246	417
Desuperheaters	299	316
Ground-source heat pumps	303	387
Air-source heat pumps	456	414
Air-source heat pumps, cooling only	152	159
Add-on heat pumps	56	63
Natural gas furnaces	9,227	9,010
Natural gas water heaters	1,896	1,691
Natural gas boilers	126	128

MEC Rebate Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	1.08	134%	83%	90%	99%	31%

MEC Rebate Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	1.27	190%	83%	125%	87%
Gas&Elec.	1.21	162%	83%		

Notably:

- MEC notes that participation levels for central air conditioning are continuing to adjust to the higher 13 SEER requirements introduced in 2006. Another factor contributing to lower participation is the general slowdown in new construction. Natural gas savings were below plan goals by 12 percent, a slight improvement over 2006 impacts.
- Rebates for programmable thermostats, insulation, and high efficiency lighting are reported under the MEC's residential audit program.
- The average SEER for air conditioning equipment rebated in 2007 was 14.4 compared to 14.2 in 2006. The average AFUE for natural gas furnaces in 2007 was 93.7, compared to 93.3 in 2006.

d. MUNI Residential Rebate/Incentive Programs

The IAMU has recommended against aggregating data for the municipal sector because it would diminish the exceptional efforts of some and polish the record of those communities that arguably did not invest sufficiently in the energy efficiency of their citizens. OCA agrees. IAMU has acknowledged the challenges of administering a full range of energy efficiency programs, particularly for its smaller members, and appears to recognize that, in light of current circumstances, energy efficiency should be a high priority for all utilities irrespective of size.

Consistent with OCA's January 2008 report and with the concurrence and assistance of the IAMU, this report continues to focus on the results reported by twenty communities, several of which are offering or planning to offer a wider range of energy efficiency programs.

Municipal Residential Rebates/Incentive Programs Reported as Offered in 2007 (Non-Load Management)

MUNI	Appliance	High Eff. A/C	Geothermal Heat Pump	Air Source Heat Pump	High Eff. Water Heater	High Eff. Furnace	Prog. Thermostat	High Eff. Interior Lighting	Low Interest Loan	Windows and Insulation
Algona	X	X	X	X	X			X		
Ames		X	X	X			X			
Atlantic			X	X	X					
Cedar Falls (G&E)	X	X	X	X	X	X		X	X	X
Denison					X					
Greenfield	X		X	X	X		X			
Harlan	X	X				X	X	X		
Independence	X	X		X						
Indianola	X	X						X		X
Maquoketa	X	X								
Montezuma (G&E)	X	X		X	X	X		X		
Muscatine	X	X	X		X			X		
Osage								X		
Pella										
Pocahontas				X	X					
Spencer	X	X	X	X	X			X		
Waverly	X							X		X
Webster City	X						X	X		X
West Point	X	X								X
Woodbine		X	X		X	X			X	

UTILITY NAME	2007 Overall Plan Societal B/C Ratio	2007 Res. Incentive Expenditures (Excluding Load Management)	2007 Per Customer Incentive Expenditure	2006 Per Customer Incentive Expenditure	2007 Residential Customers
Algona	0.88	$ -	$ -	$ 12.60	3008
Ames	2.26	$ 200,045	$ 9.25	$ -	21636
Atlantic	0.79	$ 16,550	$ 4.36	$ 4.32	3797
Cedar Falls (G&E)	N/A	$ 174,137	$ 11.30	$ 13.70	15415
Denison	3.36	$ 141,283	$ 53.90	$ 5.59	2621
Greenfield	0.49	$ 14,947	$ 14.89	$ 21.38	1004
Harlan	2.04	$ 12,523	$ 5.44	$ 2.48	2304
Independence	0.93	$ 28,824	$ 10.88	$ 4.12	2650
Indianola	0.88	$ 43,995	$ 8.47	$ 10.76	5196
Maquoketa	0.62	$ 8,210	$ 2.83	$ 3.36	2897
Montezuma (G&E)	1.24	$ 1,459	$ 2.05	$ 3.36	712
Muscatine	2.27	$ 3,042	$ 0.32	$ 22.24	9634
Osage	4.54	$ 14,619	$ 8.19	$ 2.85	1786
Pella	0.96	$ -	$ -	$ -	4048
Pocahontas	2.1	$ 106,879	$ 114.68	$ 28.54	932
Spencer	4.16	$ 43,128	$ 8.58	$ 10.33	5027
Waverly	1.66	$ 43,655	$ 11.15	$ 8.16	3916
Webster City	0.22	$ -	$ -	$ 2.25	3927
West Point	0.93	$ 3,475	$ 5.82	$ 1.07	597
Woodbine	0.96	$ 14,476	$ 21.87	$ 19.00	662

Proper equipment sizing is an energy efficiency program requirement for the following municipal utilities: Atlantic (CAC, heat pumps), Cedar Falls (CAC, furnace), Greenfield (heating and cooling equipment), Independence (CAC, heat pumps), Indianola (CAC, heat pumps), Muscatine (heat pumps), and Waverly (HVAC).

e. **REC Rebate/Incentive Programs**

2006 Societal Benefit-Cost[10]:

High Efficiency Interior Lighting	6.597
Dairy Pre-coolers	5.671
High Efficiency/Energy Star A/C	3.514
Air Quality Rebate Program	2.563
High Efficiency Zoned Electric Heat	2.405
Geothermal Heat Pump	2.229
High Efficiency Water Heater	2.208
Energy Star Appliances	1.003
High Efficiency Exterior Lighting	0.602
Air Source/Energy Star Heat Pump	0.468
Energy Efficiency Low Interest Loan	0.033

While the IOUs offer a variety of energy efficiency measures under the residential rebate/equipment program umbrella, the RECs tend to classify measure types as discreet programs.[11] The REC's definition and reporting format in 2007 enabled review of cost effectiveness on a more measure-specific program basis while IOU and MUNI utilities report the cost effectiveness of the rebate program as a whole.[12] The RECs did not report benefit-cost ratios in the joint IAEC 2008 filing.

A significant level of participation and investment continues to occur in the Geothermal Heat Pumps, High Efficiency Water Heater and Air Source/Heat Pump Rebate programs. (See Table below). Most Iowa RECs offer these programs.[13] While the energy savings from these heat pump measures are derived by comparison to electric consumption using standard electric furnaces, the alternative to ground source and geothermal heat pumps is often propane or natural gas furnaces. An electric-only utility seeking to maintain or expand its load by preventing the loss of a heating customer to a competing fuel is more likely to aggressively promote efficiency measures that will serve to maintain or grow load. Thus, the nearly universal availability of these programs among the RECs and impressive participation results for geothermal, ground source heat pumps and high efficiency electric water

[10] OCA Appendix B p. 11 (Legislative Interim Committee, Nov. 13, 2007).
[11] Hence, OCA Appendix B (Legislative Interim Committee, Nov. 13, 2007) p. 11 ranking of REC Energy Efficiency Measures is more accurately a ranking of the REC Energy Efficiency Programs.
[12] *See e.g.,* OCA Appendix B (Legislative Interim Committee, Nov. 13, 2007) p. 1 (IOU Benefit-Cost Results) and p. 11 (REC Benefit-Cost Results).
[13] OCA January 2008 Report, Attachment, p. 29, Grid Table and Key for IAEC 2006 IUB filing.

heaters is rational.[14] This should not detract from the value of these efficient appliances or the significant energy benefits (perhaps understated to the extent it assumes measure competes with standard efficiency electric furnace) of the RECs' very good results in this area. However, it is important to understand the type of energy efficiency programs that will tend to be widely implemented and aggressively promoted when it's purely a matter of utility discretion.

By contrast, there are gaps in availability of and/or participation levels in the most cost effective energy efficiency programs in 2007 (see Table below). The level of participation in such programs varies widely from utility to utility, and while some RECs are achieving relatively large participation numbers in a wide variety of energy efficient rebate programs, opportunities for growth and expansion of programs remain.

Notably, the following RECs reported significantly expanded and/or revised programs in 2007 and 2008: Access Energy [(added Energy Star appliances (and disposal of old), high efficiency air conditioning, low income and CFL program)]; Butler County (added CAC, high efficiency window AC, water flow control measures, interior/exterior efficient lighting, custom rebates, and low income); Farmers-Kalona (added new CFL program); Franklin (added CFL recycling and water flow control measures); Glidden (added seventeen new programs, including CAC, AC, CFL, Energy Star appliances (and disposal), heat pumps); Humboldt County (added CFL/disposal, exterior lighting, premium/adjustable speed motor, and low income); Maquoketa (added energy efficient weatherization/insulation display, renewable information, Start Smart workshop, and low income program); Osceola [(added new CFL, high efficiency air conditioning, Energy Star appliances (and disposal of old)].

[14] Many load management programs exhibit similar characteristics. Energy efficiency incentives for load control and interruptible customers can help attract and retain (primarily commercial) customers to the utilities' service territory. The incentives are justified because the utility avoids the cost of planning for that customer, yet the customer's "interruptible" status does not reduce the customer's load and, therefore, is an attractive program for a utility interested in maintaining load. The differences in characteristics of interruptible programs as energy efficiency are also addressed in OCA's November 13, 2007 Response to Interim Legislative Committee.

2007 Report of Residential Rebate Programs Participation—Joint IAEC Filing:

Coop	Efficient Appliances	High Eff. A/C	Geothermal Heat Pump	Air Source Heat Pump	High Eff. Water Heater	High Eff. Zoned Elec. Heat	High Eff. Interior Lighting	Energy Audits	Low Interest Loan
Soc. B/C[15]	**1.003**	**3.514**	**2.229**	**0.468**	**2.208**	**2.405**	**6.597**	**N/A**	**0.033**
Access Energy			12	9	78		3972	87	5
Allamakee		19	17	8			9	0	
Boone					2				
Butler		18	2	17	153	30		13	5
Calhoun		1	6	6	39	6		2	
Chariton		24	9	7	74				
Clarke	67	25	33	11	222			4	
Consumers	84	34	27	4	138		453	0	
East-Central	160	23	36	76	241		72	0	
Eastern Iowa	517	166	80	12	220		0	145	2
Farmers (G)	71	13	22	7	84				
Farmers (K)		4	6		6			2	
Franklin		4	4	14	54			15	38
Glidden			10	11	30	6		7	1
Grundy (IA)	62	1	3	0	28			8	
Grundy (MO)									
Harrison			2	43	22			8	7
Hawkeye	307	9	8	5	118	26		51	
Heartland	118	21	5	5	77			56	0
Humboldt		4	3	6	53				2
Iowa Lakes			22	112	309		35	183	2
Linn	556	613	163	40	309		5090	147	
Lyon			7	13	57			75	
Maquoketa	646	115	106	9	413		2617	75	4
Midland	3	47	83	27	193		233	150	
Nishnabotna			7	35	28			12	15
North West		0	36	219	272		1147	0	11
Osceola			0	18	24				
Pella			20	4	86			15	
Prairie Energy		2	13	1	84	30	3	86	20
Sac County			0	1	27	3	10	12	0
Southern Iowa			8	7	68			35	
Southwest IA	84	55	30	32	191		63		
T.I.P.	149	32	22	6	119			1	
Western Iowa		18	8	26	40			20	
Woodbury		8	7	25	17			12	

[15] Included are the 2006 B/C ratios, not 2007, since 2007 is not available.

2. RESIDENTIAL AUDIT PROGRAMS

a. BHE Residential Audit

	2007 Units	2006 Units
Audit Components:		
Water heater blanket	132	482
Pipe insulation	340	1,362
Low-flow showerhead	447	1,826
Bathroom aerator	294	1,593
Kitchen aerator	450	1,619
Infiltration kits	16	96
Total Audits	941	2,663

Noteworthy:

- Audit is prerequisite for participation in Envelope Measures Retrofit program.
- Audit-only participants cited rebate level and "didn't know how to go about it" as reasons for not participating in the Envelope Measures Retrofit program.

BHE Program	Societal B/C	SExp. % Budget	SExp. Direct Incentives[16]	Participation % of Goal	Energy % of Goal	Demand % Goal
Residential Audit	1.05	137%	58%	110%	162%	160%

b. IPL Residential Audit

	2007 Units	2006 Units
CFLs	23,507	17,668
Faucet aerator	5,409	4,974
Home audit	4,548	3,275
Low flow showerhead	2,845	2,505
Pipe insulation	2,284	2,006
Programmable thermostats	852	768
Water heater wrap	302	335
Insulation	1,862	2,121

[16] 2006 Estimate

IPL Res Audit Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	4.24	143%	92%	127%	186%	160%

IPL Res Audit Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	8.69	79%	79%	127%	216%

IPL Residential Home Audits Trend

IPL	# Participants		kW		kWh	
Year	Goal	Actual	kW Goal	kW Actual	kWh Goal	kWh Actual
1999	940	704	2,133	56	1,184,580	490,530
2000	940	783	2,133	79	1,184,580	652,775
2001	940	1,614	2,133	171	1,184,580	1,051,792
2002	940	1,751	2,133	180	1,184,580	1,145,172
2003	940	1,997	2,133	334	1,184,580	1,154,824
2004	1,600	1,292	415	668	1,273,600	2,043,575
2005	1,600	1,435	415	242	1,273,600	1,123,283
2006	1,600	1,475	490	798	1,523,600	2,542,517
2007	1,600	2,038	490	782	1,523,600	2,827,702

Rebate incentives for insulation measures were increased in 2005 and 2006, which has driven increasing insulation participation. Program savings goals were increased in the 2006 modification while participation goals have held steady. The result is that savings goals are better aligned with historical performance while maintaining "stretch" participation goals.

IPL conducted 67 percent more audits in 2007. Focus going forward is getting customer follow through on audit recommendations.

c. MEC Residential Audit

	Units 2007	Units 2006
On-site audits	6,842[17]	9,110
Insulation	4,742	6,236
CFL lamps	36,105	46,762
CFL Change a Light Program[18]	164,000	189,000
Halogen bulbs	1	73
Programmable thermostat	485	713
Low-E windows	1,679	1,241
Water heater blankets	441	852
Pipe wrap	4,516	6,202
Aerators	11,526	15,849
Low-flow shower heads	5,975	8,239
Waterbed mattress pads	9	56

MEC Res Audit Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW% Goal
Electric	2.64	174%	73%	10,847%	442%	258%

MEC Res Audit Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	1.46	150%	73%	125%	143%
Gas&Elec.	1.82	158%	73%		

Notably:

MidAmerican's participation and impact levels have been significantly impacted by the addition of CFL promotions through the *Change a Light Change the World* program.

MidAmerican provided insulation rebates to 3,559 customers or about 52 percent of the on-site audits. With customer interest leveling off from extremely high levels in 2005-2006 heating season, MidAmerican increased promotion of audit program in 2007 to meet participation goals.

[17] MEC reports 11,200 customer on-line audits in 2007.

[18] Change a Light Change the World is administered separately from the Audit program, but results are reported in Audit program. IPL reports Change a Light participation through its residential Equipment Rebate program.

d. REC Residential Audit and Education Programs

Most RECs offer some type of residential audit, including audits conducted via telephone in response to customer inquiries, electronic audit programs delivered via Internet website, and/or on-site premises audits. The components, volume and availability of on-site residential audits during which efficiency measures are installed is not reported and remains an area in need of more detail and clarity. While it is a straightforward matter to determine whether or not a utility offers rebate programs for lighting, appliances, and efficient air conditioning, the scope and content of an audit program can vary considerably from utility-to-utility.

The RECs do not attribute savings to their residential audit program. Therefore, audit investments by RECs have been evaluated together with the REC educational programs and expenditures, which similarly do not have reported energy impacts. The lack of savings attributable to education efforts is not uncommon as it is difficult to quantify the energy savings that take place as a result of education efforts. This, of course, does not diminish the value or importance of effective energy efficiency education.

2007 IAEC Audit and Educational Programs[19]

Coop	2007 Expenditures on Audits and Education Programs	% of 2007 Audit and Education Expenditures v. Total Plan Expenditures	2007 Expenditures on Audits and Education Per Customer
Access Energy	$130,205	38.87%	$14.79
Allamakee	$47,929	15.14%	$6.97
Boone	$184	31.19%	$1.61
Butler	$60,612	23.81%	$11.98
Calhoun	$14,002	24.49%	$8.38
Chariton	$26,400	27.15%	$4.40
Clarke	$52,489	23.95%	$10.07
Consumers	$134,559	52.50%	$28.39
East-Central	$34,305	11.87%	$4.09
Eastern Iowa	$111,524	14.71%	$4.80
Farmers (G)	$22,067	13.44%	$4.55
Farmers (K)	$3,492	21.86%	$5.98
Franklin	$51,591	30.50%	$35.29
Glidden	$40,901	35.30%	$31.58
Grundy (IA)	$41,678	47.03%	$17.98
Grundy (MO)	$538	100.00%	$1.97
Guthrie	$34,722	11.58%	$7.49
Harrison	$21,561	12.54%	$9.08
Hawkeye	$34,293	16.25%	$6.33
Heartland	$72,107	37.82%	$13.95
Humboldt	$24,039	35.53%	$17.02
Iowa Lakes	$167,804	27.97%	$17.76
Linn	$120,945	13.06%	$5.24
Lyon	$9,784	9.19%	$4.92
Maquoketa	$179,070	12.96%	$14.64
Midland	$141,638	17.12%	$19.48
Nishnabotna	$115,917	18.98%	$44.58
North West	$157,083	18.23%	$22.45
Osceola	$4,034	6.59%	$4.40
Pella	$24,690	18.98%	$4.47
Prairie Energy	$123,428	40.36%	$28.02
Sac County	$21,581	48.83%	$28.93
Southern Iowa	$32,559	33.84%	$8.33
Southwest Iowa	$41,827	11.16%	$7.13
T.I.P.	$77,840	31.85%	$12.55
Western Iowa	$14,602	12.17%	$4.17
Woodbury	$57,157	55.74%	$18.62

[19] Data from Joint IAEC filing (July 1, 2008).

e. MUNICIPAL UTILITIES Residential Audit

Of the municipal utilities subset evaluated, residential audits are indicated as being offered by the Ames, Cedar Falls, Muscatine, Osage, Spencer, and Waverly. For this group, the following participation and energy impacts related to this program were reported in IUB Docket No. NOI-07-2.

Muscatine Power and Water

		Units	2007 kW	2007 kWh
Muscatine	Residential Audits	118	3.54	24,720

In Home Audit
During the audit, Muscatine's energy services advisor will address the customer's insulation levels, windows, doors and electrical usage and give the customer specific advice on how to save energy dollars in the home. As part of the energy audit, customers receive a free compact fluorescent bulb, a low flow showerhead, faucet aerators and a water heater blanket (if the customer has an electric water heater). These items alone can save a customer $60 per year.

The residential energy audit includes a blower door test, at no charge, to help determine air exchanges in their home. In the spring, Muscatine offers a central air conditioner tune-up inspection that is performed by a technician of choice and Muscatine will pay a small portion of the cost.

Audit by Mail
Customers also have the option of completing an at-home energy audit form (available on website) and returning the audit to Muscatine Power. Muscatine will then issue a letter providing the customer with energy efficiency recommendations based on the completed audit form, plus a free compact fluorescent bulb.

Cedar Falls Utilities

	Measure Description	Units	2007 kWh
Cedar Falls	Audits	77	19,250
Program 9	Blower Doors	63	1,575
Program 10	Thermal Camera	44	--

Customers can select a comprehensive audit package for $60, including Draft Detector Service (blower door analysis) and thermal camera imaging to identify

where heat is escaping throughout the home. These services are also available on an a la carte basis. Cedar Falls offers generous incentives for thermal envelope improvements. Additionally, Cedar Falls provides incentives for annual furnace inspections.

Independence Light and Power offers a home energy audit which includes an air infiltration test. ILP also offers a $25 central air inspection and tune-up incentive, which can be claimed on a biennial basis.

Waverly Light and Power

WLP offers free residential and business audits during which low-cost and no-cost energy-savings techniques will be explained. Additionally, customers are informed of incentive programs to assist customers in implementing energy efficient equipment.

3. RESIDENTIAL NEW CONSTRUCTION PROGRAMS

Residential New Construction programs promote energy efficiency in new home construction and educate homebuilders and new home buyers about the advantages of building energy-efficient homes. Prior to the program, builders often did not include key energy efficiency measures into new homes, such as duct sealing at each joint, foundation insulation, energy efficient mechanical heating, cooling and water heating equipment, energy efficient windows and higher levels of ceiling and sidewall insulation. Improvements made during construction deliver energy savings for the life of the home. Efficiency measures not included during construction cause lost efficiency opportunities, and retrofit improvements are typically more costly.

IOU Cross-Cutting Issues

The standards to qualify for ENERGY STAR® designation significantly increased in 2007. Out of concern that builders would not participate in the programs with the more stringent requirements, the IOUs in consultation with the IUB staff and OCA, developed a less burdensome Iowa-specific residential new construction building option package (BOP). However, the majority of new construction homes enrolled in IOU programs in 2007 were qualified under the Energy Star ® designation.

Effective January 1, 2007, all IOUs are offering the ENERGY STAR®-certified program and the Iowa-specific residential new construction BOP. These changes bring uniformity in program requirements for the IOUs and, in that respect, should facilitate builders' compliance with and

understanding of these programs. On balance, these changes should raise the efficiency level required to qualify for new construction energy efficiency rebates while also allowing builders, if they so elect, to maintain their participation in the more stringent ENERGY STAR® program.

At OCA's request,[20] the IOUs agreed to evaluate new home construction practices to determine the extent to which these practices are compliant with the recently adopted IECC 2006 building energy code. If this analysis shows there is not widespread adoption and/or enforcement of this code in the IOUs' service territories, it may be appropriate to encourage compliance with such standards through utility energy efficiency programs and to allow the utilities to recognize associated energy savings.

a. BHE Residential New Construction

	2007 Units	2006 Units
ENERGY STAR® clothes dryer with moisture sensor	6	7
ENERGY STAR® clothes washer	15	9
High efficiency furnace 92-94% AFUE	37	142
High efficiency furnace 94-96% AFUE	14	30
Home Energy Rating (HERS)	179	62
High efficiency water heater 0.62 EF	45	75 68[21]
High efficiency water heater 0.84 EF	6	
Integrated space and water heat 0.84 EF	2	

BHE Program	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Energy % of Goal	Demand % of Goal
Res. New Construction	1.73	102%	54%	108%	108%	107%

BHE developed a set of prescriptive standards to ensure that program homes qualify for the ENERGY STAR label. The program also offers an alternative performance path to meet program requirements. In 2007, approximately 21% of program participants chose the performance path. The program recorded 230 participants in 2007 compared to 215 in 2006.

[20] OCA was uncomfortable assuming that new building energy codes would not be met.
[21] 0.64 EF, no longer a specification in current program.

b. IPL Residential New Construction

Program Components:
High efficiency cooling equipment
High efficiency ground source heat pump
High efficiency lighting
High efficiency heating equipment
Multiple ENERGY STAR appliances
ENERGY STAR programmable thermostats
High efficiency doors
High efficiency water heaters
High efficiency windows
Multiple insulation Types
Multiple water conservation measures

	2007 Units:	2006 Units
IPL New Construction	663 Electric	651 Electric
	306 Electric-Gas	323 Electric-Gas
	126 Gas	160 Gas

IPL Residential New Construction

IPL Res New Construction	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	4.79	109%	90%	121%	164%	144%

IPL Res New Construction	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	2.06	60%	82%	80%	89%

c. MEC Residential New Construction

Program Components:

Central air conditioners
Window air conditioners
Desuperheaters
Ground-source heat pumps
Comprehensive HERS
Duct sealing
Efficient water heaters (gas and electric)
Air-source heat pumps
Insulation—multiple types
Infiltration
Programmable thermostat
Low-E windows
Natural gas furnaces

MidAmerican 2007 Units	
Builder Option Package performance path:	1,282
Energy Star ® performance path:	2,508
Total MidAmerican 2007 Units	3,790

MEC Residential New Construction

MEC Res New Construction	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	2.20	177%	87%	249%	198%	123%

MEC Res New Construction	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	1.86	145%	87%	122%	119%
Gas&Elec.	1.99	155%	87%		

Notably:

For the seventh consecutive year, MEC's residential new construction program has earned EPA's ENERGY STAR-Labeled Homes Outstanding Achievement Award. Despite a 30 percent decrease in statewide new home construction, MEC's program participation was just 11 percent less than the 2006 participation level. Since 1997, over 21,000 new homes have qualified for MEC's program.

d. MUNICIPAL Residential New Construction

The municipalities of Waverly, Cedar Falls, and Indianola utilize the Good Cents program to promote specific energy conservation measures in the construction of a new home, or the improvement of an existing home. This program promotes the proper sizing and installation of efficient HVAC equipment in conjunction with home insulation requirements. When new HVAC equipment is installed and passes inspection (prior to covering with sheet rock) and verification, a home is certified for a 10 percent ten-year rate reduction.

Cedar Falls reported 197 Good Cents participants and $87,474 in incentives paid in 2007, but does not distinguish between new construction and retrofit. Waverly reported 25 Good Cents units compared to 47 in 2006. Indianola reported 66 total units, compared to 33 new home participants and incentives of $17,470 and 104 remodels with $20,935 in incentives paid in 2006.

Waverly's House of Green demonstrates that energy efficient and sustainable building practices are affordable and practical. The home showcases the latest and best practices to facilitate knowledge and understanding of energy efficiency, passive solar design and green building.

The City of Ames began offering a residential new construction program on July 1, 2008. Ames offers a $500 incentive for homes certified as EnergyStar® compliant. Participants can also take advantage of additional rebates for qualifying cooling equipment, lighting, and appliances.

e. REC Residential New Construction

The following REC websites report offering an All Star new construction energy efficiency program providing incentives of $250 per home (which can be combined with other program incentives): Consumers Energy, East-Central Iowa, Farmers (Greenfield), Maquoketa, Pella, Southwest Iowa. It allows incentives for homes meeting efficiency 10% > 1992 Model Energy Code. This Code was replaced in 2007, with the 2006 IECC. Linn County also offers the All Star new construction rebate, but requires a 4-Star HERS rating. Homes eligible for rebate must have electric heat, Energy Star qualified cooling, efficient water heating, and Energy Star electric appliances.

The joint IAEC filing reports new construction programs being offered by Guthrie County, Hawkeye, Midland Power and Western Iowa Power Cooperatives.

4. RESIDENTIAL LOW INCOME

Coordinated IOU Low Income Features

The IOU programs assist Low Income energy consumers through three different initiatives: (1) weatherization, (2) multi-family energy efficiency improvements, and (3) energy education.

Weatherization

During its review of current energy efficiency plans in 2003, the IUB ordered the IOUs to double Low Income program funding. The weatherization programs are administered primarily through the Iowa Department of Human Rights (IDHR) Community Action Program (CAP) agencies.[22] The CAP agencies have been ramping up the programs to meet the increased Low Income program investment goal. In 2007, the IOUs met Low Income funding goals. Even though Low Income programs are not required to be cost effective, the IOUs are finding that these programs pass societal benefit-cost screens.

Measures Funded Through Low Income Weatherization Program:

Building shell and heating system inspection and adjustment
Insulation
Infiltration reduction
Space and water heating replacement
Programmable thermostats
Refrigerator and freezer replacement
Energy-efficient lighting
Hot water temperature turn-down
Water heater wraps, pipe insulation,
Faucet aerators/flow control devices

Multi-Family

The IOUs have been working in cooperation with the Iowa Finance Authority (IFA) and IDHR to identify Low Income multi-family and institutional housing facilities that would benefit from receiving an energy audit and installation of energy saving measures. Multi-family Low Income housing has traditionally been a difficult market to reach for energy efficiency programs. This cooperative effort represents a very important and promising development. Audits were performed at several low income

[22] Federal funding for the Weatherization Assistance Program comes from the Department of Energy. In addition, Iowa allocates 15% of its Low-Income Home Energy Assistance Program funding (LIHEAP) to weatherization. Additional funding from the utilities accounts for about 30% of the total funding for weatherization assistance, making Iowa's program one of the most leveraged in the country. (IPL Energy Efficiency Program Report p. 15 (2006)).

multifamily buildings. Retrofit projects have been slow to develop, but the IOUs project completing some in 2008.

Energy Efficiency Education
The IOUs also cooperatively facilitate the Energy Wise Education Program for customers who qualify for Low Income energy assistance. This program trains CAP agencies to deliver energy efficient education seminars to Low Income customers. Low Income participants in the Energy Wise Education Program are provided a take-home energy savings kit and several energy efficient measures.

Each of these initiatives is designed to reduce the energy burden of the most vulnerable families in Iowa. These cooperative initiatives were begun shortly after the Board's approval of current energy efficiency plans in 2003, and in combination with the increased funding levels, are enhancing the quality of scope of energy efficient programming available to Low Income Iowans. This program served 4,000 households in 2006. The utilities met plans to serve 5,000 households in 2007.

a. BHE Low Income

In addition to the three common Low Income program components identified above, BHE provides incentives for energy efficient technologies (including high efficiency clothes washers) and building envelope measures through its partnership with the Habitat for Humanity program. These incentives include funding for Home Energy Ratings (HERS) inspections to ensure that homes meet requirements for the ENERGY STAR label. Annual expenditures for the Habitat program were $15,153 and served six homes in 2007.

In addition to the weatherization efforts delivered through CAP agencies, BHE assisted in the weatherization of 163 Low Income households in 23 communities through volunteer weatherization teams.

Low Income Weatherization 2007:	163
Multi-Family Efficiency Initiative:	6 properties (370 housing units)

b. IPL Low Income

IPL provided weatherization assistance to 960 homes in 2007 (836 electric and 555 natural gas), saving an estimated 867,835 kWh and 124,737 therms annually.

IPL Low Income	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	4.54	154%	51%	106%	235%	328%

IPL Low Income	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	1.50	97%	94%	114%	85%

c. MEC Low Income

Number of Households with Impacts

Measure	Total	Electric	Gas
Audits	609	478	491
Wall insulation	378	306	307
Ceiling insulation	496	400	406
Foundation insulation	220	163	191
Band joist insulation	226	167	224
Natural gas furnace	217	0	217
Water heater measure	396	44	352
Water heaters	124	6	118
Lighting measures	439	439	0
Refrigerator exchange	144	144	0
Freezer exchange	38	38	0

MEC Low Income

MEC Low Income	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	1.69	112%	78%	261%	752%	351%

MEC Res. NC	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	0.93	104%	78%	265%	146%
Gas&Elec.	1.09	106%	78%		

While MEC and other IOUs doubled the spending goals for the Low Income program, it appears that participation and energy impacts may be based on the lower proposed budget levels. Even so, the energy impacts and cost effectiveness ratio represent very good results for this program and this customer segment.

In cooperation with the IFA, MEC reports having completed 12 Low Income multifamily and five institutional housing/emergency shelter energy audits. A number of retrofit projects are scheduled to be completed in 2008.

d. MUNICIPAL Utilities Low Income Program

A subset of municipal utilities report Low Income programs in their response to IUB Docket No. NOI-07-2. The communities of Sioux Center, Carlisle, Breda, Denver, Lehigh, Orange City, Rolfe Gas, and Readlyn noted customer contribution funds which are provided to qualifying Low Income households to help pay bills and install weatherization measures. Impacts are generally not reflected, and it is possible that Low Income contribution funds are a more widespread practice than the data provided in the IUB reports would indicate.

Current Reported Low Income Energy Efficiency Programs:

Cedar Falls "Low Income" Home-Improvement Program
In an effort to assist families that have a limited income, Cedar Falls utilities has teamed up with the City of Cedar Falls to offer home improvements that increase a home's efficiency and reduce the money spent on utility bills.

Osage MU has worked with the North Iowa Area Community Action (local CAP agency) to identify customers qualifying for basic weatherization measures. This is an energy efficiency program targeted at OMU's low income residential customers. Weatherization materials are installed by OMU at no charge to customer up to $500 per customer.

The **City of Pocahontas** has an ongoing housing rehabilitation program for low and moderate income homeowners. The program is funded through a CDBG and a grant from the electric utility. The program provides forgivable loans of up to $24,999 for home improvements including new windows, doors, siding, insulation, HVAC systems, wiring, plumbing, etc. Since 1997 the City has received three CDBGs totaling $905,000. In 2007 the electric utility provided a $75,951 grant to the program. The total program, from its start in 1997 through completion of the current grant in 2008, will have improved 31 homes.

As a result, this multi-year program may affect the one-year benefit-cost ratios computed and energy efficiency expenditure data.

Low income programs for Alton, Stanton and Manning reported in OCA's prior report were not included in 2007 data.

Future Municipal Low Income Initiatives:

In August 2007, **Bedford Municipal Gas** will consider adoption of a program of customer incentives that includes customer rebates as incentives to purchase efficient gas furnaces, water heaters, programmable thermostats, and water heater blankets. The utility will also consider a proposal to make a contribution to the local CAP agency to promote low income weatherization.

On July 1, 2007, **Ames** began a new DSM effort called Smart Energy. First year programs making up Smart Energy are: a residential energy audit program, a high efficiency air conditioner rebate program, a low income weatherization program, and a commercial high efficiency lighting rebate program. Program Info is available at www.cityofames.org/smartenergy.

e. REC Low Income

Several RECs have begun offering the Developmental Assessment and Resolution Program (DARP), which is designed to help LIHEAP qualified members with energy payment challenges. Through the Community Action Partnership (CAP) agency, the program provides education "to help members establish good habits in meet their energy obligations." The program educates the family on ways they can conserve energy and increase their energy efficiency. This program is being offered by the following cooperatives: Access Energy, Butler County, Consumers Energy, Heartland, Humboldt, and Maquoketa.

5. RESIDENTIAL APPLIANCE RECYCLING

a. BHE—N/A

b. IPL

IPL Appl. Recycling	Societal B/C	SExp. % Budget	SExp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	16.82	115%	95%	134%	172%	488%

IPL's 2003 plan expanded the appliance recycling to include inefficient refrigerators and air conditioners. The program is designed to remove inefficient appliances from operation in IPL's service territory and provide safe disposal of these units. IPL plans to expand participation by targeting customers who have received a rebate on a new appliance. The program has proven very cost effective, with participation and savings exceeding goals.

c. MEC—N/A

d. MUNICIPAL

Waverly's Energy Star rebate program conditions rebates for new appliances on old appliances being taken off the system; Cedar Falls, Spencer and Independence condition receipt of high efficiency refrigerator rebates on old appliance being taken off system; Ames conditions refrigerator and freezer rebates on disposal of old unit; Harlan and Muscatine condition room air conditioner and refrigerator rebate on customer certification that old unit has been disposed of and is no longer in use.

e. REC

Refrigerator disposal programs are reported as new programs being offered by: Access Energy, Glidden, Heartland, and Osceola.

6. NONRESIDENTIAL EQUIPMENT PROGRAMS

a. BHE Commercial and Industrial Equipment Program

i. BHE Prescriptive Rebates

	2007 Units:	2006 Units:
High efficiency furnaces		
92% AFUE (rebate $225)	116	187
94% AFUE (rebate $300)	117	70
96% AFUE (rebate $375)	9	1
High efficiency water heating	3	6
Setback thermostats	275	319
Integrated space and water heat	3	1
High efficiency ovens and ranges	0	0

BHE Commercial Rebate	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Energy % of Goal	Demand % Goal
	6.18	92%	47%	63%	88%	118%

ii. BHE Custom Rebates

Scope: High efficiency gas boilers
Thermal envelope measures for commercial buildings
Process-related equipment for industrial or agricultural customers
Other equipment not addressed through prescriptive rebate

BHE Custom Rebate	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Energy % of Goal	Demand % Goal
	3.05	124%	52%	86%	313%	313%

b. IPL Nonresidential Equipment Program

i. IPL Prescriptive Rebate Program

	2007	2006
Boilers	75	71
CFL	4,800	4,960
Cooling	510	610
Geothermal	38	63
Heating	663	634
Insulation	416	314
Lighting	26,697	19,378
Lighting fixture/ceiling fan	273	237
Motors/variable frequency drive	42	9
Programmable thermostats	817	587
Refrigerator/freezer	137	239
Replacement windows/doors	3,221	4,014
Vending machine controller	124	
Washers	68	
Water heaters	42	31
Window A/C	154	126

		2007 Units	2006 Units
ii.	Performance Contracting	37	29

iii. Custom Rebates

Custom rebates are available for efficiency measures that do not qualify for prescriptive rebate or new construction rebate.

IPL Nonresidential Equipment

IPL NR Equip. Electric	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Rebate	3.81	151%	87%	133%	286%	204%
Perf Contract	5.53	39%	49%	77%	61%	37%
Cust. Rebate	2.11	137%	77%	127%	196%	161%

IPL NR Equip Gas	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Rebate	2.05	200%	88%	170%	175%
Perf Contract	1.47	58%	68%	5%	50%
Cust. Rebate	2.63	123%	68%	73%	242%

c. MEC Nonresidential Equipment Program

i. Prescriptive Rebates

	2007		2006	
Measure	**Commercial**	**Industrial**	**Commercial**	**Industrial**
Central A/C	335	4	311	1
Package terminal AC/HP	97	--	118	--
Chillers	4	--	5	1
Heat pumps	78	--	79	--
Natural gas furnaces	572	--	653	--
Natural gas boilers	39	--	65	--
Natural gas water heaters	31	--	21	--
Programmable thermostats	466	--	618	--
T-5/T-8 lighting	26,641	1,635	21,460	2,279
CFL lamps and fixtures	17845	9	11,345	1,053
LED exit lights	501	8	566	52
Occupancy sensors	403	3	89	29
LED traffic signals	1561	--	3,247	--
Metal halide lamps and fixtures	155	650	1,117	162
Efficient motors	9	292	10	370
Variable speed drives	88	221	130	194
Geothermal heat pumps	--	356	143	--
Window air conditioner	--	2	--	--
Efficient ice makers	--	3	--	--
Efficient freezers/refrigerators	--	26	--	--
T-5/T-8 high-bay lighting	--	3,982	8,887	--
Occupancy sensors-high bay	--	214	--	--
Desuperheaters	--	--	39	--

ii. MEC Nonresidential Custom Rebate Program

The largest areas of participation included commercial energy management systems, insulation, low-emissivity windows, heat recovery systems, and industrial premium efficiency motors.

MEC Nonresidential Rebates

MEC Equipment Rebate	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	4.33	213%	83%	156%	464%	505%

MEC Equipment Rebate	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	1.83	125%	83%	95%	121%
Gas&Elec.	4.17	200%	83%		

MEC Equipment Custom Rebate	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	2.01	150%	71%	71%	218%	95%

MEC Equipment Custom Rebate	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	1.50	545%	71%	127%	303%
Gas&Elec.	1.88	184%	71%		

d. MUNICIPAL Nonresidential Equipment Program

The subset of municipal utilities reviewed for this report indicates offering various nonresidential energy efficiency incentives, which are set forth in the following table:

Municipal Utility	2007 $ Incentives	Water Heat	GS/AS Heat Pump	CFL T-8	A/C	Eff. Appl	Eff. Motors VSD	Envelope Measures	Prog. T'stat	Custom	2006 $ Incentives
Algona	$ -			x							$ 3,664
Ames	$ 9,886			x						x	$ -
Atlantic	$ 6,200	x	x								$ 7,600
Cedar Falls (G&E)	$ 17,417										$ 36,388
Denison	$ 19,702	x									$ -
Greenfield	$ 150			x							$ 2,100
Harlan	$ 9,804			x	x				x		$ 956
Independence	$ 880									x	$ 9,228
Indianola	$ 81			x							$ -
Maquoketa	$ 1,065			x		x	x				$ 1,160
Montezuma (G&E)	$ 4,071	x	x	x	x		x				$ 350
Muscatine	$ 45,113		x	x			x			x	$ 22,770
Osage	$ 13,730			x							$ -
Pella	$ 40,123										under dvpm't
Pocahontas	$ 6,596	x	x								$ 1,842
Spencer	$ 38,441			x	x		x				$ 12,540
Waverly	$ -										$ 46,287
Webster City	$ -										$ 2,500
West Point	$ -				x	x					$ -
Woodbine	$ -	x	x		x						$ -

As the table indicates, some programs are more comprehensive than others.

Also notable:

- Woodbine Natural Gas and Electric Utilities reports good results with zero-interest financing. Both the natural gas and electric utilities in Woodbine offer successful zero-interest financing to residential and commercial customers for a variety of energy efficient technologies. The financing covers up to 90% of the cost of eligible equipment, with a 3 year loan period for central air conditioners and water heaters, and a 5 year loan period for geothermal heat pumps.

- Independence Light & Power provides rebates for commercial and industrial customers on a custom basis. Incentives are available for energy efficient equipment such as high efficiency lighting, high efficient HVAC equipment, premium efficient motors, variable frequency drives or any other process equipment that will save energy.
- Muscatine Power offers customized energy efficiency incentives for measures not covered by existing rebate programs. MP&W evaluates proposals based on projected energy savings, cost effectiveness, public benefit, and educational benefits.

e. REC Nonresidential Equipment Program

Most nonresidential equipment rebate results are contained within the data presented in Residential Equipment Rebate/Incentive Programs section above. In addition to efficiency measures that are common to residential programs, some RECs report offering commercial rebates incentives for premium motors, adjustable speed drive motors, and dairy pre-coolers. New 2007 program activity for these programs is depicted below:

	2007 Incentives Paid for Premium Motors Rebate Program	2007 Incentives for Adjustable Speed Drive Motors	2007 Incentives for Dairy Pre-coolers
East-Central			$600
Hawkeye			$660
Linn County	$531	$9,788	$531
Maquoketa Valley	$597	$7,874	$6,435
North West		$2,600	

Note: Amounts include total costs of the program. Data needed to separately derive incentive costs were not apparently provided.

The utilities reporting participation in 2006 report widely varying benefit-cost results. However, the Dairy Pre-cooler Program is consistently cost effective among those reporting and appears to present an area for greater energy efficiency opportunities.

7. IOU SMALL COMMERCIAL AUDIT

a. BHE Small Commercial Audit

The program provides an on-site audit for small Nonresidential customers to identify energy savings opportunities. BHE reported having 37 participants in 2007, which is 20 percent of goal. Impacts for this program are achieved primarily through participation in the rebate program addressed above.

b. IPL Agriculture Audit/Rebate Program

	Units
Automatic milker takeoff	475
Circulating fans	228
Heat reclaimer	1,904
High efficiency ventilation	2,507
Lighting	7,845
Livestock waterer	49
Milk precooler	2,065
Motors/variable frequency drive	28
Tractor heater timer	8
Variable speed vacuum pump	706
Water heaters	9

IPL Ag Audit	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	1.94	148%	73%	243%	249%	219%

IPL Ag Audit	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas—N/A	--	--	--	--	--

The higher than anticipated results may have resulted from IPL's 2007 plans to:

- Expand the program to include new technologies and more education;
- Provide farm energy audit services to assist agri-businesses outside the IPL service territory in applying for USDA grants. Non-IPL customers are not eligible for typical audit incentives, but IPL will conduct energy audits and provide an analysis report to non-IPL customers for a fee. The primary target market is agri-business customers interested in applying for USDA grants.

c. MEC Small Commercial Audit

MEC's Small Commercial Audit program provides comprehensive energy analysis services to small businesses, installs energy savings measures, and recommends appropriate energy saving projects along with financing and rebate options. The program delivered 644 small business audits and 134 multifamily audits in 2007. The program resulted in the adoption of energy efficient measures in the following primary categories: insulation, faucet

aerators, low flow showers/sprayers, CFLs, LED exit retrofit kits, thermostat controls, and efficient furnaces.

MEC Sm. Com. Audit	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	1.16	148%	66%	474%	164%	70%

MEC Sm. Com. Audit	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	1.32	119%	66%	161%	34%
Gas&Elec.	1.24	133%	66%		

d. MUNICIPAL Small Commercial Audit

Spencer Municipal Utility makes available premises audits to all SMU customers on a per request basis. Spencer reported two nonresidential participants in 2007. The energy impacts are likely included in the equipment incentive program.

Commercial Audits are reported as being available from Ames, Muscatine, and Waverly Light and Power (perhaps as coordinated service also available to Cedar Falls customers).

e. REC Small Commercial Audit

The RECs' Energy Audit Services Programs shows an increasing number of RECs performing and tracking energy results from agricultural and/or small commercial audits. The participation rates vary considerably among RECs. Positive developments are evident. The RECs are attempting to leverage the program with federal funding opportunities. Program descriptions express greater focus on evaluating and implementing energy efficient measures and processes.

8. IOU COMMERCIAL—INDUSTRIAL AUDIT AND PERFORMANCE BID

a. BHE

See Custom Rebate and Small Commercial Audit Programs above.

b. IPL

See Performance Contract and Custom Rebate Programs above.

c. MEC Commercial - Industrial Audit and Performance Bid

i. Nonresidential Energy Analysis Program

This program began as a pilot project in 2004 designed to explore the potential for achieving comprehensive energy efficiency improvements in large, existing commercial buildings, industrial facilities and manufacturing processes. These strategies use a whole-building approach building/process approach to save energy, and reduce peak demand.

Overall, interest and participation results have been encouraging

MEC Lg. Com. Audit	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	1.89	123%	74%	407%	123%	129%

MEC Lg. Com Audit	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	0.16	43%	74%	1683%	2.81%
Gas&Elec.	1.79	111%	74%		

ii. Efficiency Bid Program

Efficiency Bid is also a relatively new program, initiated as a pilot project in 2004. Efficiency Bid allows a customer to design their own energy efficiency projects and bid competitively for energy efficiency incentives, which MEC awards based on its evaluation of each bid. The target market for this program is large industrial customers with electric demands of 3 MW and above, a group historically difficult to reach with energy efficiency programs. This program is proposed to be revised somewhat in 2009 to streamline participation and expand the pool of eligible customers.

MEC Lg Com Audit	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	2.14	64%	61%	167%	84%	59%

MEC Lg Com Audit	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	N/A	N/A	N/A	N/A	N/A
Gas&Elec.	2.13	65%	61%		

d. MUNICIPAL Commercial-Industrial Audit and Performance Bid
Commercial Audits are reported as being available from Ames, Muscatine, Spencer, and Waverly Light and Power (perhaps as coordinated service also available to Cedar Falls customers).

9. NONRESIDENTIAL NEW CONSTRUCTION

a. BHE—N/A

b. IPL Nonresidential New Construction

IPL NR New Constr.	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	1.43	72.9%	89%	41%	43%	39%

IPL NR New Constr.	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	2.46	47.2%	65%	23%	69%

Performance Notes:
IPL's annual report filed in 2008 reports 58 active projects compared to 13 verified projects in 2007. Projects typically span a period greater than one year, and IPL is expecting a significant increase in projects and impacts as it has identified 240 project leads as of May 2008. IPL has had difficulty identifying projects early enough to qualify for the new construction program. To address this, IPL is working to better inform design firms of its new construction program.

Effective January 1, 2007, the program adopted the Iowa State Energy Code (ASHRAE 90.1 – 2004) for establishing baseline performance.

c. MEC Nonresidential New Construction

MEC NR New Constr	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	kWh % of Goal	kW % of Goal
Electric	1.52	127%	84%	82%	168%	172%

MEC NR New Constr.	Societal B/C	$Exp. % Budget	$Exp. Direct Incentives	Participation % of Goal	Therm % of Goal
Gas	2.07	189%	84%	30%	254%
Gas&Elec.	1.59	135%	84%		

Performance Notes:
At year-end 2007, there were 120 construction projects in the pipeline ranging from new project starts just beginning the energy design assistance stage of the program to physically completed buildings that were in the field verification stage.

MidAmerican successfully implemented new program criteria in response to the new, more stringent State of Iowa Energy Code without adverse impacts on program participation. New project starts were 98 percent of 2006 new project starts, MidAmerican's best year to date.

10. LOAD MANAGEMENT PROGRAMS

Both electric IOUs and COUs offer load management programs for residential and Nonresidential customers. The kW of interruptible demand enrolled in these programs in many instances represents a significant portion of the individual utility's peak demand. The availability of this program is beneficial to utilities, customers and participants in general because the utility can avoid planning for interruptible capacity. The advantages and drawbacks of including load management as "energy efficiency" are addressed in OCA's Legislative Interim Committee Meeting (November 13, 2007) Response to Questions.

Load management differs from traditional energy efficiency measures in that it does not conflict with a utilities' interest in generating revenues from the sale of electricity. Utilities do not need to plan to meet the needs of interruptible load in the way that they do firm load, and interruptible load does not produce the long-term and sustained energy and demand reductions associated with more pure energy efficiency measures. Hence, load management programs have existed and will likely continue to exist irrespective of state energy efficiency mandates.

IPL's load management programs were recently modified in order to achieve greater "energy efficiency" characteristics through increased utilization of interruptible capacity. While IPL has lost some participants, some of these customers were not

good candidates for an interruptible program because they cannot tolerate interruptions and/or the penalties for failing to reduce load when called on to do so. Examples would include schools that were interrupted during the ice storms in 2007.

The inclusion of load management in reporting data significantly impacts reported levels of energy efficiency investment for many utilities. This impact extends to reported benefit-cost results. To get a more accurate view of true energy efficiency investments, i.e., those that deliver long-term and sustained energy and demand reductions, it is useful to evaluate utility energy efficiency data with and without load management programs.

11. OTHER PROGRAMS

a. BHE

i. School Based Energy Education: BHE distributed 1,557 energy kits to sixth grade students. BHE utilized feedback on baseline energy consumption to compute program savings from measures included in kit.

ii. Trees Forever: BHE provided $1,118,786 in funding to Trees Forever and the IDNR Trees for Kids program.

b. IPL/MEC/BHE Building Operator Certification Program

Building Operator Certification (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 the individuals directly responsible for maintenance of energy-using building equipment and day-to-day building operations. The training program includes exams and outside assignments that participants must successfully complete to earn certification.

IPL, MEC and BHE provided start-up funding for the training series and are marketing the program to their customers. The participant cost of the program is $1,050, and IOU customers are eligible for up to $500 in tuition rebates upon program completion and certification. It is anticipated that the program will be self-sustaining in 2010, supported solely by customer tuition revenue.

B. ENERGY EFFICIENCY 2007 PLAN PERFORMANCE

1. BHE 2007 PLAN PERFORMANCE

While spending was higher than budget for the program year, BHE reported participation and impacts well above goals. However, spending, participation, and impacts were all below the levels achieved in 2006.

BHE reports that its EE natural gas programs delivered the following results in 2007:

EE MCF Savings v. MCF Retail Firm Sales:	0.9%
EE Spending v. Retail Natural Gas Revenues:	2.1%
Societal Benefit/Cost Ratio:	2.37

BHE	Budget/Goal	Actual	% Budget/Goal
Expenditures	$2,968,999	$3,592,458	121%
Energy Impacts	84,004	145,339	173%
Demand Impacts	981	1,745	178%
Participation	12,126	16,225	134%

2. IPL 2007 PLAN PERFORMANCE

Expanded and Aligned Goals in 2007

In 2005, IPL conducted an intensive evaluation of its energy efficiency programs to review, among other things, whether program results were tracking accurately with projected program participation and estimated savings. The evaluation was conducted by outside contractors selected via competitive RFP and included a survey of customers (both participating and non-participating) and trade allies concerning all aspects of IPL's programs and program implementation. The results of this evaluation served as the basis for a plan modification approved by the IUB in November 2005. The modification increased IPL's total electric energy savings goals by 18 percent and total natural gas energy savings goals by 9 percent. Electric budgets were increased by 16 percent and gas budgets by 21 percent.

IPL's electric energy savings in 2007 exceeded goals by 54 percent and natural gas energy savings exceeded goals by 13 percent, while its expenditures for such programs came in at one percent under budget. With the exception of Nonresidential New Construction and Nonresidential Performance Contracting, all IPL electric programs delivered impacts far above projections. IPL implemented a major Nonresidential New Construction program modification in 2006 that requires a longer

lead time for program benefits to be realized such that 2006 is not representative of future performance.

IPL 2007 Reported Plan Performance:
IPL reports that its EE and load management programs delivered the following results in 2007:

Energy Efficiency MW v. Electric Peak MW Demand[23]:	1.00%
Load Management MW v. Electric Peak MW Demand:	9.40%
EE MWh Savings v. Electric MWh Retail Sales:	0.80%
EE MCF Savings v. MCF Retail Firm Sales:	0.98%
Electric EE Spending v. Electric Retail Revenues:	4.12%
Gas EE Spending v. Retail Natural Gas Revenues:	2.73%

On a combined basis, IPL's energy efficiency program reported the following Benefit-Cost ratios (utilizing updated avoided costs):

IPL 2007 Societal B/C Ratios[24]:

Total Electric Energy Efficiency Program:	2.94
Energy Efficiency Programs Only[25]:	2.41
Residential Electric EEP Only:	3.04
Nonresidential Electric EEP Only:	2.38
Residential Gas EEPs:	2.23
Nonresidential Gas EEPs:	2.18

3. MEC 2007 PLAN PERFORMANCE

MEC exceeded all plan participation and energy savings goals for 2007, with overall plan kWh savings exceeding goals by about 134 percent and other savings goals by about 9 percent to 35 percent.[26] Overall plan spending exceeded plan goals by about 33 percent.[27]

[23] Peak MW demand imputed using 2006 and 2007 FERC Form-1 data.
[24] Figures include regulatory assessments and programs exempted from cost effectiveness standards.
[25] Excluding electric load management programs
[26] 2006 Annual Report at 3.
[27] *Id.* at 9.

MEC reports that its EE and load management programs delivered the following results in 2007:

Energy Efficiency MW v. Electric Peak MW Demand[28]:	0.89%
Load Management MW v. Electric Peak MW Demand:	6.10%
EE MWh Savings v. Electric MWh Retail Sales:	0.87%
EE MCF Savings v. MCF Retail Firm Sales:	0.53%
Elec. EE Spending v. Electric Retail Revenues:	2.70%
Gas EE Spending v. Retail Natural Gas Revenues:	2.20%

	Societal B/C Results:
MEC Total Energy Efficiency Program B/C[29]:	2.59
Electric EEP Only:	2.83
Gas EEP Only:	1.50

[28] Peak MW demand imputed using 2006 and 2007 FERC Form-1 data.
[29] Total EEP includes regulatory assessments and programs exempted from cost effectiveness standards.

4. MUNICIPAL SUBSET 2007 PLAN PERFORMANCE

UTILITY NAME	Total Customers	% of Elec. Retail Sales Explained by EE Savings	2007 Per Customer EE Savings (kWh)	2007 Per Customer Elec. EE Expenditure	Total Electric Societal B/C	Combined Gas/Elec Societal B/C
Harlan	2,861	.34%	73.50	$7.95	2.01	2.04
Waverly	5,014	.29%	82.64	$60.00	1.66	1.66
Algona	3,701	.27%	75.49	$8.84	.88	.88
Cedar Falls	17,740	.24%	59.97	$17.50	3.04	N/A
Woodbine	878	.21%	36.09	$19.72	.96	.96
Independence	3,023	.17%	32.12	$41.64	.93	.93
Osage	2,741	.17%	34.82	$11.42	2.69	4.54
Greenfield	1,271	.11%	38.51	$43.96	.49	.49
Atlantic	4,598	.08%	18.31	$7.12	.79	.79
Indianola	6,340	.08%	14.41	$10.31	.88	.88
Montezuma	890	.08%	27.76	$9.92	.85	1.24
Muscatine	11,198	.07%	58.15	$12.49	2.27	2.27
Pocahontas	1,158	.03%	5.89	$117.42	2.1	2.1
West Point	696	.03%	6.13	$7.64	.93	.93
Pella	4,709	.02%	10.92	$11.65	.96	.96
Spencer	6,047	.01%	179.67	$21.78	4.16	4.16
Ames	24,401	.01%	2.84	$15.74	2.26	2.26
Maquoketa	3,586	.01%	2.92	$6.09	.62	.62
Webster City	4,541	.01%	3.72	$18.68	.22	.22
Denison	3,202	.002%	.88	$58.06	3.36	3.36

The reported Benefit-Cost ratios include special programs and assessments that do not yield quantifiable energy savings. Load management programs can be a significant driver of higher range Benefit-Cost results. Hence, for COUs having discretion in program design and content, a high Benefit-Cost ratio is not necessarily indicative of overall plan performance or the degree of plan comprehensiveness, particularly if load management is a large component of overall plan spending. Notably, however, Spencer reports a high Benefit-Cost ratio and does not report any load management programs. Instead, Spencer's high Benefit-Cost ratio is driven by its higher participation levels in energy efficiency measures that typically demonstrate higher Benefit-Cost ratios (lighting and efficient air conditioning).

Conversely, Pocahontas directs a significant portion of its energy efficiency funding to Low Income weatherization initiatives (a positive feature) but does not report offering lighting incentives. IOUs are finding Low Income weatherization to be quite cost effective. So, it's possible that with further review of Pocahontas' weatherization program and the introduction of more cost effective measures, that Pocahontas would show a plan that is cost effective as a whole.

Municipalities having long-established and comprehensive programs (yet not dominated by load management) tend to exhibit Benefit-Cost ratios closer to, but slightly lower than, the IOUs. Likewise, kWh savings as a percentage of retail sales figures lag those of the IOUs. The IOUs of course have the advantage of economies of scale.

5. REC 2007 PLAN PERFORMANCE

RECs	2007 kWh Savings	2007 kWh Sales To Ultimate Customers[30]	2007 EE kWh/Total kWh Sales	2006 EE kWh/Total kWh Sales
Access Energy	495,428	234,387,854	0.21%	0.35%
Allamakee	402,823	122,855,926	0.33%	0.13%
Boone	734	4,945,677	0.01%	0.04%
Butler	1,371,165	120,570,551	1.14%	2.38%
Calhoun	211,953	28,431,144	0.75%	0.13%
Chariton	446,719	86,457,698	0.52%	0.44%
Clarke	693,203	83,087,140	0.83%	0.75%
Consumers	519,067	99,740,116	0.52%	0.49%
East-Central	2,142,450	185,058,959	1.16%	0.31%
Eastern Iowa	1,756,692	630,062,799	0.28%	0.10%
Farmers (G)	400,717	120,370,629	0.33%	1.22%
Farmers (K)	67,574	21,361,000	0.32%	0.42%
Franklin	312,598	61,064,802	0.51%	0.17%
Glidden	345,016	101,176,470	0.34%	0.05%
Grundy (IA)	152,001	94,249,211	0.16%	0.31%
Grundy (MO)	0	2,591,400	0.00%	N/A
Guthrie	639,498	86,252,464	0.74%	2.40%
Harrison	681,661	87,449,379	0.78%	0.24%
Hawkeye	456,005	128,754,022	0.35%	0.23%
Heartland	235,763	194,318,674	0.12%	1.39%
Humboldt	186,962	52,311,324	0.36%	0.27%
Iowa Lakes	2,403,120	497,113,963	0.48%	0.27%
Linn	3,605,441	379,952,016	0.95%	0.39%
Lyon	282,852	74,106,809	0.38%	0.22%
Maquoketa	2,530,215	256,170,225	0.99%	0.28%
Midland	1,529,576	353,376,898	0.43%	0.22%
Nishnabotna	680,366	157,120,794	0.43%	0.17%
North West	3,741,834	417,238,893	0.90%	0.14%
Osceola	271,032	58,306,707	0.46%	0.04%
Pella	367,385	50,982,429	0.72%	0.53%
Prairie Energy	1,159,200	234,358,648	0.49%	0.10%
Sac County	63,644	28,109,844	0.23%	0.57%
Southern Iowa	263,080	79,171,088	0.33%	2.35%
Southwest Iowa	942,574	93,011,779	1.01%	0.48%
T.I.P.	470,542	142,507,075	0.33%	0.22%
Western Iowa	656,543	122,014,148	0.54%	0.26%
Woodbury	715,494	63,987,125	1.12%	0.87%

The RECs did not report Benefit-Cost results in their 2008 biennial filing.

[30] http://www.state.ia.us/government/com/util/industry_topics/annual_reports/annual_report_info.html

6. INDIRECT EXPENDITURES COMPARED TO TOTAL PLAN SPENDING

Given the utilities' motivation to sell energy, it is important to evaluate the overall level of expenditures going to direct energy efficiency incentives that generate energy and demand savings. While there are some exceptions, COUs with significant load management/TOU expenditures (relative to overall plan expenditures) have tended to report indirect expenditures at levels below 20 percent of total plan expenditures – ordinarily an exceptionally good result.[31] However, when the presence of load management/TOU significantly impacts a utility's overall level of incentive expenditures relative to plan spending, this substantially diminishes the meaningfulness of measuring direct incentive expenditures for that particular utility. Load management is cost effective from the utility's standpoint and does not produce the long-term and sustained energy reductions (associated with more pure energy efficiency measures) that would cut against a utility's interest in selling energy.

The following tables tend to show that the economies of scale possessed by the IOUs, particularly combination gas and electric IOUs, substantially improve the level of overall plan expenditures going toward incentives. The ability of smaller utilities to opt into existing or third-party delivered programs (and thereby minimize administrative expenses) could facilitate improved levels of direct incentive expenditures. The RECs did not report 2007 expenditures in a manner that permits an analysis of direct versus indirect expenditures.

IOU NON-INCENTIVE EXPENDITURES RELATIVE TO TOTAL PLAN EXPENDITURES IN 2007

2007 BHE Non-Incentive Expenditures as % of Total Plan Exp.	2007 IPL Non-Incentive $Exp as % of Total Plan Exp.		2007 MEC Non-Incentive $Exp as % of Total Plan Exp.	
	Include Load Mgmt.	Exclude Load Mgmt.	Include Load Mgmt.	Exclude Load Mgmt.
	14%	20%	22%	22%
Gas Only	Gas Only		Gas Only	
63%[32]	18%		22%	

[31] OCA January 2008 Energy Efficiency Report, pp. 49-52

[32] BHE indicates that a significant portion of the 2007 non-incentive costs are program implementation costs rather than administrative.

MUNICIPAL SUBSET ADMINISTRATIVE EXPENDITURES AS A PERCENTAGE OF TOTAL PLAN EXPENDITURES IN 2007

IUB Section 5 11E Reports	2007 MUNI Subset Administrative Expenditures as % of Total Expenditures		
Utility	**Administrative**	**Total Plan**	**%**
Algona	$31,721	$32,714	96.96%
Ames	$103,065	$324,447	31.77%
Atlantic	$6,000	$32,800	18.29%
Cascade	$3,293	$3,953	83.29%
Cedar Falls	$311,065	$511,428	60.82%
Denison	$23,933	$185,918	12.87%
Greenfield	$2,185	$18,077	12.09%
Harlan	$3,828	$26,581	14.40%
Independence	$84,064	$120,034	70.03%
Indianola	$10,282	$56,467	18.21%
Manilla	$1,500	$3,506	42.78%
Maquoketa	$5,128	$14,965	34.27%
Montezuma	$1,547	$9,311	16.61%
Muscatine	$47,780	$96,731	49.39%
Osage	$31,994	$60,749	52.67%
Pella	$0	$40,123	0.00%
Pocahontas	$20,000	$134,475	14.87%
Spencer	$18,881	$106,690	17.70%
Waverly	$202,653	$291,119	69.61%
Webster City	$1,888	$73,788	2.56%
West Point	$563	$4,101	13.73%
Woodbine	$4,763	$19,445	24.49%

IV. FACTORS IMPACTING CURRENT AND FUTURE ENERGY EFFICIENCY PERFORMANCE

Natural Gas Efficiency Challenges and Opportunities

Residential programs are responsible for the majority of total gas program savings, while nonresidential programs produce the majority of total electric program savings.[33] Part of the reason for this difference is that large natural gas customers elect competitive natural gas commodity service and have been exempted from funding or participating in natural gas energy efficiency programs. The IOUs' assessment of potential presentation indicated that with the increase in natural gas prices, many or most natural gas energy efficiency measures/processes are quite cost effective. Thus, it appears there is significant potential for Nonresidential natural gas efficiency savings that is not being fully realized because the large volume transportation segment is excluded from current programs. While some of these customers see some benefit in having the ability to participate in the programs, others are strongly opposed to funding such programs.[34]

Importance of Nonresidential Electric Energy Efficiency Results

Large commercial energy efficiency projects have been contributed significantly to the IOUs' good electric EE performance relative to IUB goals.[35] These projects typically involve large electric savings and thus also tend to be very cost effective. Future IOU electric goals and performance will likely continue to be significantly influenced by similar nonresidential opportunities.

Market Transformation is Increasing the Baseline for Energy Efficiency and Reducing the Savings that can be Attributed to IOU EEPs

Iowa's adoption of the 2006 International Energy Conservation Code (IECC) and the adoption of higher federal appliance standards such as minimum air conditioner SEER ratings raise the bar on what qualifies as an energy efficient measure. This "market transformation" is generally a positive development because, to the extent enforced (e.g., building code enforcement), such changes generate permanent efficiency savings and substantially reduce, if not eliminate, lost opportunities. However, if these standards are not adopted on a widespread basis and enforced, there may be a false impression that such standards are moving the market to desired efficiency levels.

While utilities no longer provide incentives or take credit for savings from 13 SEER air conditioners because this is now the minimum efficiency that can be sold[36], the

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[33] Report Attachment, Summary Table 4.
[34] Comments of [Industrial Energy Group] in IUB Docket No. NOI-06-1.
[35] Report Attachment, Summary Table 3.
[36] Recent research, however, suggests that a number of Iowa COUs are including rebates for SEER 13 air conditioning units.

resulting energy savings from moving the market to 13 SEER as a minimum efficiency standard are nonetheless being realized and serve to challenge energy efficiency administrators to achieve higher levels of savings. Changing federal efficiency standards will have an impact on all utilities offering energy efficiency programs for the appliance subject to the particular efficiency standard. Likewise, more stringent energy building code requirements (if enforced) could impact the utilities' new construction energy efficiency programs. New construction programs are a major component of the IOU EE plans and have been a source of significant energy efficiency impacts. The widespread adoption and enforcement of building energy codes would be an effective means of obtaining energy efficiency savings in new construction projects. Through the current assessment of energy potential, IOUs are specifically studying the extent to which the lack of adoption and/or enforcement of new building codes will impact opportunities for IOU new construction programs to deliver energy savings.

Downturn in Residential New Construction and Economy

While the residential new construction market has been strong for a number of years, increasing mortgage rates and tighter credit standards are contributing to reduced new construction sales. MEC reported new home sales declines of as much as 20 percent in many areas of its service territory in 2006. Energy efficiency program results for 2007 show that program participation declined but much less so than the overall new home sales decline.

Public Policy Supporting Priority Position for Energy Efficiency

Governor Culver joined governors from six states in the Midwest and a Canadian premier, in signing an agreement, the Midwestern Greenhouse Gas Accord, which will create a cooperative program to reduce greenhouse gas emissions in the Midwest. Governors also endorsed objectives and goals by which to measure progress, and offer a menu of policy options to reach the common goals. The measurable energy efficiency goal is to meet at least 2 percent of regional annual retail sales of natural gas and electricity through energy efficiency improvements by 2015, and continue to achieve an additional 2 percent in efficiency improvements every year thereafter. http://www.wisgov.state.wi.us/docview.asp?docid=12495

Iowa Plan for Energy Independence, submitted by Iowa Office of Energy Independence (December 2007)
www.energy.iowa.gov

ACEEE Power Point presented to interim legislative committee on energy efficiency (Nov. 13, 2007).

V. BEST PRACTICES AND OPPORTUNITIES

IOU Strengths and Positive Developments:

- Cost effective plans and programs
- Comprehensive programs that address major retail energy end-uses
- Greater uniformity and coordination in residential new construction, Low Income, CFL promotion, audits (coordinating costs and energy impacts when one IOU provides gas and another IOU provides electric service at a particular premises), Building Operator Certification program
- Premises audits and processes to facilitate increasing levels of customer implementation of building infiltration (caulking/weather stripping) and insulation recommendations
- Low Income programs
- Education and promotion of energy efficiency programs
- Minimizing energy savings lost opportunities presented in new construction projects (MEC in particular)
- Community weatherization initiatives (BHE in particular)
- Agricultural audit (IPL in particular)
- Regular evaluation and reporting of program/plan performance using standardized performance criteria
- Honest and comprehensive performance assessments through third-party evaluator followed by implementation of recommendations and "stretch" goals (IPL in particular)
- Evaluating delivery/incentive structures to improve participation and impacts while managing spending (MEC in particular)
- Market transformation objectives through increasing levels of participation in higher efficiency equipment alternatives (BHE in particular)
- Innovative approaches to achieve greater impacts in hard-to reach markets (IPL Ag audits, MEC large commercial/industrial energy analysis program, IOU Multi-family Low Income initiative)

IOU Opportunity Areas:

- Cross-marketing opportunities
- Attention to what is (is not) working well for other IOUs (agricultural audits, commercial new construction)
- More training and education for commercial/industrial program marketers (trade account managers that have the most contact with customers)
- Implement proper sizing/installation requirements as prerequisite for HVAC rebates

- Increased customer education and awareness of programs, assistance in fairly evaluating energy efficiency investment opportunities, and navigating program options.
- Systematic evaluation and pursuit of cost effective CHP opportunities
- Increased and coordinated outreach/education of builders, designers and trade allies to inform and encourage program participation
- Energy efficiency investment more directly guided by comprehensive integrated least cost resource plans

MUNI Strengths and Positive Developments:

- Sense of community and community improvement goals, including consideration of Low Income customers and local economic development goals
- Comprehensive audits and efficiency incentives offered by leading programs
- Innovative and progressive energy efficiency programs and components (Waverly proper sizing of HVAC, community bucks v. cash incentive payments, inclining rate structures, Good Cents)
- MUNI's with generation resources understand that energy efficiency expands opportunities in the wholesale market
- IAMU leadership and recognition of energy efficiency as high priority in today's environment

MUNI Opportunity Areas:

- Gaps in program offerings and/or customer participation
- Continued education and assistance to members about the benefits of energy efficiency
- Consumer education
- Building on leading program examples
- Continued coordination with other utilities

REC Strengths and Positive Developments:

- Geothermal and air source heat pumps rebate programs,
- Hot water heaters rebate programs
- Load management and demand response programs that utilize advanced metering technology
- Enhanced agricultural/small commercial audit program
- Momentum is Building Conference – increased emphasis on energy efficiency
- Recently expanded program offerings by select RECs, including addition of low income efforts
- Customer communication and information via newsletters and websites

REC Opportunity Areas:

- Address gaps in program offering and/or consumer participation
- Continued expanded offering and participation in efficient lighting, air conditioning, Energy Star appliances, and low income programs
- Assure that programs are encouraging efficiencies above minimum Code specifications and federal efficiency requirements
- CHP opportunities
- Coordination of programs with other utilities
- Insulation/building shell measures
- Consider whether discount electric heat rate structures are consistent with energy efficiency goals
- Incorporate proper sizing and installation of heating and cooling systems as prerequisite for incentives

VI. CONCLUSION

Energy efficiency is a least cost, environmentally sound energy resource and should be prioritized as such through Iowa energy policy. Despite these characteristics, energy efficiency is dependent on strong policy guidelines and requirements. The reason for this is that utilities naturally prefer resource alternatives that enhance revenues. Many utilities abide by a business model that rewards increased retail sales of gas and/or electricity. Reduced energy consumption by retail consumers as a result of energy efficiency and conservation efforts has the potential to reduce utility revenues. However, conservation and efficiency efforts also free up more energy that can be sold in wholesale markets.

To elevate energy efficiency to its justified priority position, energy efficiency investment should be guided by integrated least cost resource planning analysis that gives appropriate consideration to current and future likely environmental regulations. COUs should not be exempt from this requirement. COUs are partners in planned baseload generation additions and should be equally responsible for pursuing cost effective energy efficiency.

When the administration of energy efficiency is assigned to utilities, state policy should establish precise, purposeful, comprehensive, auditable, and enforceable energy efficiency objectives that are guided by comprehensive least cost integrated planning analyses. Absent such directives, utilities in general and IOUs in particular will tend toward behavior that advances their interest in enhancing and maximizing revenues which may or may not be consistent with optimal energy efficiency investment.

THE STATUS OF
ENERGY EFFICIENCY PROGRAMS
IN IOWA

ATTACHMENTS

Energy Efficiency Spending and Impact
Excerpts from 2007 Report

MidAmerican Energy Company

MidAmerican Energy Company
Actual & Planned Expenditures, Energy & Capacity Savings & Participation
EEP-03-1 - Gas
Year to Date - December 2007

Program Name	Expenditures			Therms			Peak Therms			Participants/Units		
	Plan 2007	Actual 2007	% of Plan	Plan 2007	Actual 2007	% of Plan	Plan 2007	Actual 2007	% of Plan	Plan 2007	Actual 2007	% of Plan
Residential Audit	$1,876,000.00	$2,819,308.13	150.28%	440,100	631,351	143.46%	4,310	7,216	167.42%	7,956	9,984	125.49%
Residential Equipment	$1,798,000.00	$3,421,744.17	190.31%	929,400	805,684	86.69%	13,420	11,655	86.85%	9,000	11,263	125.14%
Low Income (1)	$1,739,000.00	$1,807,043.94	103.91%	99,480	145,591	146.35%	1,330	1,794	134.89%	550	1,457	264.91%
Small Commercial Energy Audit	$530,000.00	$629,206.67	118.72%	351,170	119,020	33.89%	8,900	2,415	27.13%	508	819	161.22%
Nonresidential Energy Analysis	$226,000.00	$98,168.96	43.44%	56,020	1,576	2.81%	1,000	30	3.00%	6	101	1683.33%
Efficiency Bid	$0.00	$1,765.85	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Nonresidential Equipment	$206,000.00	$258,260.81	125.37%	118,320	142,756	120.65%	3,020	3,118	103.25%	909	866	95.27%
Nonresidential Custom	$64,000.00	$348,786.15	544.98%	35,680	108,170	303.17%	960	3,523	366.98%	51	65	127.45%
Trees	$200,000.00	$279,387.90	139.69%	0	0	N/A	0	0	N/A	95	91	95.79%
Commercial New Construction	$533,000.00	$1,008,274.62	189.17%	180,000	457,408	254.12%	2,580	6,827	264.61%	56	17	30.36%
Residential New Construction	$3,088,000.00	$4,490,168.09	145.41%	1,096,300	1,307,020	119.22%	16,220	19,654	121.17%	1,900	2,313	121.74%
Assessments	$509,000.00	$651,552.63	128.01%	0	0	N/A	0	0	N/A	0	0	N/A
Total (2)	$10,769,000.00	$15,813,667.92	146.84%	3,306,470	3,718,576	112.46%	51,740	56,232	108.68%	21,031	26,976	128.27%

MidAmerican Energy Company
Actual & Planned Expenditures, Energy & Capacity Savings & Participation
EEP-03-1 - Electric
Year to Date - December 2007

Program Name	Expenditures			kWh			kW			Participants/Units		
	Plan 2007	Actual 2007	% of Plan	Plan 2007	Actual 2007	% of Plan	Plan 2007	Actual 2007	% of Plan	Plan 2007	Actual 2007	% of Plan
Residential Equipment	$1,839,000.00	$2,459,870.77	133.76%	4,985,008	4,911,600	98.53%	5,742	1,797	31.30%	7,483	6,742	90.10%
Commercial New Construction	$3,829,000.00	$4,875,302.03	127.33%	20,138,687	33,881,815	168.24%	3,567	6,143	172.22%	60	49	81.67%
Nonresidential Equipment	$1,217,000.00	$2,593,421.09	213.10%	16,023,850	74,280,767	463.56%	2,480	12,526	505.08%	37,889	59,273	156.44%
Residential New Construction	$1,351,000.00	$2,390,762.16	176.96%	4,462,288	8,856,052	198.46%	4,466	5,506	123.29%	100	249	249.00%
Residential Audit	$816,000.00	$1,423,054.39	174.39%	3,103,991	13,707,482	441.61%	1,216	3,142	258.39%	373	40,461	10847.45%
Small Commercial Energy Audit	$501,000.00	$742,542.67	148.21%	1,957,452	3,203,582	163.66%	1,057	737	69.73%	578	2,738	473.70%
Nonresidential Energy Analysis	$1,281,000.00	$1,578,285.16	123.21%	6,682,696	8,240,475	123.31%	1,179	1,525	129.35%	45	183	406.67%
Nonresidential Custom	$679,000.00	$1,016,480.03	149.70%	4,626,404	10,065,550	217.57%	1,299	1,239	95.38%	129	92	71.32%
Efficiency Bid	$687,000.00	$442,429.15	64.40%	3,437,824	2,882,757	83.85%	603	353	58.54%	9	15	166.67%
Residential Load Management	$3,296,000.00	$3,177,993.29	96.42%	920,389	952,389	103.48%	49,960	51,697	103.48%	57,200	59,075	103.28%
Nonresidential Load Management (3)	$6,589,000.00	$7,637,753.78	115.92%	3,407,831	1,077,991	31.63%	125,177	176,955	141.36%	121	136	112.40%
Trees	$200,000.00	$275,864.58	137.93%	0	0	N/A	0	0	N/A	90	95	105.56%
Low Income (1)	$463,000.00	$520,199.32	112.35%	220,799	1,660,393	751.99%	92	323	351.09%	550	1,435	260.91%
Assessments	$1,037,000.00	$1,136,027.84	109.55%	0	0	N/A	0	0	N/A	0	0	N/A
Total (2)	$23,785,000.00	$30,269,986.26	127.27%	69,967,219	163,720,853	234.00%	196,838	261,943	133.08%	104,627	170,543	163.00%

(1) Includes nonresidential spending and impacts
(2) Does not include carrying charges and return
(3) Realized

Exhibit B

MidAmerican Energy Company
EEP-03-1
EEP-03-1 2007 Actual and Planned Spending

	Plan	Actual	Variance	% Variance
Residential Load Management	$ 3,296,000	$ 3,177,993	$ (118,007)	-3.58%
Residential Equipment	$ 3,637,000	$ 5,881,615	$ 2,244,615	61.72%
Residential Audit	$ 2,693,000	$ 4,242,362	$ 1,549,362	57.53%
Low Income (1)	$ 2,202,000	$ 2,327,244	$ 125,244	5.69%
Residential New Construction	$ 4,437,000	$ 6,880,930	$ 2,443,930	55.08%
Commercial New Construction	$ 4,363,000	$ 5,883,576	$ 1,520,576	34.85%
Nonresidential Equipment	$ 1,424,000	$ 2,851,682	$ 1,427,682	100.26%
Nonresidential Custom	$ 742,000	$ 1,365,266	$ 623,266	84.00%
Nonresidential Load Management	$ 6,586,000	$ 7,637,754	$ 1,051,754	15.97%
Small Commercial Energy Audit	$ 1,032,000	$ 1,371,750	$ 339,750	32.92%
Nonresidential Energy Analysis	$ 1,509,000	$ 1,676,454	$ 167,454	11.10%
Efficiency Bid	$ 687,000	$ 444,195	$ (242,805)	-35.34%
Trees	$ 400,000	$ 555,252	$ 155,252	38.81%
Assessments	$ 1,546,000	$ 1,787,581	$ 241,581	15.63%
	$ 34,554,000	$ 46,083,654	$ 11,529,654	33.37%

(1) Includes nonresidential spending

Exhibit C

MidAmerican Energy Company
EEP-03-1
2007 Actual Expenditures by Cost Category for each Program

	Planning & Design	Administration	Advertising & Promotion	Customer Incentives	Monitoring & Evaluation	Equipment	Installation	Miscellaneous	Total
Residential Load Management	$ 101,451	$ 421,617	$ 233,250	$ 1,777,920	$ 77,978	$ 329,494	$ 236,283	$ -	$ 3,177,993
Residential Equipment	$ 174,998	$ 457,450	$ 320,821	$ 4,872,346	$ 54,636	$ 1,364	$ -	$ -	$ 5,881,615
Residential Audit	$ 134,081	$ 611,343	$ 382,807	$ 3,078,538	$ 34,109	$ 1,484	$ -	$ -	$ 4,242,362
Low Income (1)	$ 84,547	$ 329,548	$ 85,275	$ 1,803,997	$ 23,138	$ 739	$ -	$ -	$ 2,327,244
Residential New Construction	$ 209,231	$ 268,018	$ 361,034	$ 6,012,065	$ 29,292	$ 1,290	$ -	$ -	$ 6,880,930
Commercial New Construction	$ 173,012	$ 260,273	$ 296,386	$ 4,919,938	$ 233,175	$ 792	$ -	$ -	$ 5,883,576
Nonresidential Equipment	$ 77,271	$ 176,645	$ 201,620	$ 2,365,347	$ 30,026	$ 774	$ -	$ -	$ 2,851,683
Nonresidential Custom	$ 32,702	$ 228,418	$ 83,129	$ 974,566	$ 46,148	$ 303	$ -	$ -	$ 1,365,266
Nonresidential Load Management	$ 247,276	$ 309,156	$ 230,104	$ 6,662,937	$ 186,250	$ 2,031	$ -	$ -	$ 7,637,754
Small Commercial Energy Audit	$ 38,198	$ 336,989	$ 71,388	$ 909,877	$ 15,014	$ 284	$ -	$ -	$ 1,371,750
Nonresidential Energy Analysis	$ 46,189	$ 265,641	$ 112,277	$ 1,236,862	$ 14,520	$ 965	$ -	$ -	$ 1,676,454
Efficiency Bid	$ 24,013	$ 52,555	$ 24,912	$ 268,923	$ 73,653	$ 138	$ -	$ -	$ 444,194
Trees	$ 18,801	$ 29,238	$ 103,162	$ 401,100	$ 2,634	$ 317	$ -	$ -	$ 555,252
Assessments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,787,581	$ 1,787,581
	$ 1,361,770	$ 3,746,891	$ 2,506,165	$ 35,284,416	$ 820,573	$ 339,975	$ 236,283	$ 1,787,581	$ 46,083,654

(1) Includes nonresidential spending

Exhibit D

Energy Efficiency Spending and Impact
Excerpts from 2007 Report

Interstate Power & Light Company

Interstate Power & Light Company
IUB Docket No. EEP-02-38
Spending Report for 2007
Source: Plan initially approved on June 3, 2003. Plan modifications approved on November 30, 2005, and October 20, 2006.

Combined Electric & Gas Spending Summary

IPL: Jan-Dec 2007		Planning & Design		Program Admin		Advertising and Promotion		Incentives		Monitor		Annual	YTD	YTD
Program	Notes	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	% of Budget
1: Res Prescriptive Rebates	Program	169,752	159,212	502,152	651,786	476,552	984,014	7,414,000	6,804,109	230,100	30,143	8,792,556	8,629,264	98.1%
1: Res Prescriptive Rebates	Community Action	0	167	25,566	7,897	66,472	7,167	393,720	99,417	52,155	74,444	537,913	189,091	35.2%
1: Res Prescriptive Rebates	Total	169,752	159,378	527,718	659,683	543,024	991,181	7,807,720	6,903,526	282,255	104,588	9,330,469	8,818,356	94.5%
2: Res Appliance Recycling	Total	8,184	608	20,460	2,102	35,805	29,050	511,500	660,101	25,575	245	601,524	692,105	115.1%
3: Res Home Audits	Total	14,315	72,532	102,240	2,431	80,564	91,619	1,032,620	1,812,493	35,790	16,695	1,265,529	1,995,770	157.7%
4: Res New Construction	Total	30,675	9,322	81,800	3,360	102,250	71,682	2,045,000	1,719,076	71,575	172,596	2,331,300	1,976,036	84.8%
*Subtotal Residential Energy Solutions		222,926	241,841	732,218	667,576	761,643	1,183,531	11,396,840	11,095,196	415,195	294,123	13,528,822	13,482,267	99.7%
5: Non-Res Custom Rebates	Total	84,898	12,043	151,384	278,245	517,573	838,325	3,311,151	4,385,433	177,975	228,604	4,242,981	5,742,650	135.3%
6: Non-Res Performance Contracting	Total	99,523	41,896	199,043	193,387	398,088	135,874	2,322,180	731,222	298,565	274,960	3,317,399	1,377,339	41.5%
7: Non-Res Prescriptive Rebates	Total	39,888	54,904	80,798	66,618	185,120	142,417	954,243	1,925,908	104,323	21,382	1,364,372	2,211,229	162.1%
8: Non-Res New Construction	Total	56,254	66,479	112,508	98,831	225,016	74,666	2,132,699	1,621,741	168,762	6,979	2,695,239	1,868,696	69.3%
**Subtotal Bus & Industry Energy Solutions		280,563	175,322	543,733	637,080	1,325,797	1,191,283	8,720,273	8,664,303	749,625	531,925	11,619,991	11,199,914	96.4%
9: Agriculture	Total	32,736	3,737	16,368	57,248	43,989	34,969	248,589	384,747	16,368	49,462	358,050	530,162	148.1%
10: Low Income	Total	73,548	0	147,095	432,647	294,189	10,288	2,093,273	2,523,368	220,643	12,458	2,828,748	2,978,761	105.3%
11: Trees	Total	68,164	0	35,805	286,576	68,164	60	423,522	376,565	68,164	0	663,819	663,201	99.9%
*** Subtotal: DSM without Load Management ****		677,937	420,900	1,475,219	2,081,127	2,493,782	2,420,129	22,882,497	23,044,179	1,469,995	887,969	28,999,430	28,854,305	99.5%
12: Res Load Management	DLC	94,247	72,297	188,492	227,025	376,984	39,185	1,607,726	2,331,964	282,739	126,435	2,550,188	2,796,907	109.7%
13: Non-Res Load Management	Interruptible	9,700	9,921	115,000	72,939	21,000	19,499	23,480,684	22,837,946	16,000	4,499	23,642,384	22,944,804	97.0%
13: Non-Res Load Management	Sm Bus Pilot	50,000	1,817	260,000	17,476	110,000	31,234	311,000	0	41,600	0	772,600	50,528	6.5%
13: Non-Res Load Management	Total	59,700	11,739	375,000	90,415	131,000	50,733	23,791,684	22,837,946	57,600	4,499	24,414,984	22,995,332	94.2%
14: Regulatory Total	Total	0	0	1,432,494	1,513,258	0	0	0	0	0	0	1,432,494	1,513,258	105.6%
15: Iowa EE Plan	Total	0	568,361	0	17,942	0	0	0	0	0	0	0	586,303	0.0%
Grand Total		831,884	1,073,296	3,471,205	3,929,767	3,001,766	2,510,048	48,281,907	48,214,089	1,810,334	1,018,903	57,397,096	56,746,103	98.9%

Incremental Spending Summary					
		Material $		Installation $	
Program		Budget	Actual	Budget	Actual
12: Res Load Management	DLC 1,702 Switches		170,200		170,200
13: Non-Res Load Management	Interruptible		n/a		n/a
13: Non-Res Load Management	Sm Bus Pilot		n/a		n/a

Interstate Power & Light Company
IUB Docket No. EEP-02-38
Spending Report for 2007
Source: Plan initially approved on June 3, 2003. Plan modifications approved on November 30, 2005, and October 20, 2006.

Electric Spending Summary

IPL: Jan-Dec 2007		Planning & Design		Program Admin		Advertising and Promotion		Incentives		Monitor		Annual	YTD	YTD
Program	Notes	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	% of Budget
1: Res Prescriptive Rebates	Program	102,300	107,189	358,050	450,733	306,900	763,008	4,603,500	4,754,341	153,450	19,752	5,524,200	6,095,023	110.3%
1: Res Prescriptive Rebates	Community Action	0	110	16,368	5,212	42,966	4,730	255,750	65,615	33,759	49,133	348,843	124,800	35.8%
1: Res Prescriptive Rebates	Total	102,300	107,299	374,418	455,944	349,866	767,738	4,859,250	4,819,956	187,209	68,885	5,873,043	6,219,823	105.9%
2: Res Appliance Recycling	Total	8,184	608	20,460	2,102	35,805	29,050	511,500	660,101	25,575	245	601,524	692,105	115.1%
3: Res Home Audits	Total	7,161	22,869	40,920	-326	30,690	26,178	409,200	672,749	20,460	6,732	508,431	728,202	143.2%
4: Res New Construction	Total	15,345	4,661	40,920	1,680	51,150	35,879	1,023,000	1,143,763	35,805	86,315	1,166,220	1,272,298	109.1%
*Subtotal Residential Energy Solutions		132,990	135,438	476,718	459,401	467,511	858,844	6,802,950	7,296,569	269,049	162,176	8,149,218	8,912,428	109.4%
5: Non-Res Custom Rebates	Total	73,656	10,801	130,944	232,478	451,143	742,793	3,004,551	4,025,681	150,381	199,423	3,810,675	5,211,175	136.8%
6: Non-Res Performance Contracting	Total	84,631	36,516	169,261	159,397	338,524	124,938	1,974,720	535,181	253,892	234,047	2,821,028	1,090,079	38.6%
7: Non-Res Prescriptive Rebates	Total	30,690	41,640	61,380	40,330	141,174	109,502	733,491	1,370,265	80,817	16,051	1,047,552	1,577,788	150.6%
8: Non-Res New Construction	Total	45,012	49,893	90,024	72,339	180,048	56,104	1,871,067	1,507,138	135,036	6,777	2,321,187	1,692,250	72.9%
**Subtotal Bus & Industry Energy Solutions		233,989	138,850	451,609	504,544	1,110,889	1,033,337	7,583,829	7,438,265	620,126	456,297	10,000,442	9,571,292	95.7%
9: Agriculture	Total	32,736	3,737	16,368	57,248	43,989	34,968	248,589	384,647	16,368	49,462	358,050	530,062	148.0%
10: Low Income	Total	11,041	0	22,083	317,338	44,165	1,543	314,253	330,998	33,124	4,697	424,666	654,577	154.1%
11: Trees	Total	68,164	0	35,805	286,576	68,164	60	423,522	376,565	68,164	0	663,819	663,201	99.9%
*** Subtotal: DSM without Load Management ****		478,920	278,024	1,002,583	1,625,107	1,734,718	1,928,752	15,373,143	15,627,045	1,006,831	672,633	19,596,195	20,331,560	103.8%
12: Res Load Management	DLC	94,247	72,297	188,492	227,025	376,984	39,185	1,607,726	2,331,964	282,739	126,435	2,550,188	2,796,907	109.7%
13: Non-Res Load Management	Interruptible	9,700	9,921	115,000	72,939	21,000	19,499	23,480,684	22,837,946	16,000	4,499	23,642,384	22,944,804	97.0%
13: Non-Res Load Management	Sm Bus Pilot	50,000	1,817	260,000	17,476	110,000	31,234	311,000	0	41,600	0	772,600	50,528	6.5%
13: Non-Res Load Management	Total	59,700	11,739	375,000	90,415	131,000	50,733	23,791,684	22,837,946	57,600	4,499	24,414,984	22,995,332	94.2%
14: Regulatory Total	Total	0	0	1,123,504	1,185,128	0	0	0	0	0	0	1,123,504	1,185,128	105.5%
15: Iowa EE Plan	Total	0	397,663	0	12,560	0	0	0	0	0	0	0	410,222	0.0%
Grand Total		632,867	759,722	2,689,579	3,140,234	2,242,702	2,018,671	40,772,553	40,996,954	1,347,170	803,567	47,684,871	47,719,149	100.1%

Interstate Power & Light Company
IUB Docket No. EEP-02-38
Spending Report for 2007
Source: Plan initially approved on June 3, 2003. Plan modifications approved on November 30, 2005, and October 20, 2006.

Gas Spending Summary

IPL: Jan-Dec 2007		Planning & Design		Program Admin		Advertising and Promotion		Incentives		Monitor		Annual	YTD	YTD
Program	Notes	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	% of Budget
1: Res Prescriptive Rebates	Program	67,452	52,022	144,102	201,053	169,652	221,006	2,810,500	2,720,242	76,650	10,392	3,268,356	3,204,715	98.1%
1: Res Prescriptive Rebates	Community Action	0	57	9,198	2,685	23,506	2,437	137,970	33,802	18,396	25,311	189,070	64,291	34.0%
1: Res Prescriptive Rebates	Total	67,452	52,079	153,300	203,738	193,158	223,442	2,948,470	2,754,044	95,046	35,703	3,457,426	3,269,006	94.6%
2: Res Appliance Recycling	Total	0	0	0	0	0	0	0	0	0	0	0	0	
3: Res Home Audits	Total	7,154	49,663	61,320	2,756	49,874	65,440	623,420	469,270	15,330	9,964	757,098	597,093	78.9%
4: Res New Construction	Total	15,330	4,661	40,880	1,680	51,100	35,804	1,022,000	575,313	35,770	86,281	1,165,080	703,739	60.4%
*Subtotal Residential Energy Solutions		89,936	106,403	255,500	208,175	294,132	324,686	4,593,890	3,798,627	146,146	131,947	5,379,604	4,569,838	84.9%
5: Non-Res Custom Rebates	Total	11,242	1,241	20,440	45,768	66,430	95,534	306,600	359,753	27,594	29,181	432,306	531,477	122.9%
6: Non-Res Performance Contracting	Total	14,892	5,380	29,782	33,990	59,564	10,935	347,460	196,041	44,673	40,913	496,371	287,259	57.9%
7: Non-Res Prescriptive Rebates	Total	9,198	13,265	19,418	26,287	43,946	32,915	220,752	555,643	23,506	5,331	316,820	633,442	199.9%
8: Non-Res New Construction	Total	11,242	16,587	22,484	26,491	44,968	18,563	261,632	114,603	33,726	202	374,052	176,446	47.2%
**Subtotal Bus & Industry Energy Solutions		46,574	36,473	92,124	132,536	214,908	157,947	1,136,444	1,226,039	129,499	75,628	1,619,549	1,628,623	100.6%
9: Agriculture	Total	0	0	0	0	0	0	0	100	0	0	0	100	
10: Low Income	Total	62,507	0	125,012	115,309	250,024	8,745	1,779,020	2,192,370	187,519	7,761	2,404,082	2,324,184	96.7%
11: Trees	Total	0	0	0	0	0	0	0	0	0	0	0	0	
*** Subtotal: DSM without Load Management ****		199,017	142,876	472,636	456,020	759,064	491,378	7,509,354	7,217,135	463,164	215,336	9,403,235	8,522,745	90.6%
12: Res Load Management	DLC	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
13: Non-Res Load Management	Interruptible	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
13: Non-Res Load Management	Sm Bus Pilot	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
13: Non-Res Load Management	Total	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
14: Regulatory Total	Total	0	0	308,990	328,130	0	0	0	0	0	0	308,990	328,130	106.2%
15: Iowa EE Plan	Total	0	170,698	0	5,383	0	0	0	0	0	0	0	176,081	0.0%
Grand Total		199,017	313,574	781,626	789,533	759,064	491,378	7,509,354	7,217,135	463,164	215,336	9,712,225	9,026,956	92.9%

Energy Efficiency Spending and Impact
Excerpts from 2007 Report

Black Hills Energy

Table 3. 2007 Energy Savings (MCF) by Program

Program	Savings			Peak Savings		
	Goal (MCF)	Actual (MCF)	As Percent of Goal	Annual Goal	Actual	As Percent of Goal
Furnace Replacement	20,714	26,350	127%	305	388	128%
Envelope Measures Retrofit	5,614	12,363	220%	84	184	219%
Water Heater Replacement	1,117	666	60%	3	7	219%
Innovative Space & Water Heating Technologies	1,073	2,132	199%	13	13	98%
Setback Thermostat & Furnace Maintenance	12,685	46,248	365%	186	588	316%
Residential New Construction	7,999	8,635	108%	103	110	107%
Residential Energy Audits	2,314	3,738	162%	6	10	160%
School-Based Energy Education	947	4,974	525%	3	14	441%
C/I Prescriptive Rebate	17,074	15,009	88%	127	150	118%
C/I Custom Rebate	4,742	14,857	313%	61	192	313%
Low-Income Weatherization	2,550	2,550	100%	25	25	100%
Low-Income Energy Education	4,914	4,914	100%	13	13	100%
Weatherization Teams	407	1,049	258%	24	24	100%
Multi-Family Efficiency Improvement Program	1,855	1,855	100%	28	28	100%
Total	**84,004**	**145,339**	**173%**	**981**	**1,745**	**178%**

Table 4. 2007 Expenditures by Program

Program	Annual Budget	Actual Expenditures	% of Budget Expended
Furnace Replacement	$642,627	$882,131	137%
Envelope Measures Retrofit	$205,749	$431,932	210%
Water Heater Replacement	$35,641	$22,730	64%
Innovative Space & Water Heating Technologies	$41,312	$51,857	126%
Setback Thermostat & Furnace Maintenance	$90,724	$234,458	258%
Residential New Construction	$383,416	$391,440	102%
Residential Energy Audits	$136,086	$186,467	137%
School-Based Energy Education	$50,762	$42,718	84%
Small Commercial Energy Audits	$108,005	$29,305	27%
C/I Prescriptive Rebate	$129,605	$119,073	92%
C/I Custom Rebate	$145,806	$180,997	124%
Building Operator Certification	$32,600	$32,600	100%
Low-Income Weatherization	$431,374	$449,431	104%
Low-Income Energy Education	$50,774	$54,273	107%
Habitat for Humanity	$31,322	$15,153	48%
Multi-Family Efficiency Improvement Program	$47,809	$52,506	110%
Tree Planting Program	$119,885	$118,786	99%
Iowa Energy Center & Center for Global Environmental Research	$181,448	$186,810	103%
Weatherization Teams	$18,200	$23,936	132%
Energy Efficiency Planning 2009-2013	$85,854	$85,854	100%
Total	***$2,968,999***	***$3,592,458***	***121%***

Table 5 shows participation by program.

Table 5. 2007 Participation by Program

Program	Participation Goals	Annual Participation	Participation as Percent of Goal
Furnace Replacement	2,135	2,386	112%
Envelope Measures Retrofit	374	660	176%
Water Heater Replacement	268	190	71%
Innovative Space & Water Heating Technologies	101	127	126%
Setback Thermostat & Furnace Maintenance	1,121	4,463	398%
Residential New Construction	213	230	108%
Residential Energy Audits	854	941	110%
School-Based Energy Education	1,067	1,557	146%
Small Commercial Energy Audits	187	37	20%
C/I Prescriptive Rebate	374	237	63%
C/I Custom Rebate	68	59	86%
Low-Income Weatherization	188	163	87%
Low-Income Energy Education	5,000	5,000	100%
Habitat for Humanity	6	6	100%
Multi-Family Efficiency Improvement Program	6	6	100%
Weatherization Teams	163	163	100%
Total	***12,126***	***16,225***	***134%***

Overall program cost-effectiveness is shown in Table 6. We measure program cost-effectiveness from the following perspectives:

- Societal (SOC)
- Utility (UCT)
- Rate Impact (RIM)
- Participant (PCT)

Table 6. Program Portfolio Cost Effectiveness

Test	Total Discounted Costs	Total Discounted Benefits	Net Present Value	Benefit/Cost Ratio
SOC	$4,943,551	$11,736,002	$6,792,452	2.37
UCT	$3,269,140	$7,834,117	$4,564,977	2.40
RIM	$8,648,156	$7,834,117	($814,039)	0.91
PCT	$1,461,512	$5,345,043	$3,883,531	3.66

IOU Spending and Performance Summary
Excerpts from 2007 Report

Table 1. Annual IOU Spending on EE-$
(Including Load Management)

Year		Budget	Actual	Difference	Percent Over/(Under) Budget
MEC					
	2007	34,554,000	45,197,000	10,643,000	30.80%
	2006	33,884,000	48,185,972	14,301,972	42.21%
	2005	33,129,000	42,911,056	9,782,056	29.53%
	2004	31,350,000	35,140,770	3,790,770	12.09%
	2003	20,122,193	31,246,931	11,124,738	55.29%
IPL					
	2007	57,397,096	56,159,800	-1,237,296	-2.16%
	2006	54,960,451	54,034,419	-926,032	-1.68%
	2005	46,062,686	53,001,329	6,938,643	15.06%
	2004	44,739,699	51,695,054	6,955,355	15.55%
	2003	29,674,365	35,183,426	5,509,061	18.57%
BHE					
	2007	2,883,145	3,506,604	623,459	21.62%
	2006	2,781,167	4,256,243	1,475,076	53.04%
	2005	2,705,722	3,355,809	650,087	24.03%
	2004	2,640,000	2,335,588	-304,412	-11.53%
	2003	1,620,896	1,584,202	-36,694	-2.26%
ATMOS					
	2007	63,625	42,837	-20,788	-32.67%
	2006	63,625	35,242	-28,383	-44.61%
	2005	63,625	23,620	-40,005	-62.88%
	2004	63,625	44,090	-19,535	-30.70%
	2003	40,170	14,084	-26,086	-64.94%

Source: Companies' Annual Reports to IUB
Note: Spending made for Planning & Design of EEP 2009-2013 in 2007 was removed in the above table.

Table 2. Iowa 2007 Total Spending on Energy Efficiency
(Including Load Management)

		Electric	Gas	Gas & Electric
MEC	Residential	10,285,521	12,789,105	23,074,626
	Nonresidential	19,454,169	2,668,205	22,122,374
	Total	**29,739,690**	**15,457,310**	**45,197,000**
IPL	Residential	13,027,112	6,894,022	19,921,134
	Nonresidential	34,281,814	1,956,853	36,238,667
	Total	**47,308,927**	**8,850,875**	**56,159,802**
BHE	Residential		2,823,879	2,823,879
	Nonresidential		682,724	682,724
	Total		**3,506,603**	**3,506,603**
ATMOS	Residential		38,112	38,112
	Nonresidential		4,724	4,724
	Total		**42,837**	**42,837**
All IOUs	Residential	23,312,633	22,545,118	45,857,751
	Nonresidential	53,735,983	5,312,506	59,048,490
	Total	**77,048,617**	**27,857,625**	**104,906,241**

Note: Spending made for Planning & Design of EEP 2009-2013 in 2007 was removed in the above table.

Sources:

MEC - Company's Annual Energy Efficiency Cost Recovery (ECR) filings in March 2008.
IPL - Company's Annual Report for 2007.
BHE - Company's Annual Report for 2007.
ATMOS - Company's Annual Report for 2007.
Note: ATMOS's Residential Spending in 2007, per ECR filing, is $46,625
Noresidential Spending in 2007, per ECR filing, is $5,779

Table 3. Iowa IOUs 2007 Electric Energy Efficiency Programs- Incentive and Impact Outside Load Management

	MidAmerican Energy					Interstate Power & Light				
No. of Electric Customers:										
Residential:	540,810					408,094				
Nonresidential:	87,025					75,168				
		Incentive		Impact Share			Incentive		Impact Share	
	Paricipants (No.)	Incentives ($)	Incentive (%)	kWh (%)	kW (%)	Paricipants (No.)	Incentives ($)	Incentive (%)	kWh (%)	kW (%)
Residential Programs (Excluding Load Management)										
Equipment Rebates	6,742	2,076,368	38%	17%	17%	74,997	4,819,956	63%	56%	61%
Appliance Recycling		n/a	n/a	n/a		5,341	660,101	9%	19%	14%
Home Audits	40,461	945,410	17%	47%	29%	2,038	672,749	9%	8%	6%
New Construction	249	2,135,192	39%	30%	51%	969	1,143,763	15%	10%	14%
Low Income	1,435	364,141	7%	6%	3%	1,584	330,998	4%	7%	5%
Subtotal		5,521,111	100%	100%	100%		7,627,568	100%	100%	100%
All Residential (vs. Nonres.)			38%	18%	32%			49%	28%	46%
Nonresidential Programs (Excluding Load Management)										
Prescriptive Rebates	59,273	2,167,652	24%	56%	56%	3,059	1,370,265	18%	14%	22%
Custom Rebates	92	750,384	8%	8%	6%	210	4,025,681	51%	64%	52%
Performance Contract/ Bid	15	268,923	3%	2%	2%	34	535,181	7%	9%	10%
New Construction	49	4,079,991	45%	26%	27%	12	1,507,138	19%	7%	10%
Audit (small comm.)	2,738	508,347	6%	2%	3%	316	384,647	5%	6%	6%
Audit (large comm.)	183	1,186,004	13%	6%	7%	n/a	n/a	n/a	n/a	n/a
Low Income	See Source	50,400	1%	See Source		n/a	n/a	n/a	n/a	n/a
Subtotal		9,011,702	100%	100%	100%		7,822,912	100%	100%	100%
All Nonresidential (vs. Res.)			62%	82%	68%			51%	72%	54%

Source:

MEC: 2007 Annual Report except for Incentive data, which was obtained by special request. Customer numbers are from IE-1 Form
Note: for Low Income program, except for incentive, data reflects combined Residential and Nonresidential classes.

IPL: 2007 Annual Report. Customer numbers are from IE-1 Form

Table 4. Iowa IOUs 2007 Gas Energy Efficiency Programs- Incentive and Impact

	MidAmerican Energy				Interstate Power & Light				Black Hills Energy			
No. of Gas Customers:												
Residential:	493,266				196,577				131,394			
Nonresidential:	50,353				25,696				15,603			
		Incentive				Incentive				Incentive		
	Paricipants (No.)	Incentives ($)	Incentive (%)	Therm (%)	Paricipants (No.)	Incentives ($)	Incentive (%)	Therm (%)	Paricipants (No.)	Incentives ($)	Incentive (%)	MCF (%)
Residential Programs												
Equipment Rebates	11,263	2,795,978	28%	28%	19,062	2,754,044	46%	49%	7,166	696,820	40%	68%
Appliance Recycling		n/a	n/a			n/a	n/a			n/a	n/a	
Home Audits	9,984	2,133,128	21%	22%	2,510	469,270	8%	34%	1,601	250,083	14%	15%
New Construction	2,313	3,876,873	38%	45%	432	575,313	10%	8%	230	210,376	12%	8%
Low Income	1,457	1,340,026	13%	5%	1,074	2,192,370	37%	9%	5,326	580,146	33%	9%
Subtotal		10,146,004	100%	100%		5,990,996	100%	100%		1,737,425	100%	100%
All Residential (vs. Nonres.)			85%	78%			83%	67%			91%	79%
Nonresidential Programs												
Prescriptive Rebates	866	197,695	11%	17%	3,059	1,370,265	18%	22%	237	56,195	31%	50%
Custom Rebates	65	224,182	13%	13%	210	4,025,681	51%	52%	59	94,937	53%	50%
Performance Contract/ Bid	-	-	0%	0%	34	535,181	7%	10%		n/a	n/a	
New Construction	17	839,948	48%	55%	12	1,507,138	19%	10%		n/a	n/a	
Audit (small comm.)	819	401,530	23%	14%	316	384,647	5%	6%	37	29,305	16%	n/a
Audit (large comm.)	101	50,858	3%	0.2%	n/a	n/a	n/a	n/a		n/a	n/a	
Low Income	See Source	49,430	3%		n/a	n/a	n/a	n/a		n/a	n/a	
Subtotal		1,763,642	100%	100%		7,822,912	100%	100%		180,437	100%	100%
All Nonresidential (vs. Res.)			15%	22%			17%	33%			9%	21%

Source:

MEC: 2007 Annual Report except for Incentive data, which was obtained by special request. Customers numbers are from 2007 IG-1 Form
Note: for Low Income program, except for incentive, data reflects combined Residential and Nonresidential classes.

IPL: 2007 Annual Report. Customer numbers are from 2007 IG-1 Form

BHE: 2007 Annual Report except for Incentive data, which was obtained by special request. Customer Number from 2007 IG-1 Form
Note: - Residential Home Audit also includes Envelope Measures Retrofit.
- Incentive for Residetial Low Income is sum of total spending for Low-Income Weatherization, Low-Income Energy Education, Multi-Family Efficiency Improvement, and Weatherization Teams.
- Incentive for Small Commercial Audit reflects all spending

Table 5. Iowa 2007 Spending on Promotion or Marketing
(Including Expenses on Load Management)

		Electric		Gas		Gas & Electric	
		Relative to Customer Class Total Spending	Amount	Relative to Customer Class Total Spending	Amount	Relative to Customer Class Total Spending	Amount
MEC	Residential	6.4%	656,583	5.6%	720,560	6.0%	1,377,143
	Nonresidential	4.8%	934,992	7.3%	194,029	5.1%	1,129,021
	Total	**5.4%**	**1,591,574**	**5.9%**	**914,589**	**5.5%**	**2,506,164**
IPL	Residential	6.9%	899,572	4.8%	333,431	6.2%	1,233,003
	Nonresidential	3.3%	1,119,098	8.1%	157,947	3.5%	1,277,045
	Total	**4.3%**	**2,018,670**	**5.6%**	**491,378**	**4.5%**	**2,510,048**
Aquila	Residential	n/a	n/a	Not Available		Not Available	
	Nonresidential						
	Total						
ATMOS	Residential	n/a	n/a	Not Available		Not Available	
	Nonresidential						
	Total						
All IOUs	Residential	6.7%	1,556,155	4.7%	1,053,991	5.7%	2,610,146
	Nonresidential	3.8%	2,054,090	6.6%	351,976	4.1%	2,406,066
	Total	**4.7%**	**3,610,244**	**5.0%**	**1,405,967**	**4.8%**	**5,016,212**

Sources:

MEC - Company's Annual Report for 2007, excluding spending on Iowa 2009-2013 EE Plan
IPL - Company's Annual Report for 2007, excluding spending on Iowa 2009-2013 EE Plan
BHE - Company's Annual Report for 2007, excluding spending on Energy Efficiency Planning 2009-2013
ATMOS - Company's Annual Report for 2007.

Table 6. Iowa 2007 Spending on New Construction
(Including Expenses on Load Management)

		Electric		Gas		Gas & Electric	
		Relative to Customer Class Total Spending	Amount	Relative to Customer Class Total Spending	Amount	Relative to Customer Class Total Spending	Amount
MEC	Residential	23.2%	2,390,762	35.1%	4,490,168	29.8%	6,880,930
	Nonresidential	25.1%	4,875,302	37.8%	1,008,275	26.6%	5,883,577
	Total	**24.4%**	**7,266,064**	**35.6%**	**5,498,443**	**28.2%**	**12,764,507**
IPL	Residential	9.8%	1,272,298	10.2%	703,739	9.9%	1,976,037
	Nonresidential	4.9%	1,692,250	9.0%	176,446	5.2%	1,868,696
	Total	**6.3%**	**2,964,548**	**9.9%**	**880,185**	**6.8%**	**3,844,732**
Aquila	Residential			13.9%	391,440	13.9%	391,440
	Nonresidential			-	-	-	-
	Total			**11.2%**	**391,440**	**11.2%**	**391,440**
ATMOS	Residential	n/a	n/a	Not Available		Not Available	
	Nonresidential						
	Total						
All IOUs	Residential	15.7%	3,663,060	24.8%	5,585,347	20.2%	9,248,407
	Nonresidential	12.2%	6,567,552	22.3%	1,184,720	13.1%	7,752,272
	Total	**13.3%**	**10,230,612**	**24.3%**	**6,770,067**	**16.2%**	**17,000,679**

Sources:
MEC - Company's Annual Report for 2007, excluding spending on Iowa 2009-2013 EE Plan
IPL - Company's Annual Report for 2007, excluding spending on Iowa 2009-2013 EE Plan
BHE - Company's Annual Report for 2007, excluding spending on Energy Efficiency Planning 2009-2013
ATMOS - Company's Annual Report for 2007.

Table 7. Iowa 2007 Spending on Electric Load Management Programs

		Number of Interruption & Cycling	Incentive		Other Expenses		Total Spending	
			Relative to Customer Class Total Spending	Amount	Relative to Customer Class Total Spending	Amount	Relative to Customer Class Total Spending	Amount
MEC	Residential	4	7.7%	1,777,920	6.1%	1,400,073	13.8%	3,177,993
	Nonresidential	1	30.1%	6,662,937	4.4%	974,817	34.5%	7,637,754
	Total		**18.7%**	**8,440,857**	**5.3%**	**2,374,890**	**23.9%**	**10,815,747**
IPL	Residential	1	11.7%	2,331,964	2.3%	464,943	14.0%	2,796,907
	Nonresidential	12	63.0%	22,837,946	0.4%	157,386	63.5%	22,995,332
	Total		**44.8%**	**25,169,910**	**1.1%**	**622,328**	**45.9%**	**25,792,238**
All IOUs	Residential		9.0%	4,109,884	4.1%	1,865,016	13.0%	5,974,900
	Nonresidential		50.0%	29,500,882	1.9%	1,132,203	51.9%	30,633,085
	Total		**32.0%**	**33,610,767**	**2.9%**	**2,997,219**	**34.9%**	**36,607,985**

Sources:

MEC - Company's Annual Report for 2007, excluding spending on Iowa 2009-2013 EE Plan

IPL - Company's Annual Report for 2007, excluding spending on Iowa 2009-2013 EE Plan