Evaluation of Energy Efficiency Goals and Programs Filed with the Iowa Utilities Board by the Iowa Association of Municipal Utilities

Report to the Iowa General Assembly

January 1, 2011

IOWA UTILITIES BOARD

Robert B. Berntsen, Chair
Krista K. Tanner
Darrell Hanson

Executive Summary

Senate File 2386, enacted in 2008, was an omnibus energy bill that directed gas and electric municipal and rural electric cooperative utilities to assess their maximum potential energy and capacity savings and establish an energy efficiency goal based on that assessment. The utilities were then to establish cost-effective energy efficiency programs designed to help them meet their new energy efficiency goal.

The legislation also established a reporting schedule for the utilities and the Iowa Utilities Board (Board):

- July 1, 2008 — Utilities to begin process of determining cost-effective energy efficiency goals
- January 1, 2009 — Utilities to provide progress reports to the Board
- January 1, 2010 — Utilities to submit final reports to the Board
- January 1, 2011 — Board to provide evaluation and summary of the reports to the General Assembly
- January 1, 2012 — Utilities are required to file bi-annual reports identifying their progress in meeting their goals and any updates to their plans

On December 31, 2009, the Iowa Association of Municipal Utilities (IAMU) filed the Report of Energy Efficiency Goals for Iowa's Municipal Electric and Gas Utilities (IAMU Joint Report) on behalf of its member utilities, municipal utilities served by Missouri River Energy Services (MRES) and several small non-member utilities. The municipal electric utilities set an average 2012 energy savings goal of 1.09 percent of sales. For municipal gas utilities, the average goal for 2012 energy savings is 0.74 percent of sales.

The 2008 legislation directed the Board to evaluate the report submitted by the municipal utilities and the rural electric cooperatives and to report to the legislature summarizing the evaluation by January 1, 2011. Specifically, the Board's report is to include:

1. The goals established by each of the utilities
2. The projected costs of achieving the goals
3. The potential rate impacts
4. A description of the programs offered and proposed by each utility or group of utilities
5. The report may contain recommendations concerning the achievability of the goals based on the results of the utilities' assessment of potential

The Board wishes to express appreciation for the efforts by the utilities and the IAMU. The IAMU Joint Report represents substantial work to identify new energy efficiency opportunities for the municipal utilities of Iowa. The IAMU also provided valuable assistance to the staff of the Iowa Utilities Board, including

additional information which helped to clarify various aspects of the IAMU Joint Report.

The Board has reached the following conclusions and recommendations regarding the IAMU Joint Report:

Conclusions:

1. **Goals** – The goals adopted by the municipal utilities increase electricity savings from 0.71 percent of sales in 2010 to 1.09 percent of sales in 2012. If these goals are met, the utilities and their customers will save energy and reduce peak demand. IUB Table ES-1 shows the goals for 2012 in terms of electric energy savings in megawatt-hours (MWh) and natural gas savings in terms of thousands of cubic feet (Mcf), along with the percentages of estimated sales.

IUB Table ES-1. 2012 Energy efficiency goals of municipal utilities				
	Electricity Energy Savings		**Gas Energy Savings**	
	MWh	as % Sales	MCf	as % Sales
IAMU Goals	43,072	1.09%	40,487	0.74%
MRES Goals[1]	4,202	0.80%	NA	NA
Muni Total	47,274	Approx. 1.05%	40,487	0.74%
Non- Muni Utility Goals	446	0.2% to 1.1%	263	0.2% to 0.83%

2. **Costs of Potential 2012 Goals** – The total projected spending for energy efficiency programs in 2012 is $8,525,205 which is an increase of 32 percent over the projected spending in 2010 of $6,410,385. The costs associated with the goals of the municipal utilities appear adequate to allow the municipal utilities to reach their proposed goals.

3. **Rate Impacts** (Cost Impacts) – Total costs compared to 2008 revenue were estimated by IAMU to be approximately 1.3 percent in 2010 and 1.7 percent in 2012. In other words, the cost to implement the proposed 2012 programs would be 1.7 percent of 2008 revenues. The cost impacts of the projected energy efficiency spending do not appear to be at levels which would pose barriers to implementation.

   The Board used cost impacts expressed as a percentage of revenue because the costs of energy efficiency implemented by each utility will be recovered directly from the utility's customers. Thus the impacts will be proportionate to the spending increases. This does not necessarily mean, however, that customers will see their bills increase 1.7 percent. This is

[1]. The goals of the utilities which developed reports with the help of Missouri River Energy Services range from 0.3% of sales in 2010 to 1.0% of sales in 2014. See the IAMU Joint Report, Appendix 8, p. 6

because a utility may, for example, simultaneously implement cost saving measures in other areas that offset any increases in energy efficiency spending.

4. **Energy Efficiency Programs** – The IAMU has developed a set of common energy efficiency programs for its members across the state. These programs appear to target major areas of efficiency opportunities identified in the assessment of potential studies and will provide increased energy efficiency opportunities for municipal customers.

5. **Achievability and Assessment of Potential** – The IAMU Joint Report and additional reports from MRES and Cedar Falls Utilities describe assessments of potential with extensive detail on both the process and projected levels of energy efficiency potential. The studies, especially the study by the Energy Center of Wisconsin (ECW Study), provide extensive description of technologies, costs and potential, which adequately support the goals chosen by the municipal utilities.

   Cost-Effectiveness – The aggregate or average cost-effectiveness numbers for the proposed goals and programs, stated by IAMU in terms of "Utility Levelized Energy Efficiency Cost," compare favorably with the potential future costs avoided by the implementation of the programs. Levelized costs for electric energy efficiency were estimated to range from 1.0 to 2.4 cents per kWh depending on type of customer and incentive, and from 8 cents per therm to 31 cents per therm for natural gas efficiency, again depending on customer type and incentive levels. Programs are typically considered cost-effective if it would cost less for the utility to offer the program than it would cost to provide the additional electricity or gas that would otherwise be consumed. These levelized costs are well below municipal utilities' estimated avoided costs, indicating the programs are cost-effective.

Recommendations:

1. The Board recommends the municipal utilities and other utilities participating in the IAMU Joint Report continue to implement the programs described in the Joint Report and work diligently toward the goals they have adopted.

2. As required by legislation, the Board recommends the municipal utilities and other utilities participating in the IAMU Joint Report report on their progress with implementation and any changes needed to their programs, by January 1, 2012. The Board will endeavor to work with these utilities and stakeholders to identify effective reporting requirements that are not burdensome to the many smaller utilities.

Introduction

Senate File 2386, enacted in 2008, was an omnibus energy bill that directed gas and electric municipal and rural electric cooperative utilities to assess their maximum potential energy and capacity savings and establish an energy efficiency goal based on that assessment. The utilities were then to establish cost-effective energy efficiency programs designed to help them meet their new energy efficiency goal.

The legislation also established a reporting schedule for the utilities and the Utilities Board:

- July 1, 2008 — Utilities to begin process of determining cost-effective energy efficiency goals
- January 1, 2009 — Utilities to provide progress reports to the Board
- January 1, 2010 — Utilities to submit final reports to the Board
- January 1, 2011 — Board to provide evaluation and summary of the reports to the General Assembly
- January 1, 2012 — Utilities are required to file bi-annual reports identifying their progress in meeting their goals and any updates to their plans

On December 31, 2009, The Iowa Association of Municipal Utilities (IAMU), on behalf of its member utilities filed the Report of Energy Efficiency Goals for Iowa's Municipal Electric and Gas Utilities. The report summarized several assessments of potential, included energy efficiency goals for 136 electric and 51 gas municipal utilities, and described programs and measures to achieve the energy efficiency goals, along with projected cost impacts and cost-effectiveness analysis of the energy efficiency measures.

On May 20, 2010, the IAMU filed an amendment to its original filing in the docket covering this report (EEP-2009-0001) which updated the natural gas goals for Alton Municipal Utilities and the total for all municipal gas utilities. On October 19, 2010, the IAMU filed another amendment containing the projected spending for energy efficiency for the years of 2010, 2011, and 2012 as a percentage of 2008 revenue[2], a table showing the municipal utility levelized energy efficiency cost by sector (residential, commercial and industrial/agricultural); and a description of the Whole Town Audit. On December 6, 2010, the IAMU filed a third amendment providing a detailed explanation of the utilities' goals and clarifying differences between the goals and estimated potential. On December 14, the IAMU provided comments in response to a draft of this report, suggesting some changes in wording to clarify the Board's description of the IAMU Joint Report.

[2] The 2008 Revenue is Sales to Ultimate Customers.

After the utilities filed their Joint Report, the 2008 legislation directed the Board to evaluate the reports submitted by the municipal utilities and the rural electric cooperatives and to submit a report summarizing the evaluation by January 1, 2011. Specifically, the Board's report is to include:

1. The goals established by each of the utilities
2. The projected costs of achieving the goals
3. The potential rate impacts
4. A description of the programs offered and proposed by each utility or group of utilities
5. The report may contain recommendations concerning the achievability of the goals based on the results of the utilities' assessment of potential

The structure of this report is based on these legislative directives. The report also includes appendices 1 through 6. All of the energy efficiency statutes applicable to the non-rate regulated utilities are included in Appendix 1. The other appendices are referenced throughout the report.

1. Municipal Utilities' Energy Efficiency Goals

The municipal utilities participating in the IAMU Joint Report selected their own goals, guided by the assessment of potential done by the Energy Center of Wisconsin (ECW). The members of the Missouri River Energy Services[3] (MRES) based their goals on the integrated resource plan developed by MRES. Other municipal utilities, including Ames, Cedar Falls Utilities, and Waverly Light & Power, provided supplemental studies which informed their goals.

The IAMU Joint Report presented goals for most of the municipals, along with Amana, Farmers Electric Cooperative (Kalona), Allerton Gas, and Consumers Energy (gas). The MRES utilities were not included with those goals; instead the goals for MRES utilities were separately presented in the MRES portion of the Joint Report. Tables showing the goals assembled by IAMU can be found in Appendix 5 of this report and tables showing the MRES goals can be found in Appendix 6 of this report.

The IAMU described the selection of goals by the municipal utilities as follows:

> Goal setting was an iterative process, as some utility governing bodies (city councils or boards of trustees) met only once a month. The IAMU Board of Directors also helped the process by unanimously adopting a recommendation that utilities establish

[3] Missouri River Energy Services (MRES) describes itself as "a not-for-profit municipal power agency serving sixty member municipal utilities in Minnesota, Iowa, and North and South Dakota." Eighteen of these communities are located in western Iowa and sixteen of the eighteen Iowa members of MRES purchase supplemental wholesale power supply from MRES.

goals for 2012 consistent with the findings of the potential assessment and that they commit two percent of their gross revenues to achieve their goals. (IAMU Joint Report, Executive Summary, p. 4.)

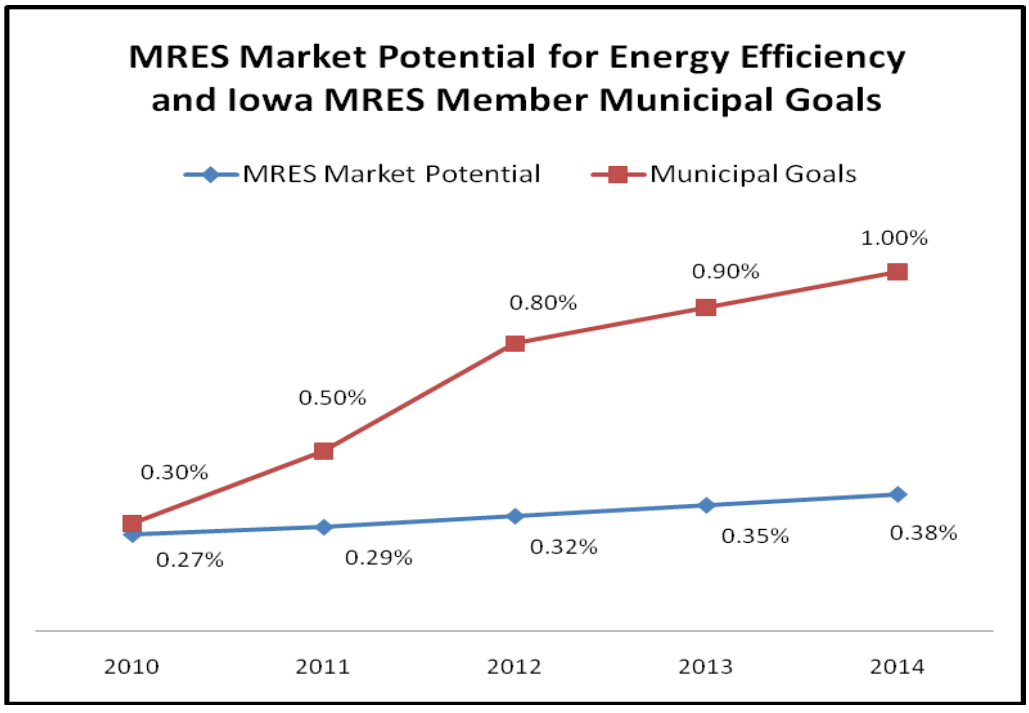
The 2012 goals presented in the IAMU tables (not including MRES utilities or the small non-municipal utilities) are as follows:

- Electricity savings of approximately 0.71 percent of sales in 2010 increasing to 1.09 percent of sales in 2012. This equates to approximately 38,128 megawatt-hours (MWh) in 2010 and about 43,072 MWh in 2012.
- Natural gas savings of approximately 0.41 percent of sales in 2010 increasing to 0.74 percent of sales in 2012. These savings are equal to about 21,831 thousands of cubic feet (MCf) of natural gas in 2010 and 40,487 MCf of natural gas in 2012.

MRES utilities set goals at a level higher than the market potential indicated by the MRES assessment of potential as shown in the figure below. In 2010, the goal for the MRES utilities is 0.3 percent of the average kilowatt-hour (kWh) sold while in 2012 the goal is 0.8 per cent of the average kWh sold. IUB Figure 1also shows the Iowa members were aware of the need to "ramp up" in the early years (2010 and 2011) before they are able to reach the higher goals.

.

IUB Figure 1 - MRES Estimate of Potential and Iowa MRES Municipal Goals



A consensus of the Iowa members of MRES decided to set the goals higher than the market potential because of several factors including: MRES has offered to provide members monetary, program development, and implementation assistance; the Iowa members believe they can overcome many of the identified market barriers through marketing campaigns and a trade ally outreach program; the Iowa members want to challenge themselves to obtain the highest levels of energy efficiency possible; and energy efficiency is a least-cost resource for MRES and its member utilities.

Goals for small, non-municipal utilities, including Amana, Farmers Electric Cooperative (Kalona), Allerton Gas, and Consumers Energy (gas) are shown in IUB Table 1 below.

IUB Table 1 2012 Goals selected by small utilities reporting as part of the IAMU Joint Report				
	Electric Goal		**Natural Gas Goal**	
	MWh	as % of Sales	MCf	as % of Sales
Amana Society Service Co.	181	0.20%	NA	NA
Farmers Electric Cooperative (Kalona)	265	1.10%	NA	NA
Allerton Gas Company	NA	NA	178	0.83%
Consumers Energy Coop (Gas Service)	NA	NA	85	0.20%

In order to aggregate the 2012 goals for all utilities included in the IAMU Joint Report, the data was assembled into IUB Table 2. In 2012, the goal for these utilities is to have electricity energy savings of 1.05 percent of sales and natural gas savings of 0.74 percent of sales.

IUB Table 2 2012 Energy Efficiency Goals				
	Electricity Energy Savings		**Natural Gas Energy Savings**	
	MWh	as % of Sales	MCf	as % of Sales
IAMU Goals	43,072	1.09%	40,487	0.74%
MRES Goals	4,202	0.80%	NA	NA
Muni Total	47,274	Approx. 1.05%	40,487	0.74%
Non-Muni Utility Goals	446	0.2% to 1.1%	263	0.2% to 0.83%

Sources: ECW Study, p. 7 and Table 2 on p. 14. IAMU Report, Appendices 3, 4, 5 and 6.

2. Municipal Utilities' Projected Costs of Achieving the Goals

In its October 19, 2010, filing, the IAMU provided a projection for spending on energy efficiency for each of the utilities included in the IAMU Joint Report.

These spending projections are the costs associated with the utilities' projected energy efficiency goals. Below is IUB Table 3 that summarizes the projected spending by year.

IUB Table 3 Projected Energy Efficiency Spending[4]			
	2010	**2011**	**2012**
Municipal Electric Utilities	$5,523,763	$5,688,143	$7,200,259
Non-Muni Electric Utilities	$38,561	$63,732	$83,391
Municipal Gas Utilities	$839474	$1,075,065	$1,232,099
Non-Muni Gas Utilities	$8,587	$9,284	$9,456
Total	$6,410,385	$6,836,224	$8,525,205

The utilities project an increase in total spending for energy efficiency of $425,839, or 7 percent, from 2010 to 2011; and an increase of $1,688,981, or 25 percent from 2011 to 2012. This represents an overall increase of $2,114,820, or 32 percent from 2010 to 2012.

3. Municipal Utilities' Potential Rate Impacts (Cost Impacts)

The Board is required to report on "potential rate impacts," however, the Board has no jurisdiction over the rates of municipal utilities, and thus a Board report which examines rates of municipal utilities might be viewed by some as an intrusive effort to evaluate the rates of individual municipal utilities. Additionally, an examination of the rate impacts of energy efficiency spending, in isolation from the benefits, may distort the true picture of energy efficiency programs.

The Board used cost impacts expressed as a percentage of revenue because the costs of energy efficiency implemented by each utility will be recovered directly from the utility's customers. Thus the impacts will be proportionate to the spending increases.

The October 19, 2010, IAMU Amendment included separate tables (See Appendix 2) for the electric and gas utilities which show the projected energy efficiency spending by utility and the 2008 revenue. Using the projected spending and 2008 revenue, cost impacts for each utility were calculated. The total cost impacts are shown in the IUB Table 4.

[4] The 2008 revenue is sales to ultimate customers.

IUB Table 4 Projected Energy Efficiency Spending as a Percentage of 2008 Revenue[5]			
	2010	**2011**	**2012**
Municipal Electric Utilities	1.5%	1.5%	1.9%
Small Electric Utilities	0.4%	0.7%	0.9%
Municipal Gas Utilities	0.9%	1.1%	1.3%
Small Gas Utilities	0.3%	0.3%	0.3%
Total	1.3%	1.4%	1.7%

Based on the 2008 revenues and the projected energy efficiency spending, the cost impact in 2010 for all the utilities in the IAMU Joint report is 1.3 percent and is 1.7 percent in 2012.

4. Municipal Utilities' Programs

The IAMU Joint Report described a group of "turn-key" programs that were developed by IAMU for use by members. The IAMU recommended that each utility adopt a set of seven common programs which included:

1. Residential and small commercial Energy Star prescriptive appliance rebate programs for electric and gas appliances
2. Residential and small commercial lighting
3. Residential prescriptive rebates for high-efficiency heating, cooling, and gas water heating
4. Residential audit and weatherization incentives
5. Commercial and industrial prescriptive programs for lighting, motors, variable frequency drive, large heating and cooling systems, water heating, and refrigeration
6. Non-residential custom programs
7. Customer education

These programs were developed by the IAMU and are trademarked as the eco@home™ and eco@work™ sets of programs, or as stated by IAMU: "***eco@home*** and ***eco@work*** identify energy efficiency programs and publications of the members of the Iowa Association of Municipal Utilities." The IAMU Joint Report stated that "unless otherwise specified, all utilities included in this report will use the programs and measures recommended by IAMU…" (IAMU Joint Report, Executive Summary, p. 6)

The IAMU Joint Report noted that there were utilities, or groups of utilities, that had developed energy efficiency programs that are not consistent with the seven programs listed above. Appendix 3 provides a list of the energy efficiency programs offered by each these utilities, or group of utilities.

[5] ibid

The common energy efficiency programs that IAMU has developed for its member appear to target major areas of efficiency opportunities identified in the assessment of potential studies and will provide increased energy efficiency opportunities for the municipal customers throughout the state. The IAMU has committed to continued development of additional energy efficiency programs such as other low-income programs and appliance pickup programs.

5. Achievability, Assessment of Potential, and Cost-Effectiveness

The majority of the utilities included in the IAMU Joint Report participated in an assessment of potential conducted by the ECW. However, the Iowa members of MRES relied on an assessment conducted by PA Consulting Group of Madison, Wisconsin. Additionally, Cedar Falls Utilities provided an Energy Efficiency Plan as a supplemental report. Each of these assessments will be described below.

The ECW assessment of potential study (ECW Study) used an Excel®-based model to screen and evaluate over 500 energy efficiency and demand response measures for residential, commercial, and industrial utility customers. Cost-effectiveness screening of the technologies was done using the Total Resource Cost (TRC) test, which compares the net present value of benefits achieved over the lifetime of the measure with the costs incurred by the program and the participant.

The ECW evaluated technical and economic efficiency potential but focused on estimating “achievable” energy efficiency potential, defined as “the annual savings that could be achieved by utility programs in a given year.” According to the ECW, achievable potential estimates consider cost-effectiveness as well as key time-related and program-related constraints, and are more useful to decision-makers than estimates of technical or economic potential. Two sources were used to help determine achievable potential: a survey of Wisconsin energy efficiency experts (with results modified for Iowa-specific attributes), and surveys of IAMU members.

For 2012, the ECW estimated the energy efficiency achievable under a moderate level of program effort, and for 2018, it projected what could be achieved under an aggressive level of program effort. The ECW also conducted analyses of peak demand reduction potential from dynamic energy pricing; estimated energy efficiency potential from improvements to utility distribution systems; and discussed energy efficiency program models for use in municipal utility service territories. Additionally, the ECW conducted a sensitivity analysis to estimate energy efficiency and demand reduction potential under a carbon cost scenario.

The ECW Study summarized the estimated energy efficiency potential in Figures 1, 2, and 3 shown below. In each of the figures, there are four categories of

energy efficiency potential: technical, economic, 2012 achievable, and 2018 achievable.[6]

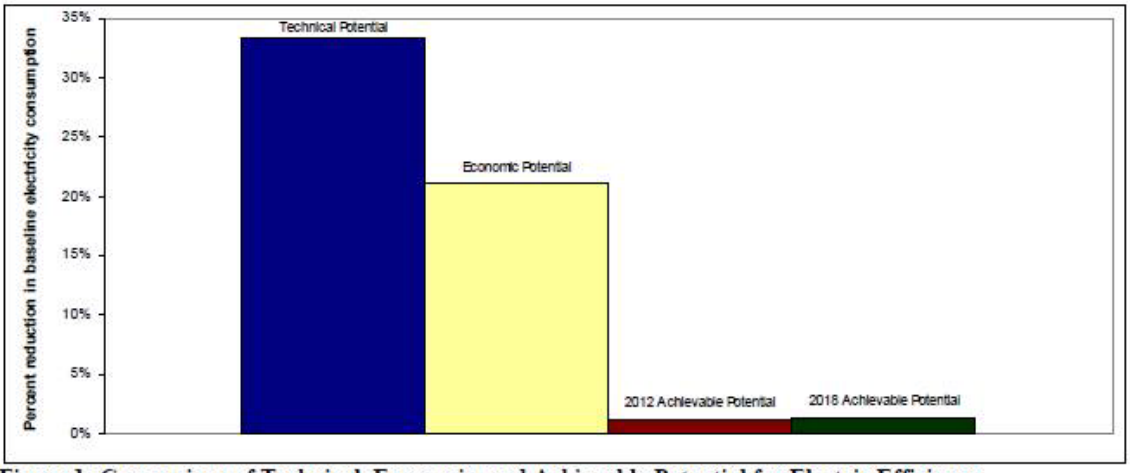


Figure 1: Comparison of Technical, Economic, and Achievable Potential for Electric Efficiency

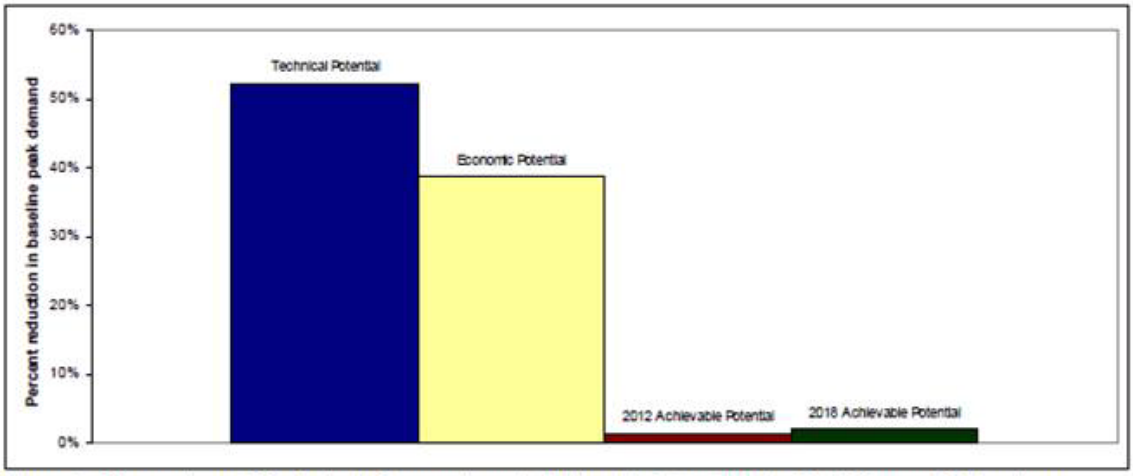


Figure 2: Comparison of Technical, Economic, and Achievable Potential for Peak Demand Reduction

[6] *Technical potential* - all technologically feasible efficiency technologies are deployed immediately, regardless of cost-effectiveness. Equivalent to 33 percent of baseline electricity consumption, 52 percent reduction of peak electricity demand, and 28 percent of natural gas consumption.
Economic potential - assumes immediate deployment of all cost-effective efficiency technologies. Equivalent to 22 percent of baseline electricity consumption, 39 percent reduction of peak electricity demand, and 21 percent of natural gas consumption.
Achievable potential - For 2012, with moderate levels of energy efficiency program investment - equivalent to 1.1 percent of baseline electricity consumption, 1.2 percent of peak electricity demand, and 1.0 percent of natural gas consumption.
Achievable potential - For 2018, under aggressive levels of energy efficiency program investment - equivalent to 1.2 percent of baseline electricity consumption, 1.8 percent reduction of peak electricity demand, and 1.8 percent of natural gas consumption.

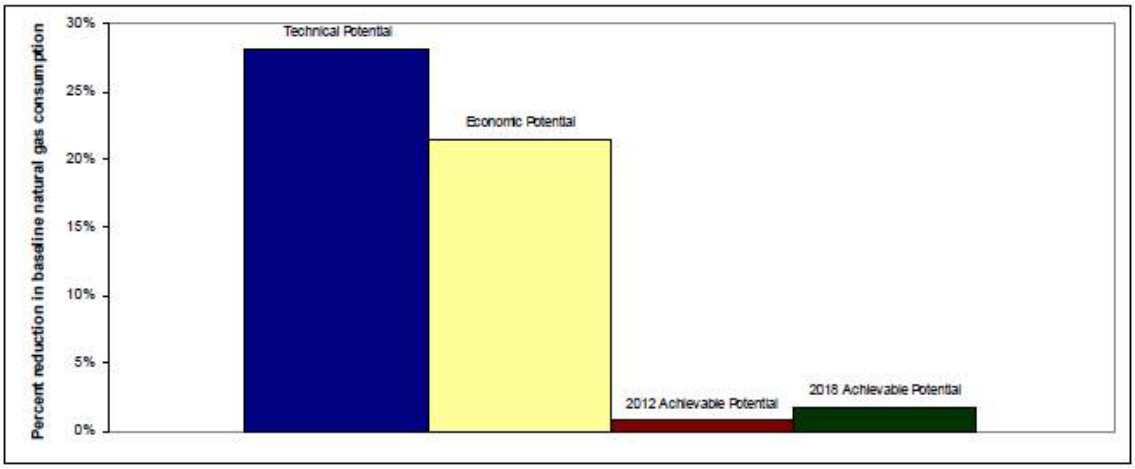


Figure 3: Comparison of Technical, Economic, and Achievable Potential for Natural Gas Efficiency

(Source: Appendix 1 of the IAMU Report, ECW narrative, pp. 7-8)

The ECW report states, "For each sector, energy efficiency potential was allocated to individual utilities by multiplying aggregate savings potential across all participating utilities by each utility's individual share of total sector sales. The same approach was used to allocate program costs by sector for each participating utility (expressed as a percentage of estimated total program costs). This allocation process was conducted for the 2012 achievable potential and program cost estimates only." (ECW study, Appendix F, p. F-1)

The achievable potential by sector can be viewed in ECW Study Table 2 which shows the amount of energy and capacity savings projected by the ECW Study.

ECW Study Table 2 - 2012 and 2018 Achievable Potential by Sector						
	Electricity Savings Potential (Annual GWh)		**Demand Reduction Potential (MW)**		**Natural Gas Savings Potential (1000 therms)**	
	2012	**2018**	**2012**	**2018**	**2012**	**2018**
Residential	28	15	6.4	10	430	760
Commercial	19	29	6.5	9.7	240	380
Industrial	12	25	1.7	3.6	200	400
TOTAL	**59**	**69**	**15**	**23**	**870**	**1,500**

ECW estimates by 2012, annual energy efficiency program investments of between $9.4 million and $13 million would be necessary to achieve the results projected in this analysis.

A wealth of information is provided by the ECW Study. The ECW Study included more than 190 pages of tables showing the energy efficiency measures analyzed in the study. Hundreds of energy efficiency measures were presented in tables which described each measure and provided measure parameters in terms of:

- Base saturation (percent of housing units with measure)
- Energy efficiency saturation in percent
- Base energy use applicable to the measure
- Measure useful life
- Technical savings rate in percent
- Load reduction factor
- Annual impact of aggressive programs in percent
- Total Resource Cost Ratio, and
- Various other characteristics

The ECW Study identified electric lighting as both a key energy efficiency opportunity and a challenge to be faced by utility-sponsored energy efficiency programs, which must try to "stay ahead" of changes in building codes and federal appliance standards. The ECW Study stated that its data showed:

> …a substantial decrease in residential electricity savings potential from 2012 to 2018, and a substantial increase in natural gas savings potential. These trends are primarily the result of new federal efficiency standards for light bulbs which come into effect over the period. Once high efficiency bulbs become mandated by law they are no longer within the purview of energy efficiency programs… The trend for residential natural gas potential is the flip side of the same coin, as there is a significant heating penalty associated with installation of energy-efficient lighting. (IAMU Report, ECW Study, Appendix 2, p. 14)

The importance of lighting to energy efficiency efforts is substantial. In the ECW Study, lighting amounted to 24,000 of the 29,000 MWh of electric energy potential savings for the residential sector in 2012. Lighting also amounted to 7,500 MWh out of 19,000 MWh in potential savings for commercial customers, and about 3,000 MWh out of 12,000 MWh in potential savings for industrial customers, in 2012. (ECW Study, p. 16-19)

The ECW Study suggests that for gas energy efficiency, the key technology is space heating equipment for residential and commercial customers. Some industrial gas savings may be possible in the areas of process heating and steam systems, but the small presence of industrial customers in municipal systems limits the potential.

The ECW Study also included Figures 11 through19 that show energy savings potential by end use and Figures 20 through 28 which identify the top energy saving measures. These figures are shown in Appendix 4 of this report.

While most of the utilities included in the IAMU Joint Report participated in the ECW Study, the members of MRES chose to conduct a separate assessment of potential. In 2006, MRES conducted a study of energy efficiency potential

(Potential Study) to consider demand-side management (DSM) already being done by its members, and to determine the remaining available potential for new DSM measures. In 2008, MRES hired PA Consulting Group of Madison, Wisconsin to update the previous Potential Study and determine the remaining energy efficiency potential, segmented by state. This study was intended to fulfill the needs of the Iowa MRES members under Iowa Code 476.6 "16"(c).

The MRES Report, included in the IAMU Joint Report, provided a description of measures similar to the analyses in the ECW Study, but with fewer analytical items. It focused on measure life, kW and kWh savings, incentive levels, and replacement cost. As described in the MRES Report, the MRES Potential Study reviewed 84 types of residential, commercial, and industrial energy efficiency measures, including all measures that were included in the MRES 2006 Potential Study, plus additional measures from the Minnesota “deemed savings database,” developed by the Minnesota Office of Energy Security. Those measures included technologies in the areas of appliances, cooling and heating, lighting, water heating, electric cooking, plug loads, process equipment, refrigeration, roofing, envelope measures, direct load control, and other miscellaneous measures. The MRES Potential Study examined the potential energy efficieny savings over a 10-year period.

The results of the MRES Potential Study were stated in terms of MWh and compared to MWh sales in 2007 for each of the MRES utilities. PA Consulting estimated that each utility could reach a level of savings of about 0.63 percent in year ten, from an average starting level of about 0.27 percent in 2010. The estimated potential in year 2012 in the MRES Potential Study appeared to be about 0.32 percent of sales.

Cedar Falls Utilities (CFU) provided a Supplemental Report which amounted to an Energy Efficiency Plan for CFU. CFU describes its study of potential as:

> CFU used a study commissioned by the Iowa Association of Municipal Utilities (IAMU) to assess technical and economic energy savings potential for CFU and to attain general and initial estimates of achievable potential for CFU. CFU then used a variety of local resources to fine tune these initial estimates of achievable potential into more specific estimates of achievable potential given CFU’s specific service territory and past program offerings.

IUB Table 5 shows a comparison between the potential for savings by CFU found in the ECW Study and the estimates provided by CFU in the Supplemental Information.

IUB Table 5 Comparison of ECW Study and CFU Estimates for Achievable Potential									
	MWh			**kW**			**Therms**		
ECW 2012 estimate for CFU	Res	Com	Indus	Res	Com	Indus	Res	Com	Indus
	2,867	2,419	431	652	830	62	102,561	48,940	17,148
ECW 2012 totals	5,717			1,544			168,649		
CFU 2012 Achievable Estimate	Res	Com	Indus	Res	Com	Indus	Res	Com	Indus
	2,020	2,500	560	NA	NA	NA	50,516	49,418	6,663
CFU 2012 Totals	5,080			NA			106,597		

The comparison of the CFU Supplemental Information to the ECW Study shows there is little difference in the estimated potential for 2012 MWh savings, but some differences for the estimated natural gas therm savings potential. However, the ECW Study did not purport to be an exact examination of each municipal utility's specific energy efficiency potential. Considering the differences among utilities and the scope of the ECW Study, the results are remarkably similar to the Cedar Falls Supplemental Information.

The IAMU and ECW provided one analysis of potential accompanied by a separate analysis by MRES. The studies used two different sets of years; however, the two reports had several years in common, including 2012. Thus, for purposes of summing energy efficiency potential, 2012 is the key year. The ECW Study, as summarized by IAMU, provided the following estimates:

- 2012 potential electric savings ranged from 0.83 percent (Muscatine) to 1.7 percent (Orient) and averaged 1.1 percent;
- 2012 potential municipal gas savings ranged from 0.71 percent (Sabula) to 0.8 percent (Wellman) and averaged 0.74 percent;
- 2012 potential peak demand savings amounted to 15 MW.

MRES estimated that each utility could reach a level of savings of about 0.63 percent by the end of ten years, with the estimated potential in year 2012 to be about 0.32 percent of sales

The statute requiring reports on goals by municipal utilities did not specifically require information on cost-effectiveness of the municipal utility goals and programs. However, the statute generally requires that utility plans be cost-effective, and some benefit-cost analysis was provided by the IAMU in its amendment filed October 19, 2010. The IAMU provided the following description of its analysis:

IAMU has calculated the levelized cost of achieving the 2012 achievable potential levels of energy efficiency described in the assessment of potential, contained in Appendices 1 and 2 of Docket EEP-2009-0001. The levelized cost for each sector, residential, commercial, and industrial and agricultural are shown in Table 5. The levelized cost was calculated as the cost of the efficiency measures to the utilities, incentive and administrative costs, divided by the life time energy savings of the measures. The levelized costs were calculated at two incentive levels, the low end assumes that the utility incentives pay 50 percent of the incremental cost of the energy efficiency measures, and the high end assumes the utility incentives pay 75 percent of the incremental cost of the energy efficiency measures. The incremental costs of the efficiency measures and administrative costs for calculating the levelized cost are the same as those assumed in the assessment of potential model.

The IAMU summarized its levelized cost analysis in IAMU Table 5:

IAMU Table 5 Municipal Utility Levelized Energy Efficiency Cost				
	Electric		Gas	
	Incentive covers 50% of incremental Cost ($/kWh)	Incentive covers 75% of incremental Cost ($/kWh)	Incentive covers 50% of incremental Cost ($/Therm)	Incentive covers 75% of incremental Cost ($/Therm)
Residential	0.012	0.015	0.22	0.31
Commercial	0.017	0.024	0.09	0.11
Industrial & Agricultural	0.010	0.013	0.08	0.11

In order to determine cost-effectiveness using levelized costs the costs must be compared to utility avoided costs. The levelized costs estimated by IAMU compare favorably to the avoided costs used as part of the ECW Study as shown in ECW Table A-1.

ECW Table A-1 Avoided Costs				
	Summer		Winter	
	Peak	Off-Peak	Peak	Off-Peak
Electricity ($/kWh)	$0.069	$0.032	$0.064	$0.035
Natural Gas ($/therm)	$0.89		$1.00	

These avoided costs are much greater than the levelized costs of the goals and programs estimated by the utilities in the IAMU Joint Report, suggesting the programs will return net benefits to the utilities and their customers.

6. IUB Conclusions and Recommendations

Conclusions:

1. **Goals** – The goals adopted by the municipal utilities increase electricity savings from 0.71 percent of sales in 2010 to 1.09 percent of sales in 2012. If these goals are met, the utilities and their customers will save energy and peak capacity.

2. **Costs of Potential Goals** – The total projected spending for energy efficiency programs in 2012 is $8,525,205 which is an increase of 32 percent over the projected spending in 2010 of $6,410,385. The costs associated with the goals of the municipal utilities appear adequate to allow the municipal utilities to reach their proposed goals.

3. **Rate Impacts (Cost Impacts)** – Total costs compared to 2008 revenue were estimated by IAMU to be approximately 1.3 percent in 2010 and 1.7 percent in 2012. The cost impacts of the projected energy efficiency spending do not appear to be at levels which would pose barriers to implementation.

   The Board used cost impacts expressed as a percentage of revenue because the costs of energy efficiency implemented by each utility will be recovered directly from the utility's customers. Thus the impacts will be proportionate to the spending increases.

4. **Energy Efficiency Programs** – The common energy efficiency programs that IAMU has developed for its members appear to target major areas of efficiency opportunities identified in the assessment of potential studies and will provide increased energy efficiency opportunities for the municipal customers throughout the state.

5. **Achievability and Assessment of Potential** – The IAMU Joint Report and additional reports from MRES and Cedar Falls Utilities describe assessments of potential with extensive detail on both the process and projected levels of energy efficiency potential. The studies, especially the study by the Energy Center of Wisconsin (ECW Study), provide extensive description of technologies, costs and potential, which adequately support the goals chosen by the municipal utilities.

   Cost-Effectiveness – The aggregate or average cost-effectiveness numbers for the proposed goals and programs, stated by IAMU in terms of "Utility Levelized Energy Efficiency Cost," compare favorably with the potential future costs avoided by the implementation of the programs. Levelized costs for electric energy efficiency were estimated to range from 1.0 to 2.4 cents per kWh depending on type of customer and incentive,

and from 8 cents per therm to 31 cents per therm for natural gas efficiency, again depending on customer type and incentive levels.

Recommendations:

1. The Board recommends the municipal utilities and other utilities participating in the IAMU Joint Report continue to implement the programs described in the Joint Report and work diligently toward the goals they have adopted.

2. The Board recommends the municipal utilities and other utilities participating in the IAMU Joint Report report on their progress with implementation and any changes needed to their programs by January 1, 2012. The Board will endeavor to work with these utilities and stakeholders to identify effective reporting requirements that are not burdensome to the many smaller utilities.

476.1A Applicability of authority - certain electric utilities

1. Electric public utilities having fewer than ten thousand customers and electric cooperative corporations and associations are not subject to the rate regulation authority of the board. Such utilities are subject to all other regulation and enforcement activities of the board, including:

   e. Assessment of fees for the support of the Iowa energy center created in section 266.39C and the center for global and regional environmental research established by the state board of regents.

   g. Filing energy efficiency plans and energy efficiency results with the board. The energy efficiency plans as a whole shall be cost-effective. The board may permit these utilities to file joint plans.

      The board may waive all or part of the energy efficiency filing and review requirements for electric cooperative corporations and associations and electric public utilities which demonstrate superior results with existing energy efficiency efforts.

476.1B Applicability of authority - municipally owned utilities

   k. Assessment of fees for the support of the Iowa energy center created in section 266.39C and the center for global and regional environmental research created by the state board of regents.

   l. Filing energy efficiency plans and energy efficiency results with the board. The energy efficiency plans as a whole shall be cost-effective. The board may permit these utilities to file joint plans.

2. The board may waive all or part of the energy efficiency filing and review requirements for municipally owned utilities which demonstrate superior results with existing energy efficiency efforts.

Iowa Code §476.6"14". Energy efficiency plans. Electric and gas public utilities shall offer energy efficiency programs to their customers through energy efficiency plans. An energy efficiency plan as a whole shall be cost-effective. In determining the cost-effectiveness of an energy efficiency plan, the board shall apply the societal test, utility cost test, rate-payer impact test, and participant test. Energy efficiency programs for qualified low-income persons and for tree planting programs, educational programs, and assessments of consumers' needs for information to make effective choices regarding energy use and energy efficiency need not be cost-effective and shall not be considered in determining cost-effectiveness of plans as a whole. The energy efficiency programs in the plans

may be provided by the utility or by a contractor or agent of the utility. Programs offered pursuant to this subsection by gas and electric utilities that are required to be rate-regulated shall require board approval.

Iowa Code §476.6"16"c(1). Gas and electric utilities that are not required to be rate-regulated under this chapter shall assess maximum potential energy and capacity savings available from actual and projected customer usage through cost-effective energy efficiency measures and programs, taking into consideration the utility service area's historic energy load, projected demand, customer base, and other relevant factors. Each utility shall establish an energy efficiency goal based upon this assessment of potential and shall establish cost-effective energy efficiency programs designed to meet the energy efficiency goal. Separate goals may be established for various customer groupings.

Iowa Code §476.6"16"c(2). Energy efficiency programs shall include efficiency improvements to a utility infrastructure and system and activities conducted by a utility intended to enable or encourage customers to increase the amount of heat, light, cooling, motive power, or other forms of work performed per unit of energy used. In the case of a municipal utility, for purposes of this paragraph, other utilities and departments of the municipal utility shall be considered customers to the same extent that such utilities and departments would be considered customers if served by an electric or gas utility that is not a municipal utility. Energy efficiency programs include activities which lessen the amount of heating, cooling, or other forms of work which must be performed, including but not limited to energy studies or audits, general information, financial assistance, direct rebates to customers or vendors of energy-efficient products, research projects, direct installation by the utility of energy-efficient equipment, direct and indirect load control, time-of-use rates, tree planting programs, educational programs, and hot water insulation distribution programs.

Iowa Code §476.6"16"c(3). Each utility shall commence the process of determining its cost-effective energy efficiency goal on or before July 1, 2008, shall provide a progress report to the board on or before January 1, 2009, and complete the process and submit a final report to the board on or before January 1, 2010. The report shall include the utility's cost-effective energy efficiency goal, and for each measure utilized by the utility in meeting the goal, the measure's description, projected costs, and the analysis of its cost-effectiveness. Each utility or group of utilities shall evaluate cost-effectiveness using the cost-effectiveness tests in accordance with subsection 14 of this section. Individual utilities or groups of utilities may collaborate in conducting the studies required hereunder and may file a joint report or reports with the board. However, the board may require individual information from any utility, even if it participates in a joint report.

Iowa Code §476.6"16"c(4). On January 1 of each even-numbered year, commencing January 1, 2012, gas and electric utilities that are not required to be

rate-regulated shall file a report with the board identifying their progress in meeting the energy efficiency goal and any updates or amendments to their energy efficiency plans and goals. Filings made pursuant to this paragraph "c" shall be deemed to meet the filing requirements of section 476.1A, subsection 1, paragraph "g", and section 476.1B, subsection 1, paragraph "l".

Iowa Code §476.6"16"d(2). The board shall evaluate the reports required to be filed pursuant to paragraph "c" by gas and electric utilities that are not required to be rate-regulated, and shall submit a report summarizing the evaluation to the general assembly on or before January 1, 2011.

Iowa Code §476.6"16"d(3). The reports submitted by the board to the general assembly pursuant to this paragraph "d" shall include the goals established by each of the utilities. The reports shall also include the projected costs of achieving the goals, potential rate impacts, and a description of the programs offered and proposed by each utility or group of utilities, and may take into account differences in system characteristics, including but not limited to sales to various customer classes, age of facilities of new large customers, and heating fuel type. The reports may contain recommendations concerning the achievability of certain intermediate and long-term energy efficiency goals based upon the results of the assessments submitted by the utilities.

Municipal Electric Utility Projected Spending Levels on Energy Efficiency.

Municipal Utility	2008 Revenue from Sales to Ultimate Customers	Projected Energy Efficiency Spending			Projected Spending as Percentage of 2008 Revenue from Sales to Ultimate Customers		
		2010	2011	2012	2010	2011	2012
Afton	$630,799	$ 3,928	$ 4,410	$ 8,035	0.6%	0.7%	1.3%
Akron	$1,179,961	$ 57,979	$ 70,780	$ 74,590	4.9%	6.0%	6.3%
Algona	$6,486,546	$ 249,688	$ 214,613	$ 142,191	3.8%	3.3%	2.2%
Alta	$1,079,496	$ 43,292	$ 29,397	$ 98,512	4.0%	2.7%	9.1%
Alta Vista	$150,578	$ 1,037	$ 1,851	$ 2,630	0.7%	1.2%	1.7%
Alton	$738,999	$ 4,782	$ 7,914	$ 12,701	0.6%	1.1%	1.7%
Ames	$46,689,947	$ 800,000	$ 800,000	$ 1,000,000	1.7%	1.7%	2.1%
Anita	$775,178	$ 5,680	$ 8,374	$ 12,724	0.7%	1.1%	1.6%
Anthon	$342,802	$ 7,582	$ 8,284	$ 10,918	2.2%	2.4%	3.2%
Aplington	$634,515	$ 6,755	$ 8,933	$ 12,133	1.1%	1.4%	1.9%
Atlantic	$5,798,285	$ 97,377	$ 82,355	$ 110,881	1.7%	1.4%	1.9%
Auburn	$206,000	$ 1,000	$ 1,474	$ 2,316	0.5%	0.7%	1.1%
Aurelia	$564,817	$ 4,533	$ 8,711	$ 11,418	0.8%	1.5%	2.0%
Bancroft	$1,056,963	$ 15,486	$ 15,910	$ 17,029	1.5%	1.5%	1.6%
Bellevue	$1,664,651	$ 15,530	$ 23,571	$ 30,697	0.9%	1.4%	1.8%
Bloomfield	$2,459,445	$ 19,588	$ 27,952	$ 38,933	0.8%	1.1%	1.6%
Breda	$338,837	$ 2,859	$ 4,221	$ 6,221	0.8%	1.2%	1.8%
Brooklyn	$1,171,251	$ 9,198	$ 13,710	$ 19,278	0.8%	1.2%	1.6%
Buffalo	$388,058	$ 1,743	$ 2,568	$ 5,989	0.4%	0.7%	1.5%
Burt	$362,757	$ 2,937	$ 3,368	$ 6,551	0.8%	0.9%	1.8%
Callender	$199,239	$ 2,489	$ 2,789	$ 3,203	1.2%	1.4%	1.6%
Carlisle	$1,416,235	$ 14,846	$ 21,728	$ 29,054	1.0%	1.5%	2.1%
Cascade	$1,503,063	$ 13,161	$ 17,526	$ 24,004	0.9%	1.2%	1.6%
Cedar Falls	$30,469,149	$ 910,550	$ 956,078	$ 1,003,881	3.0%	3.1%	3.3%

Municipal Electric Utility Projected Spending Levels on Energy Efficiency.

Municipal Utility	2008 Revenue from Sales to Ultimate Customers	Projected Energy Efficiency Spending			Projected Spending as Percentage of 2008 Revenue from Sales to Ultimate Customers		
		2010	2011	2012	2010	2011	2012
Coggon	$372,121	$ 1,645	$ 2,440	$ 4,008	0.4%	0.7%	1.1%
Coon Rapids	$1,450,064	$ 14,507	$ 18,745	$ 24,622	1.0%	1.3%	1.7%
Corning	$1,413,841	$ 15,875	$ 20,339	$ 29,951	1.1%	1.4%	2.1%
Corwith	$287,780	$ 1,838	$ 2,109	$ 2,999	0.6%	0.7%	1.0%
Danville	$581,964	$ 2,578	$ 4,471	$ 9,015	0.4%	0.8%	1.5%
Dayton	$571,475	2500	$ 3,732	$ 7,556	0.4%	0.7%	1.3%
Denison	$7,460,421	$ 65,725	$ 108,765	$ 174,558	0.9%	1.5%	2.3%
Denver	$996,960	$ 7,953	$ 12,140	$ 15,597	0.8%	1.2%	1.6%
Dike	$538,901	$ 3,171	$ 3,281	$ 5,163	0.6%	0.6%	1.0%
Durant	$1,627,975	$ 12,272	$ 16,945	$ 23,175	0.8%	1.0%	1.4%
Dysart	$1,003,076	$ 4,840	$ 5,536	$ 9,583	0.5%	0.6%	1.0%
Earlville	$478,902	$ 4,270	$ 6,401	$ 9,963	0.9%	1.3%	2.1%
Eldridge	$4,117,075	$ 22,781	$ 29,942	$ 43,912	0.6%	0.7%	1.1%
Ellsworth	$444,437	$ 3,267	$ 4,594	$ 7,125	0.7%	1.0%	1.6%
Estherville	$5,075,690	$ 45,024	$ 59,235	$ 80,826	0.9%	1.2%	1.6%
Fairbank	$642,342	$ 7,501	$ 8,962	$ 11,194	1.2%	1.4%	1.7%
Farnhamville	$437,557	$ 2,936	$ 4,457	$ 6,903	0.7%	1.0%	1.6%
Fonda	$369,324	$ 3,043	$ 4,489	$ 6,632	0.8%	1.2%	1.8%
Fontanelle	$484,390	$ 8,801	$ 11,912	$ 17,248	1.8%	2.5%	3.6%
Forest City	$3,914,002	$ 20,690	$ 32,901	$ 45,936	0.5%	0.8%	1.2%
Fredericksburg	$1,330,111	$ 14,054	$ 17,593	$ 23,125	1.1%	1.3%	1.7%
Glidden	$713,742	$ 9,171	$ 13,242	$ 15,803	1.3%	1.9%	2.2%
Gowrie	$704,218	$ 6,473	$ 10,629	$ 11,820	0.9%	1.5%	1.7%
Graettinger	$645,650	$ 14,092	$ 14,503	$ 18,884	2.2%	2.2%	2.9%
Grafton	$147,221	$ 2,500	$ 3,104	$ 3,482	1.7%	2.1%	2.4%
Grand Junction	$569,975	$ 2,261	$ 3,933	$ 6,139	0.4%	0.7%	1.1%
Greenfield	$3,293,182	$ 23,724	$ 30,190	$ 39,814	0.7%	0.9%	1.2%
Grundy Center	$2,417,554	$ 20,243	$ 39,929	$ 66,216	0.8%	1.7%	2.7%
Guttenberg	$1,670,001	$ 22,613	$ 27,096	$ 34,477	1.4%	1.6%	2.1%
Harlan	$5,134,424	$ 50,000	$ 63,700	$ 75,880	1.0%	1.2%	1.5%
Hartley	$1,311,095	$ 8,049	$ 13,321	$ 21,378	0.6%	1.0%	1.6%
Hawarden	$2,157,754	$ 12,885	$ 21,323	$ 34,221	0.6%	1.0%	1.6%
Hinton	$556,347	$ 7,101	$ 9,143	$ 14,945	1.3%	1.6%	2.7%
Hopkinton	$433,680	$ 1,953	$ 3,575	$ 5,238	0.5%	0.8%	1.2%
Hudson	$1,195,844	$ 8,196	$ 10,939	$ 17,884	0.7%	0.9%	1.5%
Independence	$6,495,835	$ 50,534	$ 59,909	$ 83,222	0.8%	0.9%	1.3%
Indianola	$7,926,793	$ 87,111	$ 115,424	$ 127,638	1.1%	1.5%	1.6%

Municipal Electric Utility Projected Spending Levels on Energy Efficiency.

Municipal Utility	2008 Revenue from Sales to Ultimate Customers	Projected Energy Efficiency Spending			Projected Spending as Percentage of 2008 Revenue from Sales to Ultimate Customers		
		2010	2011	2012	2010	2011	2012
Keosauqua	$1,068,926	$ 12,073	$ 11,315	$ 19,082	1.1%	1.1%	1.8%
Kimballton	$168,906	$ 1,036	$ 1,714	$ 2,751	0.6%	1.0%	1.6%
La Porte City	$1,359,143	$ 6,959	$ 9,651	$ 15,911	0.5%	0.7%	1.2%
Lake Mills	$2,656,571	$ 27,450	$ 39,336	$ 43,075	1.0%	1.5%	1.6%
Lake Park	$848,132	$ 4,913	$ 8,131	$ 13,049	0.6%	1.0%	1.5%
Lake View	$1,418,363	$ 13,148	$ 17,660	$ 23,617	0.9%	1.2%	1.7%
Lamoni	$1,919,710	$ 11,510	$ 15,282	$ 23,177	0.6%	0.8%	1.2%
Larchwood	$564,454	$ 3,999	$ 6,329	$ 9,410	0.7%	1.1%	1.7%
Laurens	$1,580,672	$ 31,048	$ 31,608	$ 46,458	2.0%	2.0%	2.9%
Lawler	$282,113	$ 3,544	$ 4,074	$ 5,345	1.3%	1.4%	1.9%
Lehigh	$201,261	$ 1,018	$ 1,270	$ 1,736	0.5%	0.6%	0.9%
Lenox	$1,193,890	$ 13,906	$ 18,120	$ 24,253	1.2%	1.5%	2.0%
Livermore	$323,565	$ 6,758	$ 1,807	$ 1,906	2.1%	0.6%	0.6%
Long Grove	$323,814	$ 2,891	$ 3,040	$ 4,249	0.9%	0.9%	1.3%
Manilla	$601,110	$ 3,196	$ 5,290	$ 8,490	0.5%	0.9%	1.4%
Manning	$1,701,269	$ 23,522	$ 28,773	$ 36,103	1.4%	1.7%	2.1%
Mapleton	$951,681	$ 12,628	$ 16,205	$ 21,865	1.3%	1.7%	2.3%
Maquoketa	$7,461,262	$ 59,408	$ 76,311	$ 117,086	0.8%	1.0%	1.6%
Marathon	$165,054	$ 4,423	$ 5,868	$ 7,884	2.7%	3.6%	4.8%
McGregor	$737,966	$ 4,174	$ 5,627	$ 6,952	0.6%	0.8%	0.9%
Milford	$2,231,838	$ 166,572	$ 40,654	$ 40,654	7.5%	1.8%	1.8%
Montezuma	$2,784,084	$ 13,470	$ 16,735	$ 21,696	0.5%	0.6%	0.8%
Mount Pleasant	$6,981,791	$ 43,948	$ 70,418	$ 94,746	0.6%	1.0%	1.4%
Muscatine	$43,057,101	$ 897,606	$ 499,780	$ 645,005	2.1%	1.2%	1.5%
Neola	$296,997	$ 2,912	$ 3,899	$ 5,794	1.0%	1.3%	2.0%
New Hampton	$3,157,144	$ 41,784	$ 46,243	$ 68,731	1.3%	1.5%	2.2%
New London	$1,471,512	$ 10,354	$ 12,766	$ 15,478	0.7%	0.9%	1.1%
Ogden	$1,430,934	$ 14,583	$ 14,583	$ 18,164	1.0%	1.0%	1.3%
Onawa	$1,720,851	$ 22,385	$ 29,534	$ 40,817	1.3%	1.7%	2.4%
Orange City	$6,010,532	$ 40,821	$ 67,553	$ 108,416	0.7%	1.1%	1.8%
Orient	$225,082	$ 2,030	$ 2,586	$ 3,880	0.9%	1.1%	1.7%
Osage	$4,154,083	$ 37,474	$ 47,858	$ 55,437	0.9%	1.2%	1.3%
Panora	$1,192,706	$ 10,022	$ 14,592	$ 19,265	0.8%	1.2%	1.6%
Paton	$190,879	$ 1,735	$ 2,090	$ 2,650	0.9%	1.1%	1.4%
Paullina	$938,117	$ 4,393	$ 7,269	$ 11,666	0.5%	0.8%	1.2%
Pella	$16,586,412	$ 87,459	$ 112,352	$ 137,370	0.5%	0.7%	0.8%
Pocahontas	$1,406,717	$ 24,113	$ 24,399	$ 25,180	1.7%	1.7%	1.8%

Municipal Electric Utility Projected Spending Levels on Energy Efficiency.

Municipal Utility	2008 Revenue from Sales to Ultimate Customers	Projected Energy Efficiency Spending			Projected Spending as Percentage of 2008 Revenue from Sales to Ultimate Customers		
		2010	2011	2012	2010	2011	2012
Preston	$899,927	$ 8,230	$ 13,110	$ 16,393	0.9%	1.5%	1.8%
Primghar	$785,847	$ 3,843	$ 6,359	$ 10,206	0.5%	0.8%	1.3%
Readlyn	$447,104	$ 6,077	$ 6,822	$ 8,642	1.4%	1.5%	1.9%
Remsen	$997,394	$ 7,047	$ 11,663	$ 18,717	0.7%	1.2%	1.9%
Renwick	$323,390	$ 1,231	$ 1,720	$ 2,706	0.4%	0.5%	0.8%
Rock Rapids	$1,597,178	$ 12,703	$ 21,022	$ 33,739	0.8%	1.3%	2.1%
Rockford	$690,199	$ 4,654	$ 6,199	$ 9,659	0.7%	0.9%	1.4%
Sabula	$428,963	$ 2,149	$ 3,403	$ 6,661	0.5%	0.8%	1.6%
Sanborn	$1,610,241	$ 9,222	$ 15,261	$ 24,493	0.6%	0.9%	1.5%
Sergeant Bluff	$2,350,827	$ 29,363	$ 43,824	$ 57,923	1.2%	1.9%	2.5%
Shelby	$412,897	$ 2,156	$ 3,568	$ 5,726	0.5%	0.9%	1.4%
Sibley	$2,428,156	$ 17,649	$ 31,273	$ 37,242	0.7%	1.3%	1.5%
Sioux Center	$7,043,738	$ 47,655	$ 78,863	$ 126,568	0.7%	1.1%	1.8%
Spencer	$9,031,561	$ 285,300	$ 322,059	$ 487,988	3.2%	3.6%	5.4%
Stanhope	$280,082	$ 3,255	$ 2,147	$ 2,193	1.2%	0.8%	0.8%
Stanton	$552,979	$ 4,567	$ 6,736	$ 9,335	0.8%	1.2%	1.7%
State Center	$1,590,157	$ 9,904	$ 13,453	$ 17,177	0.6%	0.8%	1.1%
Story City	$4,257,732	$ 36,967	$ 37,873	$ 44,018	0.9%	0.9%	1.0%
Stratford	$596,111	$ 7,497	$ 7,417	$ 9,536	1.3%	1.2%	1.6%
Point	$858,628	$ 16,098	$ 15,330	$ 17,511	1.9%	1.8%	2.0%
Stuart	$1,293,385	$ 12,119	$ 14,608	$ 21,268	0.9%	1.1%	1.6%
Sumner	$1,372,026	$ 17,208	$ 38,816	$ 20,546	1.3%	2.8%	1.5%
Tipton	$3,061,380	$ 23,285	$ 33,702	$ 47,955	0.8%	1.1%	1.6%
Traer	$1,738,694	$ 11,033	$ 18,020	$ 32,638	0.6%	1.0%	1.9%
Villisca	$730,191	$ 12,013	$ 15,230	$ 15,513	1.6%	2.1%	2.1%
Vinton	$2,951,636	$ 22,676	$ 25,017	$ 43,895	0.8%	0.8%	1.5%
Wall Lake	$745,917	$ 5,349	$ 8,553	$ 9,278	0.7%	1.1%	1.2%
Waverly	$11,466,065	$ 197,973	$ 203,078	$ 208,459	1.7%	1.8%	1.8%
Webster City	$11,372,289	$ 58,863	$ 81,322	$ 111,204	0.5%	0.7%	1.0%
West Bend	$1,070,817	$ 11,680	$ 13,540	$ 11,889	1.1%	1.3%	1.1%
West Liberty	$3,952,367	$ 10,597	$ 12,632	$ 23,900	0.3%	0.3%	0.6%
West Point	$1,345,584	$ 11,768	$ 14,135	$ 20,622	0.9%	1.1%	1.5%
Westfield	$75,696	$ 790	$ 939	$ 1,468	1.0%	1.2%	1.9%

The municipal utility listed as "Point" in the above table should be "Strawberry Point."

Municipal Electric Utility Projected Spending Levels on Energy Efficiency.

Municipal Utility	2008 Revenue from Sales to Ultimate Customers	Projected Energy Efficiency Spending			Projected Spending as Percentage of 2008 Revenue from Sales to Ultimate Customers		
		2010	2011	2012	2010	2011	2012
Whittemore	$380,743	$ 1,408	$ 1,731	$ 4,353	0.4%	0.5%	1.1%
Wilton	$2,124,655	$ 14,764	$ 22,011	$ 29,294	0.7%	1.0%	1.4%
Winterset	$3,824,008	$ 36,029	$ 47,960	$ 64,328	0.9%	1.3%	1.7%
Woodbine	$1,054,318	$ 6,588	$ 10,903	$ 17,498	0.6%	1.0%	1.7%
Woolstock	$221,446	$ 593	$ 1,658	$ 2,350	0.3%	0.7%	1.1%
Total	$380,608,264	$5,523,763	$5,688,143	$7,200,259	1.5%	1.5%	1.9%

Non-Municipal Electric Utility Projected Spending Levels on Energy Efficiency.

Utility	2008 Revenue from Sales to Ultimate Customers	Projected Energy Efficiency Spending			Projected Spending as Percentage of 2008 Revenue from Sales to Ultimate Customers		
		2010	2011	2012	2010	2011	2012
Amana Society Service Co.	$7,446,227	$ 8,232	$ 9,233	$ 21,253	0.1%	0.1%	0.3%
Farmers Electric Cooperative (Kalona)	$2,141,464	$ 33,329	$ 54,499	$ 62,138	1.6%	2.5%	2.9%

Municipal Gas Utility Projected Spending Levels on Energy Efficiency.

Municipal Utility	2008 Revenue from Sales to Ultimate Customers	Projected Energy Efficiency Spending			Projected Spending as Percentage of 2008 Revenue from Sales to Ultimate Customers		
		2010	2011	2012	2010	2011	2012
Alton*	N/A	$ 3,892	$ 7,364	$ 10,747	N/A	N/A	N/A
Bedford	$842,193	$ 7,169	$ 11,378	$ 11,703	0.9%	1.4%	1.4%
Bloomfield	$1,838,527	$ 11,786	$ 17,285	$ 20,386	0.6%	0.9%	1.1%
Brighton	$355,819	$ 5,876	$ 7,219	$ 7,384	1.7%	2.0%	2.1%
Brooklyn	$968,933	$ 6,523	$ 9,740	$ 12,700	0.7%	1.0%	1.3%
Cascade	$1,233,968	$ 9,411	$ 14,770	$ 17,192	0.8%	1.2%	1.4%
Cedar Falls	$20,415,953	$ 379,435	$ 398,407	$ 418,327	1.9%	2.0%	2.0%
Clearfield	$216,305	$ 1,709	$ 2,471	$ 2,754	0.8%	1.1%	1.3%
Coon Rapids	$1,172,036	$ 10,469	$ 12,182	$ 13,899	0.9%	1.0%	1.2%
Corning	$1,228,425	$ 9,953	$ 15,247	$ 18,476	0.8%	1.2%	1.5%

Municipal Gas Utility Projected Spending Levels on Energy Efficiency.

Municipal Utility	2008 Revenue from Sales to Ultimate Customers	Projected Energy Efficiency Spending			Projected Spending as Percentage of 2008 Revenue from Sales to Ultimate Customers		
		2010	2011	2012	2010	2011	2012
Emmetsburg	$3,155,235	$ 22,815	$ 36,700	$ 42,886	0.7%	1.2%	1.4%
Everly	$608,087	$ 4,058	$ 5,226	$ 5,981	0.7%	0.9%	1.0%
Fairbank	$540,771	$ 4,668	$ 7,149	$ 9,274	0.9%	1.3%	1.7%
Gilmore City	$1,559,221	$ 5,538	$ 7,061	$ 7,179	0.4%	0.5%	0.5%
Graettinger	$548,751	$ 3,753	$ 5,089	$ 6,560	0.7%	0.9%	1.2%
Guthrie Center	$1,789,382	$ 8,812	$ 13,281	$ 15,811	0.5%	0.7%	0.9%
Harlan	$3,752,467	$ 30,000	$ 41,196	$ 46,931	0.8%	1.1%	1.3%
Hartley	$1,007,780	$ 8,044	$ 11,800	$ 13,689	0.8%	1.2%	1.4%
Hawarden	$1,693,328	$ 8,733	$ 13,945	$ 16,443	0.5%	0.8%	1.0%
Lake Park	$1,160,217	$ 5,380	$ 8,883	$ 11,239	0.5%	0.8%	1.0%
Lamoni	$1,002,071	$ 6,694	$ 11,153	$ 13,871	0.7%	1.1%	1.4%
Lenox	$1,633,621	$ 4,936	$ 7,105	$ 8,971	0.3%	0.4%	0.5%
Lineville	$135,471	$ 585	$ 977	$ 1,794	0.4%	0.7%	1.3%
Lorimor	$196,616	$ 1,800	$ 2,509	$ 3,485	0.9%	1.3%	1.8%
Manilla	$578,733	$ 5,568	$ 8,227	$ 9,308	1.0%	1.4%	1.6%
Manning	$1,285,317	$ 8,981	$ 10,418	$ 12,420	0.7%	0.8%	1.0%
Mapleton*	N/A	$ 2,752	$ 6,190	$ 12,429	N/A	N/A	N/A
Montezuma	$1,298,173	$ 13,620	$ 19,894	$ 22,117	1.0%	1.5%	1.7%
Morning Sun	$468,813	$ 2,714	$ 4,416	$ 6,173	0.6%	0.9%	1.3%
Moulton	$260,702	$ 2,847	$ 3,795	$ 4,478	1.1%	1.5%	1.7%
Orange City	$4,658,269	$ 28,352	$ 44,481	$ 56,393	0.6%	1.0%	1.2%
Osage	$3,570,129	$ 25,101	$ 36,602	$ 44,335	0.7%	1.0%	1.2%
Prescott	$118,343	$ 1,089	$ 1,332	$ 1,442	0.9%	1.1%	1.2%
Preston	$640,607	$ 5,834	$ 6,643	$ 8,144	0.9%	1.0%	1.3%
Remsen	$991,060	$ 6,102	$ 10,117	$ 11,422	0.6%	1.0%	1.2%
Rock Rapids	$1,525,271	$ 17,788	$ 28,069	$ 33,201	1.2%	1.8%	2.2%
Rolfe	$496,614	$ 5,212	$ 6,707	$ 6,956	1.0%	1.4%	1.4%
Sabula	$442,237	$ 5,207	$ 6,515	$ 6,852	1.2%	1.5%	1.5%
Sac City	$1,838,103	$ 11,773	$ 18,078	$ 21,525	0.6%	1.0%	1.2%
Sanborn	$1,873,415	$ 6,202	$ 9,975	$ 13,222	0.3%	0.5%	0.7%
Sioux Center	$16,989,780	$ 32,011	$ 45,511	$ 54,015	0.2%	0.3%	0.3%
Tipton	$2,071,891	$ 12,516	$ 19,236	$ 27,102	0.6%	0.9%	1.3%
Titonka	$455,783	$ 2,000	$ 3,000	$ 4,000	0.4%	0.7%	0.9%
Wall Lake	$1,383,722	$ 2,115	$ 3,583	$ 4,363	0.2%	0.3%	0.3%
Waukee	$5,556,181	$ 46,685	$ 75,579	$ 97,733	0.8%	1.4%	1.8%
Wayland	$650,145	$ 7,123	$ 7,639	$ 9,309	1.1%	1.2%	1.4%
Wellman	$820,954	$ 9,672	$ 13,936	$ 14,445	1.2%	1.7%	1.8%

MRES provided extensive program descriptions for the programs its members will offer to their customers. The MRES Report stated that "MRES Iowa members may choose to participate in some or all of the BES programs in order to meet their goals while tailoring the offering to their customer base." MRES Report, p. 14. The MRES programs included the following:

Residential	**Commercial and Industrial**
ENERGY STAR Products	Lighting Retrofit Program
Residential Lighting Program	Lighting in New Construction Program
Residential HVAC Program	Cooling/Chiller Program
Appliance Turn- in Program	Motors/Pumps/VFD Program
New Construction Program	Food Service Program
	Specialty Measures Program
	Targeted Audit Program – Schools and City Facilities
	New Construction Program
	Custom Rebate Program

The City of Ames Electric Department provided a one-page list of programs, with brief explanations, including:

- Power Watch – An energy education and call to action program.
- Green Choices –Donations for installation of green energy resources.
- Prime Time Power –A load management program with a $20 bill credit for interrupting a central air conditioner.
- Power Factor Rebate – A rebate for large commercial customers installing power factor correction equipment.
- Air Conditioner Rebate – A rebate for efficient central air conditioners or heat pumps.
- Commercial Lighting Rebate – A rebate for commercial lighting.
- Residential Lighting Rebate – A rebate for residential lighting.
- Efficient Appliance Rebate – A rebate for efficient refrigerators, freezers, dishwashers, and washing machines.
- New Construction Rebate – A rebate available for anyone building a new home to Energy Star specifications.
- Residential Energy Audit – An energy audit and blower door test to help homeowners.
- Commercial Audit – Various types of audits for commercial customers.
- Commercial/Industrial Custom Rebate – A rebate for any change resulting in the saving of electric energy and reducing electric demand.

Cedar Falls Utilities (CFU) provided supplemental information with detail comparable to an energy efficiency plan. CFU also provided detailed descriptions of the programs it plans to offer customers, including:

Residential	**Marketing, Education & Related Initiatives**
Prescriptive Rebates	Residential Trade Ally Education & Outreach
Home Energy Audits	Advanced Diagnostics for Residential and Multifamily Customers
Residential New Construction/Energy Code Enforcement	Cedar Falls Energy Action Network
On-Bill Financing	TV and Internet Resources
Multifamily and Low-Income Programs	Targeted Customer Communications and Events
	CFU and Customer Grant Applications
Non Residential	Trees
Prescriptive Incentives	Holiday Light Recycling
Custom Program	Student Education
Building Operator Certification and Other Trainings	Safety Inspections and Programmable Thermostat Installations
	Assessments

Muscatine Power and Water provided a listing of its programs, as follows:

Commercial & Industrial	**Education**
Commercial Lighting	Muscatine High School Electrathon
Industrial Lighting	Iowa Energy Poster Contest
Commercial and Industrial Geo Exchange	Junior Solar Sprint
Commercial and Industrial LED	Energy Efficiency Programs
Commercial and Industrial Motor Challenge	Energy Efficiency Scholarship Award
Commercial and Industrial Custom Programs	Energy Efficiency Science Fair Award
Municipal Facility Improvements	eco@home Magazine
Residential	
Residential Rebate Program (include: AC Tune Up, CFL Rebate, Dishwasher Rebates, Electric Dryers Rebates, Electric Range Rebates, Electric Water Heater Rebate, Ground Source Heat Pump Rebate, Refrigerator Rebates, Clothes Washer Rebates, Window Rebates, Room Air Conditioner Rebates, Central Air Conditioner Rebates)	
Residential Energy Inspections/Audits	
Energy Code Enforcement	

Waverly Light and Power also provided some analysis of its costs and benefits, along with extensive descriptions of the programs it intends to offer, including:

Appliance Rebates	Solar Water Heating
HVAC Rebates	Residential Enhanced Energy Audits
New Home Building	Inpowering Solutions Commercial Program

Wisconsin Public Power Inc. (WPPI) provided extensive descriptions of programs available to its members, including:

Residential	**Commercial and Industrial**
Central Air Conditioner Tune-up Incentive	Efficiency Improvement Incentive
Responsible Appliance Recycling Program	RFP for Energy Efficiency
Tree Power! Cash Incentive	Shared Savings Program
ENERGY STAR® Bulb Giveaway	New Construction Design Assistance
GreenMax Home Program	Study Grants
Educational Programs	Energy Management Services for Schools
Home *Energy* Suite	**Renewable Energy Programs**
National Theatre for Children	Renewable Energy Customer Incentive
The Local Circuit	

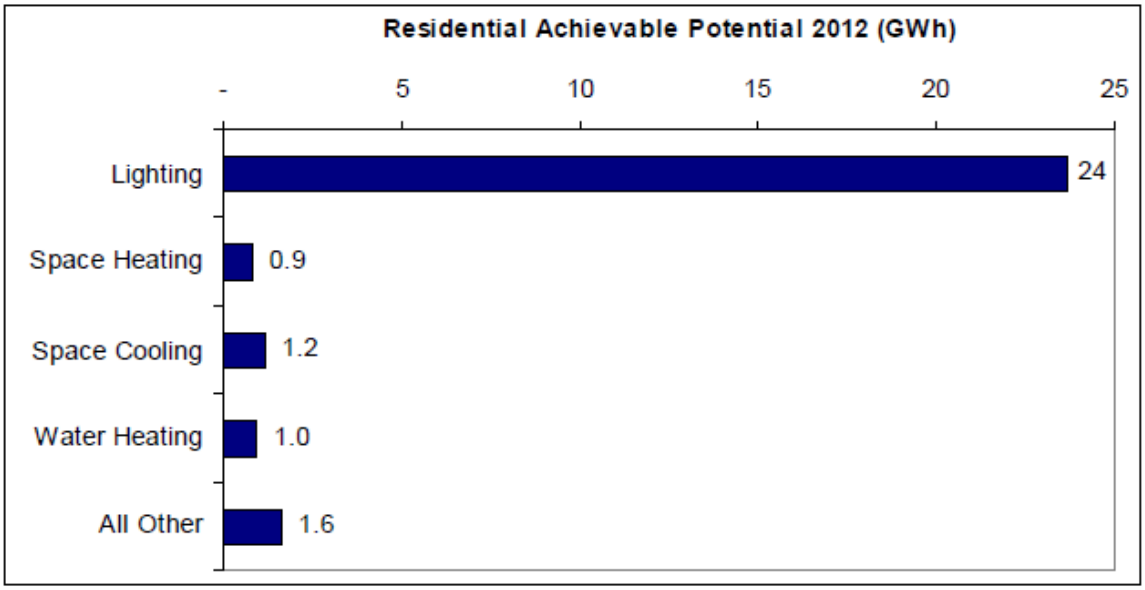


Figure 11: Achievable Residential Electric Efficiency Potential by End Use, 2012

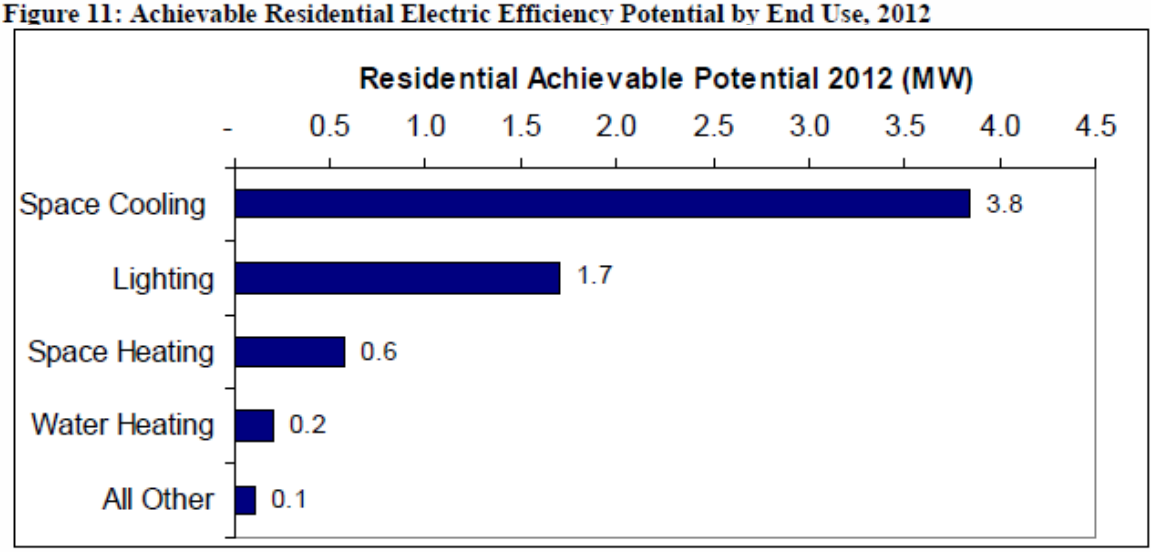


Figure 12: Achievable Residential Demand Reduction Potential by End Use, 2012

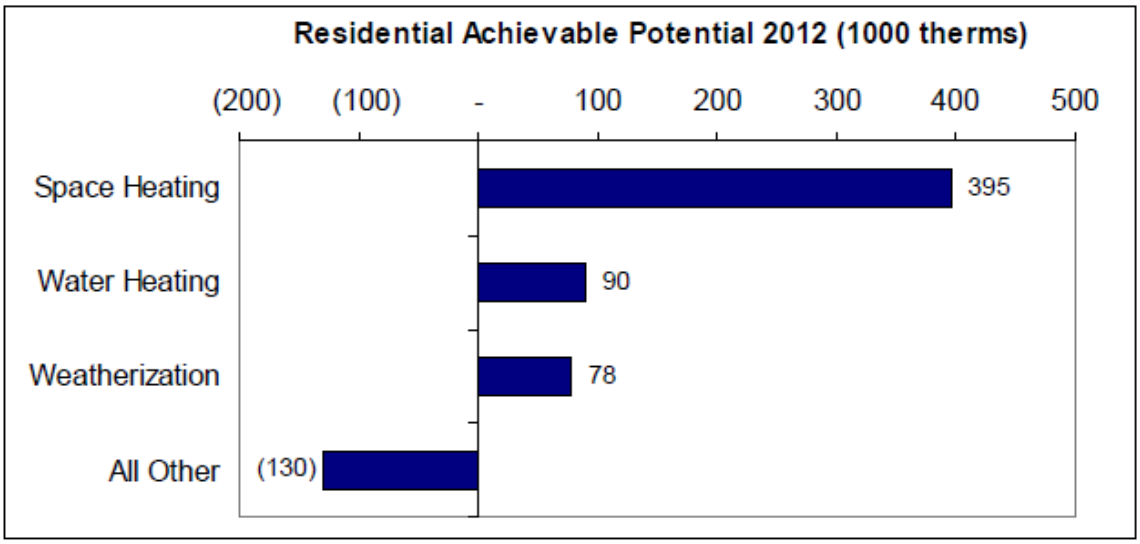


Figure 13: Achievable Residential Natural Gas Efficiency Potential by End Use, 2012[19]

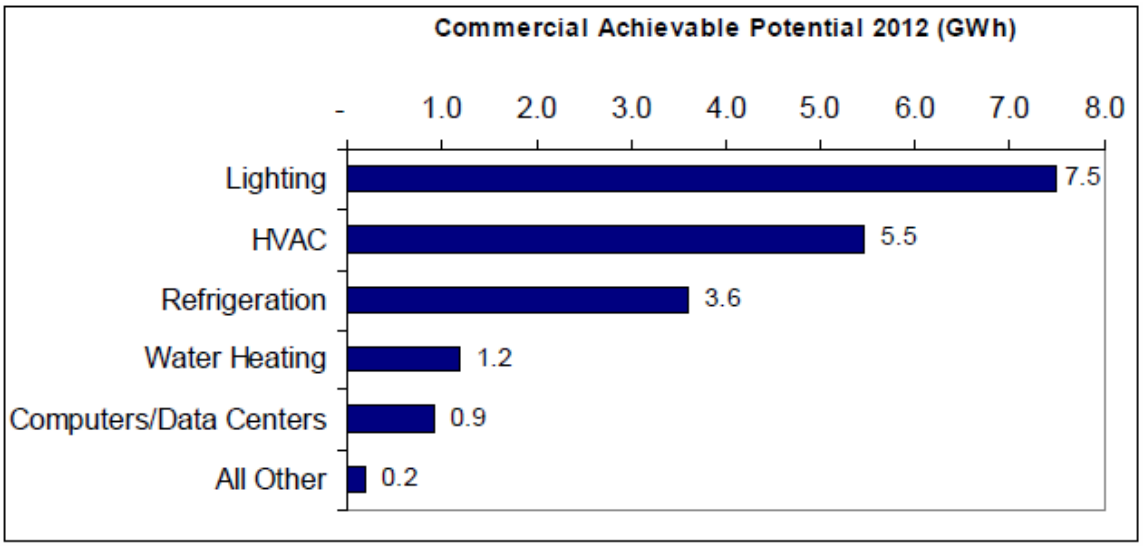


Figure 14: Achievable Commercial Electric Efficiency Potential by End Use, 2012

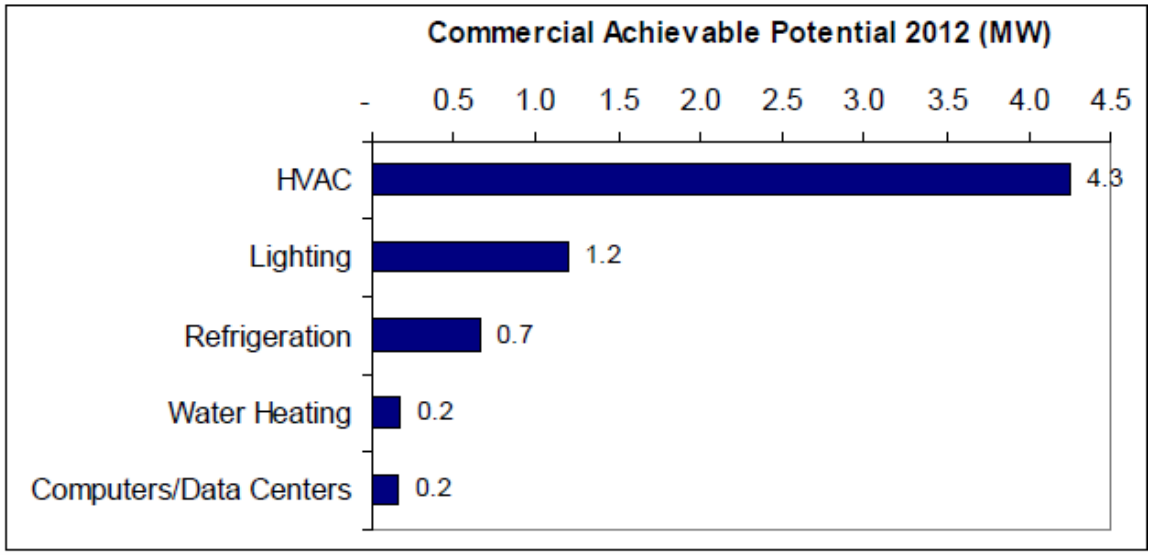


Figure 15: Achievable Commercial Demand Reduction Potential by End Use, 2012

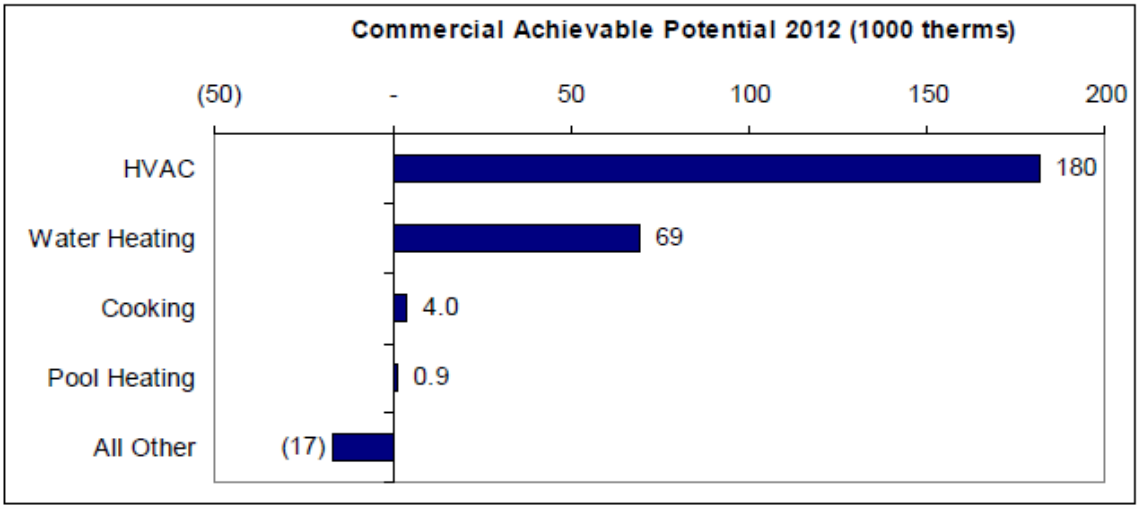


Figure 16: Achievable Commercial Natural Gas Efficiency Potential by End Use, 2012[20]

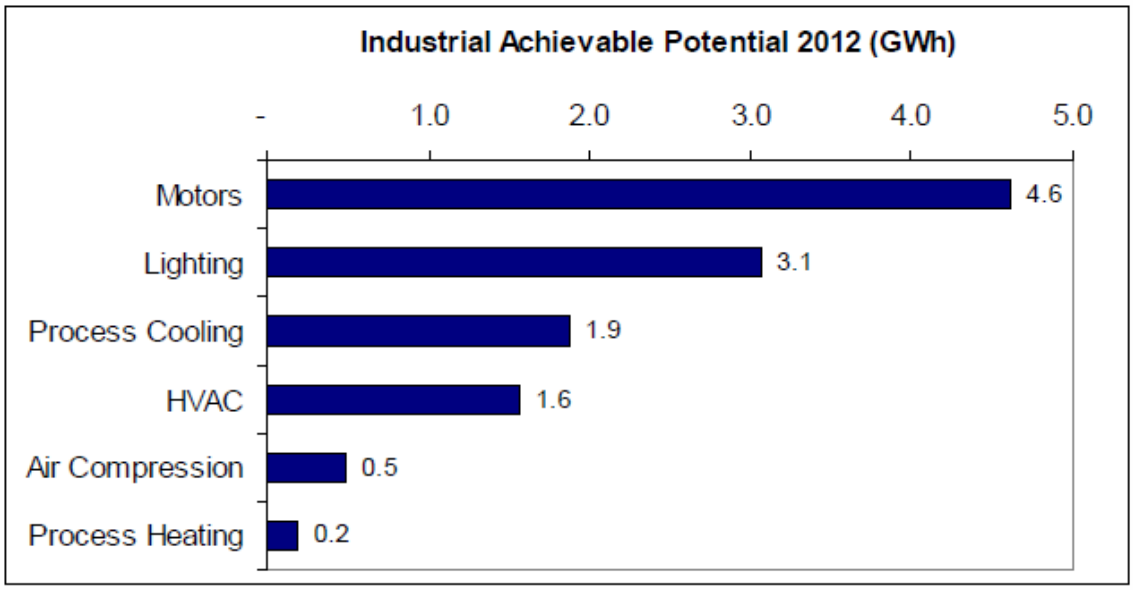


Figure 17: Achievable Industrial Electric Efficiency Potential by End Use, 2012

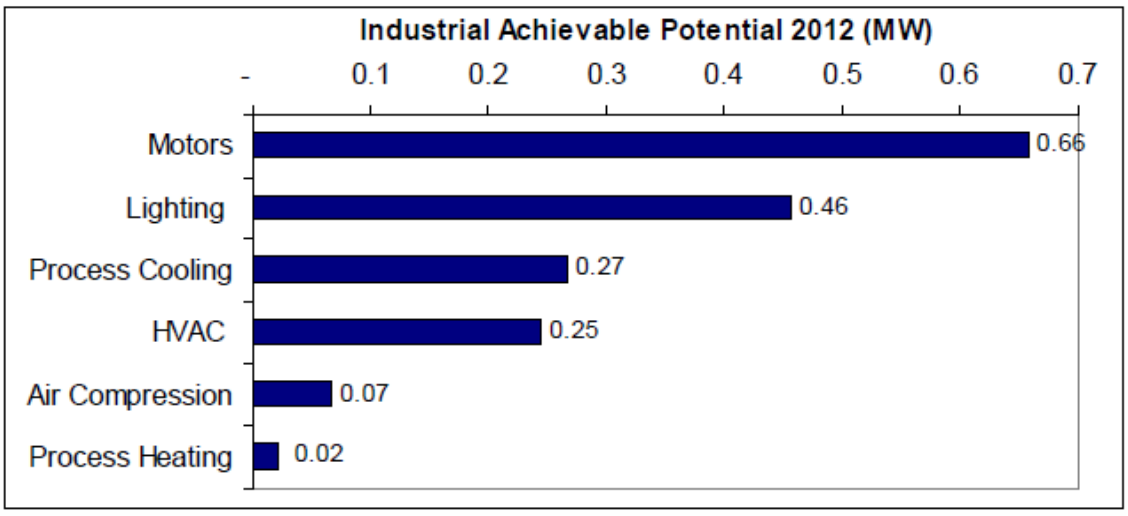


Figure 18: Achievable Industrial Demand Reduction Potential by End Use, 2012

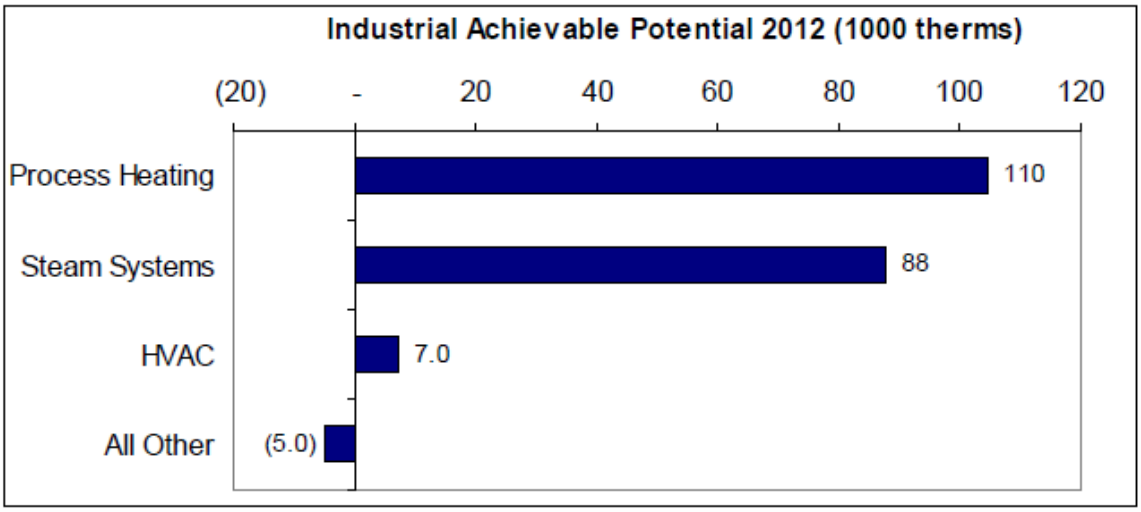


Figure 19: Achievable Industrial Natural Gas Efficiency Potential by End Use, 2012[21]

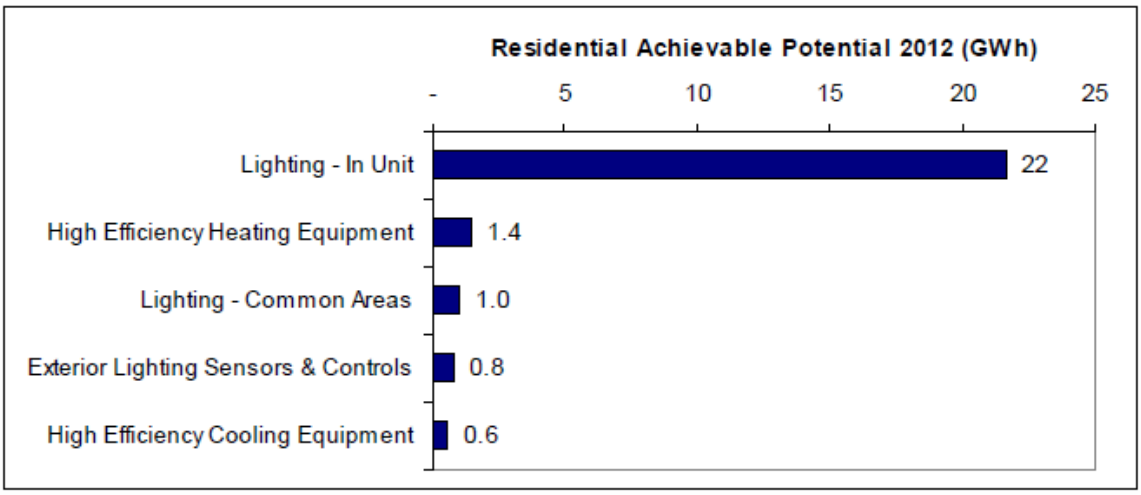


Figure 20: Top Residential Technology Markets: Electric Efficiency

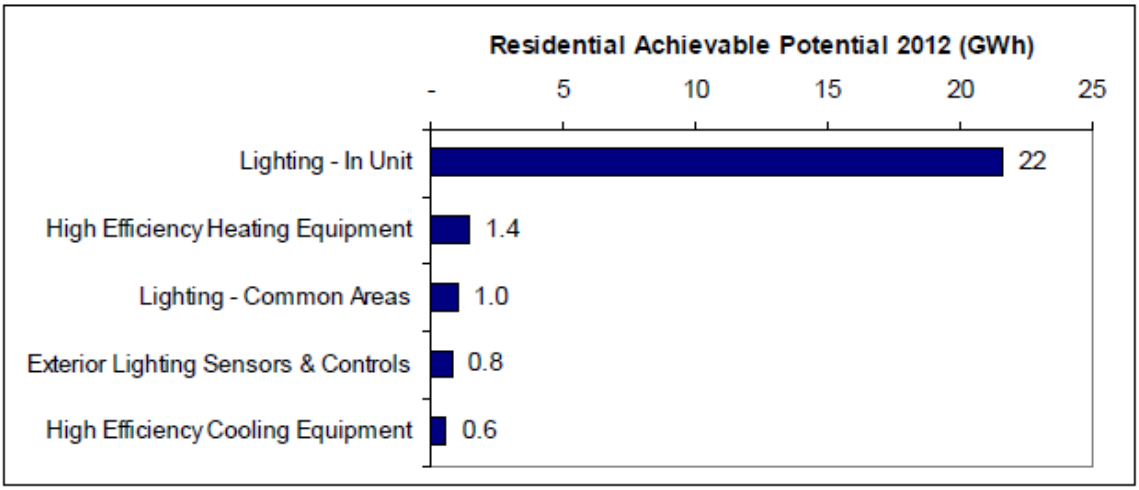


Figure 20: Top Residential Technology Markets: Electric Efficiency

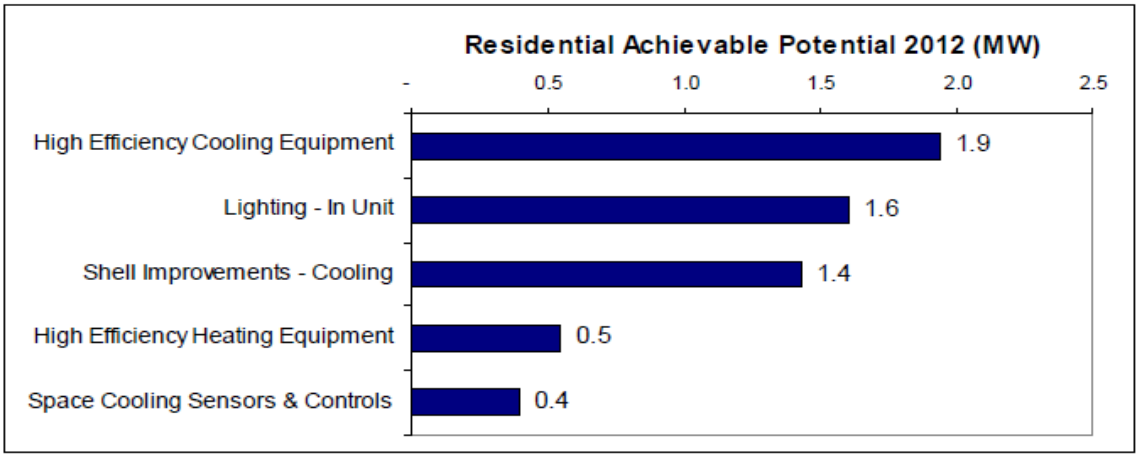


Figure 21: Top Residential Technology Markets: Electric Demand Reduction

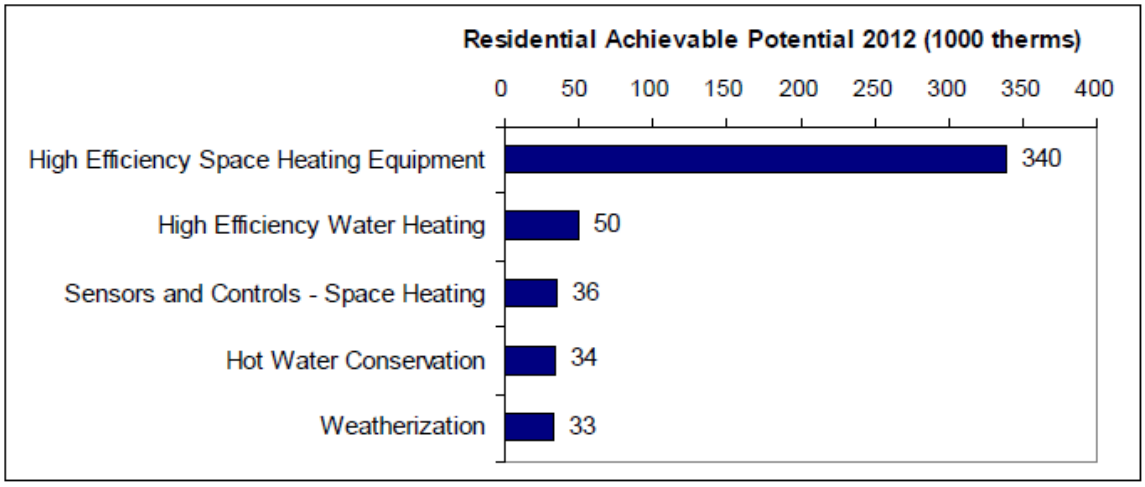


Figure 22: Top Residential Technology Markets: Natural Gas Efficiency

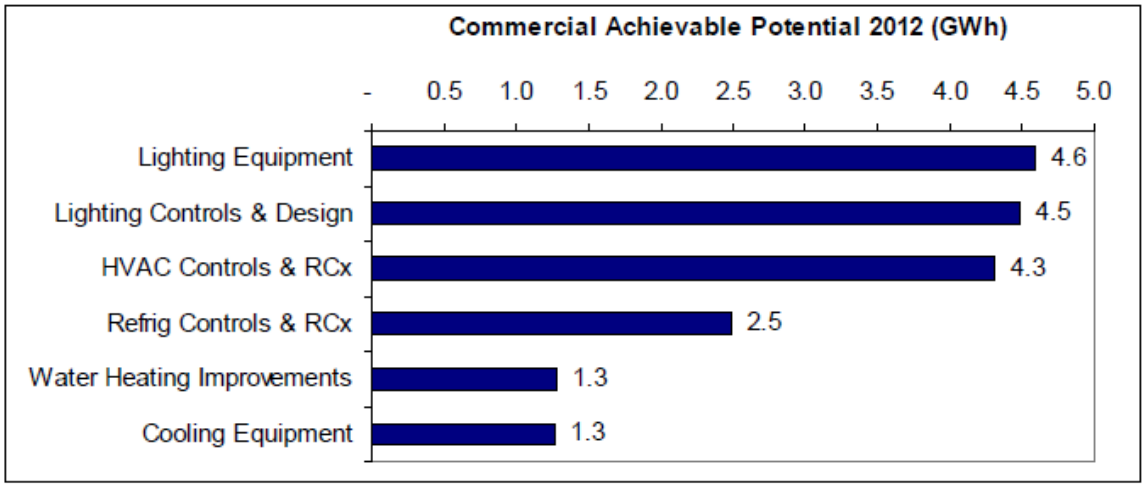


Figure 23: Top Commercial Technology Markets: Electric Efficiency

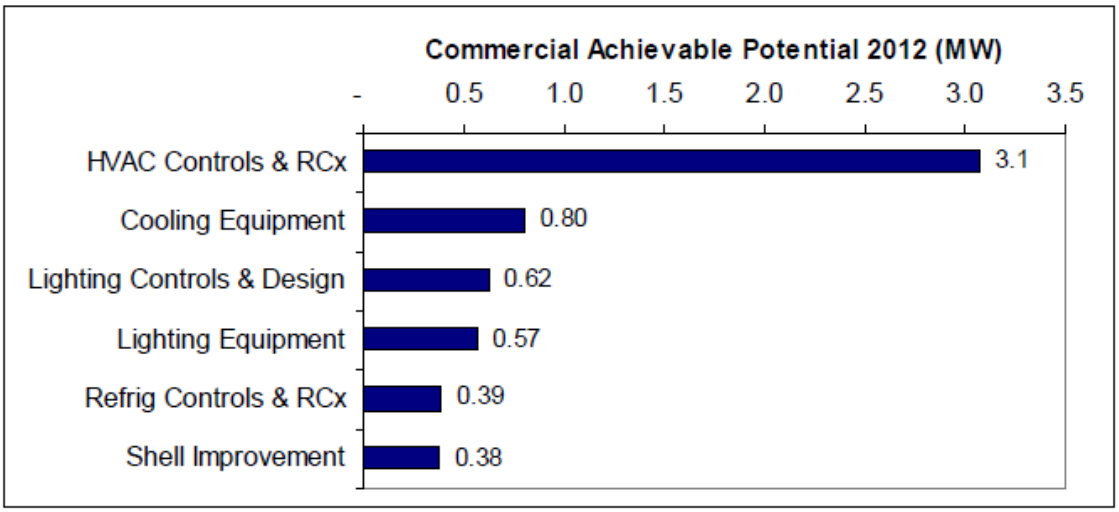


Figure 24: Top Commercial Technology Markets: Electric Demand Reduction

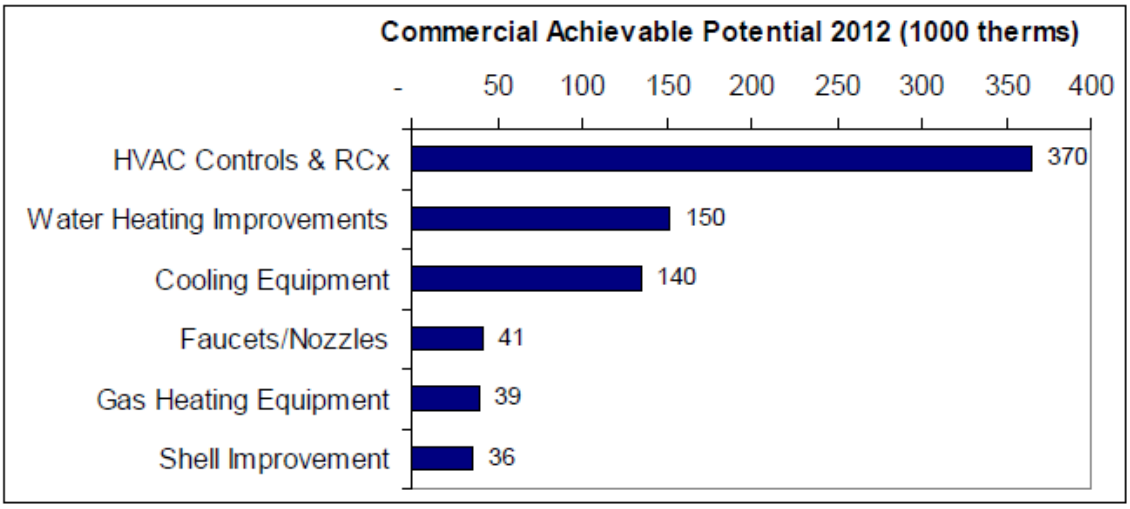


Figure 25: Top Commercial Technology Markets: Natural Gas Efficiency

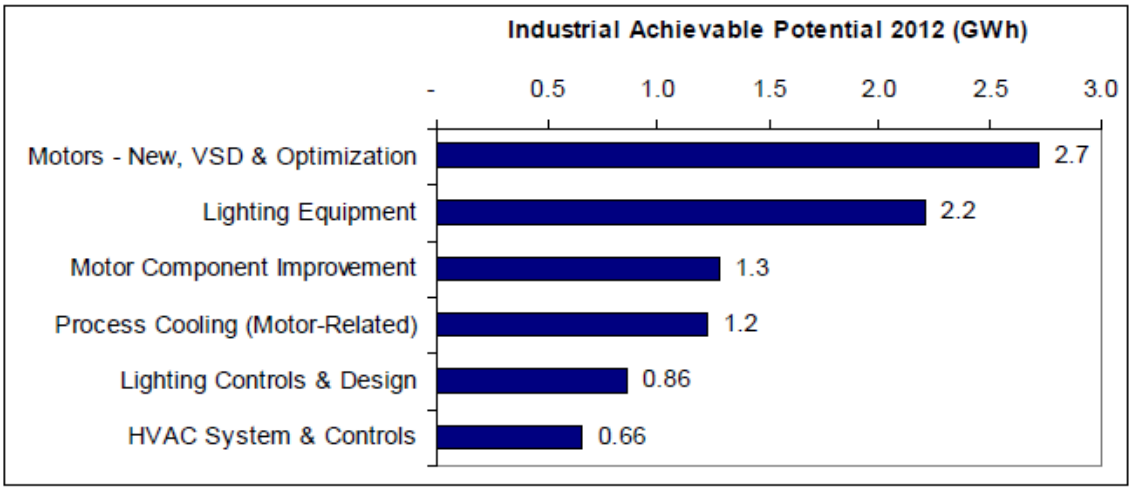


Figure 26: Top Industrial Technology Markets: Electric Efficiency

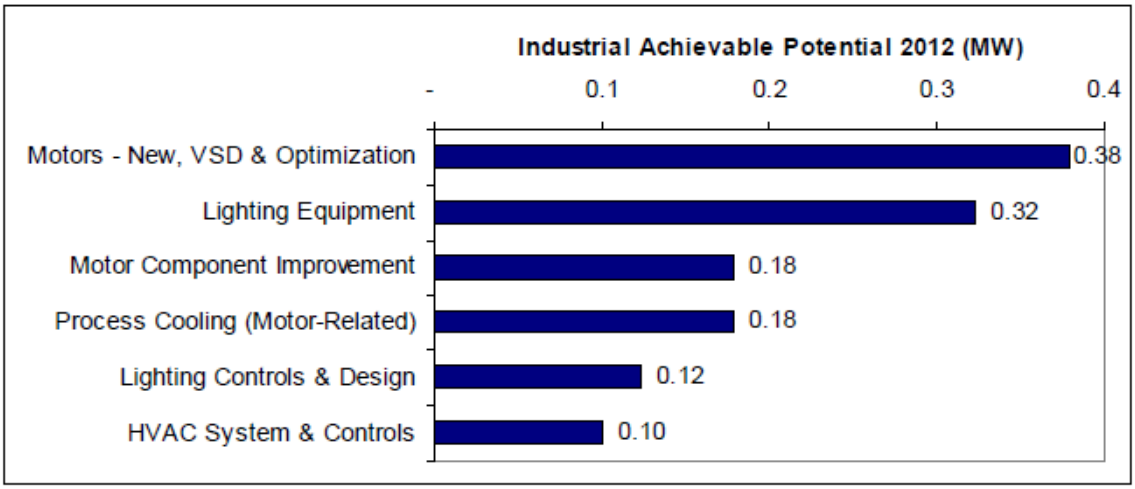


Figure 27: Top Industrial Technology Markets: Electric Demand Reduction

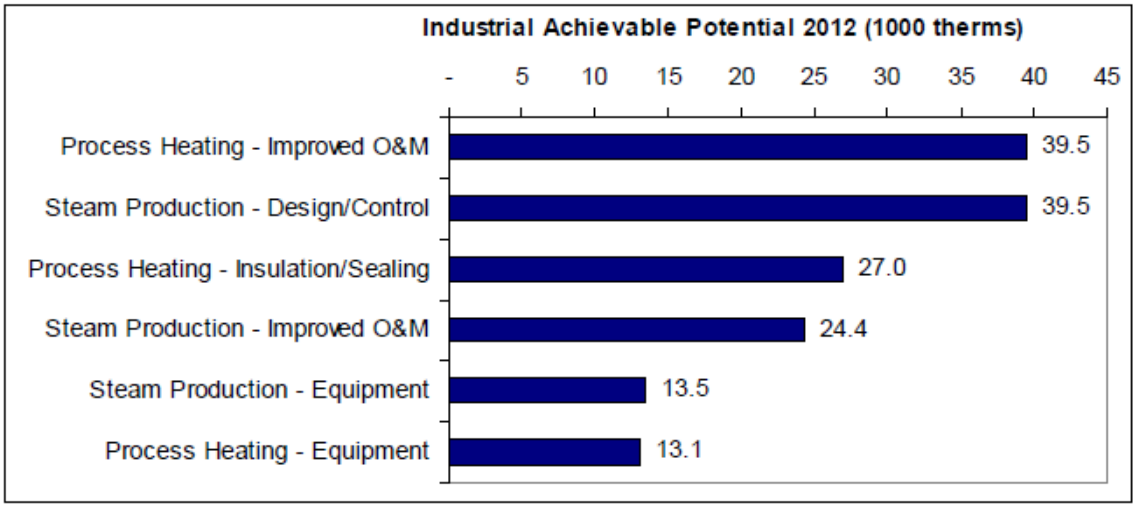


Figure 28: Top Industrial Technology Markets: Natural Gas Efficiency

Summary of Utility Data Developed under IAMU/ECW Process

Appendix 5

Utility	Joint Action Agency	Goals (% of Sales)			Goals (kWh)			Projected Spending		
		2010	2011	2012	2010	2011	2012	2010	2011	2012
Afton	RPGI	0.70%	0.91%	1.41%	43,284	56,247	86,473	$3,928	$4,410	$8,035
Akron		0.60%	0.80%	1.10%	91,505	123,866	173,060	$57,979	$70,780	$74,590
Algona	NIMECA	0.60%	0.80%	1.10%	638,559	862,580	1,202,685	$249,688	$214,613	$142,191
Alta	NIMECA	0.60%	0.80%	1.10%	96,598	131,666	183,175	$43,292	$29,397	$98,512
Alta Vista		0.60%	0.80%	1.10%	12,219	16,178	22,127	$1,037	$1,851	$2,630
Alton	MRES‡									
Ames		0.54%	0.56%	0.69%	3,223,817	3,223,817	4,029,771	$800,000	$800,000	$1,000,000
Anita	RPGI	0.60%	0.80%	1.10%	59,009	79,929	112,269	$5,680	$8,374	$12,724
Anthon	WIMECA	0.60%	0.80%	1.10%	41,051	55,701	78,114	$7,582	$8,284	$10,918
Aplington		0.60%	0.80%	1.10%	45,731	64,393	90,884	$6,755	$8,933	$12,133
Atlantic		0.80%	0.50%	0.70%	790,846	500,736	684,254	$97,377	$82,355	$110,881
Auburn		0.60%	0.80%	1.10%	11,082	14,992	20,977	$1,000	$1,474	$2,316
Aurelia	WIMECA	0.60%	0.80%	1.10%	51,112	67,119	94,094	$4,533	$8,711	$11,418
Bancroft	NIMECA	0.60%	0.80%	1.10%	74,670	100,199	137,939	$15,486	$15,910	$17,029
Bellevue	SIMECA	0.60%	0.80%	1.10%	110,383	149,103	205,632	$15,530	$23,571	$30,697
Bloomfield		0.60%	0.80%	1.10%	174,217	231,664	322,059	$19,588	$27,952	$38,933
Breda	MEAN	0.60%	0.80%	1.10%	26,405	35,151	48,317	$2,859	$4,221	$6,221
Brooklyn	SIMECA	0.60%	0.80%	1.10%	76,734	103,854	145,133	$9,198	$13,710	$19,278
Buffalo	MEAN	0.60%	0.80%	1.10%	33,031	49,907	66,835	$1,743	$2,568	$5,989
Burt		0.60%	0.80%	1.10%	21,364	28,801	39,768	$2,937	$3,368	$6,551
Callender		0.91%	1.22%	1.53%	20,855	28,265	35,869	$2,489	$2,789	$3,203
Carlisle	MEAN	0.60%	0.80%	1.10%	110,193	151,678	207,631	$14,846	$21,728	$29,054
Cascade	SIMECA	0.60%	0.80%	1.10%	109,962	145,164	201,318	$13,161	$17,526	$24,004
Cedar Falls		0.60%	0.75%	0.90%	2,731,968	3,445,150	4,220,106	$910,550	$956,078	$1,003,881
Coggon	RPGI	0.60%	0.80%	1.10%	21,722	28,509	39,436	$1,645	$2,440	$4,008
Coon Rapids	NIMECA	0.60%	0.80%	1.10%	105,469	137,571	188,240	$14,507	$18,745	$24,622
Corning	SIMECA	0.60%	0.80%	1.10%	119,177	159,075	220,826	$15,875	$20,339	$29,951
Corwith		0.81%	1.07%	1.34%	17,872	23,689	29,531	$1,838	$2,109	$2,999
Danville	RPGI	0.60%	0.80%	1.10%	33,951	45,326	62,047	$2,578	$4,471	$9,015
Dayton		0.60%	0.80%	1.10%	31,462	41,969	57,890	$2,500	$3,732	$7,556
Denison	MRES‡									
Denver	MEAN	0.60%	0.80%	1.10%	80,254	107,079	150,650	$7,953	$12,140	$15,597
Dike	RPGI	0.60%	0.80%	1.10%	35,154	44,279	60,031	$3,171	$3,281	$5,163
Durant	SIMECA	0.60%	0.80%	1.10%	80,803	111,728	154,725	$12,272	$16,945	$23,175
Dysart	RPGI	0.60%	0.80%	1.10%	53,981	72,905	101,381	$4,840	$5,536	$9,583
Earlville	SIMECA	0.60%	0.80%	1.10%	32,654	44,570	62,180	$4,270	$6,401	$9,963
Eldridge		0.60%	0.80%	1.10%	216,125	294,260	414,773	$22,781	$29,942	$43,912
Ellsworth		0.60%	0.80%	1.10%	31,266	43,148	62,417	$3,267	$4,594	$7,125

Summary of Utility Data Developed under IAMU/ECW Process

Appendix 5

Utility	Joint Action Agency	Goals (% of Sales)			Goals (kWh)			Projected Spending		
		2010	2011	2012	2010	2011	2012	2010	2011	2012
Estherville		0.60%	0.80%	1.10%	360,300	483,513	674,521	$45,024	$59,235	$80,826
Fairbank		0.60%	0.80%	1.10%	46,298	62,624	87,572	$7,501	$8,962	$11,194
Farnhamville		0.60%	0.80%	1.10%	32,174	46,119	65,977	$2,936	$4,457	$6,903
Fonda	MEAN	0.60%	0.80%	1.10%	29,192	38,852	53,824	$3,043	$4,489	$6,632
Fontanelle	SIMECA	0.70%	0.80%	1.50%	47,222	54,132	101,926	$8,801	$11,912	$17,248
Forest City		0.60%	0.80%	1.10%	225,084	318,085	449,830	$20,690	$32,901	$45,936
Fredericksburg		0.60%	0.80%	1.10%	111,787	153,046	193,446	$14,054	$17,593	$23,125
Glidden		0.60%	0.80%	1.10%	54,551	72,770	100,545	$9,171	$13,242	$15,803
Gowrie	SIMECA	0.60%	0.80%	1.10%	45,558	60,853	84,678	$6,473	$10,629	$11,820
Graettinger	NIMECA	0.60%	0.80%	1.10%	59,095	79,494	110,905	$14,092	$14,503	$18,884
Grafton		0.83%	1.12%	1.40%	18,435	24,562	30,719	$2,500	$3,104	$3,482
Grand Junction	RPGI	0.60%	0.80%	1.10%	32,492	44,092	60,831	$2,261	$3,933	$6,139
Greenfield*	SIMECA	0.60%	0.80%	1.10%	118,765	160,385	223,023	$23,724	$30,190	$39,814
Grundy Center	NIMECA	0.64%	0.84%	0.86%	185,243	242,948	246,370	$20,243	$39,929	$66,216
Guttenberg		1.00%	1.50%	2.00%	166,247	244,049	319,929	$22,613	$27,096	$34,477
Harlan		0.60%	0.80%	1.10%	372,320	498,653	691,317	$50,000	$63,700	$75,880
Hartley	MRES‡									
Hawarden	MRES‡									
Hinton	WIMECA	0.60%	0.80%	1.10%	53,516	70,990	100,767	$7,101	$9,143	$14,945
Hopkinton	RPGI	0.60%	0.80%	1.10%	27,030	35,133	47,736	$1,953	$3,575	$5,238
Hudson		0.60%	0.80%	1.10%	82,756	112,573	155,870	$8,196	$10,939	$17,884
Independence	WPPI	0.60%	0.80%	1.10%	352,773	464,692	623,708	$50,534	$59,909	$83,222
Indianola	MEAN	0.60%	0.80%	1.00%	682,400	911,635	1,150,292	$87,111	$115,424	$127,638
Keosauqua	WPPI	0.60%	0.80%	1.10%	81,241	108,266	150,539	$12,073	$11,315	$19,082
Kimballton	MRES‡									
La Porte City	RPGI	0.60%	0.80%	1.10%	96,397	129,085	178,552	$6,959	$9,651	$15,911
Lake Mills		0.60%	0.80%	1.10%	239,020	321,858	448,724	$27,450	$39,336	$43,075
Lake Park	MRES‡									
Lake View		0.60%	0.80%	1.10%	119,843	161,034	224,393	$13,148	$17,660	$23,617
Lamoni	SIMECA	0.43%	0.58%	0.80%	97,912	131,695	184,583	$11,510	$15,282	$23,177
Larchwood		0.60%	0.80%	1.10%	43,367	62,097	87,434	$3,999	$6,329	$9,410
Laurens	NIMECA	0.75%	0.75%	1.10%	221,071	222,377	330,093	$31,048	$31,608	$46,458
Lawler		0.60%	0.80%	1.10%	16,596	22,195	30,397	$3,544	$4,074	$5,345
Lehigh		0.76%	0.83%	0.95%	19,752	21,996	25,693	$1,018	$1,270	$1,736
Lenox	SIMECA	0.60%	0.80%	1.10%	102,835	137,102	189,236	$13,906	$18,120	$24,253
Livermore		0.70%	0.70%	0.80%	18,382	17,883	19,870	$6,758	$1,807	$1,906
Long Grove	RPGI	0.60%	0.80%	1.10%	17,822	23,801	33,254	$2,891	$3,040	$4,249
Manilla	MRES‡									
Manning**	WIMECA	0.60%	0.80%	1.10%	124,143	168,769	235,238	$23,522	$28,773	$36,103

Summary of Utility Data Developed under IAMU/ECW Process

Appendix 5

Utility	Joint Action Agency	Goals (% of Sales)			Goals (kWh)			Projected Spending		
		2010	2011	2012	2010	2011	2012	2010	2011	2012
Mapleton	WIMECA	0.60%	0.80%	1.10%	88,693	121,355	170,710	$12,628	$16,205	$21,865
Maquoketa	WPPI	0.60%	0.80%	1.10%	466,216	632,308	893,292	$59,408	$76,311	$117,086
Marathon		0.60%	0.80%	1.10%	12,327	16,314	22,059	$4,423	$5,868	$7,884
McGregor		0.50%	0.60%	0.75%	37,064	45,188	56,717	$4,174	$5,627	$6,952
Milford†	NIMECA	10.06%	1.00%	1.10%	3,194,018	312,451	344,512	$166,572	$40,654	$40,654
Montezuma		0.60%	0.80%	1.10%	99,384	133,902	186,040	$13,470	$16,735	$21,696
Mount Pleasant	RPGI	0.60%	0.80%	1.10%	435,277	583,131	818,048	$43,948	$70,418	$94,746
Muscatine		1.50%	0.73%	0.77%	13,078,255	6,415,034	6,809,607	$897,606	$499,780	$645,005
Neola		0.60%	0.80%	1.10%	29,332	39,795	55,974	$2,912	$3,899	$5,794
New Hampton	NIMECA	0.60%	0.80%	1.00%	319,824	421,634	531,066	$41,784	$46,243	$68,731
New London	RPGI	0.60%	0.80%	1.10%	86,487	114,693	143,487	$10,354	$12,766	$15,478
Ogden	RPGI	0.60%	0.80%	1.10%	81,955	107,868	149,717	$14,583	$14,583	$18,164
Onawa	WIMECA	0.60%	0.80%	1.10%	202,815	277,290	387,999	$22,385	$29,534	$40,817
Orange City	MRES‡									
Orient	SIMECA	0.60%	0.80%	1.10%	14,532	19,589	27,837	$2,030	$2,586	$3,880
Osage		0.60%	0.80%	1.10%	321,773	426,955	594,363	$37,474	$47,858	$55,437
Panora		0.60%	0.80%	1.10%	76,249	102,342	143,390	$10,022	$14,592	$19,265
Paton		0.60%	0.80%	1.10%	12,236	16,476	23,113	$1,735	$2,090	$2,650
Paullina	MRES‡									
Pella		0.34%	0.46%	0.57%	661,957	860,944	1,053,950	$87,459	$112,352	$137,370
Pocahontas		1.23%	1.23%	1.23%	258,167	261,907	271,541	$24,113	$24,399	$25,180
Preston	WPPI	0.60%	0.80%	1.10%	49,569	66,669	93,389	$8,230	$13,110	$16,393
Primghar	MRES‡									
Readlyn		0.60%	0.80%	1.10%	28,887	39,259	54,436	$6,077	$6,822	$8,642
Remsen	MRES‡									
Renwick*		0.60%	0.80%	1.10%	14,883	19,818	27,357	$1,231	$1,720	$2,706
Rock Rapids	MRES‡									
Rockford	MEAN	0.60%	0.80%	1.10%	35,903	46,798	64,992	$4,654	$6,199	$9,659
Sabula		0.60%	0.80%	1.10%	20,914	27,043	36,277	$2,149	$3,403	$6,661
Sanborn	MRES‡									
Sergeant Bluff	MEAN	0.60%	0.80%	1.10%	201,794	270,209	377,868	$29,363	$43,824	$57,923
Shelby	MRES‡									
Sibley	RPGI	0.60%	0.80%	1.10%	218,487	290,360	398,143	$17,649	$31,273	$37,242
Sioux Center	MRES‡									
Spencer	NIMECA	0.70%	0.90%	1.10%	1,132,135	1,460,121	1,805,105	$285,300	$322,059	$487,988
Stanhope	RPGI	0.60%	0.80%	1.10%	16,540	21,605	29,644	$3,255	$2,147	$2,193
Stanton		0.60%	0.80%	1.10%	26,405	35,151	48,317	$4,567	$6,736	$9,335
State Center	RPGI	0.60%	0.80%	1.10%	76,131	101,956	141,912	$9,904	$13,453	$17,177
Story City	RPGI	0.61%	0.74%	0.83%	321,156	373,028	424,091	$36,967	$37,873	$44,018
Stratford		0.68%	0.68%	1.10%	28,944	27,913	45,182	$7,497	$7,417	$9,536

Summary of Utility Data Developed under IAMU/ECW Process — Appendix 5

Utility	Joint Action Agency	Goals (% of Sales)			Goals (kWh)			Projected Spending		
		2010	2011	2012	2010	2011	2012	2010	2011	2012
Strawberry Point	RPGI	0.60%	0.80%	1.10%	46,005	60,327	81,903	$16,098	$15,330	$17,511
Stuart	SIMECA	0.60%	0.80%	1.10%	85,740	115,448	159,706	$12,119	$14,608	$21,268
Sumner	NIMECA	0.60%	0.80%	1.10%	94,859	127,432	174,314	$17,208	$38,816	$20,546
Tipton	RPGI	0.60%	0.80%	1.10%	178,394	239,635	333,302	$23,285	$33,702	$47,955
Traer	RPGI	0.60%	0.80%	1.10%	90,689	120,145	166,704	$11,033	$18,020	$32,638
Villisca	SIMECA	0.60%	0.80%	1.10%	73,886	96,254	133,439	$12,013	$15,230	$15,513
Vinton	RPGI	0.60%	0.80%	1.10%	230,279	308,168	432,124	$22,676	$25,017	$43,895
Wall Lake	MEAN	0.60%	0.80%	1.10%	54,008	72,407	100,873	$5,349	$8,553	$9,278
Waverly	MEAN	0.44%	0.74%	0.90%	654,375	1,127,521	1,408,167	$197,973	$203,078	$208,459
Webster City*	NIMECA	0.60%	0.80%	1.10%	399,151	534,317	741,515	$58,863	$81,322	$111,204
West Bend	NIMECA	0.88%	1.02%	0.64%	123,743	144,627	91,698	$11,680	$13,540	$11,889
West Liberty*	RPGI	0.60%	0.80%	1.10%	146,343	196,800	274,055	$10,597	$12,632	$23,900
West Point		0.60%	0.80%	1.10%	76,249	102,342	143,390	$11,768	$14,135	$20,622
Westfield		0.60%	0.80%	1.10%	7,575	10,428	13,017	$790	$939	$1,468
Whittemore*	RPGI	0.49%	0.69%	1.11%	22,942	31,435	51,126	$1,408	$1,731	$4,353
Wilton		0.60%	0.80%	1.10%	149,655	199,829	278,135	$14,764	$22,011	$29,294
Winterset	SIMECA	0.60%	0.80%	1.10%	275,767	367,935	510,461	$36,029	$47,960	$64,328
Woodbine	MRES‡									
Woolstock		0.60%	0.80%	1.10%	13,205	16,705	23,746	$593	$1,658	$2,350
Average		**0.71%**	**0.81%**	**1.09%**	**317,727**	**284,071**	**358,935**	**$44,073**	**$44,160**	**$54,801**
Total					**38,127,277**	**34,088,483**	**43,072,222**	**$5,288,748**	**$5,299,226**	**$6,576,081**

*Goals are for residential and commercial sectors.
**Goals exclude portion of industrial sector.
†Milford has two large lighting retrofit projects that are contributing to the high savings for 2010.
‡For the goals and spending levels of the utilities who belong to MRES, please see the report submitted by MRES in Appendix 8.
MEAN: Municipal Energy Agency of Nebraska.
MRES: Missouri River Energy Services.
NIMECA: North Iowa Municipal Electric Cooperative Association.
RPGI. Resale Power Group of Iowa
SIMECA: South Iowa Municipal Electric Cooperative Association.
WPPI: WPPI Energy.

Utility	Joint Action Agency	Goals (% of Sales)			Goals (kWh)			Projected Spending		
		2010	2011	2012	2010	2011	2012	2010	2011	2012
Amana Society Service Co.*	RPGI	0.11%	0.15%	0.20%	99,979	132,160	180,869	$8,232	$9,233	$21,253
Farmers Electric Cooperative (Kalona)	RPGI	0.60%	0.80%	1.10%	135,418	187,865	264,986	$33,329	$54,499	$62,138

*Goals are for residential and commercial sectors.
RPGI. Resale Power Group of Iowa

Utility	Goals (% of Sales)			Goals (therms)			Projected Spending		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Alton	0.20%	0.40%	0.60%	1,317	2,777	4,101	$3,892	$7,364	$10,747
Bedford	0.40%	0.60%	0.74%	2,824	4,301	5,122	$7,169	$11,378	$11,703
Bloomfield	0.40%	0.60%	0.74%	6,516	9,843	11,924	$11,786	$17,285	$20,386
Brighton	0.40%	0.60%	0.74%	992	1,472	1,718	$5,876	$7,219	$7,384
Brooklyn	0.40%	0.60%	0.74%	3,350	5,296	6,639	$6,523	$9,740	$12,700
Cascade	0.40%	0.60%	0.74%	4,142	6,483	8,033	$9,411	$14,770	$17,192
Cedar Falls	0.51%	0.60%	0.65%	8,919	10,416	10,738	$379,435	$398,407	$418,327
Clearfield	0.50%	0.60%	0.74%	986	1,211	1,493	$1,709	$2,471	$2,754
Coon Rapids	0.50%	0.60%	0.74%	5,310	6,136	7,172	$10,469	$12,182	$13,899
Corning	0.40%	0.60%	0.74%	4,490	6,746	7,971	$9,953	$15,247	$18,476
Emmetsburg	0.40%	0.60%	0.74%	11,623	18,399	22,567	$22,815	$36,700	$42,886
Everly*	0.40%	0.60%	0.74%	1,510	2,485	2,954	$4,058	$5,226	$5,981
Fairbank	0.40%	0.60%	0.74%	1,644	2,575	3,182	$4,668	$7,149	$9,274
Gilmore City*	0.40%	0.60%	0.74%	1,827	2,339	2,489	$5,538	$7,061	$7,179
Graettinger	0.40%	0.60%	0.74%	2,067	3,242	3,975	$3,753	$5,089	$6,560
Guthrie Center	0.40%	0.60%	0.74%	5,702	8,648	10,431	$8,812	$13,281	$15,811
Harlan*	0.40%	0.60%	0.74%	11,899	18,757	23,073	$30,000	$41,196	$46,931
Hartley	0.40%	0.60%	0.74%	3,403	5,220	6,082	$8,044	$11,800	$13,689
Hawarden**	0.40%	0.60%	0.74%	4,140	6,302	7,453	$8,733	$13,945	$16,443
Lake Park*	0.40%	0.60%	0.74%	2,721	4,433	5,429	$5,380	$8,883	$11,239
Lamoni	0.40%	0.60%	0.74%	3,787	5,872	7,171	$6,694	$11,153	$13,871
Lenox*	0.40%	0.60%	0.74%	2,679	4,229	5,560	$4,936	$7,105	$8,971
Lineville	0.40%	0.60%	0.74%	459	715	850	$585	$977	$1,794
Lorimor	0.40%	0.60%	0.74%	629	945	1,124	$1,800	$2,509	$3,485
Manilla*	0.40%	0.60%	0.74%	1,292	1,985	2,404	$5,568	$8,227	$9,308
Manning*	0.50%	0.60%	0.74%	4,742	5,882	7,147	$8,981	$10,418	$12,420
Mapleton	0.20%	0.40%	0.60%	1,137	2,273	3,410	$2,752	$6,190	$12,429
Montezuma	0.50%	0.80%	0.94%	7,065	11,372	13,055	$13,620	$19,894	$22,117
Morning Sun	0.40%	0.60%	0.74%	1,443	2,177	2,584	$2,714	$4,416	$6,173
Moulton	0.40%	0.60%	0.74%	1,222	1,865	2,289	$2,847	$3,795	$4,478
Orange City*	0.40%	0.60%	0.74%	12,245	19,492	24,938	$28,352	$44,481	$56,393
Osage	0.40%	0.60%	0.74%	13,290	20,395	25,240	$25,101	$36,602	$44,335
Prescott	0.40%	0.60%	0.74%	422	624	750	$1,089	$1,332	$1,442
Preston	0.43%	0.57%	0.71%	2,339	3,137	3,902	$5,834	$6,643	$8,144
Remsen	0.40%	0.60%	0.74%	3,325	5,223	6,300	$6,102	$10,117	$11,422
Rock Rapids	0.40%	0.60%	0.74%	6,258	9,821	11,973	$17,788	$28,069	$33,201
Rolfe*	0.40%	0.60%	0.74%	1,441	2,160	2,606	$5,212	$6,707	$6,956

Summary of Utility Data Developed under IAMU/ECW Process

Appendix 5

Utility	Goals (% of Sales)			Goals (therms)			Projected Spending		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Sabula	0.40%	0.60%	0.74%	1,177	1,760	2,103	$5,207	$6,515	$6,852
Sac City	0.40%	0.60%	0.74%	5,855	8,806	10,625	$11,773	$18,078	$21,525
Sanborn*	0.40%	0.60%	0.74%	3,108	5,274	6,673	$6,202	$9,975	$13,222
Sioux Center*	0.40%	0.60%	0.74%	17,155	26,032	31,124	$32,011	$45,511	$54,015
Tipton	0.40%	0.60%	0.74%	7,706	11,929	14,437	$12,516	$19,236	$27,102
Titonka†	0.40%	0.60%	0.74%	884	1,326	1,635	$2,000	$3,000	$4,000
Wall Lake*	0.40%	0.60%	0.74%	909	1,417	1,818	$2,115	$3,583	$4,363
Waukee	0.40%	0.60%	0.74%	17,036	27,546	35,834	$46,685	$75,579	$97,733
Wayland	0.50%	0.60%	0.75%	2,678	3,285	4,027	$7,123	$7,639	$9,309
Wellman	0.40%	0.60%	0.74%	2,834	4,545	5,545	$9,672	$13,936	$14,445
West Bend	0.40%	0.60%	0.74%	3,358	5,184	6,241	$10,129	$13,467	$16,069
Whittemore*	0.50%	0.60%	0.74%	1,616	1,956	2,209	$3,479	$4,658	$5,273
Winfield	0.45%	0.60%	0.75%	2,222	3,137	3,903	$4,101	$5,742	$6,702
Woodbine	0.40%	0.60%	0.74%	2,621	4,031	4,855	$5,105	$6,672	$8,162
Average	0.41%	0.60%	0.74%	4,281	6,500	7,939	$16,591	$21,345	$24,613
Total				218,315	331,477	404,875	$846,118	$1,088,619	$1,255,275

*Goals are for residential and commercial sectors.
**Goals exclude portion of industrial sector.
†Titonka is a propane utility.

Utility	Goals (% of Sales)			Goals (therms)			Projected Spending		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Allerton*	0.30%	0.70%	0.83%	656	1,541	1,779	$6,982	$7,603	$7,775
Consumers Energy	0.20%	0.20%	0.20%	812	851	850	$1,605	$1,681	$1,681

*Goals are for residential and commercial sectors.

Summary of Utility Data Developed under MRES Process

Appendix 6

	Joint	Goals (% of Sales)			Goals (kWh)			Projected Spending		
Utility	**Action Agency**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**
Alton	MRES	0.30%	0.50%	0.80%	32,067	53,445	85,512	$4,782	$7,914	$12,701
Denison	MRES	0.30%	0.50%	0.80%	440,718	734,530	1,175,248	$65,725	$108,765	$174,558
Hartley	MRES	0.30%	0.50%	0.80%	53,975	89,958	143,933	$8,049	$13,321	$21,378
Hawarden	MRES	0.30%	0.50%	0.80%	86,400	144,000	230,400	$12,885	$21,323	$34,221
Kimballton	MRES	0.30%	0.50%	0.80%	6,945	11,575	18,520	$1,036	$1,714	$2,751
Lake Park	MRES	0.30%	0.50%	0.80%	32,946	54,910	87,856	$4,913	$8,131	$13,049
Manilla	MRES	0.30%	0.50%	0.80%	21,434	35,723	57,157	$3,196	$5,290	$8,490
Orange City	MRES	0.30%	0.50%	0.80%	273,724	456,206	729,930	$40,821	$67,553	$108,416
Paullina	MRES	0.30%	0.50%	0.80%	29,455	49,091	78,546	$4,393	$7,269	$11,666
Primghar	MRES	0.30%	0.50%	0.80%	25,768	42,946	68,714	$3,843	$6,359	$10,206
Remsen	MRES	0.30%	0.50%	0.80%	47,257	78,761	126,018	$7,047	$11,663	$18,717
Rock Rapids	MRES	0.30%	0.50%	0.80%	85,182	141,970	227,152	$12,703	$21,022	$33,739
Sanborn	MRES	0.30%	0.50%	0.80%	61,838	103,063	164,901	$9,222	$15,261	$24,493
Shelby	MRES	0.30%	0.50%	0.80%	14,457	24,095	38,552	$2,156	$3,568	$5,726
Sioux Center	MRES	0.30%	0.50%	0.80%	319,554	532,590	852,144	$47,655	$78,863	$126,568
Woodbine	MRES	0.30%	0.50%	0.80%	44,179	73,631	117,810	$6,588	$10,903	$17,498
Average		**0.30%**	**0.50%**	**0.80%**	**98,494**	**164,156**	**262,650**	**$14,688**	**$24,307**	**$39,011**
Total					**1,575,899**	**2,626,494**	**4,202,393**	**$235,014**	**$388,919**	**$624,177**