Iowa Association of
Electric Cooperatives
A Touchstone Energy® Cooperative

July 1, 2008

Ms. Judi Cooper
Executive Secretary
Iowa Utilities Board
350 Maple Street
Des Moines, Iowa 50319-0069

Subject: IAEC Informational Joint 2008 Energy Efficiency Filing for certain Electric Cooperatives

Dear Ms. Cooper:

Enclosed please find an original and three copies of the Iowa Association of Electric Cooperatives' joint filing for 37 electric cooperatives' energy efficiency filing in 2008 for the years 2006-2009. This filing is being made in compliance with Iowa Administrative Code 199—Chapter 36 which allows for electric cooperatives to jointly file energy efficiency information and generally requires:

- a description of each individual program, including the purpose or goal of the program, and the energy using facilities, equipment, or customer behavior that the program was designed to change;
- annual energy and peak demand savings, annual dollar savings, and, if available, nonpeak demand savings from the program;
- a description of the method(s) for determining the annual energy savings, peak demand savings, nonpeak demand savings, and annual dollar savings, whether engineering estimates, surveys, metering, or other methods;
- annual number of program participants;
- annual and total costs of the program;
- date the program was initiated, terminated, and the reason for termination; and
- other relevant information.

This filing is being filed for informational purposes only. If you have any questions, or if I can be of further assistance, please advise.

Sincerely,

Regi Goodale
Director of Regulatory Affairs

cc: Iowa Utilities Board Members (1 copy each)
John Perkins OCA (3 copies)
IDNR (1 copy)
OEI (1 Copy)

Iowa Association of Electric Cooperatives

2008 Energy Efficiency Report to the Iowa Utilities Board

July 1, 2008

Iowa Association of Electric Cooperatives
2008 Energy Efficiency Report to the Iowa Utilities Board

Table of Contents

Executive Summary

Overview

Effective energy-efficiency programs that benefit the environment by helping control electricity usage are the result of a partnership between electric cooperatives and their end users. As with any successful partnership, effective communication is critical. In this case, the fruit born of that partnership is the maintenance of comfort and quality of life for consumers while using energy as efficiently as possible and in an environmentally responsible manner.

In 2007, electric cooperatives experienced a 25 percent increase in energy-efficiency program investment compared to planned energy-efficiency expenditures. The result of that investment was a 36 percent increase in electricity savings.

For consumers, the result was nearly $3 in energy savings achieved for every $1 invested in energy-efficiency programs by electric cooperatives in Iowa that are members of the Iowa Association of Electric Cooperatives. The savings are based on approximately $30.3 million in energy savings compared to an $11 million investment by those electric cooperatives. Investment that occurred in 2007 will continue to generate energy savings over the course of the expected life of installed energy-efficiency measures, which is reflected in the $30.3 million in savings.

There also was an environmental benefit to the investment in energy-efficiency programs. By reducing demand for electricity, consumers reduce the amount of electricity that would otherwise be needed, and which would place emissions into the air. The energy savings over the life of the energy-efficiency measures installed in 2007 is equal to enough electricity to provide power for approximately 34,000 homes or a city the size of 85,000 people, which is equivalent to Iowa City and Coralville, combined.

Individuals who participate in the 60 energy-efficiency programs offered by electric cooperatives are saving money on their energy costs and reducing the emissions their electricity requirements produce. It also is important to recognize that electric cooperatives are continuously evaluating their energy-efficiency programs and looking for ways to make them more effective and easy for electric cooperative member-consumers-owners to use.

Member cooperatives of the Iowa Association of Electric Cooperatives provide energy-efficiency programs, incentives and educational tools in four major categories.

- Incentive programs or energy-efficient technologies – This includes 37 programs and energy-efficient technologies in the areas of residential cooling and heating, residential lighting, residential water heating, residential appliances, efficient home incentives, and agriculture, commercial and industrial.
- Demand-response programs – This includes 14 programs in the areas of load control, time-of-day pricing for residential and nonresidential customers, crop drying and irrigation.

- Energy audit and technical support programs – This includes three residential and nonresidential programs.
- Educational and research programs – This includes six education and research programs for residential and nonresidential consumers.

Newly installed energy-efficiency measures and informational pieces distributed to electric cooperative member-consumer-owners as a result of these programs totaled more than 850,000 in 2007.

This filing will serve to reinforce electric cooperatives' long-time dedication to helping member-consumer-owners use energy wisely so they can save money on their energy bills. The filing also will illustrate the commitment Iowa Association of Electric Cooperatives members have toward investing in energy efficiency while providing affordable, reliable and safe electric service in an environmentally responsible manner. Members believe energy efficiency is one way to address concerns about global climate change, but more action is needed for a balanced approach to creating a lower-carbon economy in Iowa and the United States.

A thriving economy that provides and creates jobs for Americans must have affordable and reliable electricity, and policymakers must prove that their strategies ensure affordable and reliable electricity so the nation's economy is able to compete in a global economy. That also means adequately investing in research and development of technology that will help the United States become energy independent, and help avoid unnecessarily driving up electricity prices for Americans at a time when they're paying record prices for a gallon of gasoline, while also experiencing significant price increases for natural gas and propane.

Electric cooperatives energy efficiency strategies, goals and objectives

Electric cooperatives are unique because of their seven core business principles, which are the foundation of how business is conducted by electric cooperatives. These core principles lead and guide electric cooperatives in all they do.

The seven core principles are:

1 **Voluntary and open membership** – Cooperatives are voluntary organizations that are open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.
2 **Democratic member control** – Cooperatives are democratic organizations controlled by their members who participate in setting policies and making decisions. The elected representatives are accountable to the membership. Members have equal voting rights – one member, one vote.
3 **Members' economic participation** – Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members

allocate surpluses for any or all of the following purposes: developing the cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefitting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

4 **Autonomy and independence** – Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including government, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

5 **Education, training and information** – Cooperatives provide education and training for their members, elected representatives, managers and employees so they can contribute effectively to the development of their cooperatives. They inform the general public, particularly young people and opinion leaders, about the nature and benefits of cooperation.

6 **Cooperation among cooperatives** – Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.

7 **Concern for community** – While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.

The essence of the seven core electric cooperative principles has shaped their energy-efficiency program strategies, goals and objectives. The overarching strategy of cooperatives' energy-efficiency programs is to ensure that member-consumer-owners' have access to cost-effective energy-efficiency programs that help consumers better manage their electricity consumption and also are beneficial to the environment. To that end, the cooperatives:

- Work toward making sure every kilowatt or kilowatt-hour of electricity generated is used in the most efficient manner possible,
- Work to maintain or enhance the productivity level and comfort level of our members while using energy wisely and efficiently,
- Work to improve Iowa's indoor and outdoor air quality,
- Work to promote the use of new energy-efficient technologies,
- Work to deliver electricity at a competitive price,
- Work to preserve existing energy sources to provide for future generations,
- Work toward less dependence on foreign energy.

Energy-efficiency program participation highlights

Participation in electric cooperatives' energy-efficiency programs continues to increase, and the most significant increases in the future are expected to come from compact florescent light bulb usage and participation in heating and cooling programs, water heating programs and appliance programs.

By the end of 2009, compared to 2007 levels, participation is expected to increase by double-digit percentages, including a:

- 36 percent increase in high-efficiency appliance programs,
- 15 percent increase in cooling and heating programs,
- 15 percent increase in water heating programs, and
- 14 percent increase in compact florescent light bulb usage.

Energy-efficiency program recognition by state and federal officials

Iowa electric cooperatives' energy-efficiency programs have been cited by state and federal officials for the value they provide to end users and the environment.

State-level recognition

In January 2008, the Iowa Attorney General through the Office of Consumer Advocate reported* the following energy-efficiency program strengths to the Iowa Legislature:

- Geothermal and air source heat pumps rebate programs,
- Water heater rebate programs,
- Load management and demand response programs that utilize advanced metering technology
- Knowledge of customer preferences and needs
- Education, and
- Momentum is Building annual conference.

* The Status of Energy Efficiency Programs in Iowa, January 2008, John R. Perkins, Consumer Advocate, Page 56

The Consumer Advocate's report identified four opportunity areas for electric cooperatives' energy-efficiency programs including:

- Gaps in program offerings and/or consumer participation,
- Expanded offerings and participation in efficient lighting, air conditioning and energy star appliances,
- Low-income programs, and
- Greater focus on energy impacts in audits, new construction and retrofit programs.

Iowa's electric cooperatives that are members of the Iowa Association of Electric Cooperatives are working on a new assessment of potential for energy efficiency and these four opportunity areas will be explored in the study.

Federal-level recognition

The Federal Energy Regulatory Commission has acknowledged the leading role electric cooperatives are having on demand response programs.

The FERC's Assessment of Demand Response & Advance Metering staff report in August 2006 stated, "The estimate of market penetration of advanced metering is the highest among rural electric cooperatives at about 13 percent. Investor-owned utilities have the next highest penetration at close to six percent." That is important because advanced metering enables time-of-day electricity pricing, which provide economic incentives to help consumers better manage their energy consumption, and that benefits the environment.

Another benefit of advanced metering to the environment is the avoidance of the gasoline use that is required for traditional meter reading, drive-by automated meter reading and other premise visits that can be avoided. By the end of 2008, 26 out of the 37 distribution electric cooperatives that are members of the Iowa Association of Electric Cooperatives will be using advanced metering technology. That advanced metering penetration represents 60 percent of all the electric meters in Iowa electric cooperative service areas.

Collaboration and communication

As stated in the opening paragraph of this executive summary, effective energy-efficiency programs that benefit the environment by helping control electricity demand are the result of a partnership between electric cooperatives and their end users. As with any successful partnership, effective communication is critical.

Through this partnership electric cooperatives inform, encourage and assist their members on energy matters including:

- Using energy wisely and efficiently,
- Purchasing energy-efficient appliances and equipment,
- Building energy-efficient homes and buildings,
- Improving the efficiency levels of existing homes and buildings,
- Changing usage patterns,
- Showing members' economic paybacks for many types of energy-efficiency efforts,
- Sharing information on new energy-efficient products and technologies, and
- Working on development of 2008 legislation to improve building codes and make newly constructed buildings are energy efficient.

Trade allies partnership

In addition to informing, encouraging and assisting member-consumers on energy matters, Iowa's cooperatives also provide education and training to trade allies and cooperative employees. The cooperatives work very closely with trade allies in the education and training area. An example is the annual Momentum is Building Conference. This annual conference

brings trade allies together with electric cooperative personnel from across the state to exchange ideas and explore new technologies. Trade allies include companies and individuals in the construction industry and other areas of providing service related to products that consume energy in rural Iowa.

Touchstone Energy, ENERGY STAR® and *Living with Energy in Iowa*

Leveraging national and regional partnerships, and communication tools also is critical to the implementation of successful programs.

Electric cooperatives utilize national Touchstone Energy brand energy-efficiency resources to promote energy-efficiency for their member-consumer-owners. An example of this utilization is promoting Touchstone Energy Savers, http://www.touchstoneenergysavers.com/, which includes links to Energy Saver tools, tips and resources designed to create greater home comfort and promote energy efficiency.

One of the tools included in Touchstone Energy Savers is Home Energy Saver, the first Web-based, do-it-yourself energy audit tool. The tool is made available to Touchstone Energy cooperatives by special arrangement with U.S. Department of Energy's Lawrence Berkeley National Laboratory, and it has received numerous awards including the U.S. Department of Energy's Energy 100 Award in 2000 as one of the best 100 products during the Department of Energy's lifetime.

Another Energy Saver tool is the Light Bulb Energy Saver calculator which calculates how much energy can be saved by replacing standard incandescent light bulbs with compact fluorescent light bulbs.

Electric cooperatives also leverage ENERGY STAR to help their electricity consumers save money on their home energy costs. ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. According to ENERGY STAR, Americans saved $16 billion on their energy bills in 2007 alone, which ENERGY STAR indicated is equivalent to the avoidance of greenhouse gas emissions produced by 27 million cars — all while saving $16 billion on their utility bills.

Electric cooperatives use *Living with Energy in Iowa*, a monthly statewide magazine of the Iowa Association of Electric Cooperatives to promote the use of energy-efficiency tools, tips and specific programs offered by electric cooperatives in Iowa. The magazine is available on the Internet at http://www.livingwithenergyiniowa.com/, and other energy-efficiency resources are available at http://www.iowarec.org/, the Iowa Association of Electric Cooperatives' Web site.

The availability of that information in the magazine and on the association's Web site is highly useful based on an energy survey conducted last fall at the University of Northern Iowa by the Center for Social and Behavioral Research. One of the key findings of that research was that utility providers and consumer groups were viewed as the most credible sources of information on energy efficiency and conservation.

Supply side energy efficiency

The savings identified in this filing are based on energy-efficiency measures installed at the member-consumer-owners' premises including but not limited to compact fluorescent light bulbs, high efficient air conditioners, high efficient appliances, high efficient motors as well as load control equipment and pricing programs.

Iowa electric cooperatives also have many other activities which save kilowatt-hours from being generated. These activities are believed to produce significant electricity savings in addition to the amounts reported in this report, and include such actions as investing in power plants and power plant improvements that generate more electricity for the same amount of fuel input and more efficient transformers to reduce the loss of electricity during its delivery to end users.

Cooperatives Participating in IAEC Joint Filing

1. Access Energy Cooperative
2. Allamakee-Clayton Electric Cooperative, Inc.
3. Boone Valley Electric Cooperative
4. Butler County Rural Electric Cooperative
5. Calhoun County Electric Cooperative Association
6. Chariton Valley Electric Cooperative
7. Clarke Electric Cooperative, Inc.
8. Consumers Energy
9. East-Central Iowa Rural Electric Cooperative
10. Eastern Iowa Light & Power Cooperative
11. Farmers Electric Cooperative (Kalona)
12. Farmers Electric Cooperative, Inc. (Greenfield)
13. Franklin Rural Electric Cooperative
14. Glidden Rural Electric Cooperative
15. Grundy County Rural Electric Cooperative
16. Grundy Electric Cooperative, Inc. *(Missouri based)*
17. Guthrie County Rural Electric Cooperative Association
18. Harrison County Rural Electric Cooperative
19. Hawkeye Rural Electric Cooperative
20. Heartland Energy Services Cooperative
21. Humboldt County Rural Electric Cooperative
22. Iowa Lakes Electric Cooperative
23. Linn County Rural Electric Cooperative
24. Lyon Rural Electric Cooperative
25. Maquoketa Valley Rural Electric Cooperative
26. Midland Power Cooperative
27. Nishnabotna Valley Rural Electric Cooperative
28. North West Rural Electric Cooperative
29. Osceola Electric Cooperative, Inc.
30. Pella Cooperative Electric Association
31. Prairie Energy Cooperative
32. Sac County Rural Electric Cooperative
33. Southern Iowa Electric Cooperative, Inc.
34. Southwest Iowa Rural Electric Cooperative
35. T.I.P. Rural Electric Cooperative
36. Western Iowa Power Cooperative
37. Woodbury County Rural Electric Cooperative

PROGRAM DESCRIPTION / PURPOSE / CUSTOMER BEHAVIOR

I. Incentive Programs for Energy-Efficient Technologies

1. Residential Cooling and Heating

1.1-1.6 The Residential Cooling and Heating programs are designed to encourage members to purchase high-efficiency heating, ventilating and air conditioning (HVAC) equipment and specified ENERGY STAR® equipment. The programs provide monetary incentives to help offset the cost of these products. Higher incentives are paid for more efficient equipment.

These programs are designed to influence member behavior through initiatives that:

- Increase awareness of the energy-efficiency measures that are necessary to make a home more energy efficient.
- Increase awareness that ENERGY STAR labeled equipment offers higher efficiency than standard models.
- Increase awareness that heat pump heating and cooling systems can reduce annual heating/cooling costs, and are reliable to operate and install in their homes.

The ENERGY STAR efficiency standards provide for benchmarks for setting many of the residential Cooling and Heating program criteria.

ENERGY STAR activities include:

- Cooperatives participate in the ENERGY STAR searchable rebates database.
- The cooperatives' newsletters and Web sites feature information provided by the ENERGY STAR program.
- The cooperatives' Web sites link to the ENERGY STAR Web site and other energy efficiency Web based sites.

The savings members are reduced annual cooling costs. The ENERGY STAR calculator has been used to compute the applicable savings. The savings to the members can be calculated by multiplying the above savings by the end block price. It is assumed that all kWh used by the measures would have been at the end block of the retail rate schedule.

The savings to the electric cooperative are the cooling season kWh not purchased by the member using the measure. These savings amount to the kWh not purchased times the appropriate wholesale energy cost.

1.1-1.2 ENERGY STAR Air Conditioners encourages members to install an electric cooling system that uses less energy by providing a rebate for high efficient models. These systems may be central air conditioning units or window air conditioning unit.

1.3-1.4 Heat Pump programs for geothermal and air source technologies are comprehensive energy efficiency programs designed to encourage the use of heat pump technology by

introducing members to the energy-saving potential of heat pumps and provide financial incentives for equipment installation.

The cooperatives:

- Inform members about heat pump technology and work with local contractors to maximize value to members,
- Promote the technology through newsletter articles, web site links, printed materials and exhibits,
- Have staff members with knowledge of heat pump technology, that may:
  - Attend educational/training events,
  - Work to educate and assist members through individual consultation and group events,
  - Belong to professional organizations, and/or have professional certification, and
  - Linn County REC, Maquoketa Electric Cooperative and Southwest Iowa Rural Electric Cooperative have staff serving as directors/officers on the Iowa Heat Pump Association board in 2008.

The ENERGY STAR calculator for air source heat pumps has been used to compute savings and the baseline electric usage with resistance heat. The ENERGY STAR calculator assumes that resistance heat as the baseline energy source. The results of this calculator were used for computing the savings for the geothermal systems. It was assumed that one half of the geothermal systems would have otherwise installed air source heat pumps and the remaining one half would have otherwise installed resistance heat.

1.5 Heat Recovery Ventilator program encourages the use of heat recovery ventilator technology through education and financial incentives. Heat Recovery Ventilator equipment brings in fresh air from the outside, recovering heat from exhaust air during the winter and rejecting heat to the exhaust air during the summer. The goal of the program is to help ensure a healthy indoor environment for the occupant without a significant increase in energy costs.

The program is designed to influence member behavior through initiatives that:

- Increase awareness of the energy efficiency benefits of heat recovery systems.
- Increase awareness of the health benefits of fresh air ventilation.
- Encourage members to purchase heat recovery as part of an energy-efficient HVAC system.

Savings come from reduced heating and cooling costs. The savings to the members can be calculated by multiplying the above savings times the end block price.

The savings to the electric cooperative are heating and cooling season kWh not purchased. These savings equal the kWh not purchased times the appropriate wholesale energy cost.

1.6 High Efficiency Zoned Electric Heat program encourages members to install zoned electric heating systems that use less energy than central space heating systems. There are a number of High Efficiency Zoned Electric Heat systems available today that have an operating efficiency of 100 percent. They consist of electric heating elements installed in various ways or

configurations. Examples include radiant ceiling cable wires installed under ceiling plaster. The heating is zoned in each room is controlled by its own thermostat. Baseboard heater elements installed in housings designed to be installed by perimeter room baseboards. The heating is zoned with each room having its own thermostat. Cove heater elements installed in housings at room perimeter ceiling lines. The heating is zoned with each room having its own thermostat.

The savings from a High Efficiency Zoned Electric Heat program to the members can be reduced annual heating costs. The ENERGY STAR calculator estimates kWhs used at 26,307 for an average family in Iowa and IAEC studies show that a High Efficiency Zoned Electric Heat system will use 15 percent fewer kWh than a central, forced air electric furnace. These savings are due to the diversity effect of members reducing the thermostat settings 10 to 15 degrees in rooms not occupied. A 15 percent savings can be calculated by multiplying the above savings by the end block price.

The savings to the electric cooperative are the heating season kWh not purchased by using a High Efficiency Zoned Electric Heat system. These savings amount to the kWh not purchased times the appropriate wholesale energy cost. The kW demand savings achieved by using a High Efficiency Zoned Electric Heat versus less efficient electric heating equipment are not included in this calculation.

It is assumed that all kWh used by the High Efficiency Zoned Electric Heat would have been used at the end block of the retail rate schedule.

2. Residential Lighting

2.1-2.5 The **residential lighting programs** provide incentives for consumers to install energy-efficient lighting. Consumers and electricians are educated about the energy-saving benefits of retrofitting existing lights with higher efficiency components.

The interior program promotes ENERGY STAR lighting products including fluorescent lamps and fixtures. The interior program encourages members to replace conventional incandescent lights in their homes with compact fluorescent lamps (CFLs) and fixtures.

Cooperatives may:

- Promote and encourage the ENERGY STAR Change A Light pledge to change inefficient incandescent lighting in their home with ENERGY STAR CFL lighting,
- Make CFL bulbs available to members locally at no-cost (10 percent rebate) or near 100 percent of cost rebate,
- Have Change A Light Pledge forms available to members at events and/or on their Web sites,
- Have registered as a Change A Light Pledge Driver and have established a pledge goal, and
- Plan to participate in the 2008 Iowa Change A Light in-store coupon program.

These programs are designed to influence member behavior through initiatives that:

- Increase awareness of the energy savings that can be obtained from using high-efficiency lamps and fixtures,
- Increase awareness of the variety of available sizes of compact fluorescent lamps that allows replacement of almost any incandescent bulb with a CFL,
- Increase awareness of the reduction of heat generated by less efficient lighting and fixtures and the impact on air conditioning,
- Encourage the use of ENERGY STAR qualified lighting products, and
- Encourage the use of Light Emitting Diode holiday lights in lieu of traditional lights.

The savings from the residential lighting program have been computed, where applicable, from the Wisconsin Energy Conservation Corporation and the Change a Light Change the World Program. The energy savings can be calculated by multiplying the savings above by the end block of the appropriate retail price. It is assumed that all kWh used by the lighting fixtures would have been used at the end block of the retail rate schedule.

2.1 Change A Light Rebate Program is multi-utility sponsored program offering an instant cash-back reward on ENERGY STAR qualified CFL purchases of 12 bulbs or less for participating utility customers. The majority of cooperatives participated in the 2007 campaign, and plan to participate in the 2008 campaign.

The Iowa Change the World campaign makes CFLs available at participating Ace Hardware, Do it Best, Hy-Vee, Menards, Mills Fleet Farm, Shopper's Supply, Theisen's, True Value Hardware

and United Hardware locations. The Wisconsin Energy Conservation Corp. administers the Iowa campaign. Advertising, bill stuffers, newsletter articles and displays are used to promote this campaign.

2.2 Local CFL Rebate Program(s) may include mail-in rebate allowances as well as locally developed and administered programs such as giving CFLs as handouts at events and special programs with reduced-priced CFL packages.

2.3 CFL Recycling is a program intended to encourage members to dispose of used CFLs in an environmentally conscious way. If they have local waste disposal centers, they can take used bulbs there. But many rural areas do not have these centers readily accessible. The participating REC provides a recycling bucket in which members can drop their used bulbs, and the bulbs will be disposed of safely. Savings in demand and energy have not been estimated. Recycling bulbs has positive environmental benefits.

2.4 High-Efficiency Exterior Lighting incentives are designed to provide financial incentives, and to educate members and electricians about the energy-saving benefits of efficient security and streetlights, including information on cost, operation and maintenance of different types of fixtures. The exterior program encourages the use of high-pressure sodium, metal halide, and compact fluorescent outdoor lights and fixtures.

2.5 Light Emitting Diode Holiday Lights incentives are designed to provide financial incentives and to educate members about the energy-saving opportunities and benefits of Light Emitting Diode Holiday lights. This program encourages the use of technology that can save energy.

The savings for the Light Emitting Diode holiday lighting incentive was determined from work conducted by the Minnesota Department of Commerce to establish standard savings for certain programs. The energy savings is calculated as the difference in demand between a string of standard holiday lights and LED holiday lights times the assumed number of hours the lights are in use.

3. Residential Water Heating

3.1 The High-efficiency water heater program introduces consumers to the energy savings available from water heaters with higher energy efficiency ratings than standard equipment. The program offers financial incentives to customers that purchase a high-efficiency electric water heater and sign an agreement allowing future load control of the unit. High-efficiency electric water heaters provide participants with added benefits of installation flexibility, ease of control, safety, low maintenance and improved quality indoor air.

These programs are designed to influence consumer behavior through initiatives that:

- Increase awareness of the different types of high-efficiency domestic hot water heaters that are available, and that can reduce annual hot water heating costs and energy use, and
- Encourage consumers to purchase high-efficiency hot water heaters as their inefficient water heaters fail or need to be replaced.

The savings from this program to the members are reduced domestic hot water heating costs. Savings are computed using the DOE calculator. The savings to the members can be determined by subtracting the annual energy usage for a high efficiency water heater from the annual usage of a conventional efficiency water heater and applying the end block of the appropriate retail price to the energy savings.

Other devices can be installed to further reduce energy usage for heating water. These include tank wraps, thermal heat traps, faucet aerators, low-flow showerheads and piping insulation. Energy savings from these devices vary by size of family, efficiency of the product, etc., and would be in addition to the tank insulation savings noted above.

3.2 Drain-water heat recovery program is designed to promote devices that recover heat energy from drain water. Nearly 33 percent of a home's energy is used to heat water and 80-90 percent of it goes down the drain during use. According to the U.S. Department of Energy, Drain-water Heat Recovery systems capture this energy to preheat cold water entering the water heater or going to other water fixtures. Drain-water Heat Recovery systems thus reduce the energy needed for heating water.

This program is designed to influence member behavior through initiatives that:

- Inform consumers and contractors about the energy savings potential of Drain-water Heat Recovery systems,
- Increase awareness of the technology and availability of Drain-water Heat Recovery systems, and
- Encourage consumers and contractors to install Drain-water Heat Recovery systems.

The savings from this program to the members are reduced domestic hot water heating costs. Savings are computed using the information from the manufacturer.

3.3 Flow Restrictors (Faucet and Shower) program is designed to introduce members to the energy saving potential of installing flow restrictors on plumbing fixtures that use hot water. In addition to saving hot-water energy, flow restrictors can reduce the overall amount of water used and water-pumping energy needs. Specific goals of the program:

- Promote the use of flow restrictors on sink faucets (kitchen and bathroom),
- Promote the use of reduced-flow showerheads, and
- Make members more aware of how saving hot water can reduce home energy costs.

The DOE Energy Efficiency and Renewable Energy Web site was used as the mechanism for computing savings. The savings to the members can be determined by multiplying the annual energy saved and applying the end block of the appropriate retail price to the energy savings. It is assumed that all kWh used would have been used at the end block of the retail rate schedule.

The kW demand savings to the electric cooperative are not included in this calculation. The higher efficiency water heaters decreased in use of heated water will result in having to purchase fewer kWh. The savings amount to the kWh not purchased times the appropriate wholesale energy cost.

3.4 Heat Pump Water Heater incentives are designed to provide financial incentives for use of highly energy-efficient heat pump water heating equipment and to educate members and contractors about their potential energy savings. According to the U.S. Department of Energy, heat pump water heaters use electricity to move heat from one place to another instead of generating heat directly, and therefore, they can be two to three times more energy efficient. They are available as both a stand-alone integrated unit with a built-in water storage tank, or an existing conventional storage water heater can be retrofitted with an add-on heat pump unit.

The computations per participant are derived from the power supplier offering this program to distribution RECs.

4. Residential Appliances

4.1-4.6 Residential Appliance programs are designed to introduce consumers to the energy saving available from various types of high-efficiency electric appliances. The majority of energy savings for dishwashers and clothes washers come from the reduced need for hot water supplied from their electric water heaters.

These programs encourage members to purchase the specified ENERGY STAR qualified appliances, and provides monetary incentives to help offset the cost of these appliances. Other ENERGY STAR products are promoted through education programs as well.

These programs are designed to influence member behavior through initiatives that:

- Increase awareness of energy-saving technology available in many new appliances;
- Promote ENERGY STAR qualified appliances that offer higher efficiency than standard models, and
- Increase awareness of the advantages and savings from purchasing new energy-efficient ENERGY STAR qualified appliances.

A number of cooperatives joined the ENERGY STAR program in 2002. The ENERGY STAR efficiency standards are used as benchmarks for setting many of the residential Cooling and Heating program criteria.

ENERGY STAR activities include:

- The member cooperatives' incentives are listed in the ENERGY STAR searchable database,
- The member cooperatives' newsletters and web sites feature information provided by the ENERGY STAR program, and
- The cooperatives' Web sites link to the ENERGY STAR Web site and other energy efficiency Web based sites.

The savings to the members and the electric cooperative of an electric appliance rebate is in reduced kWh consumption. Some appliances realize their savings through reduction of hot water needs. The kW demand and kWh savings are based on information and calculation using the ENERGY STAR calculators for the various appliances.

5. Energy Efficient Home Incentives

These programs provide incentives for residential customers to purchase/design/build or remodel homes using high-efficiency heating, ventilation, and air-conditioning systems, appliances, and building techniques.

These programs are designed to influence members through initiatives that:

- Increase awareness of energy-saving technology available in many new appliances, high-efficiency equipment, and construction practices,
- Promote ENERGY STAR qualified appliances and other technologies that offer higher efficiency than standard models,
- Increase awareness of the advantages and savings from purchasing new energy-efficient ENERGY STAR qualified appliances and other high-efficiency equipment,
- Increase awareness of energy-efficient home construction practices, and
- Encourage the purchase and construction of energy-efficient homes.

The savings for the various measures included under these programs have been accounted for under the specific measures.

5.1 Loans for Efficiency Improvements program make low-interest loans available to members as part of the electric cooperative's commitment to energy efficiency along with providing energy efficiency assistance and information. Loans are available to owners and renters of permanent residential, commercial, industrial, and public, community, and agricultural buildings. Loan interest, if part of an Energy Resource Conservation Program may be five to seven percent. Many electric cooperatives allocate additional funds at prices comparable to the electric cooperative's cost of capital.

The Rural Utilities Service initiated the Energy Resource Conservation Program by allowing rural electric cooperatives use of a portion of the funds allocated for principal payments as a loan at five percent interest rate to members for energy conservation. From this program, members and electric cooperatives have made significant energy efficiency improvements in their offices (over 60 percent of the Rural Electric Cooperative offices in Iowa are heated and cooled with heat pumps).

The Loans for Efficiency Improvements Program is an expansion of the Energy Resource Conservation Loan Program where electric cooperatives have decided to use other funds for loans for energy efficiency programs not approved for the Energy Resource Conservation Program. These loans usually carry a slightly higher interest price.

5.2 Energy-Efficient Home Construction Rebates

The efficient home construction must exceed minimum energy efficiency requirements and must contain ENERGY STAR rated appliances and a high-efficiency electric heating, ventilating, and air-conditioning system. Efficient construction must be verified by one of the following methods:

- A Renewable Energy System check Certificate signed by builder showing that home is 10 percent more efficient than base home meeting current Iowa Model Energy Code,
- A signed ENERGY STAR Home certificate,
- A signed Home Energy Rating System report showing that a home has received a Four Star Home Energy Rating System rating or higher,
- For the Central Iowa Power Cooperative distribution systems an approved All-Star Home checklist is signed by the builder.

6. Agriculture/Commercial and Industrial

6.1-6.6 Agriculture/Commercial and Industrial cooling and heating programs are designed to introduce members to the energy savings of high-efficiency heating, ventilating, and air-conditioning equipment. The specific goals of the program are to encourage members to purchase high-efficiency HVAC equipment and specified ENERGY STAR equipment. The programs provide monetary incentives to help offset the cost of these products. Higher incentives are paid for more efficient equipment.

These programs are designed to influence member behavior through initiatives that:

- Increase awareness of the equipment and measures that are necessary to make facilities/processes more energy efficient,
- Increase awareness that ENERGY STAR labeled equipment offers higher efficiency than standard models,
- Increase awareness of energy-efficient heat pump heating and cooling systems, and
- Encourage members to purchase high-efficiency heating, ventilating, and air-conditioning equipment and specified ENERGY STAR equipment.

A number of cooperatives joined the ENERGY STAR program in 2002. The ENERGY STAR efficiency standards are used as benchmarks for setting many of the cooling and heating program criteria.

- The member cooperatives' newsletters and web sites feature information provided by the ENERGY STAR program, and
- The cooperatives' Web sites link to the ENERGY STAR Web site and other energy efficiency Web based sites.

6.1 Change A Light Incentive Program is multi-utility sponsored program offering an instant cash-back reward on ENERGY STAR qualified CFL purchases of 12 bulbs or less for participating utility customers. The Iowa "Change the World" campaign makes CFLs available at participating Ace Hardware, Do it Best, Hy-Vee, Menards, Mills Fleet Farm, Shopper's Supply, Theisen's, True Value Hardware and United Hardware locations. The Wisconsin Energy Conservation Corp. administers the Iowa campaign. Advertising, bill stuffers, newsletter articles and displays are used to promote this campaign.

6.2 Local Lighting Incentive Program(s) include mail-in incentive for CFL's, T-8 fluorescents, LED replacement lamps or new fixtures as well as locally developed and administered programs such as giving CFLs as handouts at events and special programs with reduced-priced CFL packages.

6.3 High-Efficiency Exterior Lighting incentives are designed to provide financial incentives, and to educate members and electricians about the energy-saving benefits of efficient security and streetlights, including information on cost, operation and maintenance of different types of fixtures. The exterior program encourages the use of high-pressure sodium, metal halide, LED and CFL outdoor lights and fixtures.

6.5-6.6 Heat Pump programs for geothermal and air source technologies are comprehensive energy-efficiency programs designed to introduce members to the energy-saving alternatives of heat pumps and provide significant financial incentives. The program goal is to encourage the use of heat pump technology.

The cooperatives:

- Inform members about heat pump technology and work with local contractors to maximize value to members,
- Promote the technology through newsletter articles, web site links, printed materials, exhibits, and
- Have staff members with knowledge of heat pump technology, that may:
  - Attend educational/training events,
  - Work to educate and assist members through individual consultation and group events,
  - Belong to professional organizations, and/or have professional certifications, and
  - Three cooperatives have staff serving as directors/officers on the Iowa Heat Pump Association board in 2008.

6.7 Heat Recovery Ventilator program introduces members to equipment that brings in fresh air from the outside preheats the incoming air during the winter and pre-cools the incoming air during the summer. It can provide clean fresh air while helping to keep energy costs low. A properly designed and installed ventilation system is the key to positive moisture control and will help ensure a healthy indoor environment. The goal of the program is to encourage the use of heat recovery ventilator technology through education and financial incentives.

The program is designed to influence member behavior through initiatives that:

- Increase awareness of the energy-efficiency benefits of heat recovery systems,
- Increase awareness of the health benefits of moisture control, and
- Encourage members to purchase heat recovery as part of an energy-efficient heating, ventilating, and air-conditioning system.

6.8 Premium Motors Rebate program is a comprehensive energy-efficiency program designed to introduce members to the energy savings of premium motors. The program provides education and assistance to members with maintenance of existing motors and purchase of energy-efficient motors and provides a rebate for energy-efficient motors labeled as National Electrical Manufacturers Association Premium™ efficiency motors.

This program is designed to influence member behavior through initiatives that:

- Promote use of energy-saving premium motors,
- Educate and support contractors and trade allies on the benefits of premium motors,
- Educate members about the reliability and high efficiency of premium motor equipment,
- Simplify identification of efficient motors through use of the National Electrical Manufacturers Association Premium motor designation,
- Encourage purchasers to optimize motor system efficiency, and
- Increase awareness of the need for a motor maintenance program and timely replacement with energy-efficient motors.

6.9 The Adjustable Speed Drive Motor Rebate program provides education and financial incentives to encourage installation of energy-efficient adjustable speed drive adjustable speed drive motor rebate, also known as variable speed drive, variable frequency drive, or adjustable frequency drive, which electronically control motor speeds.

This program is designed to influence member behavior through initiatives that:

- Promote use of energy-saving adjustable speed drives,
- Educate members about the reliability and high efficiency of adjustable speed drive motor rebate equipment,
- Encourage purchasers to optimize commercial motor system efficiency, and
- Educate and support contractors and trade allies on the benefits of installing adjustable speed drive motor rebate as an alternative to conventional motors.

6.11 Livestock Ventilation Fan The goal of the program is to encourage the use of energy-efficient ventilation fan technology through education and financial incentives.

The program is designed to influence member behavior through initiatives that:

- Educate members about the benefits of efficient ventilation fan technology, and
- Encourage members to purchase energy-efficient ventilation fans.

6.10 And 6.12 Dairy Pre-cooler and Heat Reclaimer programs are designed to introduce dairy members to the energy savings available from milk processing heat recovery units.

The specific goals of the program are designed to:

- Promote use of energy-efficient milk processing systems,
- Educate dairy members on the benefits of pre-heated water and reclaimed heat for dairy operations,
- Educate members about the energy savings that heat reclaimers provide, and
- Encourage the installation of energy-efficient dairy equipment.

6.13 The High-efficiency water heater program introduces consumers to the energy savings available from water heaters with higher energy efficiency ratings than standard equipment. The program offers financial incentives to customers that purchase a high-efficiency electric water heater and sign an agreement allowing future load control of the unit. High-efficiency electric water heaters provide participants with added benefits of installation flexibility, ease of control, safety, low maintenance and improved quality indoor air.

These programs are designed to influence consumer behavior through initiatives that:

- Increase awareness of the different types of high-efficiency domestic hot water heaters that are available, and that can reduce annual hot water heating costs and energy use.
- Encourage consumers to purchase high-efficiency hot water heaters as their inefficient water heaters fail or need to be replaced.

6.14 The Custom Rebate Program makes funds available for a wide variety of incentives for technical and non-prescriptive measures that provide energy efficiency, energy management and other energy-related benefits to commercial, large agricultural and industrial customers.

Examples of Custom Rebate applications may include, but are not limited to:

- Total Energy Usage Audit
- Design Reviews (to identify energy efficiency improvements)
- LEED Certification
- Energy Efficient Design for Commercial Construction
- Power Quality Survey/Analysis
- Process Energy Sales Tax Exemption Audits
- Energy Management Systems Analysis
- Rewards for Energy Action Points
- Non-prescriptive Technologies
- Water Heater Replacement
- Programmable (Set back) Thermostats
- Agricultural (Grain) Energy Audit
- Air source heat pump water heater – Air Tap

II. Demand Response Programs

The demand response programs are promoted through:

- Newsletters,
- Web site,
- Annual Meeting,
- Living With Energy in Iowa,
- Trade Allies,
- Bill stuffers, and
- REC Member Service Personnel

7. Water Heater Load Control program encourages members to replace less efficient water heaters with high efficiency heaters. Most people do not replace their domestic or commercial water heaters until they wear out or start leaking. These water heaters have dramatic quality differences. Conventional water heaters have glass-lined tanks. Depending on many factors, including manufacturer and local water conditions, these tanks may fail after just a few years of service. The newest generation of domestic water heaters offers high quality tanks that last for an indefinite time (the manufacturers of plastic-lined tanks generally provide a lifetime warranty on the tank).

This program promotes efficient energy use through demand-side management by controlling kW demand and time of energy use. The program encourages the use of energy-efficient products such as high-efficiency electric water heaters. This program also educates members about the benefits that can be obtained from high efficiency water heaters and introduce them to the concept of load management.

A water heater load control program interrupts service to a water heater for a defined period of time. No backup non-electric system is required, but the storage tank must be sized large enough to supply an adequate supply of hot water during load control periods.

During non-control periods, the elements on the water heater are allowed to operate as controlled by the water heater's thermostat. Control periods may be determined by a Supervisory Control and Data Acquisition system that monitors individual substation loads as well as the entire system.

During control periods, as determined by a supervisory control and data acquisition system, a signal is sent to interrupt power to the water heater.

A water heater control program can provide savings to the members through an installation incentive or reduced water-heating prices. The electric cooperative may offer an incentive to the participant. The electric cooperative may save if kWh usage is shifted to lower-cost times of the day. If the program includes pipe wraps and water flow restrictors, additional savings will be realized through a reduction in kWh consumption. Finally, in cases where a new water heater is installed as a result of the program, its kWh savings over the minimum federal standards is multiplied by the end block of the retail price.

8. Water Heater Storage program is intended to encourage members to install a more efficient, cost-effective electric water heater. The electric cooperatives may be under one of the following control strategies. The first strategy states that the water heater must be fully charged within an 8-hour off-peak period (11:00 p.m. to 7:00 a.m.). This charge must then supply all the hot water needs of the structure for a 16-hour discharge period. The second strategy states that the heating unit or units must be fully charged within a 9-hour off-peak period (9:30 p.m. to 6:30 a.m.), with two additional hours of charging time in the afternoon. A third strategy states that the storage heating equipment must be charged within a 10-hour off-peak period and the equipment must then be able to supply the heating requirements of the structure for a 14-hour discharge period.

During on-peak periods the water heating elements are controlled or shut off by a time clock or load controller.

During off-peak periods the power is turned on by the time clock or load controller to recharge the water heater. The water heater(s) must be sized large enough to provide adequate hot water for the household.

The Water Heater Storage Program is designed to promote efficient energy use through demand-side management by controlling kW demand and time of energy use. This program also encourages the use of energy-efficient products such as high-efficiency electric water heaters, water heater pipe wraps, and low-flow showerheads. This program shifts energy use to lower-cost times of day. The program also informs members about the benefits that can be obtained from high efficiency water heaters and introduce them to the concept of load management.

The savings from a water heater storage program to the members are calculated by comparing the end block of the retail price schedule to the water heater storage price. Subtract the difference and multiply the kWh measured by the storage water heater meter.

Savings to the electric cooperative are based on the number of kW being controlled and shifted to off-peak periods and a reduction of demand charges. There may be little or no kWh savings since the energy is simply shifted to another time of day.

9. Air Conditioning Load Control program is intended to encourage members to install more efficient, cost effective electric cooling equipment. The program allows for interruption of service to a cooling system for a limited time period as needed by the power supplier. A backup cooling system is not required.

During off-peak load periods, the air conditioning system will satisfy the structure's temperature requirements. During peak load periods, which may be determined by a control such as a Supervisory Control and Data Acquisition system, the power supplier sends a signal. This signal may allow the power supplier to cycle the cooling system off during specified intervals, but still maintain customer comfort and satisfaction. The load control program for heating may include a defined maximum control period. A cooling option may include switching off the air conditioner compressor for short intervals. Currently, the electric cooperative may or may not be controlling this load.

Air conditioning usage may be eligible for interruptible prices when the members participates in the interruptible heating program and also allows the air conditioner to be controlled. Air conditioners must meet certain requirements as well as be connected to a load controller.

Even if the electric cooperative is not controlling the load today, this program still provides many indirect benefits. These include having a control system on the member's' system that can be activated when demand-side management becomes economically feasible or for extreme emergencies.

This program is designed to promote efficient energy use through demand-side management by controlling kW demand and improving load factor. The program is also designed to replace low efficiency air conditioning systems with more efficient systems.

The savings to the members from a load control program may be calculated by comparing the end block retail price schedule to the load control price. Subtract the difference and multiply times the kWh measured by the load control electric meter.

10. Space Heating Load Control (Interruptible) program is intended to encourage members to install more efficient, cost effective electric heating equipment. A load control space heating program allows for interruption of service to an existing or new electric heating system for a limited time period each day. A backup non-electric heating system is not required.

The electric heating equipment must be sized to heat the entire home, and can be any type or style electric heating system in use today.

During off-peak load periods, the electric heating system will satisfy the structure's temperature requirements. During peak load periods, which may be determined by a control such as a Supervisory Control and Data Acquisition system, the power supplier sends a signal. This signal may allow the power supplier to cycle the heating system off during specified intervals, but still maintain customer comfort and satisfaction. The load control program for heating may include a defined maximum control period. Currently, the electric cooperative may or may not be controlling this load.

Even if the electric cooperative is not controlling the load today, this program still provides many indirect benefits. These include having a control system on the member's' system that can be activated when demand-side management becomes economically feasible or for extreme emergencies.

If the electric cooperative is controlling, savings to the electric cooperative are based on reduced kW demand and energy charges, which are the result of involvement in the program. A reduction of kW demand during load control ultimately reduces peak usage for the electric cooperative. If load is being actively controlled, it is assumed that the electric cooperative only saves the demand once even if they are billed monthly. Also, the electric cooperative savings may come in the form of a credit from the power supplier.

The savings to the members from a load control program may be calculated by comparing the end block retail price schedule to the load control price. Subtract the difference and multiply times the kWh measured by the load control electric meter.

11. Residential Time-of-Day Price program is designed for single-phase residential members who can postpone some of their energy usage to off-peak periods. No direct load control is involved. The members are informed of daily on-peak and off-peak load periods. A special meter, which monitors real-time, has the capability of measuring the energy usage in specific time periods, which are billed to the consumer at varying prices. When a peak-load period occurs, the meter automatically records the energy used during the period. The same is true for off-peak periods.

The savings from a Residential Time of Day Price Program for an electric cooperative are the reduced kW demand and energy purchases during peak-load periods. The savings are determined by kW demand charges and usage shifted to off-peak periods.

The savings from a Residential Time of Day Price Program to the members are the difference between the time-of-use price and the regular residential price. No attempt has been made to measure these savings.

12. Time-of-Use-Heat Plus program is intended to encourage members to take advantage of special seasonal rates for electric heating systems. The program also focuses attention on the energy efficiency of the structure which when implemented reduces the required size of heating equipment installed to save energy and provide additional occupant comfort.

This program is designed to influence member behavior through initiatives that:

- Inform members about the benefits of energy-efficient HVAC equipment,
- Inform members about the benefits of cost-effective structure improvements as a component of installing energy-efficient HVAC equipment, and
- Encourage the use of energy-efficient electric heating systems.

13. Dual-Fuel (also Electric Thermal) Storage Space Heating and Air Conditioning program is intended to encourage members to install a more efficient, cost-effective electric heating system. A dual-fuel storage program allows for one or two sources of space heating. This is because some types of electric storage heating equipment can be used in conjunction with a conventional electric heating system. If the electric storage space heating equipment is sized large enough, a second heating system is not necessary to qualify for the dual-fuel price.

A central storage heating system is usually sized to heat the entire home. Heat storage bricks can be installed in one large central unit designed to heat the entire house. A second example of a central system would be slab storage heating, with electric heating cables installed in sand under a concrete slab. The slab and sand act as a storage medium for the heating energy. A third example would be an electric boiler, which would store heat in a large water tank during off-peak times and circulate the heated water through radiators during on-peak periods.

Individual storage units may also be placed throughout the structure to provide heating for the entire structure. These individual units are required to provide 50-100 percent of the structure's heating requirements depending on the electric cooperative program requirements.

The electric cooperatives may be under one of the following control strategies. The first strategy states that the heating unit or units must be fully charged within an 8-hour off-peak period (11:00 p.m. to 7:00 a.m.). This charge must then supply all the heating needs of the structure for a 16-hour discharge period. The second strategy states that the heating unit or units must be fully charged within a 9-hour off-peak period (9:30 p.m. to 6:30 a.m.), with two additional hours of charging time in the afternoon. A third strategy states that the storage heating equipment must be charged within a 10-hour off-peak period and the equipment must then be able to supply the heating requirements of the structure for a 14-hour discharge period.

During on-peak periods the heating elements in the storage space heating equipment are controlled or shut off by a time clock or load controller. During the on-peak period, forcing air via a blower through holes within the bricks slowly discharges stored heat. In a hydronic system, heated water is circulated through the radiator system. If existing non-storage electric heating is being used as a backup system, a load control system can disconnect existing electric and let the storage system supply the heating energy.

During off-peak periods the power is turned on by the time clock or load controller to recharge the heat in the storage medium. The heat storage electric elements must be sized large enough to completely recharge during the off-peak period. If an existing non-storage electric system is being used also, a load control system may turn the power back on and allow both units to operate.

The savings from a dual-fuel storage program to the members are calculated by comparing the end block of the retail price schedule to the dual-fuel price. Subtract the difference and multiply the kWh measured by the dual-fuel storage space-heating meter.

Savings from a dual-fuel storage space-heating program to the electric cooperative are based on the number of kW that are being controlled and shifted to off-peak periods and a reduction of demand charges. There are no kWh savings since the energy is simply shifted off peak.

14. Dual-Fuel Space Heating program is intended to encourage members to install a more efficient, cost-effective electric heating system. A dual-fuel program provides a second heating system for the home. Both heating systems are sized to heat the entire home independently.

Qualifying secondary systems may include nonelectric systems such as wood, propane, natural gas or automatic standby generators.

During off-peak load periods, the heat from the electric heating system will satisfy the heating requirements. During peak load periods, which may be determined by a control such as a Supervisory Control and Data Acquisition system installed by the electric cooperative, the power supplier sends a radio signal. This signal switches off the primary heat system and allows the

backup system to operate. Currently, the electric cooperative may or may not actively control this load.

Even if the electric cooperative is not controlling the load today, this program still provides indirect benefits. These include having a control system on the members' system that can be activated when demand-side management becomes economically feasible or in extreme emergencies.

If the electric cooperative is controlling load, savings to the electric cooperative are based on reduced kW demand and energy charges, which are the result of involvement in the program. A reduction of kW demand during load control ultimately reduces peak usage for the electric cooperative.

The savings from a dual-fuel program to the members may be calculated by comparing the end block of the retail price schedule to the dual-fuel price. Subtract the difference and multiply by the kWh measured by the dual-fuel electric meter.

15. Crop Drying

15.1 And 15.2 Crop Off-Peak Pricing and Load Control programs encourage members to install high efficiency electric motors on their grain drying fans. There have been marked energy efficiency improvements in electric motors in recent years. Load control for crop drying may occur during the months of October and November. Heating elements that dry the grain would be switched off during control periods, but the dryer fan would still continue to operate, as airflow through damp grain is imperative during warm fall days.

For off-peak crop drying, load control normally occurs during the months of September, October and November. Electric heating elements are sometimes used in the crop drying process. Also, grain is often dried with ambient air that is forced through the grain continuously for approximately one month. This process uses a fan-forced air system. During wet years, it is appropriate and sometimes necessary to pre-dry the grain using another fuel source, and then complete the drying using this method.

The demand savings to the electric cooperative are based on the number of months that load control occurs. The kW demand savings occur by transferring kW demand from peak to off-peak periods. There are no kWh savings, as kWh purchases are transferred to off-peak periods.

The savings to the members are calculated by comparing the end block price of the retail price schedule to the load control price. Subtract the difference and multiply times the kWh measured by the load control meter.

16. Irrigation

16.1 And 16.2 Irrigation Off-Peak Pricing and Load Control programs encourage members to install high efficiency electric motors on their irrigation pumps. There have been marked energy efficiency improvements in electric motors in recent years.

Load control for irrigation systems would typically occur during the summer growing months. During hot periods, the irrigation system would normally be controlled during afternoon and evening peak load periods. The pumping capacity of most irrigation systems provides plenty of margin for a few hours of shutdown each day.

The demand savings to the electric cooperative are based on the number of months that load control occurs. The kW demand savings occur by transferring kW demand from peak to off-peak periods. There are no kWh savings, as kWh purchases are transferred to off-peak periods.

The savings to the members are calculated by comparing the end block price of the retail price schedule to the load control price. Subtract the difference and multiply times the kWh measured by the load control meter.

17. Commercial and Industrial Time-of-Day Price program is designed for commercial and industrial members that can reduce or transfer some of their load during on-peak load periods to off-peak periods. The members are informed of daily on-peak and off-peak load periods. A special meter monitors real-time demand and energy usage and stores that information in specific time periods, which are billed to the consumer at varying prices. When a peak-load period occurs, the meter automatically records the demand and energy used during the period. The same is true for off-peak periods.

The savings from a Commercial and Industrial Time of Day Price Program for an electric cooperative are the reduced kW demand and energy purchases during peak-load periods. The savings are determined by kW demand charges and usage shifted to off-peak periods.

The savings from a CITODP Program to the members are the difference between the time-of-use price and the regular commercial or industrial price.

No attempt has been made to measure these savings.

18. Industrial Interruptible Price program is designed for large commercial and industrial members that can shed at least 150 kW of demand and have the capabilities to interrupt the agreed-upon kW demand.

This program is designed to influence member behavior through initiatives that:

- Increase awareness of what interrupting measures are necessary to obtain reduced kW demand and energy use and prices, and
- Increase awareness of the value of demand-side energy-efficiency management programs.

III. Energy Audit and Technical Support Programs

These programs provide members with specialized services designed to assist in reducing energy use through process and equipment improvements. These services are provided by both internal and external resources.

These programs are designed to influence member behavior through initiatives that:

- Increase awareness of energy-saving technology available in many new appliances, high-efficiency equipment, and weatherization and construction practices,
- Encourage investment in ENERGY STAR qualified equipment and other technologies that offer energy-efficiency improvements, and
- Increase awareness of energy-efficient construction practices.

19. Expert Energy Services available to cooperatives cover a wide variety of commercial, institutional and industrial facilities and processes. These services are intended to help the operation of these businesses to ensure that they remain a viable economic resource for the community.

The expert energy services may include, but are not limited to:

- Agricultural energy audits for applying for USDA Section 9006 grants and loans to improve the energy efficiency of their operations or for renewable energy projects.
- Technical consulting on the design, application, and servicing of electric heating systems including boilers, air-to-air and water source heat pumps.
- On-site troubleshooting, diagnostic work for electric heating systems; service available for some types of systems.
- Customized education workshops developed and presented for members, employees, contractors, key accounts and school boards. The content of these workshops can range from simple introductions of geothermal systems to troubleshooting components of various electrical heating systems.
- Technical energy studies and facility process assessment evaluations from professional energy services organizations for commercial and industrial members.

20. Energy Audit Services are available to members through a variety of internal resources, including self-administered home energy audit tools, web-based home energy audit tools such as the Touchstone® Home Energy Audit, staff-administered home energy audits and staff-assisted home energy audits. External resources may also be used.

Various training events are offered for to cooperative staff to increase their knowledge of home and business energy use and energy efficiency. This expertise is shared with the member consumers to help them understand and reduce their energy bills. As an example, the Iowa Cooperatives for Energy Efficiency sponsored a Home Energy Review seminar conducted by industry professionals in 2007 that was attended by a number of cooperative staff members. Educational activities may be sponsored or partially reimbursed by cooperatives. Memberships in professional and energy-efficiency related organizations, such as the Rural Electricity Resource Council, may be fully sponsored or partially reimbursed.

21. Developmental Assessment and Resolution Program (DARP) program is to help LIHEAP qualified members with energy payment challenges. The program provides assessment and education to help members establish good habits in meeting their energy obligations. DARP recipients include older citizens on fixed incomes, families struggling with medical problems or a job loss, and eligible people still trying to pay off last winter's high heating bills. A Community Action Partnership (CAP) agency performs an assessment of each family situation and advises of their qualification for the program. If they qualify the CAP agency helps the family set up a payment plan that they can afford and educates the family on ways that they can conserve energy and increase their energy efficiency.

- Assists members with their energy usage through simple audits and Energy Wise Kits.
- Explain energy savings tips to members.
- Show how to use the Energy Wise Kit and explain payback by endorsing contents.
- Talk about some of the highest users of electricity in the home.
- Identify air leaks and show how to alleviate them.
- Thermostat settings and usage.
- Furnace filter replacement and filter alarms.
- Water heater settings and low flow shower head savings.
- Using compact fluorescent bulbs and energy saved.
- Check temperatures in refrigerators and freezers.

IV. Educational and Research Programs

The educational and research programs assist members in understanding ways in which they can save energy. However, the quantification of actual savings without extensive research is difficult at best. Therefore, savings computations have not been made on these programs. These programs will undoubtedly have a cumulative effort to make Iowa a more energy-efficient state.

22. Model Housing Education program is designed to promote energy-efficient construction and installation of highly energy-efficient equipment in single family dwellings. Financial assistance is provided to the homeowner who in turn allows the home to be opened to the public for educational and promotion events.

The program influences member behavior through initiatives that:

- Inform members, the public, contractors and trade allies about new, high-efficiency appliances and heating/cooling equipment,
- Promote the installation of state-of-the-art heating, lighting, cooling, cooking, water heating and ventilating equipment and ENERGY STAR appliances,
- Encourage contractors and members to build energy-efficient homes, and
- Provide an opportunity to showcase an energy-efficient home to the general public as an educational resource.

23. Domestic Water Heater Enhancement program encourages members to properly maintain their equipment and make improvements to reduce energy usage. The members may contact an electric cooperative for free maintenance of their water heater. This could include draining the water heater tank to remove scale or sediment build-up. This type of build-up reduces the efficiency of the water heaters, so this maintenance will help reduce water-heating costs for the members. Failed water heater elements can also be discovered when the water heater is being serviced. During the maintenance visit, the electric cooperative has the opportunity to advise the members about the general condition of the water heater unit. The electric cooperative can suggest other measures to save additional energy and discuss the merits of replacing the existing unit with a new, high efficiency unit that has an extended warranty on the tank.

24. Member Information and Education program is designed to keep members informed of ongoing efforts by the cooperative to make energy efficiency ideas, products, and services available. A multitude of communication tools are provided through the generation and transmission cooperative to member cooperatives.

The program is designed to influence member behavior through initiatives that:

- Increase awareness of energy-efficiency related concepts, products, and services,
- Provide resources for energy efficiency information to allow members to choose methods and equipment that best suit their operational and financial needs, and
- Encourage members to practice energy efficiency through the use of efficient equipment and lifestyles.

Each cooperative offers a wealth of member information and education initiatives that are detailed in their individual reports.

Brochures and other educational resources are developed and produced, or procured, by the generation and transmission electric cooperatives and distributed to the distribution cooperatives.

Group memberships and subscriptions are administered by generation and transmission electric cooperatives staff on behalf of the distribution cooperatives.

Momentum Is Building: The Iowa Cooperatives for Energy Efficiency, a group representing all of Iowa's electric cooperatives, have organized and sponsored the Momentum Is Building conference, a unique learning opportunity for REC member service personnel and local building trades professionals, for more than 15 years. The Iowa Energy Center has provided support as a financial sponsor for the past several years.

The conference brings together 200 to 250 attendees from across Iowa each year to learn the latest in building science and energy-efficient home building techniques. Participants have learned about geothermal heating and cooling, ventilation for tightly built houses, energy-efficient windows and doors, LEED building, insulation, structural insulated panel, green building and other building science topics from both local and nationally-known speakers.

The conference includes a vendor exhibit hall where energy-efficient products displayed may include insulation, geothermal and air source heat pump products, a variety of efficient electric products, radiant flooring, structural insulated panel, surge protection products, air quality equipment and more.

Attendees give the conference high marks and indicate on evaluations that they plan to use the information they learned for their jobs. Many professionals attend this conference each year as a refresher and a way to learn the latest in energy-efficient home building techniques.

Center for Industrial Research and Service: Central Iowa Power Cooperative has joined the sponsorship of a series of energy-efficiency themed educational workshops designed for the commercial and industrial markets presented periodically by Center for Industrial Research and Service. Central Iowa Power Cooperative offers a significant tuition reimbursement to participating cooperative staff and their members who attend.

25. Peak Alert program is an information program that electric cooperatives use to inform members about their peak-load periods. If the electric cooperative members receive the Living With Energy in Iowa magazine, the peak alert notification is usually in the August issue. This notification relays to the members the importance of the efficient use of electricity during peak-load periods. If the electric cooperative members do not receive the ***Living with Energy in Iowa Magazine***, the electric cooperative will send out notices directly or through its regular newsletter.

26. The *Living with Energy in Iowa Magazine* is designed to keep members informed of state and national energy efficiency developments or ideas. The ***Living with Energy in Iowa Magazine*** Program is one of many communications programs included in the ***Living with Energy in Iowa Magazine*** to inform members about all facets of energy usage, safety and energy efficiency. This program is part of an ongoing series entitled Energy and Us. Iowa

Association of Electric Cooperatives staff normally writes the copy for the program. Occasional articles are included from outside sources that are considered to be experts in their field.

The following are some examples of these articles:

- Tips on Protecting Your Home from Drafts,
- Weatherproof Your Home,
- Choose Home Energy Improvements Wisely,
- Smart Thermostats,
- Energy-Efficient Habits for Cooks & Washing Machines,
- Windows Play Big Role in Home Energy Efficiency,
- Cut Your Electric Bill with ENERGY STAR Light,
- Use Energy Wisely During Peak Hours, and
- Peak Hours/Peak Demand.

The ***Living with Energy in Iowa Magazine*** describes many of the energy efficiency programs available.

27. Iowa Energy Center and Center for Global Regional Environmental Research and Cooperative Research Network program is designed to satisfy the assessment requirements of RECs operating in Iowa. The RECs operating in Iowa are required to spend 1/10th of 1 percent of their gross revenues (revenues from Iowa) toward the two centers.

The National Rural Electric Cooperatives (NRECA's) Cooperative Research Network monitors, evaluates and applies technologies that help its member co-ops control costs, improve productivity, deliver superior service and keep up with emerging technologies.

To achieve these goals, Cooperative Research Network seeks to partner with other organizations (e.g., the Electric Power Research Institute, the U.S. Department of Energy) to research and develop new products and services. Cooperative Research Network transfers knowledge to its members through online and printed studies, reports, newsletters, Web conferences, seminars and presentations at events.

Membership in Cooperative Research Network is voluntary, and includes generation and transmission co-ops and distribution co-ops. Six member advisory boards ensure that CRN members have a voice in research-project selection, funding and organizational policy.

Cooperative Research Network currently is focusing its research efforts in six critical areas:

1. Clean coal and environmental-management technologies,
2. Renewable and alternative energy,
3. End-use solutions that help the customer make better use of electricity,
4. Distribution system operations best practices,
5. Broadband communications and information technology, and
6. Transmission capacity and security.

TOTAL ENERGY EFFICIENCY RESULTS FOR ALL COOPERATIVES

		GRAND TOTAL All Coops	Data Summary for 2006 (Actual)							
			Total Number of New Participants in 2006	Annual kWh Savings	Annual Peak Day Demand Savings in kW	Annual Savings to Participants	Annual Savings to Co-op	Annual Cost to Co-op	Measure Life Savings to Participants	Measure Life Savings to Co-op
I. Incentive Programs for Energy Efficient Technologies										
1		***Residential Cooling & Heating***								
	1.1	Energy Star Air Conditioning Incentive	1,118	423,663	524	$ 35,115	$ 23,933	$ 281,915	$ 526,761	$ 358,997
	1.2	Energy Star Qualified Room Air Conditioner Incentive	90	8,003	-	$ 566	$ 407	$ 6,623	$ 5,665	$ 4,061
	1.3	Geothermal Incentive	871	9,581,000	443	$ 737,123	$ 512,661	$ 1,982,902	$ 17,690,930	$ 12,303,872
	1.4	Air Source Heat Pump Incentive	860	12,710,800	440	$ 751,982	$ 543,384	$ 1,062,812	$ 11,279,719	$ 8,150,740
	1.5	Heat Recovery Ventilators	80	35,267	-	$ 3,023	$ 2,112	$ 8,364	$ 60,484	$ 42,225
	1.6	High Efficiency Zoned Electric Heat	172	678,720	-	$ 53,621	$ 35,276	$ 65,338	$ 1,286,938	$ 846,616
2		***Residential Lighting***								
		Interior Lighting								
	2.1	Change a Light Rebate Program	10,109	535,777	485	$ 29,329	$ 25,301	$ 27,956	$ 241,080	$ 207,971
	2.2	Local CFL Rebate Program(s)	13,219	700,607	635	$ 53,773	$ 40,520	$ 68,401	$ 442,022	$ 333,083
	2.3	CFL Recycling	-	-	-	$ -	$ -	$ -	$ -	$ -
		Exterior Lighting								
	2.4	High Efficiency Exterior Lighting Incentives	1,133	32,857	1	$ 2,478	$ 1,720	$ 163,359	$ 37,153	$ 25,797
	2.5	LED Holiday Lighting Incentives	-	-	-	$ -	$ -	$ -	$ -	$ -
3		***Residential Water Heating***								
	3.1	High Efficiency Water Heater Incentives	4,514	938,912	135	$ 66,868	$ 47,742	$ 1,932,613	$ 1,738,623	$ 1,241,262
	3.2	Drainwater Heat Recovery System	-	-	-	$ -	$ -	$ -	$ -	$ -
	3.3	Flow Restrictors:								
		3.3.1 Flow Restrictors - Faucet	-	-	-	$ -	$ -	$ -	$ -	$ -
		3.3.1 Flow Restrictors - Shower	-	-	-	$ -	$ -	$ -	$ -	$ -
	3.4	Heat Pump Water Heater Incentives	-	-	-	$ -	$ -	$ -	$ -	$ -
4		***Residential Appliances***								
	4.1	Energy Star Qualified Clothes Washer	797	226,246	128	$ 19,051	$ 12,951	$ 71,957	$ 209,567	$ 142,437
	4.2	Energy Star Qualified Dishwasher	549	75,006	47	$ 6,285	$ 4,282	$ 34,485	$ 69,134	$ 47,092
	4.3	Energy Star Qualified Refrigerator	1,047	87,899	8	$ 7,456	$ 5,102	$ 74,620	$ 96,916	$ 66,335
	4.4	Energy Star Qualified Dehumidifier	-	-	-	$ -	$ -	$ -	$ -	$ -
	4.5	Refrigerator Removal / Recycling	48	40,512	5	$ 3,367	$ 2,625	$ 750	$ 43,765	$ 34,127
	4.6	Replacement of Old Freezer with Energy Star Freezer	13	866	-	$ 63	$ 39	$ 493	$ 691	$ 429
5		***Efficient Home Incentives***								
	5.1	Loans for Efficiency Improvements *	176	-	-	$ 7,136	$ -	$ 255,356	$ -	$ 17,462
	5.2	Energy Efficient Home Construction Rebates *	160	-	-	$ -	$ -	$ 126,171	$ -	$ -
6		***Agriculture/Commercial & Industrial***								
	6.1	Change a Light Rebate Program	315	16,695	15	$ 1,116	$ 935	$ 950	$ 9,174	$ 7,688
	6.2	High Efficiency Interior Lighting Incentives	5,983	317,099	288	$ 17,214	$ 17,039	$ 97,966	$ 141,501	$ 140,069
	6.3	High Efficiency Exterior Lighting Incentives	801	23,229	1	$ 1,436	$ 1,298	$ 103,220	$ 21,529	$ 19,459
	6.4	Energy Star Air Conditioning Incentive	34	12,885	16	$ 953	$ 758	$ 16,681	$ 14,308	$ 11,372
	6.5	Geothermal Rebate Program	196	2,156,000	101	$ 141,685	$ 124,550	$ 224,617	$ 3,400,426	$ 2,989,194
	6.6	Air Source Heat Pump Incentive	67	990,260	34	$ 64,073	$ 51,792	$ 45,253	$ 961,092	$ 776,881
	6.7	Heat Recovery Ventilators	4	1,764	-	$ 144	$ 104	$ 3,012	$ 2,885	$ 2,080
	6.8	Premium Motors Rebate Program	14	2,030	1	$ 171	$ 130	$ 2,485	$ 3,066	$ 2,342
	6.9	Adjustable Speed Drive Motor Incentive	27	147,933	49,302	$ 10,186	$ 8,316	$ 32,110	$ 173,162	$ 141,385
	6.10	Dairy Pre-coolers Incentive	7	61,845	35	$ 5,271	$ 3,897	$ 6,885	$ 126,503	$ 93,531
	6.11	Livestock Ventilation Fans	-	-	-	$ -	$ -	$ -	$ -	$ -
	6.12	Dairy Heat Reclaimer	3	30,000	11	$ 2,340	$ 1,692	$ 900	$ 56,160	$ 40,608
	6.13	High-Efficiency Water Heater Incentive	95	19,760	1	$ 1,227	$ 980	$ 47,660	$ 31,861	$ 25,488
	6.14	Custom Rebate Program	258	-	-	$ -	$ -	$ 85,078	$ -	$ -
II. Demand Response Programs										
7		Water Heater Load Control	18,919	-	18,919	$ 883,250	$ 1,180,467	$ 328,807	$ 883,250	$ 1,180,467
8		Water Heater Storage	265	-	265	$ 14,646	$ 11,489	$ 8,458	$ 14,646	$ 11,489
9		Air Conditioning Load Control	4,724	-	4,724	$ 190,881	$ 256,332	$ 16,779	$ 190,881	$ 256,332
10		Space Heating Load Control (Interruptible)	7,722	-	34,752	$ 1,723,287	$ 1,905,173	$ 274,210	$ 1,723,287	$ 1,905,173
11		Residential Time-of-Day Price	411	-	-	$ -	$ -	$ 19,854	$ -	$ -
12		Time-of-Use—Heat Plus	7,328	-	-	$ -	$ -	$ 278,191	$ -	$ -
13		Dual-Fuel (also called Electric Thermal) Storage Space Heating and Air Conditioning	236	-	1,652	$ 11,564	$ 11,564	$ 21,819	$ 11,564	$ 11,564
14		Dual-Fuel Space Heating	2,743	-	19,201	$ 134,407	$ 134,407	$ 209,592	$ 134,407	$ 134,407
15		***Crop Drying***								
	15.1	Off Peak Pricing	118	-	1,180	$ 8,260	$ 8,260	$ -	$ 8,260	$ 8,260
	15.2	Load Control	132	-	1,320	$ 1,657	$ 9,240	$ 6,601	$ 1,657	$ 9,240
16		***Irrigation***								
	16.1	Time of Use Pricing	27	-	219	$ 1,533	$ 1,533	$ 823	$ 1,533	$ 1,533
	16.2	Load Control	449	-	4,490	$ 59,865	$ 31,430	$ 16,404	$ 59,865	$ 31,430
17		Commercial and Industrial Time-of-Day Price	65	-	218	$ -	$ -	$ 212,553	$ -	$ -
18		Industrial Interruptible Price	120	-	114,421	$ -	$ -	$ 645,957	$ -	$ -
III. Energy Audit & Technical Support Programs										
19		Expert Energy Services (Agricultural & C&I)	256	1,409,643	-	$ 102,891	$ 71,484	$ 180,752	$ 102,891	$ 71,484
20		Energy Audit Services (Residential) *	929	-	-	$ -	$ -	$ 253,766	$ -	$ -
21		DARP Program	-	-	-	$ -	$ -	$ -	$ -	$ -
IV. Educational & Research Programs										
22		Model Housing Education	333	-	-	$ -	$ -	$ 52,028	$ -	$ -
23		Domestic Water Heater Enhancement	46	-	-	$ -	$ -	$ 23,061	$ -	$ -
24		Member Information and Education	192,856	-	-	$ -	$ -	$ 1,016,066	$ -	$ -
25		Peak Alert	193,515	-	-	$ -	$ -	$ 15,265	$ -	$ -
26		Living with Energy in Iowa	112,462	-	-	$ -	$ -	$ 162,674	$ -	$ -
27		Iowa Energy Center and Center for Global Regional Environmental Research & Cooperative Research Network	194,781	-	-	$ -	$ -	$ 411,666	$ -	$ -
		TOTALS	781,197	31,265,278	254,017	$ 5,155,292	$ 5,090,924	$ 10,986,259	$ 41,803,355	$ 31,694,004

* Savings for the specific measures are accounted for and included in the applicable programs.

		GRAND TOTAL All Coops	Data Summary for 2007 (Actual)								
			Total Number of New Participants in 2007	Annual kWh Savings	Annual Peak Day Demand Savings in kW	Annual Savings to Participants	Annual Savings to Co-op	Annual Cost to Co-op	Measure Life Savings to Participants	Measure Life Savings to Co-op
I. Incentive Programs for Energy Efficient Technologies										
1		***Residential Cooling & Heating***								
	1.1	Energy Star Air Conditioning Incentive	1,083	410,400	509	$ 35,703	$ 23,993	$ 251,865	$ 535,531	$ 359,921
	1.2	Energy Star Qualified Room Air Conditioner Incentive	76	6,760	-	$ 587	$ 409	$ 5,476	$ 5,861	$ 4,076
	1.3	Geothermal Incentive	760	8,360,000	388	$ 671,716	$ 467,669	$ 1,807,227	$ 16,121,244	$ 11,223,958
	1.4	Air Source Heat Pump Incentive	765	11,306,700	391	$ 713,918	$ 500,063	$ 1,054,308	$ 10,708,742	$ 7,500,963
	1.5	Heat Recovery Ventilators	85	37,473	-	$ 3,462	$ 2,284	$ 12,471	$ 69,233	$ 45,686
	1.6	High Efficiency Zoned Electric Heat	101	398,551	-	$ 32,512	$ 22,117	$ 52,407	$ 780,305	$ 530,794
2		***Residential Lighting***								
		Interior Lighting								
	2.1	Change a Light Rebate Program	43,474	2,304,122	2,086	$ 169,902	$ 120,444	$ 221,261	$ 1,396,572	$ 990,032
	2.2	Local CFL Rebate Program(s)	36,985	1,960,205	1,776	$ 154,263	$ 110,065	$ 185,609	$ 1,268,032	$ 904,735
	2.3	CFL Recycling	58	-	-	$ -	$ -	$ 1,317	$ -	$ -
		Exterior Lighting								
	2.4	High Efficiency Exterior Lighting Incentives	1,515	43,935	2	$ 3,455	$ 2,323	$ 222,345	$ 51,828	$ 34,833
	2.5	LED Holiday Lighting Incentives	132	9,900	67	$ 746	$ 532	$ 2,551	$ 14,915	$ 10,649
3		***Residential Water Heating***								
	3.1	High Efficiency Water Heater Incentives	3,832	797,056	117	$ 59,590	$ 42,891	$ 1,782,822	$ 1,549,275	$ 1,115,228
	3.2	Drainwater Heat Recovery System	-	-	-	$ -	$ -	$ -	$ -	$ -
	3.3	Flow Restrictors:								
		3.3.1 Flow Restrictors - Faucet	6	90	-	$ 6	$ 5	$ 20	$ 63	$ 49
		3.3.1 Flow Restrictors - Shower	4	168	-	$ 12	$ 10	$ 232	$ 118	$ 92
	3.4	Heat Pump Water Heater Incentives	-	-	-	$ -	$ -	$ 351	$ -	$ -
4		***Residential Appliances***								
	4.1	Energy Star Qualified Clothes Washer	775	220,002	123	$ 19,278	$ 13,143	$ 67,759	$ 212,051	$ 144,600
	4.2	Energy Star Qualified Dishwasher	637	87,029	57	$ 7,556	$ 5,141	$ 41,433	$ 83,126	$ 56,532
	4.3	Energy Star Qualified Refrigerator	1,361	114,259	12	$ 10,090	$ 6,891	$ 80,954	$ 131,163	$ 89,578
	4.4	Energy Star Qualified Dehumidifier	11	2,341	1	$ 122	$ 119	$ 220	$ 1,461	$ 1,430
	4.5	Refrigerator Removal / Recycling	50	42,200	5	$ 3,633	$ 2,870	$ 750	$ 47,234	$ 37,305
	4.6	Replacement of Old Freezer with Energy Star Freezer	19	1,266	-	$ 89	$ 63	$ 680	$ 979	$ 689
5		***Efficient Home Incentives***								
	5.1	Loans for Efficiency Improvements *	110	-	-	$ 10,846	$ -	$ 263,244	$ 13,738	$ -
	5.2	Energy Efficient Home Construction Rebates *	183	-	-	$ -	$ -	$ 61,483	$ -	$ -
6		***Agriculture/Commercial & Industrial***								
	6.1	Change a Light Rebate Program	3,313	175,589	158	$ 7,219	$ 8,781	$ 9,103	$ 59,353	$ 72,170
	6.2	High Efficiency Interior Lighting Incentives	11,646	617,238	558	$ 45,804	$ 33,612	$ 118,060	$ 376,510	$ 276,290
	6.3	High Efficiency Exterior Lighting Incentives	753	21,837	1	$ 1,769	$ 1,239	$ 112,776	$ 26,564	$ 18,571
	6.4	Energy Star Air Conditioning Incentive	185	70,106	87	$ 6,367	$ 4,357	$ 24,660	$ 95,497	$ 65,365
	6.5	Geothermal Rebate Program	80	880,000	42	$ 63,615	$ 52,182	$ 205,845	$ 1,526,738	$ 1,252,357
	6.6	Air Source Heat Pump Incentive	49	724,220	26	$ 38,366	$ 36,694	$ 78,434	$ 575,489	$ 550,392
	6.7	Heat Recovery Ventilators	2	882	-	$ 80	$ 55	$ 6,516	$ 1,609	$ 1,097
	6.8	Premium Motors Rebate Program	-	-	-	$ -	$ -	$ 1,128	$ -	$ -
	6.9	Adjustable Speed Drive Motor Incentive	94	515,026	171,644	$ 29,958	$ 19,045	$ 20,523	$ 509,297	$ 323,765
	6.10	Dairy Pre-coolers Incentive	17	150,195	85	$ 11,621	$ 9,849	$ 8,226	$ 278,896	$ 236,382
	6.11	Livestock Ventilation Fans	-	-	-	$ -	$ -	$ -	$ -	$ -
	6.12	Dairy Heat Reclaimer	1	10,000	4	$ 780	$ 607	$ 300	$ 18,720	$ 14,568
	6.13	High-Efficiency Water Heater Incentive	150	31,200	2	$ 1,938	$ 1,603	$ 81,268	$ 50,391	$ 41,688
	6.14	Custom Rebate Program	188	-	-	$ -	$ -	$ 119,680	$ -	$ -
II. Demand Response Programs										
7		Water Heater Load Control	19,264	-	19,264	$ 914,997	$ 1,198,703	$ 303,433	$ 914,997	$ 1,198,703
8		Water Heater Storage	390	-	390	$ 20,911	$ 14,888	$ 5,099	$ 20,911	$ 14,888
9		Air Conditioning Load Control	5,447	-	5,447	$ 256,190	$ 316,630	$ 32,766	$ 256,190	$ 316,630
10		Space Heating Load Control (Interruptible)	8,243	-	37,095	$ 2,367,828	$ 2,551,734	$ 184,998	$ 2,367,828	$ 2,551,734
11		Residential Time-of-Day Price	341	-	-	$ -	$ -	$ 18,588	$ -	$ -
12		Time-of-Use—Heat Plus	8,047	-	-	$ -	$ -	$ 345,379	$ -	$ -
13		Dual-Fuel (also called Electric Thermal) Storage Space Heating and Air Conditioning	180	-	1,260	$ 8,820	$ 8,820	$ 17,920	$ 8,820	$ 8,820
14		Dual-Fuel Space Heating	2,768	-	19,376	$ 135,632	$ 135,632	$ 264,490	$ 135,632	$ 135,632
15		***Crop Drying***								
	15.1	Off Peak Pricing	12	-	120	$ 840	$ 840	$ -	$ 840	$ 840
	15.2	Load Control	131	-	1,310	$ 752	$ 9,170	$ 4,701	$ 752	$ 9,170
16		***Irrigation***								
	16.1	Time of Use Pricing	28	-	219	$ 1,533	$ 1,533	$ 1,319	$ 1,533	$ 1,533
	16.2	Load Control	471	-	4,710	$ 62,929	$ 32,970	$ 17,388	$ 62,929	$ 32,970
17		Commercial and Industrial Time-of-Day Price	79	-	731	$ -	$ 3,192	$ 178,683	$ -	$ 3,192
18		Industrial Interruptible Price	101	-	15,143	$ -	$ -	$ 355,477	$ -	$ -
III. Energy Audit & Technical Support Programs										
19		Expert Energy Services (Agricultural & C&I)	379	1,902,177	-	$ 145,261	$ 100,808	$ 262,769	$ 145,261	$ 100,808
20		Energy Audit Services (Residential) *	1,222	-	-	$ -	$ -	$ 291,508	$ -	$ -
21		DARP Program	-	-	-	$ -	$ -	$ -	$ -	$ -
IV. Educational & Research Programs										
22		Model Housing Education	334	-	-	$ -	$ -	$ 62,384	$ -	$ -
23		Domestic Water Heater Enhancement	119	-	-	$ -	$ -	$ 18,445	$ -	$ -
24		Member Information and Education	195,919	-	-	$ -	$ -	$ 1,016,174	$ -	$ -
25		Peak Alert	198,230	-	-	$ -	$ -	$ 16,080	$ -	$ -
26		Living with Energy in Iowa	113,226	-	-	$ -	$ -	$ 180,369	$ -	$ -
27		Iowa Energy Center and Center for Global Regional Environmental Research & Cooperative Research Network	193,230	-	-	$ -	$ -	$ 386,297	$ -	$ -
		TOTALS	856,661	31,200,927	283,206	$ 6,020,698	$ 5,863,975	$ 10,867,572	$ 40,426,228	$ 30,278,717

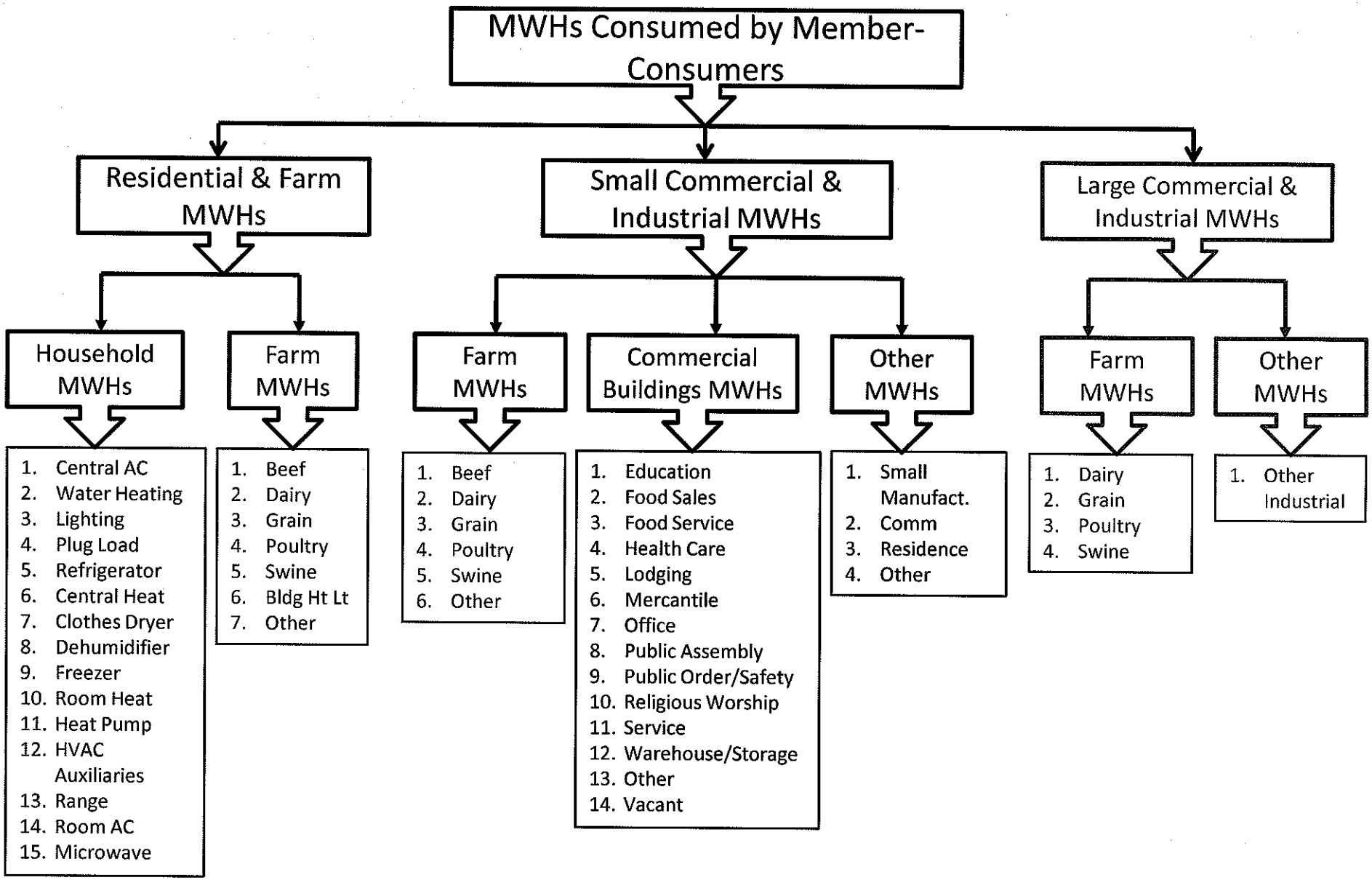
* Savings for the specific measures are accounted for and included in the applicable programs.

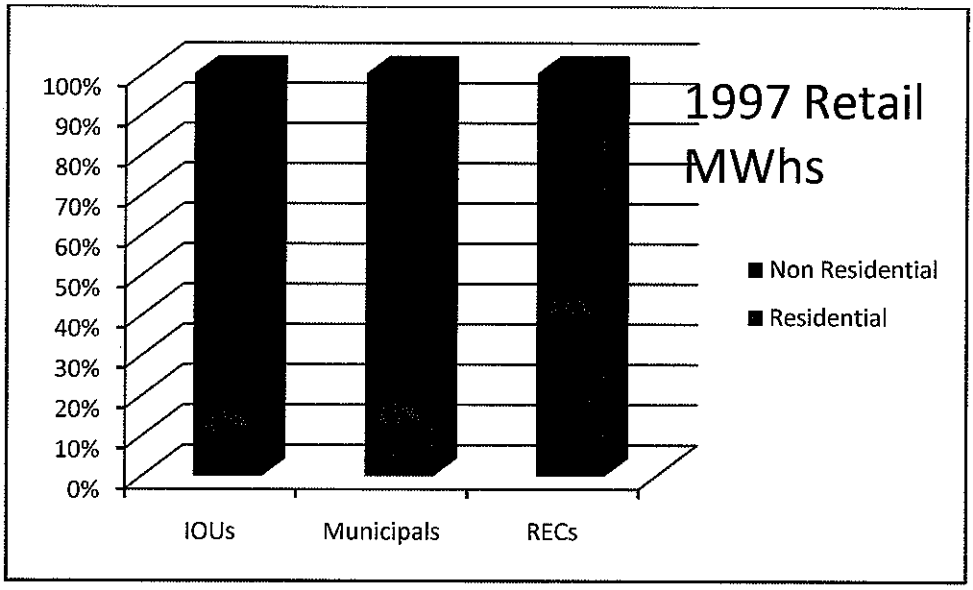
		GRAND TOTAL All Coops	Data Summary for 2008 (Projected)							
			Total Number of New Participants in 2008	Annual kWh Savings	Annual Peak Day Demand Savings in kW	Annual Savings to Participants	Annual Savings to Co-op	Annual Cost to Co-op	Measure Life Savings to Participants	Measure Life Savings to Co-op
I. Incentive Programs for Energy Efficient Technologies										
1		***Residential Cooling & Heating***								
	1.1	Energy Star Air Conditioning Incentive	1,032	391,075	484	$ 34,594	$ 23,358	$ 264,152	$ 518,886	$ 350,365
	1.2	Energy Star Qualified Room Air Conditioner Incentive	119	10,584	-	$ 871	$ 621	$ 10,214	$ 8,699	$ 6,195
	1.3	Geothermal Incentive	841	9,251,000	429	$ 760,097	$ 533,689	$ 1,844,928	$ 18,242,323	$ 12,808,500
	1.4	Air Source Heat Pump Incentive	852	12,592,560	433	$ 818,882	$ 603,555	$ 1,050,226	$ 12,283,262	$ 9,053,334
	1.5	Heat Recovery Ventilators	109	48,053	-	$ 4,455	$ 3,061	$ 48,559	$ 89,078	$ 61,222
	1.6	High Efficiency Zoned Electric Heat	86	339,360	-	$ 31,050	$ 18,864	$ 56,270	$ 745,188	$ 452,738
2		***Residential Lighting***								
		Interior Lighting								
	2.1	Change a Light Rebate Program	56,639	3,001,867	2,720	$ 234,917	$ 159,023	$ 315,041	$ 1,931,030	$ 1,307,157
	2.2	Local CFL Rebate Program(s)	38,351	2,032,603	1,839	$ 155,923	$ 117,414	$ 262,259	$ 1,281,688	$ 965,133
	2.3	CFL Recycling	2,380	-	-	$ -	$ -	$ 4,535	$ -	$ -
		Exterior Lighting								
	2.4	High Efficiency Exterior Lighting Incentives	1,620	46,980	1	$ 3,817	$ 2,541	$ 247,077	$ 57,267	$ 38,100
	2.5	LED Holiday Lighting Incentives	354	26,550	179	$ 1,518	$ 1,389	$ 3,506	$ 30,349	$ 27,781
3		***Residential Water Heating***								
	3.1	High Efficiency Water Heater Incentives	4,068	846,144	123	$ 65,580	$ 47,154	$ 2,041,181	$ 1,705,151	$ 1,225,970
	3.2	Drainwater Heat Recovery System	6	3,726	-	$ 330	$ 240	$ 2,826	$ 13,187	$ 9,558
	3.3	Flow Restrictors:								
		3.3.1 Flow Restrictors - Faucet	736	11,040	-	$ 884	$ 736	$ 1,541	$ 8,821	$ 7,361
		3.3.1 Flow Restrictors - Shower	727	30,534	-	$ 2,445	$ 2,039	$ 2,074	$ 24,442	$ 20,382
	3.4	Heat Pump Water Heater Incentives	34	35,190	12	$ 2,919	$ 2,126	$ 14,497	$ 32,105	$ 23,384
4		***Residential Appliances***								
	4.1	Energy Star Qualified Clothes Washer	928	263,433	152	$ 23,435	$ 15,908	$ 87,159	$ 257,766	$ 174,988
	4.2	Energy Star Qualified Dishwasher	721	98,505	66	$ 8,738	$ 5,884	$ 49,179	$ 96,106	$ 64,740
	4.3	Energy Star Qualified Refrigerator	1,453	121,982	14	$ 10,969	$ 7,497	$ 100,152	$ 142,616	$ 97,450
	4.4	Energy Star Qualified Dehumidifier	36	7,664	4	$ 459	$ 376	$ 2,360	$ 5,519	$ 4,527
	4.5	Refrigerator Removal / Recycling	313	264,172	30	$ 24,839	$ 17,268	$ 15,575	$ 322,902	$ 224,487
	4.6	Replacement of Old Freezer with Energy Star Freezer	44	2,930	-	$ 179	$ 143	$ 3,180	$ 1,975	$ 1,567
5		***Efficient Home Incentives***								
	5.1	Loans for Efficiency Improvements *	134	-	-	$ 12,060	$ -	$ 360,180	$ 13,498	$ -
	5.2	Energy Efficient Home Construction Rebates *	214	-	-	$ -	$ -	$ 122,387	$ -	$ -
6		***Agriculture/Commercial & Industrial***								
	6.1	Change a Light Rebate Program	4,589	243,217	220	$ 9,444	$ 12,817	$ 20,772	$ 77,652	$ 105,339
	6.2	High Efficiency Interior Lighting Incentives	13,085	693,479	626	$ 48,402	$ 39,860	$ 204,321	$ 397,867	$ 327,642
	6.3	High Efficiency Exterior Lighting Incentives	858	24,882	2	$ 1,826	$ 1,489	$ 127,455	$ 27,382	$ 22,355
	6.4	Energy Star Air Conditioning Incentive	125	47,369	58	$ 3,931	$ 2,977	$ 29,366	$ 58,973	$ 44,662
	6.5	Geothermal Rebate Program	151	1,661,000	78	$ 116,572	$ 103,204	$ 241,548	$ 2,797,735	$ 2,476,935
	6.6	Air Source Heat Pump Incentive	92	1,359,760	51	$ 39,322	$ 74,138	$ 111,805	$ 589,831	$ 1,112,054
	6.7	Heat Recovery Ventilators	3	1,323	-	$ 123	$ 82	$ 3,701	$ 2,460	$ 1,625
	6.8	Premium Motors Rebate Program	30	4,350	1	$ 223	$ 242	$ 8,545	$ 4,015	$ 4,345
	6.9	Adjustable Speed Drive Motor Incentive	992	5,435,168	1,811,392	$ 273,818	$ 194,922	$ 79,541	$ 4,654,904	$ 3,313,657
	6.10	Dairy Pre-coolers Incentive	15	128,108	73	$ 9,780	$ 8,591	$ 5,761	$ 234,719	$ 206,173
	6.11	Livestock Ventilation Fans	72	64,800	4	$ 5,529	$ 3,780	$ 5,190	$ 82,937	$ 56,695
	6.12	Dairy Heat Reclaimer	10	100,000	36	$ 7,700	$ 6,614	$ 3,517	$ 184,800	$ 158,727
	6.13	High-Efficiency Water Heater Incentive	147	30,576	2	$ 1,363	$ 1,630	$ 69,922	$ 35,463	$ 42,375
	6.14	Custom Rebate Program	386	-	-	$ -	$ -	$ 263,282	$ -	$ -
II. Demand Response Programs										
7		Water Heater Load Control	19,722	-	19,722	$ 988,623	$ 1,000,353	$ 266,250	$ 988,623	$ 1,000,353
8		Water Heater Storage	406	-	406	$ 20,353	$ 15,126	$ 5,099	$ 20,353	$ 15,126
9		Air Conditioning Load Control	5,328	-	5,328	$ 284,485	$ 325,281	$ 10,923	$ 284,485	$ 325,281
10		Space Heating Load Control (Interruptible)	8,642	-	38,888	$ 2,618,713	$ 2,675,074	$ 148,626	$ 2,618,713	$ 2,675,074
11		Residential Time-of-Day Price	409	-	-	$ -	$ -	$ 16,407	$ -	$ -
12		Time-of-Use—Heat Plus	8,853	-	-	$ -	$ -	$ 368,146	$ -	$ -
13		Dual-Fuel (also called Electric Thermal) Storage Space Heating and Air Conditioning	181	-	1,267	$ 8,869	$ 8,869	$ 15,345	$ 8,869	$ 8,869
14		Dual-Fuel Space Heating	2,771	-	19,397	$ 135,779	$ 135,779	$ 249,997	$ 135,779	$ 135,779
15		***Crop Drying***								
	15.1	Off Peak Pricing	12	-	120	$ 840	$ 840	$ -	$ 840	$ 840
	15.2	Load Control	104	-	1,040	$ 761	$ 7,280	$ 4,740	$ 761	$ 7,280
16		***Irrigation***								
	16.1	Time of Use Pricing	31	-	-	$ -	$ -	$ 1,419	$ -	$ -
	16.2	Load Control	509	-	5,090	$ 100,322	$ 35,630	$ 18,680	$ 100,322	$ 35,630
17		Commercial and Industrial Time-of-Day Price	88	-	275	$ -	$ -	$ 189,443	$ -	$ -
18		Industrial Interruptible Price	115	-	15,987	$ -	$ -	$ 324,152	$ -	$ -
III. Energy Audit & Technical Support Programs										
19		Expert Energy Services (Agricultural & C&I)	378	1,386,520	-	$ 108,407	$ 69,994	$ 307,322	$ 108,407	$ 69,994
20		Energy Audit Services (Residential) *	1,216	-	-	$ -	$ -	$ 376,848	$ -	$ -
21		DARP Program	14	-	-	$ -	$ -	$ 4,493	$ -	$ -
IV. Educational & Research Programs										
22		Model Housing Education	374	-	-	$ -	$ -	$ 78,650	$ -	$ -
23		Domestic Water Heater Enhancement	128	-	-	$ -	$ -	$ 36,000	$ -	$ -
24		Member Information and Education	194,230	-	-	$ -	$ -	$ 1,140,758	$ -	$ -
25		Peak Alert	195,802	-	-	$ -	$ -	$ 26,568	$ -	$ -
26		Living with Energy in Iowa	113,226	-	-	$ -	$ -	$ 151,983	$ -	$ -
27		Iowa Energy Center and Center for Global Regional Environmental Research & Cooperative Research Network	186,741	-	-	$ -	$ -	$ 406,497	$ -	$ -
		TOTALS	871,630	40,606,504	1,926,549	$ 6,984,145	$ 6,287,459	$ 12,222,130	$ 51,227,743	$ 39,071,750

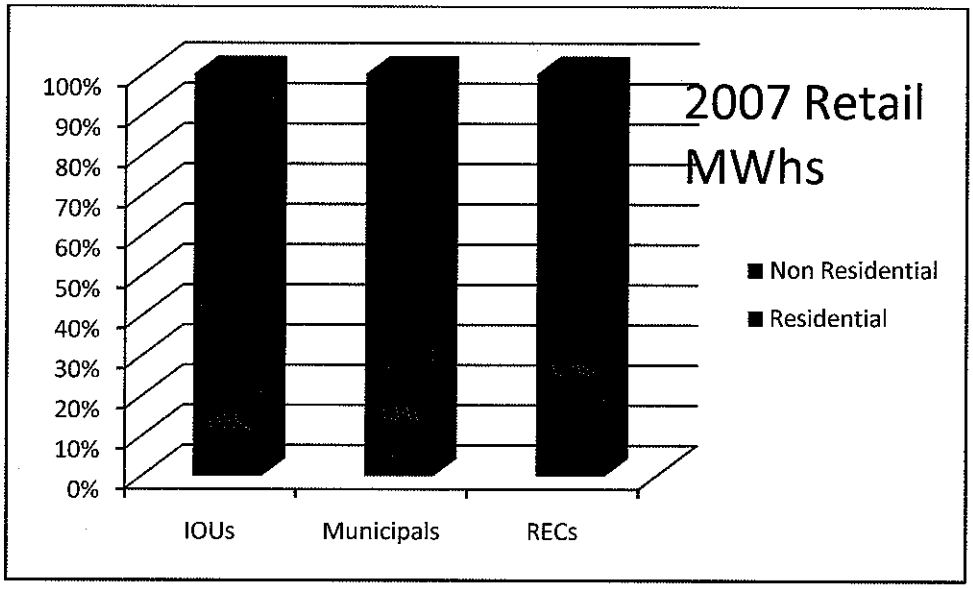
* Savings for the specific measures are accounted for and included in the applicable programs.

		GRAND TOTAL All Coops	Data Summary for 2009 (Projected)							
			Total Number of New Participants in 2009	Annual kWh Savings	Annual Peak Day Demand Savings in kW	Annual Savings to Participants	Annual Savings to Co-op	Annual Cost to Co-op	Measure Life Savings to Participants	Measure Life Savings to Co-op
I. Incentive Programs for Energy Efficient Technologies										
1		***Residential Cooling & Heating***								
	1.1	Energy Star Air Conditioning Incentive	1,066	403,959	502	$ 36,059	$ 25,020	$ 257,749	$ 540,898	$ 375,282
	1.2	Energy Star Qualified Room Air Conditioner Incentive	136	12,094	-	$ 967	$ 725	$ 11,107	$ 9,646	$ 7,236
	1.3	Geothermal Incentive	919	10,109,000	466	$ 841,252	$ 610,054	$ 2,110,345	$ 20,190,047	$ 14,641,215
	1.4	Air Source Heat Pump Incentive	984	14,543,520	502	$ 931,194	$ 759,606	$ 1,262,963	$ 13,967,936	$ 11,394,102
	1.5	Heat Recovery Ventilators	110	48,494	-	$ 4,605	$ 3,140	$ 50,826	$ 92,114	$ 62,769
	1.6	High Efficiency Zoned Electric Heat	86	339,361	-	$ 31,368	$ 20,124	$ 57,463	$ 752,813	$ 482,969
2		***Residential Lighting***								
		Interior Lighting								
	2.1	Change a Light Rebate Program	61,357	3,251,921	2,944	$ 258,366	$ 184,271	$ 383,477	$ 2,123,792	$ 1,514,707
	2.2	Local CFL Rebate Program(s)	28,788	1,525,764	1,381	$ 122,080	$ 91,914	$ 224,819	$ 1,003,495	$ 755,540
	2.3	CFL Recycling	3,749	-	-	$ -	$ -	$ 4,011	$ -	$ -
		Exterior Lighting								
	2.4	High Efficiency Exterior Lighting Incentives	1,687	48,923	2	$ 4,084	$ 2,785	$ 301,843	$ 61,260	$ 41,799
	2.5	LED Holiday Lighting Incentives	561	42,075	282	$ 2,119	$ 2,362	$ 3,561	$ 42,376	$ 47,230
3		***Residential Water Heating***								
	3.1	High Efficiency Water Heater Incentives	4,419	919,152	132	$ 71,376	$ 53,942	$ 2,081,301	$ 1,855,798	$ 1,402,445
	3.2	Drainwater Heat Recovery System	15	9,315	-	$ 788	$ 609	$ 6,130	$ 31,542	$ 24,315
	3.3	Flow Restrictors:								
		3.3.1 Flow Restrictors - Faucet	119	1,785	-	$ 105	$ 102	$ 306	$ 1,049	$ 1,011
		3.3.1 Flow Restrictors - Shower	112	4,704	-	$ 273	$ 264	$ 376	$ 2,721	$ 2,637
	3.4	Heat Pump Water Heater Incentives	64	66,240	24	$ 5,785	$ 4,225	$ 29,209	$ 63,628	$ 46,474
4		***Residential Appliances***								
	4.1	Energy Star Qualified Clothes Washer	1,000	283,870	163	$ 25,099	$ 17,783	$ 89,743	$ 276,081	$ 195,608
	4.2	Energy Star Qualified Dishwasher	792	108,203	72	$ 9,568	$ 6,724	$ 51,759	$ 105,246	$ 73,970
	4.3	Energy Star Qualified Refrigerator	1,645	138,101	15	$ 12,360	$ 8,791	$ 192,071	$ 160,691	$ 114,246
	4.4	Energy Star Qualified Dehumidifier	58	12,346	8	$ 745	$ 682	$ 1,600	$ 8,927	$ 8,179
	4.5	Refrigerator Removal / Recycling	335	282,740	32	$ 26,793	$ 18,995	$ 19,375	$ 348,306	$ 246,925
	4.6	Replacement of Old Freezer with Energy Star Freezer	65	4,329	-	$ 265	$ 237	$ 4,080	$ 2,903	$ 2,610
5		***Efficient Home Incentives***								
	5.1	Loans for Efficiency Improvements *	141	-	-	$ 13,020	$ -	$ 385,152	$ 13,498	$ -
	5.2	Energy Efficient Home Construction Rebates *	274	-	-	$ -	$ -	$ 76,935	$ -	$ -
6		***Agriculture/Commercial & Industrial***								
	6.1	Change a Light Rebate Program	5,290	280,370	252	$ 10,664	$ 15,991	$ 26,711	$ 87,652	$ 131,442
	6.2	High Efficiency Interior Lighting Incentives	15,230	807,164	730	$ 57,571	$ 49,233	$ 283,437	$ 473,220	$ 404,689
	6.3	High Efficiency Exterior Lighting Incentives	752	21,808	1	$ 1,650	$ 1,339	$ 123,078	$ 24,762	$ 20,063
	6.4	Energy Star Air Conditioning Incentive	125	47,369	59	$ 4,047	$ 3,098	$ 28,743	$ 60,709	$ 46,487
	6.5	Geothermal Rebate Program	150	1,650,000	79	$ 119,738	$ 106,381	$ 250,337	$ 2,873,714	$ 2,553,105
	6.6	Air Source Heat Pump Incentive	63	931,140	34	$ 38,692	$ 52,948	$ 84,530	$ 580,364	$ 794,222
	6.7	Heat Recovery Ventilators	22	9,700	-	$ 401	$ 578	$ 8,242	$ 8,002	$ 11,564
	6.8	Premium Motors Rebate Program	52	7,540	3	$ 301	$ 435	$ 12,293	$ 5,417	$ 7,836
	6.9	Adjustable Speed Drive Motor Incentive	432	2,366,928	788,832	$ 119,231	$ 101,935	$ 44,619	$ 2,026,916	$ 1,732,892
	6.10	Dairy Pre-coolers Incentive	16	141,360	80	$ 10,713	$ 9,588	$ 8,726	$ 257,124	$ 230,102
	6.11	Livestock Ventilation Fans	90	81,000	4	$ 6,207	$ 4,893	$ 10,048	$ 93,108	$ 73,371
	6.12	Dairy Heat Reclaimer	10	100,000	37	$ 7,230	$ 6,638	$ 5,605	$ 173,525	$ 159,312
	6.13	High-Efficiency Water Heater Incentive	145	30,160	2	$ 1,576	$ 1,724	$ 68,788	$ 41,005	$ 44,848
	6.14	Custom Rebate Program	646	-	-	$ -	$ -	$ 96,554	$ -	$ -
II. Demand Response Programs										
7		Water Heater Load Control	25,492	-	25,492	$ 999,200	$ 1,063,629	$ 375,872	$ 999,200	$ 1,063,629
8		Water Heater Storage	422	-	422	$ 21,292	$ 15,238	$ 5,199	$ 21,292	$ 15,238
9		Air Conditioning Load Control	5,513	-	5,513	$ 290,097	$ 336,366	$ 30,000	$ 290,097	$ 336,366
10		Space Heating Load Control (Interruptible)	9,049	-	40,721	$ 2,745,699	$ 2,803,299	$ 163,877	$ 2,745,699	$ 2,803,299
11		Residential Time-of-Day Price	479	-	-	$ -	$ -	$ 17,082	$ -	$ -
12		Time-of-Use—Heat Plus	9,696	-	-	$ -	$ -	$ 429,748	$ -	$ -
13		Dual-Fuel (also called Electric Thermal) Storage Space Heating and Air Conditioning	192	-	1,344	$ 9,408	$ 9,408	$ 15,473	$ 9,408	$ 9,408
14		Dual-Fuel Space Heating	2,781	-	19,467	$ 136,269	$ 136,269	$ 253,566	$ 136,269	$ 136,269
15		***Crop Drying***								
	15.1	Off Peak Pricing	12	-	120	$ 840	$ 840	$ -	$ 840	$ 840
	15.2	Load Control	131	-	1,310	$ 761	$ 9,170	$ 4,819	$ 761	$ 9,170
16		***Irrigation***								
	16.1	Time of Use Pricing	34	-	-	$ -	$ -	$ 1,419	$ -	$ -
	16.2	Load Control	543	-	5,430	$ 103,020	$ 38,010	$ 19,778	$ 103,020	$ 38,010
17		Commercial and Industrial Time-of-Day Price	92	-	475	$ -	$ -	$ 194,371	$ -	$ -
18		Industrial Interruptible Price	114	-	16,349	$ -	$ -	$ 319,074	$ -	$ -
III. Energy Audit & Technical Support Programs										
19		Expert Energy Services (Agricultural & C&I)	387	1,419,533	-	$ 115,268	$ 76,875	$ 344,372	$ 115,268	$ 76,875
20		Energy Audit Services (Residential) *	1,320	-	-	$ -	$ -	$ 430,321	$ -	$ -
21		DARP Program	26	-	-	$ -	$ -	$ 10,521	$ -	$ -
IV. Educational & Research Programs										
22		Model Housing Education	410	-	-	$ -	$ -	$ 63,152	$ -	$ -
23		Domestic Water Heater Enhancement	128	-	-	$ -	$ -	$ 25,100	$ -	$ -
24		Member Information and Education	206,109	-	-	$ -	$ -	$ 1,203,605	$ -	$ -
25		Peak Alert	207,661	-	-	$ -	$ -	$ 19,271	$ -	$ -
26		Living with Energy in Iowa	113,226	-	-	$ -	$ -	$ 178,628	$ -	$ -
27		Iowa Energy Center and Center for Global Regional Environmental Research & Cooperative Research Network	202,200	-	-	$ -	$ -	$ 411,714	$ -	$ -
		TOTALS	917,522	40,049,968	913,281	$ 7,198,145	$ 6,656,241	$ 13,174,876	$ 52,782,138	$ 42,140,308

* Savings for the specific measures are accounted for and included in the applicable programs.


MWHs Consumed by Member-Consumers
Residential & Farm MWHs
Small Commercial & Industrial MWHs
Large Commercial & Industrial MWHs
Household MWHs
Farm MWHs
Farm MWHs
Commercial Buildings MWHs
Other MWHs
Farm MWHs
Other MWHs
1. Central AC
2. Water Heating
3. Lighting
4. Plug Load
5. Refrigerator
6. Central Heat
7. Clothes Dryer
8. Dehumidifier
9. Freezer
10. Room Heat
11. Heat Pump
12. HVAC Auxiliaries
13. Range
14. Room AC
15. Microwave
1. Beef
2. Dairy
3. Grain
4. Poultry
5. Swine
6. Bldg Ht Lt
7. Other
1. Beef
2. Dairy
3. Grain
4. Poultry
5. Swine
6. Other
1. Education
2. Food Sales
3. Food Service
4. Health Care
5. Lodging
6. Mercantile
7. Office
8. Public Assembly
9. Public Order/Safety
10. Religious Worship
11. Service
12. Warehouse/Storage
13. Other
14. Vacant
1. Small Manufact.
2. Comm
3. Residence
4. Other
1. Dairy
2. Grain
3. Poultry
4. Swine
1. Other Industrial


1997 Retail MWhs
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
IOUs
Municipals
RECs
Non Residential
Residential


2007 Retail MWhs
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
IOUs
Municipals
RECs
Non Residential
Residential