

STATE OF IOWA  
DEPARTMENT OF COMMERCE  
UTILITIES BOARD

<p>IN RE:</p> <p>INQUIRY INTO THE STATUS OF ENERGY EFFICIENCY PROGRAMS IN IOWA</p>	<p>DOCKET NO. NOI-07-2</p>
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**ORDER INITIATING INQUIRY**

(Issued June 19, 2007)

**I. INTRODUCTION**

House File (HF) 918, passed during the 2007 Iowa Legislative Session, included a directive to the Utilities Board (Board), which read:

The Iowa utilities board, in conjunction with other interested parties, shall conduct a study of the energy efficiency plans and programs offered by all gas and electric utilities pursuant to section 476.6 to determine the status and effectiveness of energy efficiency programs in the state, using the most accurate and up-to-date information available to the board during the time period prescribed for the study. The board shall report the results of the study, with recommendations for best practices to increase energy efficiency and reduce energy consumption, to the members of the general assembly by January 1, 2008.

The Board is initiating this inquiry to meet these statutory requirements. The Board has the responsibility of maintaining information on energy efficiency programs and energy efficiency plans by Iowa utilities. Investor-owned utilities conduct energy efficiency programs under plans which are reviewed and approved by the Board pursuant to Iowa Code § 476.6. Chapters 199 IAC 35 and 36 give further detail

regarding the implementation of energy efficiency plans in Iowa. Consumer-owned utilities file their energy efficiency plans and results with the Board, but the Board does not approve or otherwise regulate these plans. Energy efficiency plans address both electric and natural gas usage through a variety of programs which attempt to give all customers opportunities to participate.

## **II. ENERGY EFFICIENCY STUDY – INITIATING INQUIRY**

On May 8, 2007, the Board held a meeting of interested stakeholders to receive input on the energy efficiency study.

On May 24, 2007, Board staff sent draft data requests to various interested persons to seek comment.

On June 1, 2007, staff received comments on the draft data requests from Aquila, Inc. (Aquila), the Iowa Association of Electric Cooperatives (IAEC), the Iowa Association of Municipal Utilities (IAMU), Interstate Power and Light Company (IPL), MidAmerican Energy Company (MEC), Atmos Energy (Atmos), and the Consumer Advocate Division of the Department of Justice (Consumer Advocate). A summary of those comments will be posted on the Board's Web site at <http://www.state.ia.us/iub>.

The Board will open this inquiry formally, seeking information to complete the study as required by the Iowa Legislature in HF 918. In this order, the Board is setting out a number of data requests for utility response. The Board will send letters to stakeholders, including Consumer Advocate, and utility associations notifying them of the issuance of this order. The Board will also notify each utility by letter and include a list of the data requirements and forms for data responses. Each utility will

be required to provide responses by electronic mail and by paper filing, on or before July 27, 2007.

**A. ENERGY EFFICIENCY STUDY DATA REQUIREMENTS FOR ALL UTILITIES**

The purpose of this request is to fulfill the requirements of HF 918. Therefore, the Board seeks information about the energy efficiency plans and programs of all electric and natural gas utilities in Iowa. The data will become the basis of an electronic database. An appendix of utility profiles will be a part of the energy efficiency study that the Board will submit to the Iowa General Assembly.

The Board, consistent with the goal expressed in HF 918, seeks information on the status and effectiveness of utility energy efficiency programs in Iowa using the most accurate and up-to-date information available during the time period prescribed for the study. The Board interprets this time period to be the most recent calendar year (2006). Utilities should provide information on the energy efficiency program activities and results for that time period. The Board will interpret the data provided by utilities as best estimates of actual activity and results.

In addition to the data requirements, the Board is providing a method, published by the U.S. Department of Energy, Energy Information Administration, for calculating greenhouse gas reductions that result from a utility's energy efficiency plan. The greenhouse gas reduction calculation methods are included in the reporting forms for the convenience of the utilities. The Board has also provided an example of a spreadsheet for benefit-cost calculations. If an investor-owned utility prefers to calculate benefits and costs using a different method, the utility may use its

preferred method, as long as it provides an explanation and detailed inputs and outputs for the method sufficient to permit Board staff to study, understand, and evaluate the utility's method.

The tables and worksheets in the reporting forms may be separated, expanded, or extended to accommodate each utility's needs. Utilities should maintain the labeling of the data sections to minimize issues resulting from mismatched comparisons.

The data requested is set forth in Section III of this order under "Energy Efficiency Study-Data Requirement." However, this listing of the data requested is provided for informational purposes only. Utilities must provide the data requested by using the Board-approved form found at [www.state.ia.us/iub](http://www.state.ia.us/iub). After completing the form, each utility must file an original and five paper copies with the Executive Secretary, Iowa Utilities Board, 350 Maple Street, Des Moines, Iowa 50319-0069, on or before July 27, 2007.

An electronic copy of the response to the data requests (on CD or DVD) must accompany the filing sent to the Executive Secretary. In addition, a copy of the response must be sent by e-mail to Leighann LaRocca at [leighann.larocca@iub.state.ia.us](mailto:leighann.larocca@iub.state.ia.us). Consumer Advocate must also be served with copies pursuant to the Board's rules.

## **B. DATA REQUIREMENTS FOR CONSUMER-OWNED UTILITIES**

The Board is aware of the efforts of the IAMU and the IAEC to provide energy efficiency information and services for their members and recognizes the efforts of

these associations to compile and submit joint energy efficiency plans and reports. The Board believes similar efforts may be useful in developing and filing responses to the data requested for the energy efficiency study, as long as the individual data associated with each member utility is preserved and filed as part of any joint filing. In other words, the Board would welcome joint filings by consumer-owned utilities, but they must be accompanied by individual utility responses. The Board will have additional questions for the utilities regarding electric demand response and/or load management programs. These questions will be issued in a subsequent order at a later date.

### **III. ENERGY EFFICIENCY STUDY – DATA REQUIREMENTS**

#### **A. DATA REQUIREMENTS FOR INVESTOR-OWNED UTILITIES**

The tables and worksheets in the reporting forms may be separated, expanded, or extended to accommodate each utility's needs. Utilities shall maintain the labeling of the data sections.

**Section 1. Utility name, contact person, address, phone, e-mail.**

**Section 2. Year 2006 utility energy profile.**

This data should allow viewers and users of the data to understand the utility's Iowa-only operations and size, in terms of number of customers, sales in units of energy, and revenues.

Provide the following:

For Iowa electrical service in 2006, separately for residential customers and nonresidential customers:

- Number of customers or accounts.

- Sales to final consumers, in Megawatt-hours (MWh).
- Revenues from sales to final consumers.

For all Iowa electrical service in 2006, total MWh sales and system peak megawatts (MW), as reported to the Energy Information Administration on Form 861.

For Iowa natural gas service, separately for residential customers and nonresidential customers:

- Number of customers or accounts, for residential customers, nonresidential customers, and transportation customers.
- Gas throughput to firm residential, firm nonresidential, and transportation customers, in MCf.
- Revenues from customers for residential, nonresidential, and transportation customers.
- Peak day system throughput, in MCf.

### **Section 3. Utility comparative data for 2006.**

- Energy efficiency MW savings versus electric peak MW demand.
- Load management MW savings versus electric peak MW demand.
- Energy efficiency MWh savings versus electric MWh retail sales if the utility's energy efficiency program was not in place.
- Energy efficiency MCf savings versus natural gas MCf retail throughput, as above.
- Energy efficiency and Load Management total spending versus retail customer revenues.

### **Sections 4A, 4B, and 4C. Utility energy efficiency and load management summary impact data for 2006.**

For each program, separately for electric energy efficiency programs and natural gas programs, including projected numbers or goals and actual results, list the following:

- Electric energy efficiency – number of participants, peak kW demand savings, non-peak kW savings, annual energy kWh savings.
- Electric load management – number of participants, peak kW demand savings, annual kWh savings (if any). List both cumulative kW and kWh and incremental annual kW and kWh.
- Natural gas energy efficiency – number of participants, peak day MCf savings, annual MCf savings.

**Section 5. Summary of utility program cost information.**

Provide in this section an Excel table showing the 2006 actual expenditures for each program, by fuel type. Use the categories from 199 IAC chapter 35, including: planning & design, administration, advertising and promotion, customer incentives, monitoring and evaluation, equipment, installation, and miscellaneous.

**Section 6. Summary of energy efficiency measures.**

Provide in this section an Excel table showing each general type of energy efficiency measure, including, but not limited to, any of the following:

Residential measures including features such as:

- Furnaces
- Boilers
- Cooling
- Geothermal
- Home audits
- Insulation
- Lighting fixture/ceiling fan
- CFL bulbs
- Programmable thermostats
- Refrigerators/freezers
- Replacement windows/doors
- Washers
- Water heaters
- Water heating measures, such as pipe insulation
- Lowflow showerhead and faucets
- Window air conditioners

New home comprehensive sets of measures.

Non-residential measures such as:

- Boilers
- CFLs
- Cooling
- Geothermal
- Heating
- Insulation
- Lighting
- Lighting disposal
- Lighting fixture/ceiling fan

- Motors, variable frequency drives
- Programmable thermostats
- Refrigerator/freezers
- Replacement windows and doors
- Water heaters
- Window air conditioners

Nonresidential new construction sets of measures.

Custom nonresidential retrofits and other custom measures.

Agricultural measures.

**Section 7. Environmental benefits – by total utility.**

Provide a summary of avoided emissions environmental benefits for each program, listing for each program the metric tons of CO2 equivalent savings from the program. At its discretion, a utility may list other environmental benefits from demand-side management programs, such as reductions in other power plant emissions that may be harmful to air or water quality.

See the description of the Energy Information Administration calculation method for Voluntary Reporting of Greenhouse Gas Emissions in the Instructions.

**Section 8. Cost-effectiveness summary.**

This section should be a summary of the detailed information from section 11.F.

Provide in this section a summary of the benefits and costs for each program, separately for electric and natural gas services and in combination (electric and natural gas combined, if applicable).

Provide an Excel table which shows the benefit components, cost components, net benefits, and benefit/cost ratios for each of the programs in the utility's plan, for the Participant Test, Utility Test, Ratepayer Impact Test, Total Resource Cost Test, and Societal Test.

Provide a description and the underlying calculation tables for the utility's benefit-cost process, either as an Excel spreadsheet or as the inputs and outputs for DSManager analyses.

For each program and test, separately for electric and natural gas service, provide the levelized cost of saved energy and saved capacity. Describe the inputs

for the levelized cost, including average measure lifetime for each program, allocation of costs between energy and capacity, and utility avoided costs for energy and capacity, to be compared with the levelized cost of saved energy and capacity.

**Section 9. Narrative descriptions.**

Provide an overall narrative description of the utility's energy efficiency plan, including:

- Plan docket number.
- Date filed with the IUB.
- Date of IUB approval for implementation.
- Dates of approval for formal modifications to plan.

Address any pilot or special efforts for projects or programs, including but not limited to:

- Special programs for low-income customers.
- Community-based promotion and education.
- Educational programs or efforts promoting customer-based energy efficiency, load management, or similar end-use programs.
- Case studies for particular customers with results worthy of consideration, assuming the customer(s) are willing to share their story.
- Case studies for particular programs worthy of consideration.
- Special circumstances which may limit the utility's programs, such as utility transportation of natural gas for customers, rather than direct sales of natural gas to customers.
- Opportunities to leverage or augment energy efficiency programs in cooperation with other government or private entities.

**Section 10. Provide utility notes, analyst notes, description of residual uncertainties, and caveats.**

This may include descriptions or instructions on how to use Excel tables or Access databases to locate or verify the data provided.

**Section 11. Program data sheets.**

Program data must address calendar year 2006 for each individual energy efficiency and load management program. Include program names and numbers as the heading for each individual program, as follows: Section 11.1 – "program name," Section 11.2 – "program name," Section 11.3 – "program name," and so on, for each program.

Note: If the utility provides more than one type of a program (e.g., on-site energy audits and on-line energy audits), consider listing each effort as a separate program.

Program description.

(Attach or substitute available written information as needed). Describe the program target markets, including:

- Residential, nonresidential, or other.
- New construction or retrofit.
- Targeted at energy efficiency or peak load management.
- Additional descriptive information to allow full understanding of the program.

**B. List the energy efficiency measures or operating practices targeted for replacement or improvement. For each measure, provide:**

Name of measure, type of measure, measure lifetime, estimated measure savings (kW, kWh, peak Ccf, annual Ccf), and customer incremental costs.

**C. Describe methods for promoting the program** and encouraging participation, including strategies for increasing customer awareness and communicating and coordinating with vendors and trade allies.

**D. Describe the method for estimating or determining results.**

**E. Provide impact data for 2006 for the program, separately for electric and natural gas impacts, as follows:**

Electric:

- Number of participants for electric measures.
- Electric impacts: peak kW, non-peak kW, annual kWh.
- Electric implementation costs: Utility administrative and incentive costs, total customer incremental costs.

Natural Gas:

- Number of participants for natural gas measures.
- Natural gas impacts: peak day Ccf, annual Ccf.
- Natural gas implementation costs: Utility administrative and incentive costs, total customer incremental costs.

**F. Provide program benefit-cost information for 2006.**

The benefit-cost results should be performed by the same method used in the utility's most recent Energy Efficiency Annual Report, augmented to address results or information not provided in the report. At a minimum, each investor-owned utility should provide:

- An Excel table summary of the benefits and costs for each program, separately for electric and natural gas benefits and costs, and in combination (electricity plus natural gas benefits and costs).
- The Excel table should show the benefit components, cost components, net benefits, and benefit/cost ratios for each of the programs in the utility's plan, for the Participant Test, Utility Test, Ratepayer Impact Test, Total Resource Cost Test, and Societal Test.
- A description and the underlying calculation tables for the utility's benefit-cost process, in the form of either an Excel spreadsheet or the inputs and outputs for DSManager analyses.
- For each program and test, separately for electric and natural gas, provide the levelized cost of saved energy and saved capacity. Describe the inputs for the levelized cost, including average measure lifetime for each program, and any allocation of costs between energy and capacity. Provide comparable avoided costs for energy and capacity, to be compared with the levelized cost of saved energy and capacity.

**B. IOWA UTILITIES BOARD ENERGY EFFICIENCY STUDY DATA REQUIREMENTS FOR CONSUMER-OWNED UTILITIES**

(This section is similar, but not identical, to the preceding section. It has been modified to reflect the data available from consumer-owned utilities.)

The tables and worksheets in the reporting forms may be separated, expanded, or extended to accommodate each utility's needs. Utilities shall maintain the labeling of the data sections.

**Section 1. Utility name, contact person, address, phone, e-mail.**

**Section 2. Year 2006 utility energy profile.**

This data should allow viewers and users of the data to understand the utility's Iowa-only operations and size, in terms of number of customers, sales in units of energy, and revenues.

Provide the following:

For Iowa electrical service in 2006, separately for residential customers and nonresidential customers:

- Number of customers or accounts.
- Sales to final consumers, in Megawatt-hours (MWh).
- Revenues from sales to final consumers.

For all Iowa electrical service in 2006, total MWh sales and system peak MW, as reported to the Energy Information Administration on Form 861.

For Iowa natural gas service, separately for residential customers and nonresidential customers:

- Number of customers or accounts, for residential customers, nonresidential customers, and transportation customers.
- Gas throughput to firm residential, firm nonresidential, and transportation customers, in MCf.
- Revenues from customers for residential, nonresidential, and transportation customers.
- Peak day system throughput, in MCf.

### **Section 3. Utility comparative data for 2006.**

- Energy Efficiency MW savings versus electric peak MW demand.
- Load Management MW savings versus electric peak MW demand.
- Energy Efficiency MWh savings versus electric MWh retail sales if the utility's energy efficiency program were not in place.
- Energy Efficiency MCf savings versus natural gas MCf retail throughput, as above.
- Energy Efficiency and Load Management total spending versus retail customer revenues.

### **Sections 4A, 4B, and 4C. Utility energy efficiency and load management summary impact data for 2006.**

For each set of programs, separately for electric service and natural gas service, list the following:

- Electric energy efficiency -- number of participants, peak kW demand savings, non-peak kW savings, annual energy kWh savings.
- Electric load management -- number of participants, peak kW demand savings, annual kWh savings (if any). List both cumulative kW and kWh and incremental changes in annual kW and kWh.

- Natural gas energy efficiency -- number of participants, peak day MCf savings, annual MCf savings.

**Section 5. Summary of utility program cost information.**

For each program, separately for electric service and natural gas service, list the following:

- Electric energy efficiency – utility administrative cost and incentives to customers.
- Electric load management – utility administrative cost and incentives to customers.
- Natural gas energy efficiency – utility administrative cost and incentives to customers.

**Section 6. List of energy efficiency measures.**

Provide a list of the types of energy efficiency measures which the utility's customers installed in 2006 as a result of the utility's energy efficiency programs.

**Section 7. Environmental benefits.**

Provide a summary or total of the environmental benefits achieved by the utility energy efficiency programs, in terms of greenhouse gas equivalent reductions.

**Section 8. Cost-effectiveness.**

For consumer-owned utilities, a minimum requirement is to describe benefits and costs, in dollars, for the total utility. A consumer-owned utility may elect to list benefits and costs for each program, and may use this section as a summary.

The utility may use a benefit-cost calculation method developed by itself, by another utility, or by an Iowa utility association. Also, explain the method used, in detail. The Board has provided an example of an Excel spreadsheet calculation method for benefits and costs developed by Interstate Power and Light Company.

**Section 9. Narrative descriptions.**

Provide an overall narrative description of the utility's energy efficiency efforts, including:

- Utility educational programs or efforts promoting customer-based energy efficiency, load management, or similar end-use programs.

- Case studies for particular customers with results worthy of consideration, assuming the customer(s) are willing to share their story.
- Case studies for particular programs worthy of consideration.
- Special circumstances which may limit the utility's programs.
- Opportunities to leverage or augment energy efficiency programs, in cooperation with other government or private entities.

**Section 10. Utility notes, analyst notes, description of residual uncertainties, caveats.**

This section may include any information helpful or necessary for a complete evaluation of the utility's program.

**Section 11. Program data sheets.**

Program data must address calendar year 2006 for each individual energy efficiency and load management program. Include program names and numbers as heading for each individual program, as follows: Section 11.1 – "program name," Section 11.2 – "program name," Section 11.3 – "program name," and so on, for all programs.

Note: If the utility provides more than one type of a program (e.g., on-site energy audits and on-line energy audits), consider listing each effort as a separate program.

**A. Program description.**

(Attach or substitute available written information as needed). Describe the program target markets, including:

- Residential, nonresidential, or other.
- New construction or retrofit.
- Targeted at energy efficiency or peak load management.
- Additional descriptive information to allow full understanding of the program.

**B. List the energy efficiency measures or operating practices targeted for replacement or improvement.** For each measure, provide:

Name of measure, type of measure, measure lifetime, estimated measure savings (kW, kWh, peak CCf, annual CCf), and customer incremental costs.

**C. Describe methods for promoting the program** and encouraging participation, including strategies for increasing customer awareness and communicating and coordinating with vendors and trade allies.

**D. Describe the method for estimating or determining results.**

**E. Provide impact data for 2006 for the program, separately for electric and natural gas impacts, as follows:**

Electric:

- Number of participants for electric measures.
- Electric impacts: peak kW, non-peak kW, annual kWh.
- Electric implementation costs: Utility administrative and incentive costs, total customer incremental costs.

Natural Gas:

- Number of participants for natural gas measures.
- Natural gas impacts: peak day Ccf, annual Ccf.
- Natural gas implementation costs: Utility administrative and incentive costs, total customer incremental costs.

**F. Provide program 2006 benefit-cost information.**

- Benefit-cost test results for the electricity savings from the program, and separately for the natural gas savings. Explain the method used, in detail.

#### **IV. CONCLUSION**

The utility may use a benefit-cost calculation method developed by itself, by another utility, or by an Iowa utility association. The Board has provided an example of an Excel spreadsheet calculation method for benefits and costs developed by Interstate Power and Light Company.

On or before July 27, 2007, all investor and consumer-owned utilities in Iowa must file responses to all of the data requests contained in this order. All data responses shall be made on the form approved by the Board, and found at

<http://www.state.ia.us/iub>. All responses shall be filed as follows: 1) an original and five written copies, filed with the Board's Executive Secretary, 2) one electronic copy, on CD or DVD filed with the Board's Executive Secretary, and 3) one electronic copy, via e-mail, to Leighann LaRocca, the inquiry administrative manager at [leighann.larocca@iub.state.ia.us](mailto:leighann.larocca@iub.state.ia.us). All other communications regarding this inquiry are to be directed to the inquiry manager:

Gordon Dunn  
Iowa Utilities Board  
350 Maple Street  
Des Moines, Iowa 50319-0069  
Telephone: (515) 281-7051  
Facsimile: (515) 281-5329  
E-mail: [Gordon.Dunn@iub.state.ia.us](mailto:Gordon.Dunn@iub.state.ia.us)

After receipt and review of the forms, the Board will determine what additional procedures are necessary to complete the inquiry. Work sessions may be scheduled or additional comments on specific questions may be solicited. An oral presentation to solicit additional comments and argument may also be scheduled. Participants will be notified of any subsequent procedures established.

## **V. ORDERING CLAUSES**

### **IT IS THEREFORE ORDERED:**

1. An inquiry, identified as Docket No. NOI-07-2, is initiated concerning the status of Energy Efficiency Programs in Iowa in accordance with House File 918, and Iowa Code §§ 476.6(14) and 476.6(16)

2. The Board will send stakeholders a letter containing information about participation in this inquiry. The data request form may be downloaded from the Board's Web site at [www.state.ia.us/iub](http://www.state.ia.us/iub).

3. The Board will post on its Web site, [www.state.ia.us/iub](http://www.state.ia.us/iub), information about how to obtain the form to answer the data requests. On or before July 27, 2007, investor-owned and consumer-owned utilities shall complete and return the data request. All responses shall be filed as follows: 1) an original and five written copies, filed with the Board's Executive Secretary, 2) one electronic copy, on CD or DVD filed with the Board's Executive Secretary, and 3) one electronic copy, via e-mail, to Leighann LaRocca, the inquiry administrative manager at [leighann.larocca@iub.state.ia.us](mailto:leighann.larocca@iub.state.ia.us). All other communications regarding this inquiry are to be directed to the inquiry manager, Gordon Dunn.

**UTILITIES BOARD**

/s/ John R. Norris

/s/ Curtis W. Stamp

ATTEST:

/s/ Judi K. Cooper  
Executive Secretary

/s/ Krista K. Tanner

Dated at Des Moines, Iowa, this 19<sup>th</sup> day of June, 2007.