

STATE OF IOWA  
DEPARTMENT OF COMMERCE  
UTILITIES BOARD

<p>IN RE:</p> <p>ALTOONA TOWER CONDOMINIUMS, LLC f/k/a IRONWOOD DEVELOPMENT, LC, AND PROFESSIONAL PROPERTY MANAGEMENT, INC.</p>	<p>DOCKET NO. WRU-2014-0013-0004</p>
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**ORDER ADDRESSING REQUEST FOR TEMPORARY  
APPROVAL OF WAIVER REQUEST**

(Issued January 30, 2015)

On September 11, 2014, Ironwood Development, LC (n/k/a Altoona Tower Condominiums, LCC), and Professional Property Management, Inc. (collectively, Applicants), filed with the Utilities Board (Board) a request to waive the individual metering requirements in 199 IAC 20.3(1)"b" to allow master metering at an apartment complex with two multioccupancy buildings in Altoona, Iowa. Applicants state that they have a long track record of designing and managing energy efficient and cost effective residential rental properties and Applicants want to utilize energy savings strategies at the apartment buildings. According to Applicants, the energy saving strategies at the two apartment buildings will require master metering of the buildings to make the strategies economical.

On September 30, 2014, the Consumer Advocate Division of the Department of Justice (Consumer Advocate) filed a response not opposing the waiver request. On October 1, 2014, MidAmerican Energy Company (MidAmerican) filed a response

to the waiver request and requested additional information. On October 8, 2014, Applicants filed a response to MidAmerican's request for more information.

On October 29, 2014, the Board issued an order requesting additional information about the request for waiver to allow master metering at the Altoona apartment buildings. On November 7, 2014, Applicants filed a response to the Board's order and requested a conference to discuss the issues raised concerning the request to master meter the two apartment buildings.

On November 13, 2014, the conference was held. At the conference, the parties agreed that master metering should be allowed to provide electric energy to the two apartment buildings as a pilot project and Applicants would submit a proposal for the pilot project which would include a special rate developed by MidAmerican. On January 9, 2015, Applicants filed a preliminary proposal for a pilot project. In support of the filing, Applicants indicate that there has been no agreement with MidAmerican on the appropriate rate structure for the master meter. Applicants indicate that they will submit a final proposal with additional information including the rate to be charged by February 27, 2015.

Applicants state that the two apartment buildings in Altoona are the most energy efficient multifamily housing projects built in Iowa to date; however, the energy strategies used in the construction of the buildings are not financially feasible unless the property owner can recoup the energy savings through a master meter. The parties to this docket agree that data should be collected to determine whether the

energy efficiency strategies adopted for these buildings result in energy savings even though individual tenants are not financially responsible for electric usage. Applicants state that MidAmerican and Consumer Advocate reviewed and offered comments on the pilot project and have consented to the preliminary pilot proposal with the Board. Applicants state that the proposal may be revised or supplemented and the parties will work in good faith to submit additional information by February 27, 2015. Applicants request that, once the final proposal and the additional information have been reviewed, the Board approve the pilot project and order the first annual report with data about the energy savings at the two apartment buildings be filed by June 30, 2016.

### **PILOT PROJECT**

Applicants state that the pilot project has two objectives: (1) determine whether comprehensive energy efficient building design, operation, and maintenance metered under a master meter provides an effective solution to the "split incentive" issue for multifamily residences; and (2) address whether tenants' energy consumption is influenced when the electric utility costs are included as an unidentified portion of the rent. Applicants indicate that additional objectives may be added at a later date.

Applicants explain that achieving energy efficiency savings in rental housing presents unique challenges. Where the tenant pays for energy service, the tenant does not purchase or install the fixtures and appliances and is not responsible for

properly maintaining those fixtures and appliances. In this situation, the landlord has no financial incentive to purchase and install energy efficiency fixtures and appliances since the tenant would reap any savings from reduced energy costs. Applicants point out that under these circumstances energy efficient fixtures and appliances are rarely purchased and installed by a landlord.

Applicants suggest that allowing the landlord to master meter an apartment building would allow the landlord to benefit from any reduction in energy costs by purchasing, installing, and maintaining energy efficient fixtures and appliances. In the case of the Altoona apartments, Applicants plan to invest \$292,050 for energy efficient fixtures and appliances for the two apartment buildings. Applicants would receive a payment of \$103,815 from MidAmerican for installation of the energy efficient fixtures and appliances; however, Applicants, without master metering, would receive no direct benefit from reduced energy usage from installing the energy efficient fixtures and appliances. Without some economic incentive, Applicants state that purchasing and installing the energy efficient fixtures and appliances is not economically feasible.

Applicants believe that total energy use will be reduced at the apartment buildings if Applicants purchase and install the energy efficient fixtures and appliances and are allowed to install a master meter in order to benefit from the reduced energy costs. Applicants state that no studies have compared energy usage by tenants paying their own energy bills and tenants who pay for energy as an

unidentified portion of rent. Since tenants will not be responsible for paying directly for their energy usage, Applicants propose to implement a number of educational programs regarding energy conservation for the tenants as part of the pilot project.

**A. Pilot Project Goals**

The pilot project is designed to determine whether master metering of multifamily buildings provides a cost effective solution to the issue of reduction of energy usage at these buildings. Applicants propose to purchase and install energy efficient fixtures and appliances that will reduce energy usage in the two apartment buildings by 35-40 percent. This reduction will be compared to baseline reference points.

**B. Master Metering at the Altoona Apartments**

Applicants propose that there be one master meter for both Altoona apartment buildings. The master meter will collect hourly data on the total electric energy used in both apartment buildings. The data will be used by MidAmerican to bill Applicants. In addition, each apartment building will have a general service/house meter to collect data on the energy use in common areas. Each individual apartment will be individually metered for the collection of data regarding individual tenant usage. MidAmerican will collect and analyze the data and the data will be made available to Applicants for use as part of tenant educational programs.

**C. Educational Programs**

Applicants will prepare a tenant handbook that will contain information regarding the energy efficiency strategies implemented at the apartment buildings and will provide tips and ideas to conserve energy. Applicants will provide a quarterly newsletter to each tenant which will include information from MidAmerican regarding energy use. In addition, Applicants plan to hold meetings semi-annually with tenants to discuss energy efficiency and to provide information regarding how tenants can maximize the efficient operation of the fixtures and appliances. MidAmerican will be invited to these meetings.

**D. Annual Report**

Applicants state that MidAmerican will submit a confidential report to Applicants each year with the usage data. Applicants will review and comment on the report and then the report will be filed with the Board. The apartment buildings should be 90-95 percent occupied by June 1, 2015, and Applicants suggest that the first report will be filed on or about June 1, 2016.

Applicants state that the annual report will contain data regarding total hourly load used in estimating cost of service, individual tenants' monthly energy consumption, and weather. The data will be collected and analyzed by MidAmerican and the report will show: (1) the average monthly use by tenants based on apartment size and number of occupants; (2) energy use comparison to the baseline references; and (3) a comparison of the average hourly load profile of the apartment buildings

with the average of rental properties contained in MidAmerican's load research sample.

The data in the report will be obtained by MidAmerican from each apartment and compared to several baseline references. One baseline reference will be the building energy system criteria that conform to current versions of the State of Iowa Energy Code; ASHRAE<sup>1</sup> Energy Standard 90.1 and National Appliance Energy Conservation Act. Actual energy use will be compared to a baseline of predicted energy use as determined by standard energy estimating methods, adjusted for weather, occupancy, and non-assigned energy loads. MidAmerican will also compare the data with data obtained from other multifamily buildings in the Des Moines metro area.

Applicants state that the annual report will also include a summary and documentation of the educational programs provided by Applicants each year. Applicants will provide a comparison of the Altoona Tower's average tenants' baseline energy use during the reporting year as compared to previous years. This should provide some feedback on whether the educational programs have had any effect on the tenants' behavior.

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<sup>1</sup> American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

### **BOARD DISCUSSION**

As a result of the meeting held on November 13, 2014, an agreement was reached that a master meter could be installed at the two apartment buildings in Altoona as a pilot project. Applicants, MidAmerican, and Consumer Advocate agreed to discuss the pilot project and file a proposed pilot project for Board approval. The pilot project would include a special rate developed by MidAmerican. Board staff participated in the discussions at the meeting and accepted the pilot project because of the energy efficiency strategies taken by Applicants and because of Applicants' assertion that these strategies will not be financially viable unless the buildings are master-metered. The Board anticipates that analysis of the data produced by the pilot project will provide insight into the issue of whether a building with energy efficiency measures taken by the owner, and where electric usage is included as an unidentified portion of the rent, results in reduced energy usage at the building.

The filing made on January 9, 2015, contains a description of the pilot project and indicates that a final proposal and additional information will be filed on or before February 27, 2015. The main purpose of the pilot project is to assist the Board in determining whether certain multifamily residential buildings should be allowed to master meter on the basis of energy efficiency improvements made by the landlord. The project should be designed to give the Board sufficient information, independently verifiable, to decide whether master metering should be allowed at

multifamily buildings where the owner installs similar energy efficiency fixtures and appliances and charges for electric usage as an unidentified part of the rent.

The Board considers it important that pilot projects begin with stated and well defined goals so that data collection and analysis strategies can be defined clearly to deliver credible results. To more clearly define the analysis and provide useable results, the Board is requesting that Applicants and MidAmerican address several issues when they make the filing on February 27, 2015. The issues to be addressed are described below.

The Board does not consider the filing of the first annual report in June 2016 to be consistent with the results that are to be reviewed. The Board understands that tenants are expected to be in the building by June 2015; however, assuming that it takes about eight weeks to analyze the data and write a report, a report filed in June 2016 will not contain 12 months of data. The Board considers it important that the analysis should include data for a minimum of one year so that the data collection period covers one full summer and one full winter season. The annual report should be filed after monthly data for reasonably well-occupied buildings is available for a full 12 months.

The list of energy efficiency items to be installed by Applicants appears to be inclusive; however, some of the items are not described in sufficient detail and energy savings features are not accompanied by specific estimates of energy savings or identification labels which tie back to an appendix with more details,

including operating parameters. In addition, Applicants have not described the methodology that will be used to determine on a disaggregated basis the effectiveness of individual measures or of groups of energy efficiency measures.

MidAmerican has committed to providing data to determine average monthly use of electricity in these apartments, by apartment size and number of occupants, and has committed to comparing an hourly load profile of the two buildings to a MidAmerican load research sample. MidAmerican will compare each apartment to several baseline references and to predicted energy use determined by standard estimating methods.

The information concerning the methodology and the data to be provided in the January 9, 2015, filing does not provide sufficient detail for the proposed monitoring and evaluation of the project. The Board considers it important that additional metrics be used, not just a monthly kilowatt usage, to analyze the project. Applicants should expand the pilot project to include specific details for all of the items (appliances, technologies, and building components or sub-systems) listed as contributing significantly to energy use (equaling 5 percent or greater). The details and estimates of energy use should be assembled in a separate document for ease of reference. This additional information is essential to determine anticipated savings for the project as a whole as well as savings for individual apartments.

In addition, the Board requests that MidAmerican explore the possibility of sub-metering a sample of apartments with recording meters capable of measuring

and storing energy use at smaller than a monthly time period (e.g., hourly or 15-minute interval). Depending on the costs involved, such meters could be installed on a representative sample to help identify savings attributable to specific major energy uses, such as, heating and cooling, lighting, cooking, and plug load.

MidAmerican has committed to providing enough data to determine average monthly use of apartments, by apartment size and number of occupants. It is also mentioned that apartment usage data will be collected on an hourly basis. It is not clear what data will be collected for apartments in the reference group and what data will be collected for the apartments in the control group. This information is important to perform data analysis that provides credible results.

Under the preliminary proposal, it is not clear how the usage for the common areas will be monitored or measured. Sub-metering may be needed for the common areas to identify and isolate usage in these areas from the total building usage to determine the actual apartment-only usage. Applicants and MidAmerican should explore the feasibility of this type of sub-metering.

Applicants propose to implement a number of educational programs regarding energy conservation for the tenants as part of the pilot project. It is not clear in the preliminary proposal what specific educational programs will be used. Applicants should provide a more detailed description of the educational programs including the information that will be included in tenant handbooks. Also, Applicants should include

in the annual reports specific details of the proposed programs that were actually implemented including the number of tenants who participate.

The issues to be addressed by Applicants and MidAmerican in the filing to be made on February 27, 2015, are as follows:

1. Provide a complete list of objectives for the project.
2. MidAmerican will need to file a proposed tariff with the new rate for the pilot project. Does MidAmerican expect other customers to be able to take service under this pilot project rate, or will this only be available to Applicants?
3. How long do Applicants and MidAmerican anticipate the pilot project will need to continue until there is sufficient data to address the goals of the project?
4. Is it possible for MidAmerican to determine energy use by metering common areas and to provide sub-metering for those areas?
5. Applicants should provide specific details, where possible, for all of the items (appliances, technologies, and building components or sub-systems, and other measures) listed as contributing significantly to energy use (equaling 5 percent or greater). The details should include anticipated energy savings of each item.
6. Is it possible, and feasible, for MidAmerican to meter a sample of apartments with recording meters capable of measuring and storing energy use at smaller than a monthly time period (e.g., hourly or 15-minute interval). If the costs are reasonable, can such meters be installed on a representative sample to help

identify savings attributable to specific major energy uses, including heating and cooling, lighting, cooking, and plug load?

7. Is this pilot project of sufficient importance to have some of the costs covered by energy efficiency program funds?
8. MidAmerican should specify what type of data will be collected for individual apartments, common areas, and the total buildings for the “experimental group” as well as the “control group.”
9. MidAmerican should describe, develop, and identify a set of metrics and describe the methodology that will be used to analyze the data collected.
10. Are there any privacy issues that need to be addressed, if MidAmerican is going to obtain individual apartment energy usage and analyze the data? What actions will be taken to protect the tenant's private information from public dissemination and is it necessary that each tenant's permission be obtained to collect the data?
11. Can MidAmerican provide metrics for comparison of yearly average usage for these apartment buildings?
12. The information provided by Applicants with regard to the educational programs should include how many tenants attended these meetings.
13. A detailed description of the control group will need to be provided including how the data from the control group will be compared to the apartment buildings in the pilot project.

**ORDERING CLAUSE**

**IT IS THEREFORE ORDERED:**

Altoona Tower Condominiums, LLC, and Professional Property Management, Inc., shall file a final pilot project proposal with the information described in this order on or before February 27, 2015.

**UTILITIES BOARD**

/s/ Elizabeth S. Jacobs

/s/ Nick Wagner

ATTEST:

/s/ Joan Conrad  
Executive Secretary

/s/ Sheila K. Tipton

Dated at Des Moines, Iowa, this 30<sup>th</sup> day of January 2015.