

**FILED WITH
Executive Secretary
September 24, 2015
IOWA UTILITIES BOARD
FCU-2014-0016**

ARTI CROSS EXHIBIT 4

(Public Version)



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**FILED WITH
Executive Secretary
September 08, 2015
IOWA UTILITIES BOARD**

Executive Secretary
Iowa Utilities Board
1375 East Court Avenue, Room 69
Des Moines, Iowa 50319-0069

**Re: Arti, LLC v. MidAmerican Energy Company
Docket No. FCU-2014-0016**

Dear Executive Secretary:

In compliance with the order issued on August 21, 2015, Arti hereby submits for filing its responses to the first two of the three requests for additional information set forth in the order issued on August 12, 2015. Arti has not responded to the third request for additional information because Arti is not in possession of the requested information; Arti anticipates, however, that MidAmerican will respond to the third request for additional information.

Arti has filed two versions (a confidential version and a public version) of its responses and two versions (a confidential version and a public version) of the single attachment to those responses. A request for confidential treatment of the confidential versions, along with a supporting affidavit, has also been included in the filing.

Very truly yours,

/s/ Philip E. Stoffregen

Philip E. Stoffregen

ATTORNEY FOR ARTI, LLC

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**Arti's Response to the Iowa Utilities Board's August 12, 2015 Request
For the Parties to Provide Additional Information**

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1. Is MidAmerican currently sending Arti two bills for electric service?

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Response:

No, MidAmerican has not previously sent two bills to Arti for electric Service. Based on communications Arti received from MidAmerican in July 2015, it is MidAmerican's intent to establish a second billing account for Arti that includes the meters at the Southland substation.

Arti anticipates that MidAmerican will send Arti two bills next month (October 2015) for Arti's September 2015 electric service. This is due to Arti's understanding that the Southland substation will be brought online by MidAmerican in September 2015.

2. Identify the charges that have been billed to Arti in the two bills, or which will be billed to Arti in two bills, and estimate the annual financial impact associated with the identified charges in the two bills as compared to Arti being billed for service in one bill.

Response:

Arti expects that the charges billed to Arti on each of the two electric bills would include the following [REDACTED] charges:

- a. Basic Service Charge
- b. On Peak kWh Charge
- c. Off Peak kWh Charge
- d. All Other kWh Charge
- e. kW Demand Charge
- f. Phase-In Adjustment Clause
- g. Rate Equalization Adjustment Clause
- h. Energy Adjustment Clause
- i. Transmission Cost Adjustment
- j. Energy Efficiency Cost Recovery Adjustment
- k. 2.00% Electric Franchise Fee

Of these [REDACTED] charges, only the Basic Service Charge and the kW Demand Charge would have different financial implications to Arti depending on whether Arti was provided one bill or two bills by MidAmerican for electric service to the Pony Creek and Southland substations.

Impact of Basic Service Charge

The Basic Service Charge of [REDACTED] per month would be charged once if Arti only received one electric bill, and twice if Arti received two electric bills. Hence the annual financial impact to Arti from the Basic Service Charge applied to two bills would be an additional 12 * [REDACTED], or [REDACTED] per year.

Impact of kW Demand Charge

The impact of the kW demand charge applied to two electric bills could have significant financial impact for Arti depending on the amount of load that is non-coincident or double counted in the monthly peak demands of both electric bills.

The kW Demand Charge for a single electric bill would be based upon the coincident maximum demand (in kW) of Arti's load each month measured simultaneously across both the transformers in the Pony Creek substation and the transformers in the Southland substation.

For two electric bills, the kW Demand Charge for the bill pertaining to the Pony Creek substation would be based upon the coincident maximum demand (in kW) each month measured simultaneously across the transformers in only the Pony Creek substation, and the kW Demand Charge for the bill pertaining to the Southland substation would be based upon the coincident maximum demand (in kW) each month measured simultaneously across the transformers in only the Southland substation.

If the coincident maximum demand of the transformers in the Pony Creek substation did not occur simultaneously with the coincident maximum demand of the transformers in the Southland substation, then the sum of the two kW Demand Charges on the two bills would be greater than the single kW Demand Charge on the single bill.

Based on the attached calculations that assume [REDACTED] of load on each of the Pony Creek and Southland substations, Arti estimates its minimum financial impact would be approximately [REDACTED] per year for [REDACTED] of load as a result of MidAmerican applying the kW demand charge separately to the Pony Creek and Southland substations' monthly maximum demands. Arti's load has been growing and is approaching this level (peak load of [REDACTED] in August 2015), and if Arti's load continues to grow, as is expected to be the case, the financial impact would grow commensurately.

To perform the calculations described above, since there is no historical load data for the Southland substation, it was necessary to perform a proxy calculation for the kW demand charge impact resulting from two electric bills for Arti. The estimated cost difference in the kW demand charge resulting from separate electric bills for the Pony Creek and Southland substations is based upon modeling the MidAmerican demand charges applied to the monthly maximum demand at the four Pony Creek transformers under two separate bills (two transformers per bill) for the historical 10 month period ending July 31, 2015, vs. applying the demand charges to the coincident maximum demand at the four Pony Creek transformers under one electric bill for the same time period. This analysis is then annualized and applied to a pro-forma load of [REDACTED] for Arti ([REDACTED] at each substation, as described above). The estimated cost difference is due to the non-coincident maximum demand from the two sets of transformers under the two separately modeled bills, which is intended to approximate the similarly expected non-coincident maximum demand from the Pony Creek and Southland substations that would occur under two separate bills.

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To the extent that load is ever moved between the Pony Creek and Southland substations, because of outages (forced or planned) of substation transformers, switchgear, or other substation equipment, the cost difference could be significantly greater than the [REDACTED] estimated in the attached, depending on the magnitude of load moved between the substations. This is because in the case of moving load, the same load could appear under the monthly maximum demand for both substations and result in double counting.

Similarly, to the extent that load is moved between the Pony Creek and Southland substations as a result of normal data center server operations and server maintenance, load could also be double counted in the monthly maximum demands of both substations and result in significantly greater financial impacts to Arti than contained in the attached estimate.

For each [REDACTED] of additional load that is moved between substations and then double counted in the monthly maximum demands of both substations, Arti would incur [REDACTED] of additional demand charges (in one month) if two electric bills were imposed on Arti. For illustrative purposes, if [REDACTED] of load was moved between the two substations at the Arti site in [REDACTED] separate months of a particular year, and double counted in the affected [REDACTED] monthly billings to Arti (two bills in each of the [REDACTED] months), the additional financial impact to Arti would be approximately [REDACTED].

Finally, because of the unified nature of the operations at Arti's site as discussed on pages 14-15 of Arti witness Arons's written direct testimony in docket FCU- 2014-0016, issuing a consolidated billing for the two substations would avoid the double counting problem with respect to billing demand, while issuing separate bills for the Pony Creek and Southland substations would virtually guarantee that there would be such inappropriate double counting. This is because Arti's unified operation requires the computers in the different buildings to communicate with one another to perform their [REDACTED] tasks, and thus computer activity, and hence load, can and does shift between buildings during the course of normal operations, including between buildings served by different substations.

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**ATTACHMENT TO
ARTI RESPONSES TO
IUB INFORMATION REQUESTS**

Docket No. FCU-2014-0016

PUBLIC VERSION

**This attachment contains confidential information
and consequently this public version of the attachment
has been redacted in its entirety.**