Filed with the Iowa Utilities Board on September 9, 2016, TF-2016-0321 (NOI-2014-0001)

LUTHER COLLEGE

September 9, 2016

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

Re: Docket No. TF-2016-0321

Dear Members of the Iowa Utilities Board,

It is our understanding after communication with Board staff that the Board welcomes comments about the pilot net metering tariffs submitted by Interstate Power and Light (IPL) on August 31, 2016. We offer the following remarks and recommendations for the Board's consideration.

1. Definition of "100 percent of customer's load"

One of the key terms the Board included in its order on July 19, 2016 requiring the investor-owned utilities to draft pilot net metering tariffs was to: "Increase the net metering cap from 500 kW to 1 MW (up to 100 percent of a customer's load)."

In their proposed Private Generation (PG) tariff, MidAmerican interpreted the limit to mean "the customer's annual energy needs" and "usage". In other words, MEC thinks RE DG systems should be sized to generate over one year the amount of kilowatt hours used by the consumer. This interpretation is reasonable and consistent with Board orders and comments by staff in gold memos issued in the DG docket.

Interstate Power & Light (IPL), however, in its pilot Net Billing (NB) tariff, defined load in terms of maximum *demand* not annual *consumption.* They say this is how "load" is understood in other sections of the Iowa Administrative Code. The example IPL gives in the cover letter that accompanies their pilot tariff involves a customer with annual consumption of 12,000 kWh. When they run that amount through their standard residential load factor calculation they get 5.48 kW of maximum capacity that can be net billed. A south-facing, ground-mounted array with a 30-degree orientation typically generates 1300 kWh per kW of installed capacity, which yields only 7,124 kWh from a 5.48 kW array and represents only 59% of the customer's annual consumption of 12,000 kWh.

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If IPL's interpretation of load is accepted by the Board, it will significantly reduce the size of systems that are eligible for net metering. We encourage the Board to side with MEC's interpretation of "100 percent of a customer's load" and to require that key terms be interpreted the same way in any pilot net metering tariffs it approves.

2. Include Transmission Costs and MISO Capacity Credits in Net Metering for LGS Customers.

The Board assumes increasing the cap to 1 MW will result in more investment in eligible distributed generation systems in Iowa. At the same time, it continues to limit net metering to billed volumetric energy charges. Demand charges are folded into volumetric energy charges for all other customer classes, but LGS customers are billed separately for demand. After investing in various forms of energy efficiency, and without expensive energy storage, it is very hard for LGS customers to reduce their peak demand. While they may be able to reduce it during the sunny times of the day, once the sun sets and the heat and humidity remain high, air conditioners will kick in and push their peak power consumption back up, which is what sets demand charge costs for the rest of the season. Given the current rate structure, one way to encourage LGS customers to invest in large systems up to 1 MW would be to be to include transmission costs and MISO capacity costs along with energy charges in net metering for LGS customers during the 3-year term of this pilot tariff.

3. Status of eligible distributed generation systems owned by a third party.

MidAmerican customers with eligible systems financed by a third party are eligible for net metering under MEC's new tariff, which is very helpful for non-taxable entities that can't access various tax incentives. Alliant is silent about this matter in their proposed pilot. We encourage the Board to make this condition a requirement in any pilot net metering tariffs it approves.

4. Timing of the annual cash-out of surplus kWh credits.

The Board says the cash-out "shall take place during the first billing cycle of the calendar year." Both utilities interpret this to be the January bill. Cashing out surplus production in January prevents most consumers with PV systems from fully utilizing the retail value of their summer production over the next twelve months. Moving the cash-out to the March billing cycle might be a good compromise. Or, the Board might give customers the choice of a cash-out in the January or March billing cycle.

5. Length of terms in the new net metering tariffs after the three-year pilot runs.

There is no limit to the length of the terms in in the existing net metering tariffs. MidAmerican and Alliant both propose 20 years in their pilot tariffs, but most PV panels are warrantied for 25 years and will continue to generate power long afterwards. We suggest that 25 years be the period of time the terms in the pilot net metering tariffs should be in force.

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6. Avoided cost rates do not reflect the true value of solar.

Finally, the Board has stipulated that the annual cash-out of surplus production must be at the utility's current avoided cost rate. Alliant says their rate is currently $26.39/MWh ($0.0264/kWh). They draw that number from their 2016 avoided cost filing to FERC and the IUB, but these reports don't explain how they arrive at these figures. In our view, the calculation and reporting of avoided costs should be much more transparent. While it may only cost Alliant $0.0264/kWh to purchase or produce power from a coal or natural gas-fired power plant (or even from a large wind farm), it can't possibly be the true cost of purchasing or producing a megawatt hour of power from a solar field.

A recent study on utility-scale solar (>5 MW) published by the Lawrence Berkeley National Laboratory reports that PPA prices in the Midwest for solar power ranges from $50-$80/MWh.[1] Solar power is valuable because it is produced close to the point of consumption and thus has very little line loss, the power is produced at the peak time of the day, and there are no adverse environmental impacts associated with solar power production. None of these benefits are reflected in the utilities' avoided cost figures. We encourage the Board to count both the costs *and the benefits* associated with solar power. Avoided cost (and benefit) rates should be technology-specific.

In light of these significant differences in the avoided cost rate, and considering the importance of understanding the true value of solar, we reiterate our earlier request for the IUB to conduct or commission a study on this matter.

Thank you for the opportunity to provide input in this docket. Luther College looks forward to additional participation if requested.

Sincerely,

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[1] https://emp.lbl.gov/publications/utility-scale-solar-2015-empirical.