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**Attn:** House Committee on Energy, Utilities and Telecommunications

Chairman & members of the committee--

As the owner of one of the prominent Solar Energy contractors in the state I have an obvious stake in how electrical energy is transferred between electric utilities and consumers. I also want to acknowledge that the bi-directional flow of energy is a relatively new concept (only widely adopted within the last 5-10 years) and I want to thank you for taking the time to dig into the nuances of how distributed energy generation can best be deployed here in Kansas. Making pragmatic decisions that benefit all stakeholders, businesses, utility companies, consumers, and the overall stability of our shared energy grid.

My goal in presenting to you today is to explain the three main items that are addressed in HB 2228 in regards to Renewable Energy, particularly Solar Panels:

1. Stable and equitable design criteria
2. Stable and equitable compensation for energy
3. Equal access for all Kansans

In 1982 the Tincino Solare PV system was connected to the utility grid at the University of Applied Sciences and Arts of Southern Switzerland and today, a mere 41 years later, is currently the oldest operating grid-tied solar array in the world. To install that 10kW system in 1982 cost around \$300,000 USD. Today, only 40 years later, the cost to install a grid-tied solar array has been reduced by more than 90% and a system of that size could save a homeowner an average of \$170 every month, however, not all Kansas residents have equal access to solar energy.

As it stands today, if you are a customer of an Investor Owned Utility (IOU) such as Evergy you have relatively good access to the monthly savings available through rooftop solar. However, if you happen to be in an area served by a Municipal Utility or Electric Cooperative your access to rooftop solar is confusing, unknown and possibility non-existent. Passing HB 2228 would put all Kansans on a level playing field in their ability to reduce their monthly expenses by installing Solar Panels on their home or business.

An example of this is the Jensen Family that lives in rural McPherson County. They contracted with our company in the fall of 2022 to purchase a solar energy system that should save their family \$130 every month. Their driving factor was to levelize their monthly expenses going into their retirement years. The system was designed and ready to install but their Cooperative Utility denied their interconnection application.

The reason given was a vague description stating that "... the substation cannot handle additional solar load during certain times of the year." Most Cooperative and Municipal utility companies do not generate their own electricity, but instead are under contract with a Generation & Transmission provider that historically has strictly prohibited the backflow of electricity through a substation. Instead of working out the details of bi-directional flow of energy with their G&T they use these one-way contracts as a means of denying Kansans such as the Jensen family from lowering their bills by installing rooftop solar. To quote Mr. Jensen, "I don't understand why they champion renewable energy and then in practice come up with all these roadblocks that make it unfeasible for us to install."



Passing HB 2228 will standardize how a grid interactive system is sized to appropriately offset the consumer's expected electrical load. The sizing metrics are based on either the square footage (in the case of a new building) or the historic electrical usage of an existing building. This method of system sizing relates to how the system interacts with the utility grid. It allows Kansans to produce any amount of electricity on their property but does put defined limits on how a system can interact with the grid.

In simple terms you take the energy use from the previous year, divide by the number of hours in a year, then divide that by the percentage of time that a solar array is expected to be producing at its export capacity. This gives a simple, conservative, & well-defined method of system sizing.

If you are wondering where the sizing metrics outlined in HB 2228 came from, they are what Evergy uses to appropriately size renewable generation resources. We agree with Evergy's metrics and would like to see them codified and available to all Kansans. Passing HB 2228 would do just that.

In addition to defining how a system is sized, HB 2228 also creates stable and equitable compensation metrics for energy provided to the utility. We acknowledge that not all kilowatt hours (kWh) are of equal value. Energy generated in peak months is worth more than in shoulder months. Therefore HB 2228 gives kWh generated within a billing cycle full value, but when carrying kWh forward from month-to-month reduces the value by 25% due to the disparity in seasonal energy value.

Additionally, the provisions of HB 2228 allow for grid management and power quality charges to continue to be levied to consumers by the utility companies. It's no secret that it costs money to install miles and miles of wires, hundreds of transformers, and then to maintain that equipment; trim trees, read meters, and administrate the complex systems required for a reliable utility grid. This is why non-volumetric charges such as customer charges, demand charges, and power factor charges were intentionally left out of the compensation formula. This ensures that the utility companies still have the ability to recover the costs required to adequately manage & administer the grid that we all rely upon for our daily lives.

Finally, the original net-metering legislation was adopted in the 2009 when the solar industry was in its infancy. Back then there were lots of unknowns such as:

- Is the available equipment safe and reliable?
- Will adding distributed solar compromise grid stability?
- Can utility companies continue to provide reliable service while allowing bi-directional flow of electricity?

Back in 2009 these were real concerns that needed time to be proven. For this reason, the legislation includes a 1% cap on net-metered systems. This provision means that utility companies are only required to allow Kansans to generate their own electricity until a time when the power is 99% utility owned and 1% customer owned.

HB 2228 would level that ratio to a more equitable 90% utility owned and 10% customer owned bi-directional generation. The technology is here. It's been proven safe and reliable. It's time for our state's utility policy to mature to accommodate proven and equitable electrical generation.

**If you have questions or need clarification please don't hesitate to contact me.**



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