

**August 29, 2013**  
**Proposed Ordinance #2013-XXX**

**Ordinance of the Borough of Pemberton  
Modifying CODE Chapter 90 Section 11  
paragraph B to specify a utility meter  
configuration consistent with reading excess  
Solar Energy production from a PURPA  
qualifying facility and restitution to existing  
resident customers for the various financial loss  
they have experienced.**

**Whereas:** Code 90 -11 states that "Any delivery to the Pemberton Borough electrical distribution system shall be through a separate billing meter."

**Whereas:** Code 90-11 states that "Reversing meters are not permitted"

**Whereas:** Code 90-12 "Purchase of excess generation" states that "Pemberton Borough and Resident-customer shall enter into an agreement addressing purchase and payment obligations"

**Whereas:** Metering in accordance with Pemberton Borough regulation results in all Solar Energy from the PURPA qualifying facility being sent directly to the grid such that the Pemberton Borough electrical department purchases all solar power generated, not "Excess" power.

**Whereas:** Metering in accordance with the Pemberton Borough regulation results in additional power being used from the borough to operate the Solar Power Converters.

**Whereas:** A "NET" meter which is used in 99.9% of all solar installations provides an accurate reading of the industry standard "EXCESS" solar energy and is a reliable Utility Billing Meter.

**Whereas:** With the required Pemberton Borough meter configuration, the "EXCESS" energy can only be determined by periodically reading both meters and calculating the difference between the energy in and the energy out to determine if there is "EXCESS" energy for Pemberton Borough to purchase. This is the same function provided by a single "NET" meter.

**Whereas:** A "NET" meter does not run backward but rather measures the power flowing in both directions and reports the mathematical difference over time.

**Now, therefore, be it Ordained by the Borough Council as follows:**

**First:** Paragraph 90-11 B is to be changed to read "An interconnection to a Solar Energy or other PURPA qualified facility shall be connected to the Electrical Grid using a single Utility grade NET meter.

**Second:** The Borough shall make restitution to the community residents who were penalized by the imposition of a regulation that was ill conceived.

**Third:** The Borough shall make restitution to community residents who lost usable production due to delays in final approval from the time of installation to commissioning of the system.

**Fourth:** The Borough shall correct the existing installations with appropriate metrics without prejudice.

**Fifth:** The Borough shall provide restitution to the Borough residents who found it necessary to engage legal council in an attempt to protect themselves from the ill conceived regulation and contracts.

**Discussion:**

There are currently two Solar Energy PURPA facilities installed in the Borough. The most recent installation has sufficient instrumentation that the full operation of the system can readily be measured. The Borough meters provide the power in and the power out read on two separate unidirectional utility grade meters. The system has a separate utility meter that records the amount of solar energy produced. In addition, a separate sensor monitors the amount of energy consumed by the resident (but not by the Power Converters). The Converter Hardware records the Energy Consumed and the Energy Produced each minute day and night.

Analysis of the data collected from the above sensors demonstrate that the energy generated by the system is the same within experimental error, as the energy out to the grid and the energy consumed is the same as the energy delivered from the grid. Different meter configurations have been tested but there is no configuration that causes the solar energy generated to be used before it goes to the grid.

All major utilities use NET meters because that is the only way to establish the EXCESS energy, if any, from a Solar Energy PURPA facility. The object of the Pemberton Borough regulation was to define EXCESS energy as that which is not immediately used by the facility and instead goes to the grid. Such a meter would have to inhibit energy being delivered to the grid as long as there was demand and to perform an integration over short increments of time to determine the difference between the energy in and the energy out and store the result in two different registers. There are no utility grade meter that will perform this operation.

The Borough inappropriately handled the application and commissioning of the existing systems by not providing the necessary information to the residents at the time they applied for the license for installation. The contract was not made available until after the installation and approval of the systems by the town engineers. Further, it took multiple monthly meetings to have appropriate changes to the contract executed. When approved by the Borough Council, a copy was not provided to the Resident by the Borough and was obtained as a result of the residents direct communication with the Borough solicitor prior to it's approval. Once the contract was signed it took an additional 57 days before the Borough installed the required meters.

Because of the delay caused by the Borough from installation to commissioning, the Borough shall provide restitution for the energy lost to the resident during that period.

The Borough caused both residents to engage legal council in an unsuccessful attempt to resolve the issue at the time of installation. Therefore the Borough residents and owners of the Solar Energy PURPA approved systems shall be compensated for their legal expense in this matter.

Respectfully Submitted,

A handwritten signature in blue ink that reads "Bruce J. Bugalski". The signature is written in a cursive style with a large initial 'B'.

Bruce T. Buzalski