

Ladies and Gentlemen of the Pemberton Borough, NJ Administrative Council

The **Ordinance 2013-1 amending Code 90 Section 3 "Electric Rates"** which is before you is unfair to all **Residential Solar Installations (RSI)**. The ordinance proposes a gradual reduction in the price paid by the **Pemberton Borough Electric Department(PBED)** for all Solar Energy entering the grid. The Ordinance views all energy entering the grid as "excess" solar energy.

An **RSI** is designed to produce 70% of the total energy consumed by a residence and never more than 100%. An **RSI** is designed to use the grid as a reservoir. To view all energy going into the grid as **Excess Energy** is patently incorrect.

At any one point in time, the **RSI** may consume less than 20% of the power generated. On the brightest, hottest day of Summer when an Air Conditioner is cycling on and off, there are periods during a slice of time where less than 20% of the generated power can be consumed. There will be other periods when more than 100% of the energy generated is consumed. The unused energy goes into the grid (reservoir). It is returned when consumption exceeds supply

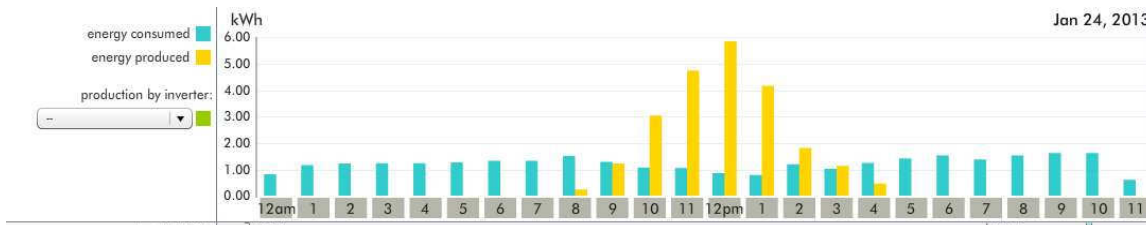


Figure 1 January 24, 2013

Figure 1 shows an **RSI's** Energy output(yellow) and usage(aqua) on a typical day in January. Each bar represents the integrated energy generated or consumed during a 1 hour interval. Most of the energy being generated during the day is being sent into the grid. It is being delivered to neighbors and other consumers. It reduces the need for **PBED** to draw power from their supplier and allows them to sell the **RSI's** energy to their consumers.

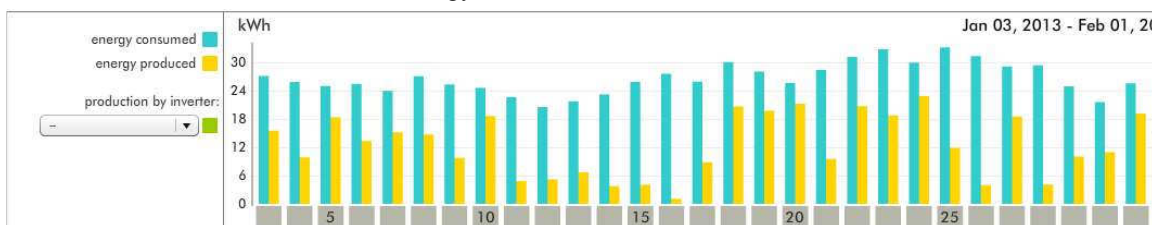


Figure 2 January 2013

Figure 2 shows production and usage for each day in the month of January. There is no "Excess Energy" produced. **RSI's** are designed to use the grid as if it were a battery, being charged during the day and discharged during the night. The **PBED** gets the free use of the generated energy during the day and is expected to return it at night without prejudice.

RSI's do not produce free energy. The systems are purchased or leased. The associated costs determine the price of the energy produced. In this discussion, an actual price of \$0.18 per kWh is used. Every kWh whether it is used or sent to the grid costs the **RSI** \$0.18.

The existing and proposed Borough models penalize the **RSI**. Purchasing all energy going into the grid at 22% of cost (\$0.04 paid for every \$0.18) and forcing the **RSI** to purchase that energy back at normal **PBED** rates doubles the **RSI's** cost to \$0.36 per kWh. The **PBED** profits 450% (\$0.22 returned for every \$0.04 spent) when it sells the **RSI's** energy to another consumer. The **PBED** profits again by 57.14% (\$0.22 returned for every \$0.14 spent) when the **RSI** reclaims the energy. Over the 20 year life of the system, this model reflects a loss to the **RSI** of **\$39,919** but a profit of **\$28,772** to the **PBED**.

I therefore propose that Pemberton Borough reject this ordinance and simplify its Code. I propose that the Borough adopt the uniform model used by all Public Utilities where in the net monthly usage of energy is billed (energy consumed minus energy supplied). This simplified model is fair to both the **PBED** and the **RSI**. Use of a single bidirectional meter would impose no additional administrative costs.

Respectfully Submitted

Bruce T Buzalski
39 Simpkins Lane
Pemberton, NJ
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