

## ARGUMENTS SUPPORTING THE BUZALSKI SOLAR GENERATOR

- The Municipal Electric Department of Pemberton is not operating a utility grid like PJM or selling power in to the wholesale market like AC Electric. Therefore, the argument (that Pemberton might have “difficulty balancing its grid”, to paraphrase) of James Jablonksi of the Public Power Association cannot be used by the Electric Department of Pemberton Borough.
- Mr. Buzalski has the right, under the Open Public records Act, to seek the Electric Department’s records and contracts for power purchases, distribution costs, and operating budget. If he did so, he would likely discover that a borough of just 1,400 citizens and 0.6 square miles has
  1. very little purchasing power in the wholesale market due to its tiny size, even if it participates in a power-purchasing consortium with several other small municipalities to buy from Constellation or similar power wholesaler
  2. its per-unit operational costs are quite high, imposing high costs on its customer-citizens
  3. little to no capital investment resources for upgrades and modernization, unless it is pushing those costs on to potential investors that would have the effect of discouraging economic development in the Borough
  4. a poor level of transparency and disclosure, unlike the investor-owned utilities who must report almost everything to the NJ BPU – the fact that there is a Municipal Electric Utility is not even mentioned on the Borough’s website
- While wind power, as a highly intermittent resource, is difficult to rely on for a utility’s base demand, long-term climatic data on sunshine shows that solar resources are highly stable and quantifiable. Average monthly sunshine, on a month-by-month basis, is highly reliable in quantity, and predictable as to what time of day it is most abundant.
- Solar electric generation in Pemberton provides the citizens of Pemberton with cleaner air. Conversely, if Pemberton Borough’s Municipal Electric Department is purchasing its power from the wholesale market, some of it is likely sourced from coal (roughly 10%), and a substantial amount from another fossil fuel, natural gas (roughly 35%). Therefore, the Borough’s power purchases are contributing to respiratory health problems, especially for asthmatic children and elderly residents with COPD.
- A majority of a utility’s costs typically result from spot market purchases made to cover temporary shortfalls in base-demand power supply. Base-load demand is met by long-term, low-cost contracts, while spot market purchases are made at times of very high peak demand. Those peak demand times are generally 3 pm to 7 pm in June through September for air conditioning and industrial cooling purposes. Mr. Buzalski’s solar generator will be operating at peak performance during summer afternoons, precisely when the Pemberton Electric Department will need to buy premium-priced power on the spot market to meet its spike in demand. The Buzalski solar generator, consequently, provides the Borough with a valuable service by helping the Electric Department with avoided costs.
- At 9.8 kW<sub>DC</sub>, Mr. Buzalski’s solar system is slightly above the NJ average in capacity, but it was designed to meet the residence’s annual energy demand. Wikipedia indicates that the Borough has 470 households, and if each uses roughly the same amount of electricity as the Buzalski

residence each year, then the Buzalski residence is responsible for far less than 1% of total household power demand in the Borough of Pemberton each year. Even if 20 households suddenly installed similar solar energy systems, it would still represent, collectively, less than 5% of total annual household demand in the Borough. Considering that these figures ignore all commercial and government power demands in the Borough, the impact on the Electric Department's ability to "balance its grid" is negligible, and impacts to the Borough's budget planning and cost structure are similarly nominal. Furthermore, the solar output of residential solar generators in the Borough, if sized to appropriate demand needs of each household, are highly predictable and easily monitored over the next 20 years.

## **CONCLUSION**

Mr. Buzalski's distributed solar generation system is providing clean air to the community with reliable timing and output of generation. He invested in capital assets at his expense, which helps the Borough avoid its own capital costs for new or replacement infrastructure, and Mr. Buzalski assumes all risk and liabilities.

There will be times of the year when the Borough benefits directly from the power it borrows from Mr. Buzalski, and times when he benefits from storing his surplus power on the Electric Department's infrastructure – it is a mutually beneficial relationship in this regard. The Electric Department receives many intangible benefits in avoided costs of spot market purchases, avoided capital construction costs, etc. Given how small the demand for power is at the Buzalski residence (or any other home in town), the Borough cannot honestly claim it will suffer material losses from these small distributed generators.

The Buzalski residence's cost of generation is competitive, if not better than, the Borough's, because the Borough has an inherently high cost structure due to its very small size. The Borough does not own substantial generation assets itself, nor does it operate a utility-scale "grid", so it can't argue that Mr. Buzalski's residential-scale solar generator poses load balancing challenges to the Borough's local distribution network, as small as it is. Finally, a substantial amount of the difficulty and cost for Mr. Buzalski to invest in his generation asset is directly related to the obstructionist policies and arbitrary decisions of the Borough's Electric Department, which has failed to capture the benefits of distributed solar generation in the manner achieved by dozens of other NJ municipalities.

Regarding the 25,000 solar panels installed by Middlesex County at its North Brunswick facility recently, the 27 Jan 2013 Star-Ledger reported that the panels "will save the county \$1 million a year in energy costs for the 15 years of the contract" according to the Freeholder's Director Mr. Christopher Rafano. [http://www.nj.com/middlesex/index.ssf/2013/01/middlesex\\_county\\_to\\_save\\_milli.html](http://www.nj.com/middlesex/index.ssf/2013/01/middlesex_county_to_save_milli.html)

So one must wonder why the Borough of Pemberton, which so many "no-money down" financing options available (leases and Power Purchase Agreements), would not consider a solar energy system itself? This is especially true if the Borough itself is the biggest consumer of power via its Water Department's water pumping and treatment services.