Berkshire Photovoltaic Services

EMF and Solar 2023

Electromagnetic Fields (EMF) are a concern to BPVS and may be to you. We use specific meters to measure the equipment we supply and when a customer asks, we can survey the EMF of other on-site devices and their electricity circuits. It is not our intent to promote un-scientific theories and assertions about EMF, Radio Frequency (RF), or microwave sectors of the spectrum such as 5G. Our meters measure AC frequencies from 20-2000 Hertz (HZ), in milligauss (mG) or Gauss units, and in microtesla (uT) (One uT =10 mG). RF frequencies from 200 MHz (megahertz) to 8 GHz (gigahertz) in volts per meter and in microwatts per square meter. 5G in the parlance of cellphones means 5GHz.

Enough to note, there are many responsible medical researchers, physicists and biologists concerned with the health and resource issues of EMF and RF. There is a growing body of peer reviewed literature which taken in summation counsels prudence on exposures. An excellent internet portal for information is at https://mdsafetech.org/. The newest reports and studies uploaded in 2022 and early 2023 are sobering.

Our designs of solar circuits and choice of equipment as well as where we place equipment and how our electrician subs install and connect wires and wifi devices is based on precise measurement of EMF and RF and we look to limit occupant exposure to below European standards which are much stricter than those in the US.

We're also careful to prevent the energy in-efficiency effects of common wiring short cuts and design practices for PV systems, which also widen EMF exposure.

Most solar customers do not have the expertise to ask the right questions of their installation contractor. Some solar designs and firms choose the cheapest methods and materials to just meet code requirements. We specify wiring methods that cancel out EMF in local transmission. From the start and over their lifetime, BPVS PV systems produce more electricity because of our care in design specifications and the installation techniques. Reducing or eliminating electromagnetic field losses thus has a two-fold purpose: optimal system energy output and reduced exposure to potentially harmful emissions.

Checking Solar DC Circuit values in the multi string PV inverter for a field of arrays.