

# Photovoltaic Electrical Systems

Fact Sheet



*In a time of drastic change it is the learners who inherit the future. The learned usually find themselves equipped to live in a world that no longer exists. – Eric Hoffer*



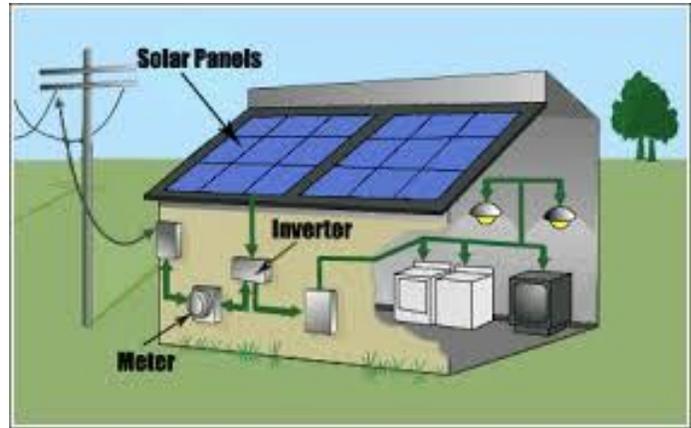
**Building Biology Institute**  
The science of healthy buildings



## Residential Solar Electricity Generation Systems Fact Sheet

### Electromagnetic Radiation Exposure

*Solar or Photovoltaic (PV) power generation systems as well as other alternative energy producing systems (e.g. wind generators and gas power, on-site generators) are not recommended for people who are experiencing electromagnetic sensitivity and especially for people displaying the symptoms of Electromagnetic Hyper-Sensitivity (EHS). People without symptoms are cautioned to evaluate all the pros and cons before moving ahead, especially as pertains to the generation of unwanted EMF radiations and effectiveness of filtration included by various inverter manufactures for reducing with these unwanted radiations.*



Can photovoltaic installations have negative health impacts? This question is often asked by people who want to practice sound ecological citizenry and who also care about the health of their family. While the negative impact of some common chemicals is at last widely recognized and popular green certifications now reward or demand reduction of damaging chemicals, there is very little discussion about the harmful effects of man-made electrical radiation or measures that can be taken to reduce exposure.

There is a fast-growing segment of the population who feels ill from our ever-increasing use of electricity and wireless devices. *The number of people with EHS has been estimated to have increased ten-fold in the last ten years to 35% of the population.*

While government agencies, some medical associations, and power companies deny the existence of any health threat, the people who are suffering seek safety and relief. Others who are not affected may be wise to employ a precautionary stance, knowing that what overtly harms some may also have negative impacts for all in the long run. And, indeed, science now has shown a cell level effect from man-made EMR that seems to affect all biological beings whether symptomatic or not.

The Building Biology Institute (IBE) has long specialized in measurement and remediation of electromagnetic radiation (EMR). It offers comprehensive [beginning](#) and [advanced](#) training on EMR.

Below is a summary of a [more extensive six-page paper](#) on the electromagnetic radiation issues associated with residential solar electricity systems.

Photovoltaic systems can have detrimental health effects due to the following issues:

1. **Electrical Noise:** The Inverter injects electrical “noise” called Dirty Electricity into house electrical circuits and devices that can be irritating to sensitive people; even people who have not been conscious of sensitivity in the past could experience discomfort. People have reported symptoms of nausea, headaches, and fatigue.
2. **High Magnetic Fields:** PV systems as well as other alternative systems can be cause unwanted, current flow on your house grounding system as well as neighboring houses. This can cause high magnetic fields in the living space depending on electrical system specifics. This current flow carries pulses made by the inverter that produce symptoms in some people.
3. **Radio Frequency Radiation:** Wireless (through the air) communication is frequently part of an additional system for billing and equipment monitoring. This is EMR in the microwave or radio frequency range of the electromagnetic spectrum. It’s termed Radio Frequency (RF) radiation. The American Academy of Environmental Medicine, released a letter in January 2012 to the Public Utilities Commission of California speaking to this radiation. The most important



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passage is: “Chronic exposure to **wireless radio frequency radiation** is a preventable environmental hazard that is sufficiently well documented to warrant immediate preventative public health action.”

Symptoms from EMR exposure can include but aren't limited to nausea, headaches, fatigue and sleep disturbance, irritability, skin problems, dizziness, visual, mental confusion and hearing disruptions like tinnitus.

These issues of microwave radiation, dirty electricity and grounding system currents are complex and are difficult to mitigate. More details available at this link: [Photovoltaic Electrical Systems](#).