

April 11, 2011

Electronic House Meets Low-EMF Design

This article addresses environmental design for low-EMF environments. Wireless technologies, compact fluorescent bulbs, and dimmer switches all come at a big price – the comfortable and healthful environment you want to create in a living space.

Which one does not fit in this ‘green home’ list?

Organic yard, compact fluorescent light bulbs, non-toxic house cleaning chemicals, organic cotton clothes, love for the outdoors, environmental organizational involvement.

Compact fluorescent bulbs do not fit in green and healthy homes.

They produce “dirty power” or radiofrequency radiation in the low kilohertz range on your electrical wiring system. RF energy does not belong on the electrical wiring of any building, and it is annoying and unhealthful for many people. The exposure is bioactive at exquisitely low levels. It is the information content of the signal, not the absolute power – which has led to enormous controversy about the inadequacy of the existing public safety standards that merely protect against tissue burns and heating damage when it comes to RF/MW energy. These exposures, if chronic, can interfere with sleep (as most wireless does), can aggravate asthma and poor blood sugar balance, and affect cortisol and other stress hormones. The body “sees” EMF as light, so it interferes with sleep and with production of melatonin, our best free-radical scavenger and cancer-surveillance protection.

If you install CFBs, you will have to add RF filters anyway to remove the low kilohertz range frequencies that CFBs create. To get rid of these bursts of RF energy, RF filters then have to be retrofitted into the system. But, RF filters take energy too and basically cancel out any energy savings from the installation of the CFBs in the first place. LED lights do not (in general) produce “dirty power” like CFBs do. They have excellent energy conservation properties. Use LEDs or stick with incandescent bulbs and save energy elsewhere.

“Green WI-FI” is misnomer, if you consider the wellness quotient for occupants of the buildings you are designing. Headache, fatigue, sleep disorders, problems with attention and concentration, memory problems, tinnitus (ringing in the ears), skin rashes, inflammatory and allergic reactions and other symptoms are now commonly identified in environments with chronic WI-FI exposure. Remember, its not the amount of power that counts, it is the information within that signal that stresses the mind and body.

Avoid wireless thermostats and other wireless gismos where you can use wired solutions. Avoid dimmer switches altogether. They produce more ‘dirty power’. Some people can even hear them hum at exquisitely low levels. It is not just annoying but can and does affect the central nervous system – leading to physical discomfort and symptoms of ill-

health that are entirely avoidable with wired solutions. You can enhance your living experience with mood lighting where you absolutely cannot find another way (think dining area, perhaps living room). But, limit those areas with dimmers, don't use them for everyday lighting, and don't leave them on while the kids are asleep.

Avoid wireless internet. Choose cable instead. Go for hardwired solutions. If you must have wireless internet, make sure your clients know to turn it off at night and when not in use. Less chronic exposure is important, especially for children. Why throw kids into a wireless environment and expect them to learn equally well? A lifetime of unnecessary RF stress may be harmful to health, behavior, memory, concentration, attention and learning.

Designers of environmentally friendly homes must quickly come to terms with energy efficiency techniques that do not harm health or create stressful conditions themselves.

Savvy consultants and builders are going to get ahead of this curve, choose wired options and create comfortable, healthy homes that save energy. Those who jump on the "wireless" bandwagon may find themselves having to swap-out costly energy-saving systems because clients find they are unpleasant to live with. We don't have to sacrifice energy conservation and green design, but we do have to find alternatives that don't bathe us in electronic smog.

So, here is our low-EMF list of [Easy Ways to Be Green\(er\)](#)

Avoid wireless smart meters: They can emit excessively high RF/MW that make people feel sick, and they interfere with sleep. They cause tinnitus (ringing in the ears), heart arrhythmias, allergic-like symptoms, provoke inflammatory symptoms and can interfere with fertility in both men and women. The EMF from the switching power supply in smart meters creates yet another type of 'electrosmog pollution'. Keep your old analog electric meter.

Install solar: Wireless smart meters are incompatible (do not run backward). Surest way to avoid the dreaded smart meter is to install solar. Just remote the inverter (EMF levels are similar to your main electric panel, so locate away from living spaces).

Avoid CFL bulbs: Use LED lights (good energy savings) but healthier than CFLs. Or stick with incandescent bulbs. You'll end up with NO energy savings with CFLs once you install RF filters (capacitors) to deal with the dirty power they create, and that will undo the energy savings you meant to achieve.

No Dimmers: Forget dimmer switches. Or use them sparingly. Maximize natural light.

- Stay Wired: Choose hardwired options for internet access.
Avoid wireless speakers
Avoid wireless everywhere you have this choice.
- LCD over Plasma: We agree – but not for the reason you think. Plasma TVs make electrosensitive people sicker; LCDs evidently do not cause the same allergic reactions and discomfort.
- Ditch the DECT: Cordless phones known as DECT (in Europe) and IDEN in the US use a technology where the base is always radiating (talking to the airspace around it). Choose instead corded phones or, if you must, cordless phones without this feature.
Use headsets or speaker phone for cordless phones and discourage cordless phone use by children.
- Kitchen Magnetic induction stove tops produce excessively high 60-Hz magnetic fields. Avoid at all cost. Several hundred milligauss is common at your torso when standing by the stove.

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(see www.bioinitiative.org if you want more information on health effects of electromagnetic fields including power frequency fields and radiofrequency/microwave radiation).