

Top 10: What should I do in my home or office building?

Prepared by Scott Sklar (2012)

- 1. Prepare** (know your bill): Rates change seasonally and in some areas by time of day. Demand charges and peak power rates for businesses are common, and ratchet rates will begin to appear. Forget the 'combined rate' for natural gas, fuel oil, propane, and electricity – breakdown your rates, compare your bills by month, seasonably, and by year.
- 2. Lighting:** Wherever possible use compact fluorescents or the new bundles LEDs – outdoor and stairwell lights, in closets, bathrooms and in lamps. Skylights and daylighting, and windows, glass brick also disperse light. Use lighting timers where possible.
- 3. Appliances:** Shop for highest rated appliances particularly refrigerators, window air-conditioners, and washer/dryer sets. Minimum SEER 10 for air-conditioners. Check out: ENERGY STAR, a government-created program helping businesses and individuals protect the environment through superior energy efficiency. www.energystar.gov
- 4. Power Strips:** Buy surge protector power strips with "on/off" switches and use them for televisions, stereos, all transformer-based chargers for toys, cells phones, iPods, cameras, and other electronic devices – parasitic electric loses are now over 10 percent of residential energy bills. New construction, add on/off switches to certain room electrical outlets.
- 5. Fans** (ceilings, attics): Ceiling fans are worth every penny (particularly in winter), and attic vent fans save money (primarily in summer). Watch out for closet, bathroom and stove vent fans without timer switches – they cost you money.
- 6. Insulation and Thermal Barrier Paint:** Keep heat in during winter and cooled air in during summer. Reduce attic heat in summer and increase heat in winter. Fastest payback after lighting investments. Don't forget double pane and triple pane gas-filled windows when renovating.
- 7. Water** (spouts, shower heads, low flow toilets, downspout collection): Heating wasted water costs money as does wasted water – flow restrictors for sinks and showers have fast payback. Bend down the toilet float and buy low-flow toilets when renovating. Note – energy efficient washers use 40% of the water a regular washer uses at its lowest water setting! Buy rain-collector barrels for your gutter downspouts – stops water runoff and lowers your water bill all at the same time.
- 8. Solar Water Heating:** Heating for swimming pools, water in buildings, and even radiators or radiant space heat are all possible and cost effective – paybacks under 5 years – when incorporated in mortgage, immediate positive cash flow. Need UNOBSTRUCTED southern exposure. Flat mount on roof. Only buy SRCC certified solar systems (www.srcc.org).. Only use an experienced solar installer – see pictures and call references. MD, DC, VA – MDV-SEIA, E-mail: director@mdv-seia.org Website: www.mdv-seia.org.

9. Solar Electric Options (consumer): Many great consumer products for home, business and garden, which include solar powered: pathway and security lights, porch and driveway lights, attic vent fans, cell phone and iPod chargers, backpacks, mole and vole evictors, pond and bird bath pumps and sprays, electric fences for gardens, window ornaments and plant pot turners, trickle chargers for electric lawnmowers, cars, and tools, and the list goes on and on.

10: Solar Electric (photovoltaics), **Small Wind**, and other options: What do you want to do? Make a statement? Protect expensive electronic equipment from surges, swells and transients? Provide back-up power for refrigerator, home office, frail/handicapped person, or for communications? Reduce higher costs electric or natural gas rates or heavily-used appliance? Zero out electric bill? Become an energy net producer? Be a high profile technology or environmental consumer?

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Systems without batteries allow you to:

- Make a statement
- Reduce your electricity bill
- Become a net energy producer
- Turn your meter backwards to sell energy back to the grid
- Heighten your profile as a consumer who keeps up-to-date on technological and environmental developments

Systems with batteries allow you to do the above, plus:

- Protect expensive electronic equipment from surges, swells, and transients.
- Provide electrical redundancy during outages for your
 - office
 - the frail or handicapped
 - communications
 - necessary infrastructure
 - lighting, heating, and cooling

In either case, you need an UNOBSTRUCTED southern exposure. Flat mount on roof or ground mount. Only buy UL certified solar system components. Only use an experienced solar installer – see pictures and call references. MD, DC, VA – MDV-SEIA, E-mail: director@mdv-seia.org
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