

Green Strategies for Existing Buildings

Major Energy Issues

- 1st step: **Moisture** Eliminate all moisture leaks at the roof and in basements and crawlspaces.
- 2nd step: **Duct sealing** If there are air ducts, they probably need to be sealed.
- 3rd step: **Air sealing** Whole-building air sealing is almost always one of the most cost-effective energy improvements.
- Insulation: Upgrade to current recommendations, where practical. Can require special equipment and techniques, but is well worth it, esp. for attics & basements.
- Fireplaces: Install tight-sealing dampers, close off completely, or convert to a closed combustion unit like a pellet or corn stove. Inspect chimneys, if using.
- Window & door performance: Install tight-sealing weather-stripping. First try servicing and repair, along with installing double-glazing/storms on all windows, *before* considering replacement. Select Energy Star units, if replacing.
- Solar protection: Install solar film, awnings, and cool-roofs. Plant trees.
- Proper ventilation: Install exhaust and air make-up systems if needed. Check that furnace dampers work.
- Increase day-lighting: Install skylights, clerestories, light shelves and light tubes.
- Alternatives to air conditioning: Use whole-house fans, ceiling fans, operable skylights, cross-ventilation windows and transoms.
- Upgrade to Energy Star: Replace all HVAC and appliances *when needed*. Retire any refrigerator older than 13 years and replace with an Energy Star model.
- Service HVAC equipment: Perform a combustion efficiency analysis on HVAC systems. Repair as necessary, and then upgrade when service life is reached.
- Install high efficiency equipment: Closed combustion condensing furnaces or boilers, heat pumps & ACs with SEER 15 or more, Energy Star water heaters.
- Switch to renewable energy sources: Solar hot water, photovoltaic and geothermal.

Always

- Try to preserve important architectural details
- Install and use a programmable thermostat
- Switch to compact fluorescent bulbs or LED bulbs
- Buy Energy Star or better
- Vent exhaust fans to the exterior from bathrooms, kitchens and laundry rooms
- Size HVAC systems properly. Most are oversized = less efficient & effective

Never

- Start a renovation project without considering energy efficient/green aspects
- Install fiberglass insulation in moist areas – crawlspaces, basements
- Install insulation over active knob & tube wiring
- Use duct tape on ducts

Greening Your Office and Home - The 4 R's of Green

Reduce

- Lighting: Turn them off; use day lighting as much as possible; switch to CFLs. Long life LEDs make sense for exits and hard to change lamps.
- Paper: Don't print. If you do print, use both sides. Buy duplex printers & copiers.
- Transportation: Teleconference & telecommute; carpool; plan trips to reduce miles; keep tires inflated; slow down and coast; choose vehicles with higher MPG rates. Install a bike rack near the front door; use public transportation.
- Purchases: Switch to real rags, mops & brooms, and real plates, napkins & flatware. Avoid all disposables. Always buy Energy Star products.
- Heating & Cooling: Set thermostats higher in summer & lower in winter; program to set back when unoccupied. Use fans & natural ventilation instead of AC.
- Water: Reduce your use; fix any leaks quickly; install low-flow and low-flush products.

Reuse

- Paper: Reuse file folders and manila envelopes. Reuse paper that has been printed on only one side for half-sheet note pads.
- Purchases: Buy recycled everything -- paper, folders, storage bins, furniture, toilet paper & towels and more. Be creative.

Recycle

- Paper and bottles: Do it at home & set up a program at work
- Computers, electronics & toner cartridges: What else?? Again, be creative.
- Buy services not products: The services of a copier, computer, or carpets.
- Examine your own production: What do you produce at work or at home that can be recycled or reused, instead of going to the dump?

Redesign

- This is really #1, but it's the hardest. Design new processes that cost-effectively eliminate all negative environmental impacts from our work, our homes, our lives.
- Involve the whole family or office in the redesign process. Encourage new ideas. Measure your current energy performance and track improvements regularly. Share the results.

Triple Bottom Line - People, Planet and Profits

- Buy local: Reduce transportation and support local businesses Choose biodegradable and organic products whenever possible
- Support staff with good wages, health care and a positive working environment
- Give back to your community

Learn More

- Visit www.TerraLogosEG.com for more information on energy efficiency and green resources.
- BGE's Smart Energy Savers at www.bgesmartenergy.com, Pepco's programs for business at www.pepco.com/business/services/programs, and other local programs, like [Associated Builders & Contractors green contractor](#) certification, [MD Green Registry](#), [Baltimore City's Office of Sustainability](#) & and the [Baltimore County Building Green Program](#).
- Visit Energy Star for Small Business www.energystar.gov/index.cfm?c=small_business.sb_index and benchmark/track the energy efficiency of your buildings with [Portfolio Manager](#).