



Remodeling Energy Efficiently

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Being immediately after the gift giving holidays and the bills are beginning to pile up and now you are seeing and feeling the effects of the winter temperatures in your utility bills, you can use some very valuable information provided by the National Association of Homebuilders Partnership for Advancing Housing Technology (PATH), as it recently released its annual recommendations on the top remodeling technologies to make existing homes more durable, stronger and more resource efficient.

Each of the PATH Remodeling Top 10 technologies chosen is rated on affordability, energy efficiency, ease of installation, quality and durability, environmental performance and safety.

The top 10 technologies include:

1. **Air Sealing** - Four alternatives to conventional fiberglass insulation - non-fiberglass batts, sprayed foam insulation, sprayed fiber insulation and blown or foamed through a membrane - are recommended because they improve the thermal resistance of exterior walls.
2. **“Smart” Ventilation Control System** - This new mechanical ventilator provides an excellent compromise for deciding whether or not crawlspace should be ventilated. The system measures the moisture content of outdoor and crawlspace air and only provides ventilation when the outdoor air is drier than crawlspace air.
3. **Right-Sized Heating and Cooling** - The Air Conditioning Contractors of America (ACCA) guidelines for sizing equipment, enables contractors to estimate heating and air conditioning loads more accurately so they can install properly-sized systems that ensure energy efficiency and optimum performance.
4. **High Efficiency Toilets** - A high efficiency unit toilet can save up to 8,760 gallons of water each year for a family of four with 24 average daily flushes. Types of high-efficiency toilets include gravity-fed, single-flush; dual-flush; pressure-assist; and power-assist toilets.
5. **Compact Fluorescent Lighting** - Compact fluorescent lamps (CFL), simply miniature versions of full-size fluorescent lights, are up to four times more efficient (using 50% to 80% less energy) and last up to 10 times longer than incandescent bulbs. In addition, the warm tones of newer compact fluorescent lighting make it almost indistinguishable from incandescent lighting.
6. **High Performance Windows/Storm Windows** - Window technology has evolved over the years to the point where windows can be selected not only for their aesthetic qualities, but also for their performance abilities. Windows have special coatings that control the amount of heat gain and loss, or can prevent water spots and dirt accumulation.

7. **Wireless Lighting, Thermostats and Other Controls** – Derived from commercial construction but now available in homes, these controls can be set on timers or using a variety of sensors – temperature, occupancy, light detection and more. With wireless systems to increase home efficiency without sacrificing homeowner comfort.

8. **Solar Hot Water** – Solar water heaters come in a variety of configurations to meet domestic hot water needs. Each differs in design, cost, performance and level of complexity. Most systems have back-up water heating such as electricity or gas. Solar water heaters can help save on water heating costs by reducing the amount of gas and electricity needed to heat water..

9. **Recycled/Renewable Flooring** – Two types of environmentally – conscious flooring lead the market; recycled flooring from old structures and renewable flooring from fast-growing trees, such as bamboo.

Recycled wood flooring is typically very durable due to its tight grain. Creating wood floors from old lumber diverts the valuable wood from landfills and reduces the need for fabricating new wood flooring products.

Properly installed and maintained floors made of sustainable species, which grow more quickly than hardwoods and softwoods, will last as long as hardwood flooring and can be as cost competitive.

10. **Tubular Skylights** – Tubular skylights use the sun for lighting interiors without the drawbacks associated with conventional skylights. They have a roof-mounted light collector typically consisting of an acrylic lens set in a metal frame. Most have a reflective sun scoop in the rooftop assembly that directs sunlight into a metal or plastic tube that has a highly reflective interior coating.

With the money you save from remodeling with these energy efficient technologies, you could pay off some of your gift giving expenses.