Energy Facts

Energy Checklist For Existing Homes

E-2789

The cost of energy continues to climb and you want to save money on your energy expenditures. Perhaps conserving energy is a goal for you as well. Use this checklist as you walk around your home and yard and check to see if the energy-saving ideas have been built or designed into your existing home and yard. Check off the ones you have already, and plan to develop some of the ones you cannot check off right now.

Home Site

____Large deciduous shade trees are planted on south and west side of house (to provide summer shade during the hottest part of the day, but allow winter sun to heat house)

____Low evergreen trees and shrubs or a slatted fence are placed on the side of house exposed to winter winds (to provide a wind break and reduce air infiltration; avoid high evergreens on southeast, south, and southwest as they block winter sun from house).

House Design

____South windows have an overhang or awning, deciduous trees, or vines (to shade the summer sun but allow winter sun into the house).

____East and especially west windows are provided with shade trees and tall shrubs, fences, awnings, tinted glass or other shading devices (to keep out early morning and late afternoon sun in the summer).

Color and Lighting

____Outside walls and roof are a light color if summer heat is a greater problem than winter cold, such as in un-insulated summer cabins (light colors reflect the sun's heat while dark colors absorb it).

____Interior wall and ceiling colors are light tints or white (so both daylight and artificial light are reflected more than absorbed).

____Floor covering is medium to light in color (so light reflectance will save on the amount of artificial light needed).

____Overhead lights in living areas and bedrooms provide sufficient over?all lighting, but use less total wattage than several lamps; lamps can be used for task lighting as needed (simple fluorescent enclosed fixtures, flush with the ceiling, will provide excellent light with little energy use; incandescent fixtures may be preferred by some).

____All light fixtures are located so they can be easily cleaned (dust on bulbs, tubes, and fixtures reduces illumination).

Additional energy conservation measures using interior design:

1. Cover walls with fabric, gathered on a rod at the top and bottom (be sure to flame?proof the fabric).

2. Use closets as buffers on north or west walls.

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3. Add a heat lamp to a bathroom to take the chill off on cold mornings.

4. Use thermal wallpaper to insulate or foil wallpaper to reflect heat back into the interior.

5. Use filled bookcases on outside, non?mass walls to act as insulation.

6. Use large decorative area rugs, tapestries, or fabric wall hangings on outside, non?mass walls to add insulation.

7. Use carpet and a good pad to reduce heat transfer through floors in addition to keeping bare feet warm.

8. Use high?back, overstuffed furniture in northern rooms to reduce drafts and allow you to be engulfed (snuggled) in the chair.

9. Use furniture with skirts to avoid drafts.

10. Use a reversible ceiling fan to pull air up in the winter and to circulate the warm ceiling level air without any draft on the occupant (particularly those fans placed directly over a seating area). Then reverse it for summer so the air flows across an occupant, cooling by evaporation.

Products to conserve energy and where to find them: (See Table I for comparisons of the heat retention capability of various building materials)

1. Movable insulation: designed to cover and insulate windows on the interior; can be found at fabric stores, building supply stores, drapery shops, and some lumberyards.

2. Mini?blinds: used to reflect sunlight and focus daylight; can be found in most department or drapery stores.

3. Insulated decorative ceiling tiles: added to the ceilings as insulation; can be found in lumberyards and stores.

4. Thermal wallpaper: used to add insulation to outside walls; can be found in building supply stores, lumberyards, and some wallpaper stores.

5. Vinyl wallpaper: used as a vapor barrier on outside walls; found in wallpaper stores.

6. Patterned and dyed concrete floors: used as a thermal mass, cheaper than tile floor, and you can inquire at local contractors or building supply stores.

7. Area rugs: used on north walls to insulate, in buffer areas to insulate or add psychological warmth; can be found in department and carpet stores.

8. Quarry tile, ceramic tile, brick veneer, or paving brick: used as a decorative treatment and additional mass over the thermal mass floor or wall; can be found at building supply firms and some lumberyards.

9. Fluorescent lighting fixtures: used to replace some incandescent fixtures, especially in bathrooms, kitchens, and utility rooms; can be found in electrical and lighting supply stores.

Sources of information:

MSU Extension Bulletin EE-1771, Energy-Conscious Interior Design.

MSU Extension Bulletin E-1384, A Checklist for Energy-Saving Homes.

TABLE 1: ABSORPTION OF HEAT.

Material	*Percent Heat Retained*
Brick, glazed white	26
Brick, common red	68
Marble, white	44
Marble, dark	66
Granite, reddish	55
Slate, blue/gray	87
Slate, dark gray, rough	90
Concrete	65
Steel, enamel red	81

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