Landscaping Combines Beauty With Saving Energy

Q: *We just built a house and it needs landscaping. I have heard proper landscaping can affect utility bills. What are some basic efficient landscaping tips?*

A: People tend to appreciate landscaping for its aesthetic value, but proper landscaping also affects the energy efficiency of your house.

Proper landscaping includes the use of ground cover, dwarf and full-size shrubs, climbing vines and trees. Ground cover is typically some type of plant, grass or gravel. The selection you make depends on your climate and specific house. A combination that works best for one house may not be the best for a home just down the street.

This combination of ground cover plants and dwarf shrubs near the foundation saves energy and water.

Try to use low-growing ground cover plants or gravel instead of grass. Most common species of grass require maintenance. Grass is the best choice for areas where children play, but try to keep it to a minimum.

In all but the most humid climates, placing low-growing ground cover plants near your house helps keep it cool during summer. The leaves block the sun's heat from being absorbed into the ground and they give off moisture. Evaporation of water from the leaves, called transpiration, cools air near the home.

In hot, humid climates, gravel shaded from the sun can be more effective than ground cover plants. Using gravel also eliminates the need for watering, but it may increase the air temperature around your house. The thermal mass of gravel stores the afternoon sun's heat, causing the heating effect to last into the evening. Though not helpful in the summer, gravel offers an advantage during winter.

When selecting ground cover plants, consider their specific characteristics: mature size, water needs, propagation, foliage density, etc. To minimize watering requirements, group the plant types based on their watering needs.

Dwarf shrubs are ideal for energy-efficient landscaping because they remain small at maturity (2 to 3 feet high). Plant some near the house foundation and some further away for windbreak ramps. Since they stay small, they require little care and little watering.

Dwarf shrubs can cut your utility bills year-round. The sill plate–the bottom frame along a home's foundation—remains one of the greatest air infiltration pathways into many houses. Planting dwarf shrubs near the house, especially evergreen varieties, can block the force of cold winter winds and reduce the amount of air leaking in.

As a windbreak ramp, dwarf shrubs can be planted to the northwest side of taller shrubs and trees. These smaller plants begin directing the cold winds upward toward the tops of taller trees. The upward wind path continues over the top of your house, not against it.

Planting climbing vines on a trellis can create effective shading to reduce the heat buildup on a wall during summer. In most climates, locate the trellis close to the house to take advantage of transpiration cooling.

Climbing vines often are more effective than trees for shade because you can target specific windows and areas of your house where heat produces the greatest problem. Deciduous vines that lose their leaves during winter are best so the winter sun still reaches the house.

Trees have perhaps the greatest impact on your utility bills. Landscaping details vary for different climates, but some general concepts apply to all.

Evergreen trees are effective for the northwest across to the northeast side of a house to block winter winds. During winter, the sun does not shine from those sides. Deciduous trees planted on the other sides provide summer shade, but allow the winter sun through. You may want to leave a small gap to the southwest to allow summer breezes to reach your home. ■

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