



Landscaping for energy conservation

Gardening enthusiasts are counting the days until the soil temperature is warm enough to start getting new plants and shrubs in the ground. They're visualizing the new colors, the different textures and the general look of the landscape.

Something else to consider is how these plantings, both new and established, can impact energy savings. Well-placed trees and shrubs can have a positive impact on heating and cooling costs. Things gardening homeowners need to keep in mind are angle of the sun, orientation of the house and the direction of winter and summer winds. Boy, do Oklahomans know about wind ... and summer heat ... and the cold of winter.

It's no secret how hot an Oklahoma summer can be. Providing shade can significantly reduce the heat flow into a home, which in turn can help reduce your energy bills. Studies suggest shade can reduce heat flow by as much as two-thirds. Likewise, shading the roof with tall, high-branching trees such as oaks, can help with cooling. While summer shade is desired to reduce cooling expenses, we also want to maximize the sun during the cold of winter. To get the best of both worlds requires careful tree selection.

Characteristics to look for include high branches to block summer sun, but allows permeation of the winter sun, which strikes the house at a much lower angle. For example, the open branching of the Kentucky coffeetree allows for a more open winter canopy and allows greater winter sun penetration.

Homeowners also want to consider the timing of leaf drop. Ideally, look for trees that drop leaves between Oct. 15 and Nov. 15. Gardeners may want to avoid trees with cone-shaped crowns, such as pin oaks and many evergreens because they provide significantly less shade in summer and block winter sunlight. Consider planting trees and shrubs that will shade south- and west-facing walls as they capture a great deal of heat from the hot afternoon sun during those long summer days.

Wind is another consideration in landscaping to conserve energy. Your home can lose much more heat on cold, windy days than on cold, calm days. Well-placed trees and shrubs can intercept winter winds and reduce heat loss. The coldest winds arrive from the north and northwest, so for those planning a windbreak, it's best to locate it long the north and west side of your home or property.

Foundation plantings are the plant materials placed along the perimeter of the home and impact the energy gain and loss from a home in a variety of ways. They act as insulation against wind,

reducing air currents close to the home. They also create pockets of air that act to insulate the home. As with wind breaks, evergreens have a greater impact on energy savings than deciduous plants.

For more information, check out [Oklahoma State University Extension](#)'s Fact Sheet [HLA-6417: Landscaping for Energy Conservation](#). at <http://osufacts.okstate.edu>.

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