

## **Planting Trees For Energy Conservation...The Right Tree in the Right Place**

Homeowners go to great lengths to conserve energy in this era of tight budgets and environmental awareness. However, many do not realize that the simple act of planting a tree can result in energy savings. Planting the right tree in the right place is the key to saving energy with trees. The right tree in the right place provides wind protection, shade, and cool air, while adding beauty, privacy, and wildlife habitat to the landscape.

**The right tree in the right place also means tree selection and placement to minimize conflicts with power lines and other obstructions. Many residential power outages are caused by trees interfering with power lines.**

### **The Right Tree**

Deciduous trees (trees that lose all of their leaves each fall) save energy in summer by shading houses, paved areas, and air conditioners. Small deciduous trees and shrubs, and especially those with low, dense branches, also can serve as effective wind barriers. Large and small evergreen trees and shrubs save energy by slowing cold winds in the winter. They also provide shade, but since they often have branches near the ground, their shade is most effective when the sun is not directly overhead. Both deciduous and evergreen trees save energy in summer by directly cooling the air. This cooling happens as water evaporates from the leaf surfaces, much as our skin is cooled when we perspire.

### **The Right Place....for Shade**

Shade from trees reduces air conditioning needs and makes non-air conditioned homes more comfortable. Plant deciduous trees so they will shade east-facing walls and windows from 6 to 10 a.m. and west-facing surfaces from 2 to 6 p.m. during June, July, and August. Trees with mature heights of at least 25 feet should be planted 10 to 20 feet east and west of the house. Plant smaller deciduous or evergreen trees with lower limbs northwest and northeast of the building to provide late afternoon and early morning shade.

Air conditioners should also be shaded from mid-morning through evening. Prune branches to allow at least several feet clearance around the air conditioning equipment to encourage air flow. Shrubs should not be planted near the air conditioner or they will reduce air flow and cooling efficiency. **This same principle holds for planting near an underground electrical transformer. Call for clarification regarding plantings around underground transformers.**

### **The Right Place....for Wind Protection**

Trees can reduce energy use for heating by blocking cold winter winds. These winds enter homes through small openings and also carry heat away from the building's outer surfaces. Effective windbreak trees have crowns that extend to the ground and branches that keep their foliage in winter (evergreens). Junipers, spruces, firs, Leland cypress, Douglas-fir, and evergreen shrubs are good choices for wind protection.

Trees for winter wind protection should be planted upwind of the area to be protected. This will often mean planting on the west, northwest, and north sides of a building. However, local conditions like mountain ranges may cause prevailing winter winds to be from other directions. Wind protection extends downwind ten to twenty times the windbreak height, so the trees need not be planted close to dwellings to be effective.

**NOTE:** For more information about trees around power lines contact FLEC at **1-877-353-2674**. If you are planning to plant trees in an area where buried power lines or other buried utilities may be present, call **8-1-1** to have these utilities located and marked. Call well ahead and allow at least 3 days for most locates.