

Timber Frames Are Green



[Home page](#)

[The Buzzword Green](#) || [Timber Frames are Green](#)

[How Homes Became Green](#) || [Green](#)

[Green Structures We Build](#)

[Planning Your New Green Office and Shop](#)

[Restoration Project](#)

[Planning Your Timber Frame Home](#)

[LEED and HEALTHY BUILT HOMES](#)

[Notes for Contractors](#)

Cabin Creek Timber Frames Green Structures We Build: Green Buildings and Energy Conservation



Buildings use 37% of the total energy consumed each year in the US. Most old ones and many new ones are quite inefficient.

Green building means quality building. More specifically, it means achieving durability, efficiency, and sustainability. A building does not become green by using local wood, VOC free paint, or an Energy Star refrigerator. These are unequivocally good, but there is much more to being green. A large part, perhaps the greater part, of being green is achieving efficiency in conservation of energy, or maintaining a low cost of heating, cooling, and powering a building over a period of years. This is mainly accomplished by using very efficient insulation: structural insulated panels, or SIPS.

For a decade now, our company, Cabin Creek Timber Frames, has been building green residences and commercial buildings. Recently, rating systems have become popular, such as the LEED and HERS (home energy rating system) which projects the efficiency (the cost of powering, heating and cooling) of a building based on the plans alone. There is no provision in HERS for rating buildings built before 2005 when the system came into use, even though some very efficient buildings were already being built.

Residence: Recently, when one of our houses (SIPS/timber frame), built before the HERS requirements were in place, was compared with the imaginary all electric reference house using the HERS system, our actual house was projected to use 86% of the energy of the reference house. When our actual costs of heating, cooling, and powering were compared with the ideal reference house, ours required 59% of the projected reference house energy use.

Commercial building: Our office (SIPS/timber frame) and beamery (metal building) complex, 9256 square feet, was recently evaluated by a professional engineer who compared a reference electric office/manufacturing complex with ours, looking particularly at the efficient use of power. With our use of waste wood (carbon neutral) in our detached furnace to heat the entire complex with radiant floor heating, our costs were 43% of the predicted electric building group, producing a savings of \$9000 per year.

Timber frame buildings with SIPS panels are inherently efficient. They commonly cost one half as much to heat and cool as equally R-rated fiberglass/stud wall structures. The use of SIPS is far from rocket science, but most general contractors are reluctant to employ them.

From a purely practical standpoint, it makes good financial sense to spend the extra money initially to build a more efficient building in light of the decreased costs of operating and the rising cost of fuel. Also, there are federal, state and municipal tax deductions available, some substantial.

CABIN CREEK TIMBER FRAMES

828-369-5899

6624 Georgia Road Franklin, NC 28734

www.cabincreektimberframes.com

jbell@cabincreektimberframes.com

Sips.org

Suretight.com

Hers or Home Energy Rating System www.energy.ca.gov/HERS/index.html

www.healthybulthomes.org

Energy Star www.energystar.gov

LEED www.usgbc.org