Today's Log Homes Go Green

with Sustainable Building Practices and

the Best Elements of Old and Modern Energy Efficiency

Whether the goal is to save fuel, save the planet or a little of both, American homeowners are increasingly going green. And while the average household spends $1,900 a year on energy, log home owners typically report that they spend far less than their neighbors on heating, air conditioning, hot water and lighting.

Energy efficiency is among several ways modern log homes qualify as "Green"-- an approach to building that started in 1993 with the belief that we can all pitch in to make the places where we live, work and play more environmentally friendly. The hallmark of "green" is to use less energy, renewable resources, limit $C0_2$ or "greenhouse gas" emissions and create indoor environments free of mold, formaldehyde, carcinogens, and other allergens.

The most obvious factor that makes engineered log homes "green" is their building material -- solid timbers grown from trees -- a renewable resource. Many companies purchase certified wood sourced from sustainably managed forests. During the milling process, manufacturers utilize all portions of the log, from bark and other sources for mulch, scrap from cut-offs for raw material used in carvings and other home products, sawdust used by farmers as bedding material, etc. The homes are sold as kits or "packages" with the bulk of the building materials delivered at one time. These packages consolidate delivery and generally travel shorter distances conserving fuel, says the Log Homes Council, which represents 60 of North America's leading manufacturers and promulgates industry and product standards. And, logs require less energy and man-made materials than stick-built construction. With the completion of a log home, you have walls that serve both the structural and insulative needs of a home, as

opposed to using many products from siding, house wrap, plywood, dimensional lumber, insulation, drywall, and paints in traditional homes.

Heating and Air Conditioning

The massiveness of the logs plays a vital role in conserving energy. According to studies by the University of Maine at Orono, the logs absorb heat energy during the day and radiate it at night to even out the temperature, which makes the occupants feel more comfortable while using less energy.

“In addition to the benefits of solid timber construction, Log Homes Council member companies engineer their log wall joinery and roof systems to eliminate air infiltration and moisture, conserve energy and increase comfort. This engineered approach continues with every product included in a log home package such as brand-name, double-paned windows and patio doors with low-e glass, proper venting and subflooring structures,” explains Rob Cantrell, 2007 President of the Log Homes Council, a council within the National Association of Home Builders (NAHB).

Engineered for Energy Conservation and Safety

Log home companies are up on latest developments in building technology and safety and maintain relationships with suppliers of roofing materials, heating systems, windows and other components. Council members constantly test and evaluate newer components to make sure they contribute to energy efficient, safe and trouble-free homes. Even the interior and exterior stains and finishes are evaluated for their suitability as solid timber coatings and to make sure they meet low Volatile Organic Compound (VOC) clean air standards, in their quest for the ultimate green home.

The Builder

While a green philosophy begins with the log home manufacturer at the design stage, it has to continue with the builder who erects the home. The Log Homes

Council's parent organization, the National Association of Home Builders (NAHB), has been getting local builders on board by providing them with the knowledge they need to build green. As part of its effort, NAHB has partnered with the International Code Council to develop a consensus committee based Green Building Standard that provides a practical, nationally recognized baseline for resource-efficient, cost-effective home building.

By the end of 2008, the NAHB expects that many of its members, who build more than 80 percent of the homes in the US, will incorporate green practices into the construction of new homes. The NAHB Green Building Standard and Certification Program addresses seven key green construction areas including site, resource efficiency, energy efficiency, water efficiency, indoor environmental quality, homeowner education, and global impact. Direct ways log home owners can reduce their footprint include less impact on natural features and vegetation during building site preparation, choosing environmentally friendly components for subflooring, trusses and other conventional materials that go into a log home, choosing energy-efficient appliances, conserving water with low-flow plumbing fixtures and taking steps to increase occupant comfort and indoor environmental quality.

Log homeowners play a big part in going green too. These individuals embrace nature and consider their homes permanent dream homes where they are willing to invest in energy efficiency upfront to reap savings over the years. Their design preferences lean toward open flooorplans that allow for the flow of warmth throughout the home – in many cases, a wood-burning stove is the principal heat source.

From the manufacturer, to the builder to the homeowner, log homes are doing their part for a greener planet. Thankfully, log home construction is and always has been green. With new technologies and products available, log home owners can go the extra step to make their homes even greener.

Visit the Log Homes Council website at http://www.loghomes.org/, or go to any newsstand where there are at up to four different log home magazine titles on display that list log home educational events, factory tours, dealer locations and model homes around North America. Frequent log home shows and regional fairs offer a chance to talk with several manufacturers at one time.

For quotable expert sources on log homes and log home owners throughout North America, as well as professional photos **Contact the Log Homes Council at 800-368-5242, x8576.**

10 SIMPLE WAYS TO SAVE ENERGY AND "GREEN" YOUR LOG HOME

Adopting a "green" philosophy is easier than you think and it does not require wind turbines, solar panels or wearing extra sweaters in January. Here are 10 conventional, easy to implement suggestions from the Log Homes Council on ways to reduce energy costs, increase comfort and make your log home a little greener.

Passive Solar

Situate the home to take advantage of the sun. In colder climates, a southern exposure for the family room and kitchen is idea. Rely on existing trees to lower energy costs. When clearing the site for construction, maintain fir trees as a barrier along the cold and windier north and west elevations. Plant or preserve existing deciduous trees along the south and east elevations. The leaves will provide shade in summer and in the winter; the bare trees will let in plenty of sunlight and warmth.

Energy Star

ENERGY STAR© is a government-backed program helping businesses and consumers protect the environment through greater energy efficiency. Look for the Energy Star label and rating on products you buy for your home. The distinctive yellow label gives consumers guidelines for a wide range of components and savings can be significant. When compared to single pane windows, Energy Star rated low-e glass with solar shading, cut energy bills by $110 to $400 while increasing comfort, protecting furniture from sun damage and reducing condensation.

The Kitchen

Again, ENERGY STAR rated appliances such as refrigerators; dishwashers and vent fans incorporate advanced technologies that use 10% to 50% less energy and water than standard models -- more than making up for the slightly higher costs of these products. **Tip** – old refrigerators are energy hogs; so keeping that extra fridge to occasionally store beverages and extra food is wasteful.

Lighting

Compact Fluorescents cut energy by 70 percent. Wherever possible install fluorescent fixtures and switch lamps to compact fluorescent bulbs. These bulbs have been improved in terms of ambient color, but if you still have trouble getting used compact fluorescents, start with utility areas such as the laundry and basement. Combine compact fluorescents with incandescents in bedrooms and living areas. In addition, automatic lighting controls, ranging from outdoor light fixtures with built-in photo sensors to motion detectors to whole-house programmable controls eliminate waste.

Heat Pump Systems

For climates with moderate heating and cooling needs, heat pumps offer an energy-efficient alternative to furnaces and air conditioners. During the heating season, heat pumps take advantage of the outdoor “heat” and move it into the

home. During warm weather, the process is reversed. Because they *move* rather than *generate* heat, heat pumps can deliver up to four times the amount of energy they consume. In moderate climates, air source heat pumps use the ambient air. In severe climates, geo-thermal heat pumps, which are more costly, take advantage of the heat below the ground, which remains above 50 degrees.

Hot Water

Consider an on-demand heating system that eliminates having to keep an 80 or so gallon tank of water warm around the clock. In addition to natural gas or propane, units that have to be vented or installed on an outside wall, on demand hot water heating systems are available in electric models that can be installed anywhere. Additionally, solar water heating can be considered.

Indoor Air Quality

Consider incorporating a HEPA filter to the heating system. A HEPA (High-Efficiency Particulate Air) filtration system, removes up to 99.97% of small particles - pollutants that standard disposable filters simply do not touch.

Ceiling Fans

Ceiling fan and light units circulate warm air in the winter and make occupants feel cooler in the summer. Look for ENERGY STAR rated models, as they are 50 percent more efficient than conventional units. This saves $15-$20 per year on utility bills to say nothing of the air conditioning and heating savings gained. **Tip:** In the summer, use the ceiling fan in the counter-clockwise direction to create a wind-chill effect. In the winter, reverse the motor and operate the fan at low speed in the clockwise direction to produce a gentle updraft, which forces warm air near the ceiling down into the occupied space.