



By Herb Lagois

Be warm and clean – the efficient way

As fall is approaching we find ourselves once again thinking about our heating costs. Do we replace windows, add more insulation, replace our furnace, or do we consider alternate sources of energy?

Other than keeping all mechanical equipment well maintained, adding additional insulation and sealing drafts is often the simplest and most cost effective solution to reduce energy consumption costs.

Replacing old and inefficient windows is another good energy efficient solution, good for both heating and cooling seasons. It is important to realize that retrofitted or newly constructed homes become more of an air tight risk with polluted indoor air -- polluted from everyday human activities, pets, household products and off-gassing of materials. By using an HRV (heat recovery ventilator), fresh air can be introduced and stale air exhausted with greater efficiency from the home.

Changing furnaces, air conditioning units, even appliances can help with energy consumption costs. New or replacement furnaces should be high-efficient, multi-stage, direct-drive, and installed with outdoor resets. Air conditioners should have a high SEER (Seasonal Energy Efficiency Ratio) rating.

For Ultimate comfort, Hydronic (liquid) heating is an excellent energy-efficient choice for new or retrofit projects. Water takes less energy to heat than air. Solar, wind, and Geothermal are great alternate energy solutions and can be combined with forced air (furnace) systems or combined with Hydronic Heating systems. Solar thermal (liquid based such as pool heating) and Solar photovoltaic (produces electricity) capture the sun's energy.

Designers must account for proper exposure and positioning of solar panels. Wind (similar to photovoltaic) produces electricity. Geothermal (often referred to as free heat) uses the earth's energy for heating and cooling. Geothermal is best applied when heating and cooling are both required.

As a consumer, it is often hard to decide what the best energy efficient solution is. Competent Designers and Architects have at their disposal energy analysis software which can be used to determine annual energy use by comparing different building techniques, building orientation, heating systems, fuel types etc. - and help to determine cost effectiveness of energy efficiency upgrades.

Ask design and industry professionals for advice. Make informed decisions. When Fall approaches, enjoy knowing that your home is comfortable and energy efficient.

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