



# Changing the World

One Home at a Time

January – March, 2010

## Energy Mortgages

An energy mortgage is a mortgage that credits a home's energy efficiency in the home loan. For an energy efficient home, for example, it could mean giving the home buyer the ability to buy a higher quality home because of the lower monthly costs of heating and cooling the home. For homes in which the energy efficiency can be improved, this concept allows the money saved in monthly utility bills to finance energy improvements. There are two types of energy mortgages:

### **Energy Improvement Mortgage**

Finances the energy upgrades of an existing home in the mortgage loan using monthly energy savings

### **NEW AND IMPROVED! Energy Efficient Mortgage**

This type of mortgage uses the energy savings from a new energy efficient home to increase the home buying power of consumers and capitalizes the energy savings in the appraisal.

## Ductless Heat Pump Technology Can Save You Money

Ductless heat pumps, or “mini-splits” have been standard HVAC technology in international markets for decades. Recent improvements in the efficiency and functionality of these systems has brought them to light in U.S. markets as one of the most technologically advanced electric heating and cooling systems available. Systems are cost-effective and easy to install, removing ductwork costs and adding A/C as a standard option.

### **What is a Ductless Heat Pump?**

A ductless heat pump (DHP) is an inverter-driven zonal heating and cooling system that does not require the use of air ducts. The systems consist of an outdoor compressor unit and one or more indoor air-handling units, linked by a refrigerant line. Indoor heads are typically mounted high on a wall or ceiling covering a 3” hole where the refrigerant line passes through to the outside unit, which is mounted at the base of the house. Each indoor unit corresponds with a heating and cooling zone that can be controlled independently by remote control or wall-mounted thermostat.

### **More Comfortable**

Ductless heat pumps use variable speed compressors with “inverter technology” (AC to DC) to continuously match the heating/cooling load, avoiding the on/off cycling of conventional electric resistance and central heating systems that is associated with uncomfortable temperature variations and high energy consumption.

### **Energy efficient**

Ductless systems are 25%-50% more energy efficient than electric zonal heat – saving you money every month.

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# ENERGY STAR® Qualified Home Buyer Benefits

ENERGY STAR® qualified homes are designed to be more energy efficient than new homes built to current state energy codes. This means lower energy bills and a home that costs less to operate.

## Specific savings are:

By reducing the amount of energy used, ENERGY STAR® qualified homes help reduce air pollution and greenhouse gases. Currently, the average American home is responsible for more annual pollution than the average car, and the energy used in homes accounts for more than 20 percent of all greenhouse gas emissions in the U.S.

Increased insulation, tightly sealed ducts, and a performance-tested energy efficient heating and/or cooling system contribute to uniform temperatures throughout the house, making an ENERGY STAR® qualified home more comfortable.

In addition to increased insulation, tightly sealed ducts and an energy efficient heating and/or cooling system, each ENERGY STAR® qualified home built through the Alliance's ENERGY STAR® Homes Northwest program features high efficiency water heaters and ENERGY STAR® qualified windows, appliances and lighting in at least 50% of the sockets.



*“Tamarack won’t build a home that’s not energy efficient.”*

*Paul Wilson, President*

## Why Tamarack is Different

Tamarack Construction is dedicated to building homes to standards above and beyond the industry norm while strictly adhering to building codes. We are a recognized leader in the field of building highly energy efficient homes for all customers, regardless of their budget range.

### **One of many reasons we are different from most builders:**

Tamarack, a Northwest Energy Star Partner®, began building with Structural Insulated Panels in the early 1990’s and never looked back! Structural Insulated Panels (SIPs) provide a strong structural system consisting of rigid foam insulation laminated between sheets of structural sheathing. This simple sandwich forms an amazingly strong structural panel, and assures you of straight, flat walls with no bulging framing members. A continuous wood surface inside and out provides a sound nailing base for every type of exterior and interior finish...just think of how easy hanging pictures will be.

SIPs help create an inside home environment that is more easily and economically controlled...no drafts, no cold spots...your comfortable and the environment benefits because you're using less energy and creating less pollution. SIP structures are also very quiet and clean due to an air-tight envelope, so Tamarack always installs heat recovery and air filtering systems to ensure optimum indoor air quality.

“You can’t build a ‘**green**’ home that is not Energy Efficient,” says Paul. “Helping to control homeowner’s future energy costs makes home ownership more affordable. Also, building many highly energy efficient homes contributes in a modest way to help people contribute to the country’s quest to use less energy.”

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## Why Tamarack is Different from Other Builders

**Tamarack** is dedicated to educating homeowners about how buildings live and breathe!

Does your current insulation WORK? One of the greatest enemies of building efficiency is hidden moisture condensation causing mildew, decay and the growth of mold. **TAMARACK** addresses this concern with the use of **FOAM INSULATION**, which successfully achieves thermal isolation, air isolation and moisture isolation. It is the complete isolation of the interior climate from the exterior climate that substantiates how foam insulation successfully deals with the complexities of building insulation operating in all climates. It works by not allowing the interior climate (heating or cooling) to mix with the exterior climate (hot or cold), thereby isolating the production of harmful and/or unhealthy elements.

**TAMARACK** believes in order to provide our clients with an Energy Efficient Home in a cold weather environment, the use of **Foam Board Insulation** under the concrete foundation pad dramatically increases the energy efficiency of your home. Foam Board is an insulation board designed for use with under floor heating systems, has a very high compressive strength, is light weight, is highly efficient and its low cost makes this thermal board an ideal choice for placing under a concrete foundation when building an energy efficient home.

Radon comes from the natural (radioactive) breakdown of uranium in soil, rock and water and gets into the air you breathe. You can't see or smell it. Radon can be found all over the US, but particularly high levels exist in the Northwest. It can get into any type of building – homes, office, and schools – and result in a high indoor radon level. That is why **TAMARACK** Construction ALWAYS installs a **Passive Radon reduction system** in every home we build, reducing potential radon levels in your home by up to 99%.

The **heat recovery ventilation** system (HRV) is an integral part of your home. You will become knowledgeable in how and why it works to reap the benefits of the system. The HRV system is not a heating or cooling unit. It is strictly a ventilation system, which means it moves air. How-ever, there is a heat recovery aspect to this machine, hence the name. Maintenance of this system is minimal; the most important thing you will need to do is make sure the filters are clean. Do this at least twice a year to obtain maximum efficiency.

### Want to learn more?

Make an appointment to talk with a **TAMARACK** team member about how you can reduce your energy consumption by building a new energy efficient custom home or retrofitting your existing home!

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Listen for our radio ads on 101.5 FM and 1079 AM



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## **Alternative Energy Loan Program    What is it?**

The Alternative Energy Revolving Loan Program (AERLP) provides a financing option to Montana homeowners to install alternative energy systems. The program is designed so that the energy produced is used by the generating entity. Federal stimulus funding has recently been introduced into the loan program. Energy conservation measures installed in conjunction with an alternative energy project may be funded through the AERLP. Homeowners must apply directly through the Montana Department of Environmental Quality.

### **Download Loan Application Here:**

[http://www.deq.mt.gov/Energy/Renewable/AltEnergyLoan/pdf/AERLP%20Residential%20Application\\_2010.pdf](http://www.deq.mt.gov/Energy/Renewable/AltEnergyLoan/pdf/AERLP%20Residential%20Application_2010.pdf)

### **What are Alternative Energy Systems?**

Alternative energy systems are defined by law as "the generation system or equipment used to convert energy sources into usable sources." Underground Geothermal Heat Pumps are included in the list of approved systems for funding. **Tamarack** will work directly with you and the DEQ to provide technical review and approval of systems proposed for the loan program.

### **What energy conservation measures may be included in a project?**

Additional insulation, efficient windows, doors, and fixtures are examples of measures that may be proposed for funding. Energy conservation measures must be installed as part of the alternative energy project to be funded through the program.

### **How much can I borrow?**

Loans can be made up to a maximum of \$40,000 (subject to available funds), and may be repaid in up to ten years, depending on the loan amount. Interest rates are set annually and are fixed for the term of the loan. **The interest rate for 2010 is 4.0 percent.**

### **How does the process work?**

DEQ accepts and processes loan applications throughout the year. Approved projects are ranked according to the criteria published in ARM, Title 17, Chapter 85, which includes items such as system reliability, return on investment and avoided fossil fuel consumption. Once a loan is approved, the applicant is informed whether funds are currently available, and if not, when new funds are anticipated.

## **TAX INCENTIVES FOR INSTALLING Geothermal Heat Pumps**

Taxpayers who install geothermal heat pump systems for residential use are eligible for both federal and state tax incentives. Qualified geothermal heat pump systems refer to any equipment that uses the ground or ground water as a thermal energy source to heat the taxpayer's residence, or as a thermal energy sink to cool the residence. The unit must meet the requirements of the ENERGY STAR® program that were in effect when the heat pump was purchased.