



Energy Tax Credits

Biomass (Wood) Stoves

HAS THE MOUNTAIN PINE BARK BEETLE turned your backyard views rusty red? This situation has caused some to consider biomass for home heating. For most of us in Montana, biomass is the heat source formerly known as wood. Just remember, the oil-drum wood stove was long ago consigned to the ash heap of abandoned choices.

Some home heating units today are designed to burn a variety of biomass feedstock. In the northern Midwest corn is commonly used — even the cob. Grains, grasses and even cherry pits have local or regional followings as a heating fuel. But for most of us in Montana, the regional following for biomass means a feedstock of solid wood fuel or pellets manufactured from sawdust or other forest byproducts.

Burning biomass feedstock in Montana offers certain economic advantages while addressing an environmental concern. Our “red forests” can be burned in a controlled fashion rather than decaying over time or fueling wildfires. The atmospheric carbon dioxide released through wood combustion is balanced by the carbon stored as new forests rise to replace the dead old ones. Still, air quality issues remain. And the long-term effects of removing large quantities of biomass from forest ecosystems raises further questions.

Types of Biomass Heaters

A variety of commercial biomass stoves and heating units are suitable to our climate and conditions. They can be divided generally into solid fuel wood-burning units and pellet stoves. Either style can be sold as a freestanding unit or as an insert into an existing fireplace. Freestanding outdoor units that burn solid wood fuel are becoming more common in our region. These systems are usually designed to heat water that is transported to a nearby dwelling for space heating purposes. Wood that is run through a hammer mill is called “hogged.” Chipped and ground fuel is also seen, but these are more typically used in large conveyor-fed or auger-fed commercial applications.

Household-size biomass burning units may or may not be fitted with a catalytic after-burn device to meet federal emissions ratings. A catalytic stove typically features a ceramic collar near where the smoke exits the unit for the chimney. This ceramic honeycomb is coated, usually with platinum or palladium, which acts as a catalyst to combust the smoke at comparatively low temperatures as it leaves the stove. Catalytic devices generally burn solid wood at high efficiencies. Compared to most non-catalytic stoves, these units contribute less particulates and other air pollutants, but at a higher purchase price.

Manufacturers of units that burn solid wood can now meet comparatively high efficiency standards without use of catalytic devices. This is accomplished through smaller combustion

chambers, baffles and generally higher combustion temperatures. Biomass heaters that burn pellets offer higher efficiencies and are generally not fitted with catalytic devices.

Tax Credits

The Environmental Protection Agency (EPA) is the federal certifying agency for biomass stoves. Montana looks to EPA's lead in the use of these devices and to establish an emissions and efficiency threshold for state tax credits. Consumers should look for a permanent EPA label affixed to any biomass stove under consideration for purchase. In addition, a temporary, removable EPA label should list the emissions rate and overall efficiency of the model as well as other information.

A 75 percent efficiency standard is difficult to attain for biomass stoves, particularly those that burn solid wood fuel. Some in the industry have speculated that this federal standard is unrealistically high. However, a lower heating value was developed to measure efficiency for biomass stoves and manufacturers can independently test and certify that their products meet the federal standards. The lower heating value measures the amount of heat released, minus any energy used to vaporize water in the fuel. The system is supposedly more applicable to combustion of wood compared to, say, natural gas or liquid heating fuels.

Federal Credit

A May 2009 EPA website listing of manufacturers and products shows only a handful of models — all pellet-burning — that meet the threshold 75 percent efficiency rating required to capture the 30 percent federal tax incentive. Since the announcement of the federal tax incentives in February 2009, however, a flurry of biomass products now advertises certification to meet these federal qualifications. To capture the 30 percent federal tax credit — up to \$1,500 per taxpayer — the unit must feature a manufacturer's certificate stating that the stove meets or exceeds the 75 percent efficiency rating. The federal government encourages manufacturers to post the certificates for qualifying models on company websites.

A qualifying biomass unit must be used to heat a dwelling or to heat water for a dwelling. Installation costs that ensure proper and safe functioning of the unit may be included. The credit applies to existing principal residences — new construction is ineligible. Cabins and second homes are also ineligible. The homeowner must have the manufacturer's certification statement that the unit meets the federal standard as a biomass burning stove and that the efficiency rating is 75 percent or greater. Consumers do not need to submit copies of the certificates with their taxes, but should keep the original on file. The heating unit must be installed during the 2010 tax year and the credit claimed for the year of installation.

To capture the federal \$1,500 credit, look for the certification label before you buy and keep it after the purchase. Always consult qualified financial and tax specialists as you plan major expenditures in renewable energy for your home.

Montana Credit

A Montana state credit up to \$500 per taxpayer may be claimed as well. To capture the Montana credit, the stove must meet the Environmental Protection Agency (EPA) standard 40 CFR 60.53 as listed on the back of state tax form ENRG-B. This is from the Code of Federal Regulations (CFR) that broadly governs emissions from combustion.

Any new wood pellet stove qualifies for the \$500 Montana credit. So do indoor and outdoor wood-burning appliances that meet the above EPA standards. Qualified fireplace inserts may

also be claimed. Couples may each claim the credit up to \$1,000 and any unused amount can be carried forward to the next tax year. Use the alternative energy tax form ENRG-B to claim the state credit.

Be sure to check with your local health department for local codes or ordinances that may govern the use of wood burning appliances in your community.

Resources

Check the Montana Department of Revenue website

<http://recovery.mt.gov/revenue/default.mcpx> for details on state and federal requirements for these biomass products as well as all energy tax credits currently available. A 2008 version of Montana tax form ENRG-B is available at:

<http://mt.gov/revenue/formsandresources/08forms/ENRG-B.pdf>

The Environmental Protection Agency website for wood burning stoves is available at:

www.epa.gov/Compliance/resources/publications/monitoring/caa/woodstoves/certifiedwood.pdf.

A full listing of manufacturers, products and efficiency ratings are offered, but check manufacturers' websites for certification of specific models.

The Hearth, Patio and Barbecue Association (HPBA) is a trade organization that tracks developments in the wood stove industry. Its website for biomass issues is at:

www.hpba.org/consumers/hearth. Some commonly asked questions about the biomass credit are offered at: www.hpba.org/government-affairs/government-affairs/issues-legislation

Commonly Asked Questions

Q: I purchased a biomass stove and earned about \$600 toward the federal credit. Can I capture additional credits through other energy investments?

A: Yes. A combined credit up to \$1,500 may be taken for the 2010 tax year. The credits can be combined with energy conservation or other renewable investments in your home.

Q: My stove required purchase and installation of a chimney and outside combustion air ducting. Can I claim those expenses?

A: Yes. Associated costs to bring the installation up to safe operating standards can be claimed.

Q: Can my spouse and I both file for the federal and state credits, doubling the amounts?

A: Yes. Each taxpayer, showing an independent investment in the product, can claim the deduction. Check with your tax accountant.