



April 29, 2011

USDA INVITES APPLICATIONS FOR RENEWABLE ENERGY AND ENERGY EFFICIENCY

I attended a conference last week in Beatrice sponsored by USDA Rural Development on Renewable Energy Potential in Southeast Nebraska. There were sessions on wind energy, solar, bioenergy, methane, Flex Fuel Pumps and geothermal energy. New for the 2011 Rural Development REAP grant program was the initiative to provide grants to install more flex fuel pumps in Nebraska.

A topic that is not new, but has large potential, is geoenery or using the energy in the earth to heat and cool buildings that are 300 to 400% more efficient. Compare that to air source heat pumps (200%) or a gas furnace/boiler around 93%. A ground source heat pump can reduce heating and cooling costs by 25 to 40%, typical payback of 6 to 10 years, plus low maintenance. Ground heat exchanger piping is virtually maintenance free and has long life. The heat pump itself is located indoors protected from the elements.

One company now has a 50 year warranty on the pipeline that is installed in the ground. There is no cooling tower required, no boiler required (usually), no noisy units sitting outside, and is less costly to operate over the life of the heating and cooling system. There are no local emissions and no volatile or toxic fluids. In the piping closed loop systems, they use a biodegradable type of antifreeze.

Up-front costs are higher, but the presenter Steve Zach, an energy efficiency consultant for NPPD, indicated the 30% federal tax credit earned him \$4,500 on his personal home installation and his projected breakeven is 7 years or less.

So if you are building new, replacing a commercial heating and cooling system or contemplating replacing your old home heating and cooling system, it is certainly a consideration to think about. For residential homes you need to have enough room in your yard and the willpower to redo your grass lawn. Each loop in the ground will require about 45 feet and 15 feet apart to the next loop. The presenter used 4 ground loops on his large home.

Good sources of information on geoenery are at www.igshpa.okstate.edu, www.geoexchange.org, www.eere.energy.gov and www.nppd.com or contact Steve Zach at 402-563-5472.

USDA is providing funding for up to \$61 million in guaranteed loans and \$42 million in grants through the Rural Energy for America Program (REAP). Funds are available to help agricultural producers and rural small businesses develop renewable energy systems, make energy efficiency improvements and conduct studies to determine the feasibility of renewable energy systems.

At the meeting in Beatrice it was mentioned Nebraska has been very successful in the past receiving 25% grants. Grants for solar panels, small wind installations or geothermal are for business-use buildings, not your home. Last year there were 157 recipients for many different kinds of energy efficiency projects and on farms this may include grain dryer updates and



irrigation equipment upgrades. To see examples go to www.rurdev.usda.gov/ne/Energy_Section%209007.htm

The deadlines for submitting completed REAP applications are June 15 and June 30, 2011, depending on the type of project to be funded. For information on how to apply for assistance, contact your local USDA Rural Development office in Lincoln and talk to Deb Yocum, Rural Energy Coordinator, office 402-437-5554, cell 402-499-1198 or e-mail debra.yocum@ne.usda.gov.

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