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Conservation and planning

Seifert, Richard D., interviewee

Steve Lay, host

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Steve Lay said with conservation and planning we can lessen the bite of energy costs in a Fairbanks winter. Rick Seifert, energy specialist with the Institute of Water Resources Engineering Experiment Station and Cooperative Extension Service, said energy conservation is learning how to use material so you don't need to consume precious energy. Lay said since each home is different it is difficult to make blanket estimates about savings, but the savings can be considerable. Seifert said you can see all different kinds of buildings in Fairbanks. They do give a generic estimate of energy use for a home as 1750 gallons of fuel oil. With the proper rectifications that can be cut in half. There are things you can do while constructing a building such as using the best furnace. Depending on the furnace it can make a difference of ten to 15 percent. In the long run that can be a big deal.

Steve Lay said university researchers are studying many ways to improve energy conservation in the state. They are drawing heavily on work from other researchers in other parts of the country as well as here in the north. Seifert said most of the work has been reviewing research that has been done elsewhere and applying it by doing calculations based on heat loss coefficients for the different building materials. They have computer programs which can model an entire building and give an itemized wall by wall and window by window heat loss. They look at it from the total building point of view and they can easily see where the problems areas are by the magnitude of heat loss. The State of Alaska Department of Transportation Public Facilities Research Testing research has shown that most furnaces are fairly efficient and they don't always need a seasonal tune up. Their research showed that if you had a tune up and kept track of the results of the tune up then checking the temperature over a period of time then it is safe to assume that the burner is working correctly. Seifert said he looks at the building from a broad point of view and one of the things he looks at is how bad windows are from an insulating and heat loss point of view. They are virtually holes in the wall. Windows lose ten times as much heat as the corresponding wall. They are very critical from a heat loss point of view. There are also condensation problems with windows. Insulating windows is often a very good idea. An extra pane is beneficial and plastic will work. Putting a layer on the outside preferably is a good idea. The insulating value of a window is increased by two or three fold by using something like Styrofoam. Putting it on the inside is a bad idea unless you can seal it. It can make the surface area of the window colder and if it isn't sealed then condensation can build up.