ENERGY EFFICIENCY

SCOTT'S ENERGY SPOT: AIR CONDITIONERS

Efficiency tips from Firelands Electric's energy advisor

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It's getting to be that time of year. One day it is warm enough for shorts and the next snow is flying. This can only mean one thing — that spring is in the air in Ohio. Soon, Firelands Electric's members will start thinking about turning on their air conditioners to combat the hot summer temperatures. In preparation, it's important to make sure your air conditioner is in top-notch condition.

Determining a unit's readiness for summer can be tackled by the member or by hiring a qualified heating and cooling contractor. Let's take a few minutes to go over some tips for our do-it-yourself homeowners.

Air conditioners and heat pumps generally consist of two sections, the outside unit, or condenser, and the indoor coil, also known as the evaporator. The outside unit is typically located next to the house and the indoor unit is located next to or on top of the furnace.

Before any work is started on your air conditioning unit, the thermostat should always be put in the off position and the power to the outside condenser should be shut off. The latter can be done either at the outside disconnect or at your breaker panel.

Outside unit/condenser

First, a visual inspection of the area around the outside unit should be performed. Look for any landscaping or shrubs growing too close to the outside unit. Heating and cooling equipment manufacturers generally recommend at least two feet of clearance on each side, including the top, to allow for proper air flow.

Once landscaping and shrubs have been cleared from the area, clean the outside condenser fins with a shop vacuum, air, or garden hose. If using a garden hose, make sure to clean the hole located in the bottom pan of the condenser to allow for drainage. Extra care should be taken around the cooling fins. Bending or distorting the fins will have a major impact on the equipment's performance. Stubborn, caked-on dirt or debris may need to be professionally cleaned.

A U.S. Department of Energy study, as well as several major HVAC manufacturers, report that a layer of dirt on the outside air conditioner coils that is only the thickness of a sheet of paper can decrease the overall air conditioner or heat pump efficiency by 21% and increase the operating cost by as much as 35%.

With the fins cleaned, a visual inspection of the copper lines running between the inside and outside units should be performed. Look for any signs of oil stains or missing pipe insulation. Oil stains are an indication of a possible refrigerant leak. The Air Conditioning Contractors of America report that a 10% decrease in refrigerant levels will result in a 20% decrease in system performance, leading to higher electric bills.

Also note, if your area has an abundance of cottonwood trees, the outside condenser should be checked and cleaned more frequently.

Indoor unit/coil

Cleaning or replacing the air filter is a very easy way to improve air conditioning performance. The U.S. Department of Energy estimates that