

# Choosing the Right Heat Pump

Initial Costs vs. Operating Costs - The biggest expense over the life of a heat pump (or any heating and cooling system) is the accumulated monthly cost of running it year after year. Usually, as the efficiency rating of a unit goes up, so does the initial cost. However, as the efficiency rating goes up, the monthly cost to operate the unit goes down. You'll want to consider the importance of a high-efficiency system and the trade-off between your initial cost and the monthly operating costs. If you plan to live in the same house five years or more, consider installing a more efficient system.

Size - To work most efficiently, a heat pump's heating and cooling capacity has to match your home's heating and cooling demands. An undersized system won't adequately cool your home, while an oversized one won't dehumidify properly and can make the house feel drafty in the winter and result in high energy bills.

Duct System - This is very important because the heat pump will pump air all through your house using this system. The ductwork must be insulated and sealed properly so the air gets where it's going at the right temperature. Proper construction of the ductwork is essential to ensure efficient operation of the heat pump over the life of the system. Care taken in the initial construction and sealing of the ductwork will yield maximum efficiency from the heat pump for years to come.

Efficiency - The heating efficiency of a heat pump is measured as the Heating Seasonal Performance Factor (HSPF), and the cooling efficiency for these heat pumps is indicated by the Seasonal Energy Efficiency Ratio (SEER). Generally, the higher the number, the better the efficiency of the system.

Installation - When it comes to electric heat pumps, the installation is almost as important as the heat pump itself. The better the installation, the more efficient your electric heat pump will run and the more comfortable the house will feel. It's that simple.

# Air Source Electric Heat Pumps

The most common type of heat pump is the air source unit; there are two basic kinds. The layout of your home will usually determine which one is best for you.

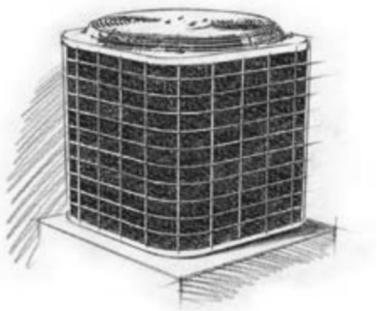
Packaged Heat Pumps - The packaged heat pump is a self-contained unit that allows the compressor and both heat exchangers to be located outside your home. The unit uses ductwork to heat and cool your entire home.

Split-system Heat Pumps - A second type, called the split system heat pump, is the more common of the two air source choices. In this type the indoor air-handling unit and heat exchanger are separate from the compressor and the outdoor exchanger.

# Dual-Fuel Heat Pumps

A dual-fuel heat pump is an electric heat pump and a gas furnace all in one. In the Tennessee Valley, where temperatures are typically above freezing and we enjoy some of the lowest electric rates in the U.S., a heat pump is the most efficient way to heat your home. In those few instances when the temperature drops below freezing, a gas furnace provides heat. By combining the two, you can have the benefits of both systems.

While more costly than conventional heating and cooling systems, dual-fuel units may save money over the life of the system in certain applications.



# Geothermal Heat Pumps

Geothermal heat pumps operate like air-to-air heat pumps, moving heat rather than creating heat; however, they use the ground water to absorb or dissipate heat. And, because the ground or water temperatures are much more constant year-round, warmer in winter and cooler in summer, geothermal heat pumps operate more efficiently.

Geothermal systems circulate water or refrigerant between an underground network of pipes and heat pumps located inside the house. Geothermal systems are fast becoming the system of choice all over the country. They can be installed into a new or existing home.

# Choosing a Contractor

Volunteer Energy Cooperative and TVA have developed the Quality Contractor Network (QCN). QCN members have the skill and the knowledge to install the right system for your home, service your equipment down the road, and even coordinate financing through VEC. QCN members not only stand behind the systems they install, they also stand behind the installation process.

When selecting your new electric heat pump, a QCN member can recommend the proper size unit for your home and ensure that it's a high-efficiency heat pump. While installing or servicing your heat pump, QCN members provide prompt, courteous service while attempting to work with your schedule. They can also explain the details of how to finance your new heat pump through the VEC/TVA EnergyRight Solutions program.

We recommend that you obtain at least three estimates from contractors. Check the contractors' references to ensure that customers are satisfied with their work.

Once your new electric heat pump is installed, a QCN contractor can also show you how to care for the system, including everything from how to change the filter to operating the thermostat. He or she will also advise you on how to recognize symptoms of a pending problem with the equipment.

# Financing a Heat Pump

If you're thinking about purchasing a new residential heating-and-cooling system, now is the perfect time. The EnergyRight Solutions Heat Pump Financing Program can make a new electric heat pump more affordable than ever by offering low-interest financing to pay for qualifying heat pump installation. Low monthly payments will be automatically added to your electric bill and you can take up to 10 years to pay for your system.



# VEC/TVA EnergyRight Solution, Heat Pump Financing Program Guideline,

Homes more than 12 months old can qualify for the VEC/TVA heat pump loan financing program administered by TVA. A list of TVA-qualified (QCN) contractors is available at your local VEC office or on the web at [www.vec.org](http://www.vec.org). Only heat pumps installed by these QCN dealers qualify for financing through this program.

Loans are made to the owner(s) of the property where the heat pump is installed. The heat pump loan, the electric account, and the property Warranty Deed must be listed in the name of the person securing the heat pump loan. If the VEC electric account is in the name of someone other than the property owner, that customer must be a loan co-applicant. A lien will be placed on the property as security for the loan until the loan is paid in full. VEC charges a one-time fee of \$30 per person on the warranty deed, to cover the cost of placing and releasing the security filing lien on the property.

The maximum loan amount for a single electric heat pump is \$12,500. Weatherization measures, such as attic insulation and storm windows, may be included in the loan up to the maximum amount if authorized by the QCN dealer. Only Energy Star equipment qualifies for heat pump financing.

Please direct any questions to Kristy Kelly-Sewell (extension 7055) or Shelly Miller (extension 7051).

**For more information visit:**  
[www.vec.org](http://www.vec.org) or [www.energyright.com](http://www.energyright.com)

**Or phone your local VEC office**  
Benton: 423-338-2569    Byrdstown: 931-864-3685  
Cleveland: 423-476-6571    Crossville: 931-484-3527  
Decatur: 423-334-5721    Hamilton Co.: 423-344-8382  
Jamestown: 931-879-5853    Monterey: 931-839-2217  
Spring City: 423-365-5220

## Step by Step Instructions to Apply for Heat Pump Financing

1. Complete a heat pump loan application by calling your local VEC Customer Service Center and entering extension 7055 or 7051 when prompted. Applications can also be filled out at your local VEC Customer Service Center or downloaded at [www.vec.org](http://www.vec.org).
2. VEC will send the loan application to the bank and notify you by mail of your loan approval or denial, typically within 1 – 2 working days. For a faster response, you can also call VEC to receive the results of your application. Criteria for loan approval include an acceptable credit score and an acceptable VEC pay history. Loan approvals are valid for 90 days.
3. Once you have received a loan approval from VEC, you may interview and choose a contractor from the approved VEC Quality Contractor Network (QCN) list. The QCN contractor you select will process financing paperwork and answer questions for you. We recommend that you request a written estimate of the work to be performed from three approved contractors before making your selection.
4. To complete loan paperwork, you will need to provide an enlarged copy of the driver's licenses for each applicant and a copy of the Warranty Deed of the property where the heat pump is installed.
5. After the heat pump is installed, you may be selected for a random inspection by a qualified inspector at no cost to you.
6. VEC will pay the contractor. Loan payments will be added to your monthly electric bill.

## Estimated Monthly Payments,

TVA sets the interest rates for the heat pump loan program. Once the loan is funded, your rate will not change. Interest rates for the program change periodically. As a guideline, payments for a 6% interest loan for 10 years are shown below. There is no penalty for early payoff. Additional payments on the loan principle can be made at any time.

<u>Loan Amount</u>	<u>Approximate Monthly Payment</u>
\$3,000	\$34
\$3,500	\$39
\$4,000	\$45
\$4,500	\$50
\$5,000	\$56
\$5,500	\$62
\$6,000	\$67
\$6,500	\$73
\$7,000	\$78
\$7,500	\$84
\$8,000	\$89
\$8,500	\$95
\$9,000	\$100
\$9,500	\$106
\$10,000	\$111

# Electric Heat Pumps,

## A Guide to Home Comfort and the VEC/TVA EnergyRight® Solutions Heat Pump Loan Financing Program

