November
2003

Lane-Scott Electric Cooperative

LANE-SCOTT CONNECTIONS

P.O. Box 758, 410 S. High St., Dighton, KS 67839
Phone 620-397-5327

Lane-Scott Electric Cooperative, Inc. Announces NEW HEAT PUMP SERVICE RATE

Effective October 1, 2003 members of Lane-Scott Electric Cooperative, Inc. will have the opportunity to sign up for a new heat pump service rate.

The Heat Pump Service rate will apply to both a new and existing heat pumps, where the consumer permanently installs and uses an electric heat pump as the major source of heating and cooling of the residence. This will include both the air source and ground source heat pumps.

This installation will require a member to install a sub meter for the kilowatts used by the heat pump. Lane-Scott Electric Cooperative, Inc. will supply the meter and socket with the member paying for the cost of installation.

Lane-Scott Electric Cooperative, Inc. requires that the heat pump have a minimum rating of 12 SEER to qualify for the rate.

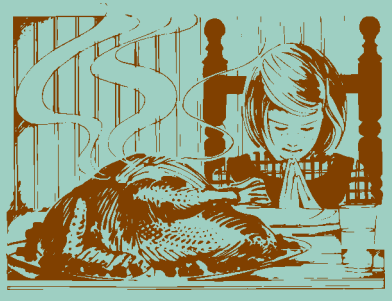
Sunflower Electric Power Corporation has a rebate that Lane-Scott Electric Cooperative, Inc. will pass on for its members as follows:

- Installation of Air to Air Heat Pump $400.00
- Installation of Ground Source Heat Pump with a Minimum of 2.5 ton. $400.00
- For each 1/2 ton over the 2.5 ton with a ground Source heat pump there will added incentive of $100.00

Heat pumps have made great strides in the last few years and have a new level of efficiency that greatly surpasses the older models. It is not uncommon to achieve efficiency rating of 200 to 300 percent. This part of the country has many advantages for heat pump usage and the efficiency it offers to you.

Consider the Heat Pump Service rate as a way to use a more efficient method of heating and cooling your home. Please stop by Lane-Scott Electric Cooperative, Inc. or give us a call and ask for Bob Venters or Earl Steffens.

We wish you a Happy Thanksgiving!



Lane Scott's office will be closed on November 27th and 28th so that we may share Thanksgiving with our families.

In case of emergency call: 1-800-407-2217

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Telephone 397-5327
Owned & Published by
The Lane-Scott Electric Co-op, Inc.
P.O. Box 758
410 S. High St.
Dighton, KS 67839

In Case of Outage

If your electricity is off for more than a few minutes, call Dighton, 1-800-407-2217. Office hours 8:00 a.m. to 5:00 p.m. After hours calls will be answered by the dispatch and forwarded to standby personnel.

After Hours & Weekends Call: 1-800-407-2217

24-Hour Electrician Emergency Service

If you are without electricity, or have an electrical emergency on your side of the meter, we have a master electrician on staff available 24 hours a day. To request after-hours electrician service, call the following number:

1-800-407-2217

Heat Pumps Operate Efficiently All Year

Heat pumps are combination type air-conditioning units that cool at house during the summer and heat it during the winter. They transfer heat from the inside to the outside during the summer and scavenge heat from the outside and transfer it to the inside during the winter.

The source heat pumps (ASHP) are heavily dependent upon the outdoor air temperature as their source of heat during the winter and "sink" for heat during the summer. During the very hot days of the summer, the outside air temperature is high enough that it will not accept a significant amount of additional heat, so the unit must work harder to bring the inside temperature down.

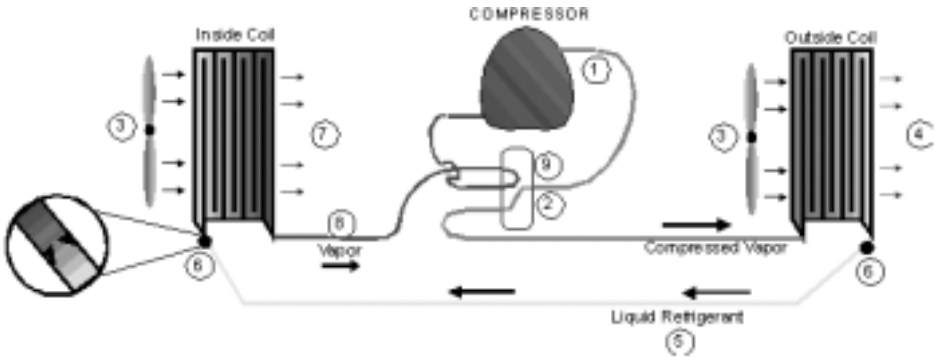
By the same logic, during the winter, there is less heat available in the outdoor air and the unit has less heat energy to draw into the home. For this reason, the air-to-air heat pumps have auxiliary heating elements which go into operation when it gets cold outdoors.

Depending on the age and efficiency of the unit, these auxiliary electric heaters may be used when the outside temperature drops into the mid 30's. As an option, these units may also use backup resistance heating strips.

The ground source heat pumps (GSHP) make use of the earth's temperature as a rather constant source for heating and cooling. Pipes are put into the ground either into deep wells or in trenches at depths of 3 to 5 feet below grade. Fluid is circulated through the pipes to remove or dissipate heat. During the summer, the hate is transferred to the ground.

Since the earth's temperature is about 55 degrees, the fluid is cooled as it circulates through the ground and that cooler fluid is used to absorb heat from the interior of the house during the summer. During the winter, the 55 degree temperature is above the outside temperature, so heat is absorbed from the earth and transferred into the house.

In both cases, the fluid is the heating or cooling agent for the compressor cycle in the heat pump. It does not circulate in the home and the actual heating and cooling temperatures observed in the house are much warmer or colder than the 55 degree fluid temperature because of the unit's compressor operations.



Cooling Mode

A heat pump is essentially an air conditioner with a few additions. A heat pump has a reversing valve, two metering devices and two bypass valves. This allows the unit to provide both A/C and Heat. The diagram above shows a HP (heat pump) in cool mode. The cycle works like this:

The compressor (1) pumps the refrigerant to the reversing valve (2).

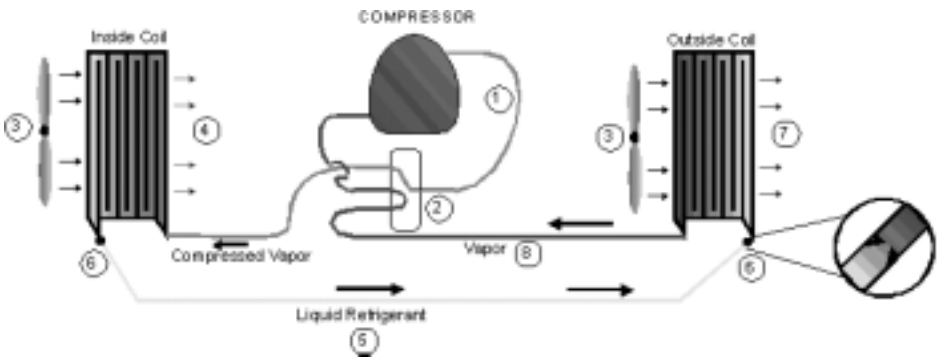
The reversing valve directs the flow to the outside coil 9condenser) where the fan (3) cools and condenses the refrigerant to liquid.

The air flowing across the coil removes heat (4) from the refrigerant.

The liquid refrigerant bypasses the first metering device and flows to the second metering device (6) at the inside coil 9evaporator) where it is metered.

Here it picks up heat energy from the air blowing (3) across the inside coil 9evaporator) and the air comes out cooler (7). This is the air that blows into the home.

The refrigerant vapor (8) then travels back to the reversing valve (9) to be directed to the compressor to start the cycle all over again (1).



Heating Mode

The diagram above shows the heat pump in heat mode. The difference in the two diagrams is the reversing valve (2) directs the compressed refrigerant to the inside coil first. This makes the inside coil the condenser and releases the heat energy (3-4). This heated air is ducted to the home. The outside coil is uesd to collect the heat energy (3-7). This now becomes the evaporator.

Both heating and A/C modes do exactly the same thing. They PUMP HEAT from one location to another. In these examples the heat in the air is moved out of or into the home.

Don't Cover Those Attic Vents

Several procedures should be taken around the house to ready things for winter. But covering your attic vents shouldn't be one of them, says Gene Meyer, Extension mechanical engineer at Kansas State University.

"Attic vents should be left open the entire year," Meyer said. "Attic ventilation performs two vital functions: air flow and moisture removal."

The ventilation allows air to flow through the attic, thus removing the hot air that accumulates in this space during the summer.

During the winter, moisture produced within a home tends to migrate to the outside. Part of this moisture passes through the ceiling into the attic area. If adequate ventilation is not provided during the winter, condensation and frost can occur in the attic space.

"Once this moisture has condensed in the attic space, it can ruin the insulation and cause structural damage," Meyer said. "So it's important to leave this attic ventilation open during the entire year."

Humidity in Winter Can Keep You Comfortable

Operating a humidifier during the winter months has some obvious advantages, like keeping you comfortable at lower temperatures. But it may actually increase your energy costs, says Richard B. Hayter, director of Engineering Extension Programs at Kansas State University.

A portion of the energy used to heat your home is necessary to evaporate water from a humidifying unit. This energy does not contribute to warming the house, so your furnace has to work longer to satisfy the thermostat. The longer it runs, the more fuel you have to pay for at the end of the month, even though you may have been able to stay comfortable at a lower temperature.

"Elevated humidity can reduce the occurrence of sore throats, dry sinuses and other upper respiratory problems associated with dry air, and it tends to tighten a house against unwanted air leaks, too," Hayter said.

At a room temperature of 68 degrees, it shouldn't be necessary to raise the humidity to more than 30 percent. A room is too humid if condensation forms and persists on windows and other cold surfaces throughout the day.

Get Ready for Heating Season

In addition to having a professional service your furnace before winter, you can do a few things yourself to make sure you get the most for your heating dollar.

- Clean and dust warm-air registers, baseboard heaters and radiators.
- Heat-resistant radiator reflectors placed between walls and radiators maximize the heat that stays in the room.
- Caulk and seal openings for plumbing, ducting, or electrical wiring that penetrates through exterior walls, floors, ceilings, and soffits over cabinets.
- Install rubber gaskets behind outlet and switch plates on exterior walls.
- Look for dirty spots in your insulation. These spots often indicate the location of holes that let air leak into and out of your house. Seal the holes by stapling sheets of plastic over the holes and caulking the edges of the plastic.

HEAT PUMP SERVICE

APPLICABILITY:

This rate is applicable to all farm, village and seasonal residential consumers of the Cooperative, subject to the Cooperative's Rules and Regulations, where the Consumer permanently installs and uses an electric heat pump as the major source of heating and cooling of the residence. The Consumer must inform the Cooperative in writing of the equipment installation and receive approval by the Cooperative for the installation. The Cooperative may require a visual inspection of the installation prior to its approval. In addition, the Consumer agrees to allow and pay for the installation of a separate meter to measure energy use applicable to heat pump equipment. Service under this schedule is limited to individual motors up to and including ten (10) horsepower unless motors are of a type approved by Cooperative.

TYPE OF SERVICE

Single-phase at available voltages.

RATE:

Customer Charge ..... $ 10.00 per month
Heat Pump Sub-meter Charge ..... $2.00per month

Energy Charge

July through September ..... $0.09904 per kWh
October through June ..... $0.08904 per kWh
Heat Pump Use ..... $0.06000 per kWh

TERMS of PAYMENT AND SERVICE:

In accordance with the Rules and Regulations of the Cooperative as they currently exist or may be amended from time to time.

Co-op Groups Tell FCC To Proceed With Caution On Broadband Over Power Lines

The prospect of bringing high-speed internet into rural homes over electric distribution lines in the near future should be regarded with caution, co-op groups told the Federal Communications Commission (FCC) in late summer Submitted jointly by the National Rural Electric Cooperative Association (NRECA) and the National Rural Telecommunications Cooperative (NRTC), the comments were filed in response to an earlier call by the FCC for public comment on whether or not it should make changes to rules governing the amount of allowable radio frequency signal emissions from electric power lines—a change that could foster the development of broadband over power line (BPL).

NRECA/NRTC replied that there should be no FCC rule changes regarding radio frequencies until more data is provided from BPL developers about interference.

There has only been very limited deployment of BPL technology within the U.S. today and that has been in areas with relatively dense population and thus little information yet to guide the FCC on whether to make any changes to its radio signal interference rules, the organizations explained.

The comments are based on joint NRTC and Cooperative Research Network (CRN) research dating back to 1997 through a July 2003 conference that showed the additional field testing of BPL, particularly in rural areas with low customer density, should be done before looking for it to be the solution for rural broadband distribution.

The comments noted encouraging signs that technology vendors are making progress towards overcoming the technical and economic hurdles for BPL use in rural areas. "However promising the developments of BPL, the CRN/NRTC investigation also suggests that BPL will not be a commercially viable solution for most rural Americans any time soon," the comments said.

One of the main problems with BPL in rural areas is that the technology requires a signal repeater every one-third to three-fourths of a mile to maintain high-speed Internet access. Rural power lines, however, often stretch for miles between consumers and would require more signal repeaters, which are expensive. Another big obstacle is the cost involved in putting in the backhaul connections to reach to the Internet. Currently, these are the main reasons that BPL is not cost-effective for rural America.

The comments further noted that a lack of standardization in BPL technology could leave utilities and others that invest in BPL with stranded investment in a useless technology if they pick the wrong vendor.

While NRECA and NRTC reported that their members were "keenly interested in BPL", the two organizations also urged the commission not to assume that BPL is the only technology that can provide high-speed Internet access to rural Americans and that rural areas will benefit from a competitive broadband market that offers different ways to get high-speed Internet, such as cable modem, digital subscriber line service (DSL), or wireless options, including satellite Internet.

According to NRTC and NRECA, half of rural Americans have access to the Internet with the majority of that access is limited to dial-up. Industry forecasters say bringing cable modem and DSL into rural homes is a challenge given how thinly rural homes are spread and the current economic downturn in the telecommunications industry.

Internet access via satellite—specifically Ka-band satellite technology—is one of the most promising for rural areas because broadband signals can be delivered to rural areas regardless of how isolated.

Through a partnership with satellite broadband provider WildBlue Communications, Inc., NRTC will offer rural customers virtually anywhere in the continental United States affordable high-speed Internet access in 2004, the comments said.

Electric Co-ops Leaders Urge Congress To Remember Rural Consumers in Energy Bill

Will the 108th Congress pass an energy bill? The question is on everyone's minds as rural electric cooperative leaders prepare to attend a legislative rally centered on the energy bill in Washington, D.C. on Sept. 30th. The U.S. Congress is ambitiously trying to pass an energy bill by mid-October.

"Once again, we are the Davids in a battle among the Goliaths of the electric utility industry. We need to stay united and build the strong grassroots pressure right now," said Dena G. Stoner, vice president of government relations at the National Rural Electric Cooperative Association.

The visits that co-op leaders have planned with their federal legislators come at a crucial time. The energy and electricity-related provisions under consideration right now by Congress could have a profound effect on electric cooperatives and their consumers for decades.

A House-Senate energy conference committee—a panel of House and Senate conferees formed for the purposes of reconciling differences in the energy legislation that has passed both chambers—began its work on the energy bill when it first met on September 7th. The Senate passed its energy bill in late July right before its August recess, and the House passed their version in April 2003.

As of September 29th, energy conference leader and chairman of the Senate Energy and Natural Resources Committee Pete Domenici, (R.-N.M.), is actively negotiating electricity conference language with other conference committee members. NRECA is urging support of Domenici's electricity proposal.

One of the key provisions of Domenici's electricity language will be a small utility exemption from the Federal Energy Regulatory Commission. Without the exemption, small co-ops would face new federal regulations that would impose additional costs on consumer members when the regulations were really intended for large electricity generators.

Stoner urged co-op leaders and consumers to visit the Take Action Network to send the electric co-op message to Congress. That website can be found at http://takeaction.nreca.coop.

Source: NRECA