



# POWER

## Source

September 2018 Vol. 22 No. 9



## Does Your Air Conditioner Have You Heated Up?

**N**oticed a sudden spike in your electric bill? Or, maybe your air conditioner seems to run all the time without cooling the house? Perhaps both?

If you answered yes to any of these, you might be experiencing a malfunctioning HVAC system. More specifically, your system's heat could be operating even though the thermostat is set to "cool." We've actually heard of the heater and the air conditioner running at the same time; working against each other.

What might be causing your heater to activate? Electrical issues within your central AC unit are most likely the cause. Shorted wiring, faulty electronics in your furnace, or an electrical problem with your thermostat, for instance, could all explain the issue.

Bottom line, when you suspect your heater is turning on improperly, contact an HVAC specialist. Working with live wires and electrical components can be very dangerous. But the good news: This issue can typically be reversed with a quick repair.

One of the quickest fixes for this problem: Check to see if your thermostat is, in fact, set to "cool." It sounds overly simplified, but you'd be surprised how easy it is to change settings accidentally.

If your air conditioner is set to cool, a range of issues could be triggering the heater to turn on. The most common include:

### 1. A Faulty Thermostat

Most solutions for this problem require the expertise of an HVAC technician. However, you can do a simple examination of your system's thermostat. If the thermostat has lost power, this could be the source of

your problem. If your thermostat is battery powered, try changing the battery. Also, if you see a blank screen, check to see if a breaker has tripped. Worst case scenario, the thermostat is defective, in which case, you would need to have the thermostat replaced by a trained professional.



### 2. Thermostat Connection is Faulty

The thermostat's connection to the furnace and AC unit may become disconnected or the wiring from the thermostat to the units could short out.

In other words, your thermostat may be in "cool" mode, but the furnace and AC unit have no way of knowing. This can trigger the heater to turn on. These shorts can be caused for many reasons. Common causes are water damage, rodents, and those really pesky critters, the "Do-It-Yourselfers." Ultimately, an HVAC expert can help you restore the connection.

### 3. Electrical Problems at the Furnace

Your AC and heater work in close cooperation together. In fact, even during the cooling cycle, the blower within your furnace is responsible for circulating cooled air throughout the home. That's why the furnace is oftentimes referred to as the "air handler," particularly when you heat with electricity.

Inside the furnace or air handler, there's a complex network of wires and circuit boards. Over time, these boards can malfunction and short out. In nutshell, the furnace's motherboard tells it exactly what to do. When it's not properly communicating, the "cooling" signals the furnace receives from the AC unit and the thermostat can't be properly understood – which can trigger the heater to operate.

See HVAC on PAGE 3

*Manager's Message...***Lance Adkins, GM**

In this third installment of the “early days” of Farmers’ Electric (FEC), the organization is almost six months old and has already accomplished quite a bit. As a brief recap, the Board has been elected by the membership, the Board has hired a Project Manager, authorized the establishment of an office location and bookkeeper, approved a wholesale power supply contract and contracted for the construction of the first 100-miles of distribution line. In addition, the Board established a lending program to help prospective members get their homes wired, plumbed, and purchase appliances. In today’s business environment, with near-instant telecommunications, email, and experienced office support staff, that may not seem like much. For a manager and bookkeeper with little utility experience, that was quite a feat!

Board meeting minutes from August and September reflect that communications were flowing between FEC and the Rural Electrification Administration (REA) on rate design. Just as we do today, rates would need to recover sufficient revenues to cover the cost of wholesale power, operating expense, debt service on the construction loan, and a little margin or “profit” to keep the REA satisfied that the fledgling cooperative was sustainable. Two rate classes were established, Farm and Home, including discounts for homes with an electric range and or water heater; and Commercial, Small Power and three-phase Farm Service. Today FEC has ten separate rate classes and continues to offer special rates for residential members with electric heating and/or water heating systems. Further, the Board reviewed bids for the first meters, awarding the contract to Westinghouse Manufacturing Company of El Paso, Texas in the amount of \$2,436.10. Unfortunately, the minutes do not reflect the number of meters, it would be interesting to know the actual cost per meter.

Rates for Farm and Home service included a \$3.50 base service charge for locations requiring a 5 kVa transformer or less and, if more capacity was required, an additional 70 cents per kVa. In those early days, common transformer sizes in use were 1.5, 3, 5 and 7.5 kVa, with homes with an electric range and water heater likely served by a 7.5 unit. Most homes today, assuming refrigerated air conditioning, are served by a 15 kVa transformer or larger depending on home size and whether a home uses electricity for heating and water heating as well. In general, 10 kVa is the smallest transformer FEC purchases today for overhead service and 25 kVa for underground service, taking advantage of volume discounts available from manufacturers on common transformer sizes. Smaller units are available as specialty items, at a significantly higher cost.

In this day of “disposable” consumer items, even televisions are not really made to be repaired, the transformer serving homes and businesses are still built to provide many years of trouble free service – unless struck by lightning or shot by a frustrated hunter. In fact, a large number of transformers installed in those early days, where

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*Watt Meter Circa 1930's*

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**POWER SOURCE**

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## EARLY DAYS from PAGE 2

limited capacity was required, are still in service today. However, just like the televisions of today, we no longer send failed small transformers off for repair, it just costs less to purchase a new one. Meters have followed a similar path as well. While we test, in house, every meter removed from service that accuracy is within regulatory standards, clean, inspect and make available for service, if any component is questionable, the meter is retired permanently, as the cost to repair is greater than the cost to replace.

Until Next Month,

## HVAC from PAGE 1

### Contacting a Heating and Air Conditioning Specialist to Fix Your System

There's nothing quite as frustrating as a malfunctioning HVAC system. Good news is, most HVAC problems tend to have relatively quick solutions.

In the case of the heater running while you're trying to cool your home, the simplest fix may be changing the batteries in your thermostat or resetting a tripped breaker. Even the more complex problems like circuit board replacement or wiring restoration can be fixed pretty quickly and easily.

If you are experiencing this or any other problem with your heating and cooling system, contact a specialist to do the work. They will take the guess work out of it and have you cooling off before you know it.

## Pole Inspectors in Area

Continuing through the end of September and into October, weather permitting, GLS, Ground Line Services out of San Antonio, Texas, will be testing poles for Farmers' Electric Cooperative (FEC) out of the Weber City Substation. These areas would include, House, Jordan, McAlister, and north of Taiban.

Pole testing is a yearly maintenance program that FEC performs, however, every pole is not tested each year, rather, FEC strives to test each on a ten-year rotation.

This type of maintenance program helps to ensure that FEC can continue to supply the very safest, reliable electricity to our members.

All FEC contractors should be marked as such, "FEC Contractor" on their vehicle. If you have any questions about pole testing or the pole testers, please feel free to contact the office at (800) 445-8541 and ask for Member Services.



## Big Bass Bonanza!

Ute Lake State Park, NM

Open Team Tournament

October 13, 2018

- Entry fee: \$100 per team in advance (check or M/O made payable to **Melrose Senior Center**) \$110 (cash only) day of the tournament.
- 50/50 Payback! \$10 Big Bass Pot!
- This team tournament is a **fund-raiser for the Melrose Senior Citizen Center.**

For more information call Mark Latham at (575) 309-4496 or (575) 799-5412.



# Ask the Energy Guys

Hey Energy Guys! I'm having a new home built and I need service. Which would be better, overhead or underground?



### PROS

- Not vulnerable to damage from tree branches
- Does not interfere with views
- No right of way (tree trimming) required
- Less susceptible to damage from vehicle collisions
- Less vulnerable to blinks when animals and branches contact lines

### CONS

- More expensive to build
- Susceptible to flooding
- Difficult to locate faults
- Expensive to repair
- Fed by overhead lines at some point, making the lines vulnerable to outages and interruptions
- Limitations on voltage that can be buried underground
- Can be vulnerable to dig-ins

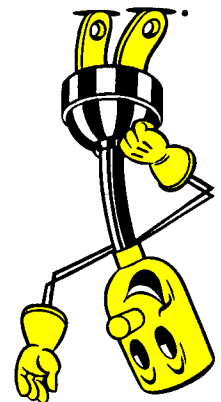
### PROS

- Lower cost
- Quicker to construct
- Easier to spot damage and faults
- Less expensive to repair and upgrade
- Can be built in any terrain
- Any voltage can be placed overhead

### CONS

- Susceptible to wind, ice, and snow
- More vulnerable to damage from trees and vegetation, which requires right of way trimming
- Vulnerable to blinks when animals and branches contact lines
- Susceptible to damage from vehicle collisions
- Less attractive

**“Owned By Those We Serve”**



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