

Power Talk

A monthly publication for members of
United Cooperative Services

Your Touchstone Energy® Cooperative 

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United Cooperative Services continues its Power Cost Education Campaign. Learn more about PCRf and natural gas issues at www.united-cs.com.

Explaining Electric Delivery & Deregulation

Article Written by Landy Bennett, United's Vice President of Marketing & Customer Services

Electric companies produce electricity and then deliver electricity... it's that simple, right? As a member of an electric cooperative, the process really is pretty simple because there are only two entities continuously dealing with the complexities of the relatively new energy market in Texas.

The first entity is Brazos Electric Cooperative, which produces the power. Just as you are a member of United — United is a member of Brazos Electric, our wholesale power provider. They are responsible for the generation and transmission of the electric energy over high voltage lines, which deliver power to more than 40 sub-stations scattered throughout United's service area. Brazos Electric also provides electrical services to 17 other cooperatives.

The cooperative business model works for the benefit of United's members due to the fact that Brazos Electric is governed by the distribution cooperatives they serve and only exists to provide the power demands of those cooperatives. This ultimately should be advantageous to our member.

The second entity involved in this simpler model is your cooperative. United takes all the intricacies and details of delivering the power to each home, farm, retail business and industrial site and strives to perform those task while maintaining a "member-first" focus that is unique to cooperatives.

When deregulation was first introduced in Texas, electric cooperatives like United were given the ability to "opt-in" or take a position to "wait and see" what happened with the industry. United elected to cautiously observe and study the evolution and growth of this new electric energy market. But the fact remains that it has always been United's position that

if the deregulated market ever offered low cost benefits to our members, it would be an option deserving of serious consideration and potential implementation.

At this point, even though the natural gas prices have caused United's prices to increase over

the past few months, the prices offered by all the other retail electric providers have also increased due to those same natural gas prices. The cooperative model of providing electricity should always prove to be a more desirable business model. This is because United's only reason for existence is to provide electricity at the lowest possible cost while keeping service focused on the member.

Now, compare the cooperative model to the deregulated market of today, which is made up of many different players — each with a desire to make as much return on their investment as the market will allow:

- Companies generating power
- Companies buying and selling power in a wholesale market
- Companies required to deliver power at transmission voltage levels
- Companies that schedule power to meet the ebb and flow of electric energy demands and other services

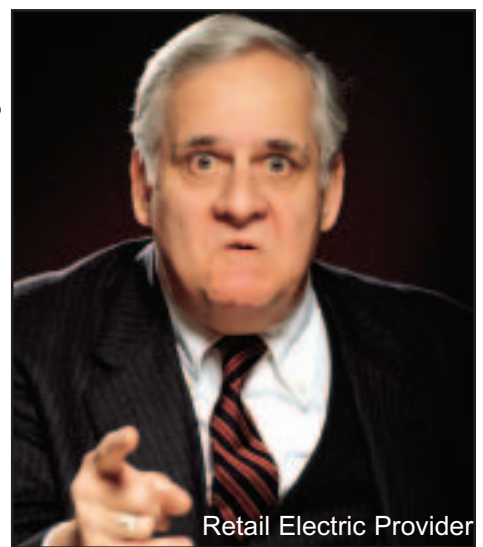
A common thread found in each of these groups above is the driving force to satisfy their investor groups or stockholders. Then, we add another layer of organizations involved with electric generation and delivery:

The Electric Reliability Council of Texas — ERCOT is the organization entrusted to keep electric power flowing to approximately 20 million Texans, representing 85 percent of the state's electric load and about 75 percent of the Texas land area. As the Independent System Operator for its region, ERCOT manages the scheduling of power on an electric grid consisting of 78,000 megawatts of generation capacity and 38,000 miles of transmission lines.

ERCOT also manages financial settlement for participants in the state's deregulated wholesale bulk power market and serves as the central retail transaction hub for the areas of the state now open to competitive choice. As



Electric Cooperative



Retail Electric Provider

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Learning the Basics of Energy Efficient Air Conditioning

Conservation Tips
from United

Power Cost
Education Campaign

Article Written by Mike Majors, United's Key Account Executive

One thing is guaranteed during Texas summers — hot, dry weather. With daytime temperatures consistently reaching the upper 90's and lower 100's, air conditioning systems are getting a workout trying to keep everyone cool during the hottest days of the year.

Air conditioning is by far the largest electric load in the average home. Air conditioning costs account for approximately 50 to 60 percent of the total electric cost for a home. During peak times of year, this percentage can go up even higher.

Even though the hot summer months are ending, since air conditioning has such a large impact on monthly electric bill, United Cooperative Services would like to focus more attention this month on air conditioning. With this article, we hope to show examples of what members can do to increase energy efficiency while in turn lowering their monthly electric bills.

Conditioning Air for Comfort

Air conditioning systems provide comfort by accomplishing four main tasks: (1) temperature control; (2) dehumidification; (3) air movement; and (4) ventilation. AC systems must complete these main tasks at maximum efficiency in order to minimize energy consumption.

To optimize energy efficiency, we recommended you set the thermostat of your AC unit to somewhere between 78 and 80 degrees. Each degree below the recommended setting can add eight percent to your monthly cooling cost. Thus, if a thermostat is set at 72 degrees, the cooling costs (which represent 50 to 60 percent of the total monthly electric bill) can be as much as 64 percent higher than it would be at the recommended thermostat setting.



Burleson Key Accounts Executive Mike Majors



Removing moisture from the inside air (or dehumidification) is also a crucial task of an AC unit. For maximum comfort, the relative humidity within a home should be around 55 percent or less. Above this level and people inside the home will feel clammy and uncomfortable.

Furthermore, at levels above 60 percent relative humidity

indoors, the increased moisture within the home can lead to mold growth, which can cause many health related issues for the home's occupants. It is very important to run an AC unit long enough throughout the day to correctly remove the moisture from the indoor air.

On a hot day, who doesn't enjoy the feeling of cool air blowing across their skin? Air movement is an extremely important function of AC equipment. Removing warm air within the home and replacing it with cold, conditioned air may be the primary function of an AC unit, but what maximizes the comfort is the feeling of that conditioned air as it moves throughout the home.

To help supplement this function, we recommend using ceiling fans within the home. Ceiling fans help move the conditioned air within a home and are inexpensive to use. A ceiling fan running 24 hours a day for an entire month will only cost approximately \$4 in electric costs. Moreover, by blowing cool air across the skin, ceiling fans can actually make the home feel a degree or two cooler and allow for higher thermostat settings.

Ventilation is an often overlooked component of air conditioning, yet it is extremely important from a health standpoint. Replacing stale air within the home with conditioned, filtered air reduces many of the airborne toxins that reside within the home.

AC equipment functions as a filtering mechanism by removing dust and microbes from the air as the unit cycles. This is one reason why it is extremely important to change air filters regularly. A clogged filter reduces air flow and makes the AC unit work harder. In addition, a clogged filter loses the ability to remove more dust and airborne particles from the air, which can lead to respiratory issues for the occupants of the home.

Importance of Properly Sizing an AC Unit

Comfort, efficiency and reliability are closely related to correct sizing and selection of equipment. When a member replaces their air conditioning equipment, "What size unit should I install?" or "Is my AC unit large enough?" are some of the most common questions asked of United's marketing staff throughout the warmer months.

To properly size an AC unit, no rules of thumb are 100 percent accurate but AC units are often sized based on a certain number of tons per square foot of house. Although this

Stephenville Area Manager Jake Brooks & Granbury Key Accounts Manager John Lindsey.



government mandates the minimum SEER unit that can currently be sold is 10 SEER. The highest SEER rating currently on the market is around 18 or 19 SEER. There is a substantial difference in operating cost between a 10 SEER unit and an 18 SEER unit. For example, a three ton 10 SEER unit costs approximately \$0.26 per hour of operation. However, an 18 SEER three ton unit will only cost \$0.14 per hour of operation – nearly half the cost. The chart below shows the difference between various SEER ratings and the cost of operation for a three ton unit.

Maintaining Your AC Equipment

Once the AC unit has been installed, it is equally important to make sure the unit is properly maintained. A unit is at its peak efficiency when it is brand new. However, over time, efficiency can be diminished if the unit is not properly maintained.

Some key areas of AC maintenance are:

- Change AC filters once a month – clogged filters reduce necessary air flow to the unit
- Keep condensing unit (outside unit) free of debris and dirt – clean regularly
- Have the unit professionally inspected and cleaned at least annually.
- Keep obstructions away from return air grills.

AC equipment purchases are one of the largest expense items for any home but with proper maintenance, units can last on average 15 to 20 years. Without proper care and maintenance, AC equipment efficiency will diminish and the life of the equipment will decrease as well.

There are hundreds of ways to make your home energy efficient and save money on your electric bill. As United continues this Power Cost Education Campaign, we will show you more ways to improve your home.

For more information of AC equipment and more conservation tips, please take time to visit the United’s Web site at www.united-cs.com and look in the energy efficiency tips section. You can also contact the Marketing Department of United for more information by calling your local office.

measure is commonly used, it is not a truly accurate way to size AC equipment.

To size AC equipment properly requires a Manual J load calculation. A Manual J load calculation takes all aspects of the structure into consideration when sizing the equipment. Some areas evaluated in a Manual J Load calculation are:

- Type and amount of insulation
- Square footage of windows, doors and walls
- Which direction the home faces
- Amount of attic ventilation (i.e. soffit vents, ridge vents, turbines, etc.)

When purchasing new AC equipment, we strongly recommend a HVAC dealer complete a Manual J load calculation. Properly sized equipment will maximize efficiency and minimize energy consumption.

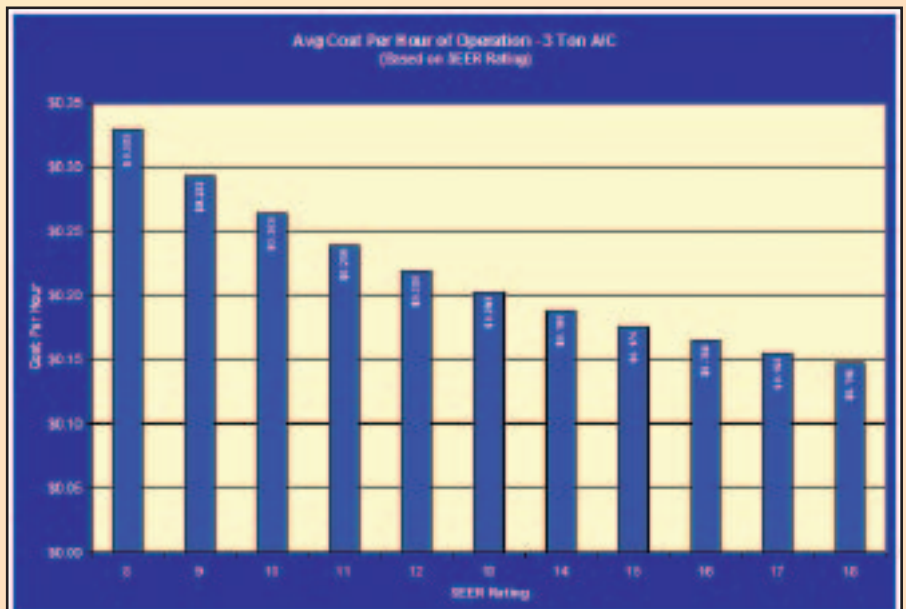
However, equipment that is improperly sized will reduce efficiency while raising cost of operation. An oversized unit will short cycle, which means to cycle on and off frequently. Oversized units cool the air so quickly, the air does not get well dehumidified, leaving occupants feeling cold and clammy. Undersized units will run continuously and never get the house down to the thermostat setting.

Energy Efficiency of AC Equipment

All air conditioning systems have an energy efficiency rating called SEER, which stands for Seasonal Energy Efficiency Ratio. SEER is a measure of the total cooling of an AC unit during its normal annual usage period for cooling, divided by the total electric energy input.

SEER is like a miles per gallon rating for AC equipment. A high SEER unit is more energy efficient than a low SEER unit — less energy is consumed providing the same amount of cooling. For example, a 12 SEER unit is more energy efficient than a 10 SEER unit but is less efficient when compared to a 14 SEER air conditioning unit.

When purchasing a new AC unit, the SEER rating is very important. The U.S.



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Power Talk is a monthly publication produced, written and inserted into this magazine expressly for the members of United Cooperative Services by Communications Director Jocelyn Janota. For information, call (817) 556-4036 or write to jocelyn@united-cs.com.

United's Events Calendar is now available exclusively online as a free service for United's members and their communities.

Check event listings at: <http://www.united-cs.com/events.htm>

Touchstone Energy Tidbit

United Cooperative Services has set the benchmark for what it means to champion the Touchstone Energy brand. Whether through sponsorships, advertising, communications or simply promoting the cooperative difference through their local, state and regional Touchstone Energy initiatives, United has been instrumental in Touchstone Energy's success.

www.touchstoneenergy.com

Your Touchstone Energy® Cooperative 

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Explaining Electric Delivery & Deregulation

one of ten regional reliability councils in North America, ERCOT monitors and enforces industry reliability standards for grid and utility operations.

ERCOT is a non-profit corporation regulated by the Public Utility Commission of Texas and subject to oversight by the Texas Legislature. ERCOT's members include retail consumers, investor- and municipally-owned electric utilities, rural electric co-ops, river authorities, independent generators, power marketers and retail electric providers.

The Public Utility Commission — In 1975, the 64th Texas Legislature enacted the Public Utility Regulatory Act (PURA) and created the Public Utility Commission of Texas (PUC) to regulate the rates and services various utilities. Today, with the changes brought on by deregulation, the PUC is responsible for the following:

- Regulating rates and terms for intra-state transmission service and for distribution service in areas where customer choice has been introduced.
- Oversight and monitoring of the ERCOT market
- Adopting and enforcing rules relating to retail competition, including customer protection, the "price-to-beat" and the renewable energy goal.
- Licensing of retail electric providers and registration of power generation companies.
- Reviewing proposals for the construction of new transmission facilities.
- Regulating rates and service for integrated utilities.

With all these different players/components, the interaction required between each and all results in an extremely complex world of electricity production, sales and delivery. While Brazos Electric and United must operate in that same complex world, the solid foundation of knowledge and experience that has been developed over the years has allowed United to take advantage of the various market products to efficiently meet the power demands members require in their daily lives — whether at home, work or play.

In this cooperative model, you — the member — have only two companies to depend on... and those two companies have similar profit motives. Both United and Brazos Electric strive to remain as financially strong and stable as necessary in order to be around for the long haul. United's long term success will pave the way to continue to provide electric service at the most affordable rates possible. All this to be accomplished so that service is never sacrificed, but rather, raised to higher standards and expectations.

Compare that philosophy with other companies who are driven and/or required to squeeze the most profit dollars from their company's business plan or model. Which utility do you feel more comfortable using?

It is our hope that because of these core differences, United's way of providing electric service will always sustain "The Power that Connects Us."