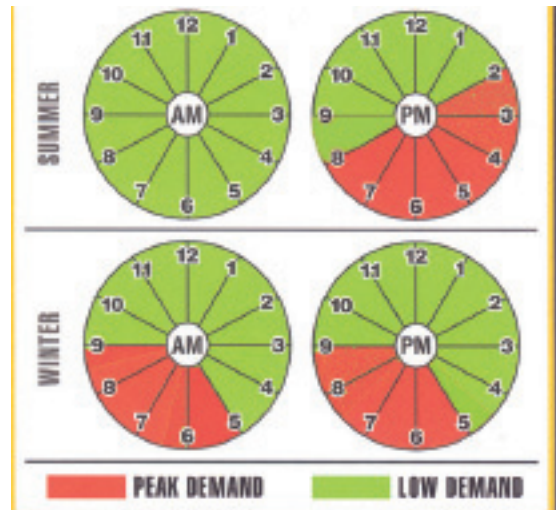


Understanding BHEC's Demand Rate



Reducing Your Costs by Reducing Your Demand



**Black Hills
Electric Cooperative**

A Touchstone Energy® Cooperative 
The power of human connections

A lot has changed in the electric utility industry in recent years. More government regulation of the industry and other costs related to generating electricity have driven members' rates up.

It is important that co-op members understand that the price they pay for electricity is sometimes less than the actual cost to generate it. But by reducing electricity demand or changing the time of day that electricity is used, BHEC's members can reduce system demand, lowering the cost the cooperative pays for electricity, which in turn reduces their own costs.

What is demand?

BHEC defines demand, measured in kilowatts or kW, as how fast you are consuming energy averaged over a 30-minute period. The more electric devices that you use, the greater your demand for electricity. For example, turning on a 2,000-watt room heater for 30 minutes creates a demand of two kW. Turning it on for 15 minutes creates a average demand of one kW.

Why a demand rate?

Demand charges are the way your cooperative pays for the generation and distribution capacity it needs to meet peak demands that occur from time to time. The demand charge your cooperative pays to its wholesale power supplier is calculated on the basis of the highest peak demand during the month. The co-op's power bill also includes the total kilowatt-hours used each month.

A demand rate keeps the cost per kilowatt-hour lower and gives each member the opportunity to control when and how they use electricity and reduce their demand charge. By making a few minor lifestyle changes, including spreading out chores that require large amounts of electricity, a member can reduce the demand on the electric system and reduce his or her own energy costs.

What is the rate?

Your monthly bill is comprised of a customer charge, a charge for the highest on-peak demand, measured in kW, and a charge for the

energy you use, measured in kilowatt-hours. You will be billed for the highest on-peak demand in a 30-minute period for the month. You are not billed for off-peak demand.

How does a demand rate benefit me?

Since BHEC's rate is based on the highest on-peak demand each month, reducing the on-peak demand can save its members thousands of dollars a month. If the co-op's peak demand occurs outside the times of our power supplier's peak, then the peak has no effect on the co-op's power bill.

BHEC's off-peak times limit inconvenience to its members, allowing members to use all the energy they want during these periods. For example, From October 1 through May 31, the member needs to limit his or her demand from 5 to 9 a.m. but can resume their normal use after 9 a.m. until 5 p.m. when they need to limit their demand until 9 p.m. Then, they may continue normal use after that until the morning on-peak period. **There is no demand limit on weekends and certain holidays.**

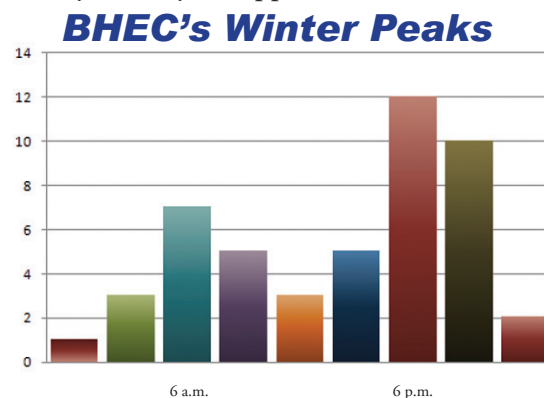
By making a conscientious effort to limit your use during these times, you can reduce your power costs and your cooperative's costs.

How can I reduce my demand?

Reducing peak demand is not about stopping the use of electricity altogether but about thinking when and how you use your appliances.

From June 1 through September 30, most of us tend to use more electricity in the afternoon between 2 and 8 p.m. This is when we switch on air conditioning, the TV and/or computer, and start cooking, taking showers and washing clothes. All of this activity contributes to a significant spike in residential energy use and the co-op's peak demand.

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The winter peaks are in the morning from 5 to 9 and in the evening from 5 to 9.

It's important to understand that you will only be billed for highest demand during the peak period or periods each month. That means you can control your electric costs by staggering the use of different equipment or using large loads off peak. For example, if you were to simultaneously operate a 4.5 kW water heater and a 5.5 kW dryer during the peak period, you would record 10 kW on the demand meter. However, if you were to alternately operate these appliances during the peak period, the maximum reading would only be 5.5 kW because the 5.5 kW dryer only operates when the 4.5 kW water heater is off and the meter only stores the highest demand. If you used both appliances off peak, your meter would register zero demand during the peak period and there would be no demand charge.

Is there an easy way to regulate my demand?

You may control your demand manually by keeping large loads off during the peak periods or by using timers and switches on your large loads. BHEC also sells a demand controller, which is an electronic device that automatically monitors your home's electrical use. You set a demand that you feel you can live with during the peak periods and the demand controller maintains that setting.

How does a demand controller work?

A demand controller manages your total electric use by controlling the major electric appliances in your home. The appliances that are controlled are your water heater, clothes dryer and heating and cooling system and hot tub if available.

When the demand exceeds your preset kW limit, the unit will control the operation of the appliance, avoiding a demand that is more than your kW setting. If your demand exceeds the limit, an audible alarm will sound. The unit controls your appliances on a time cycle to avoid keeping specific appliances off for too long.

The demand controller allows you to set the priority of how your equipment will be managed and controlled.

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Will my lights, TV, computer, stove, etc., be controlled?

No, the demand controller is not designed to shut off smaller electrical equipment. However, it will monitor the total electrical use in your home in order to determine the total demand used at a given time. Depending on your demand controller's kW setting, operating non-controlled appliances may sound a alarm.

Do I need a demand controller?

No, you may control your demand without a demand controller by scheduling your major use at different times. However, it will be easier to manage your demand with a demand controller.

Is my meter different?

No, your meter is automatically read by the co-op. The meter records the total energy used, the highest demand measured for the month and the highest demand measured in the peak period(s). Once the information is downloaded by the cooperative, your demand is reset to zero for the next billing period. The kilowatt-hour reading is not reset. The co-op's billing software subtracts the previous month's kilowatt-hour reading from the current month's kWh reading to calculate your monthly use.

What are Some Typical Appliance Demands?

The wattage of your appliances may be found on the manufacturer's nameplate attached to the appliance. If it is not listed, multiplying amperage by the voltage will give you watts. Dividing watts by 1,000 will give you kW.

The table on page 6 lists the demand for some common appliances. The demand for electric heat is based on the size of the heater. A 450-watt cove heater will have a demand of .45 kW. A 25,000-watt forced

air furnace will have a demand of 25 kW. Air conditioning units have a demand of one to five kW.

Appliance Demand in kW	
(Over 30-min. period)	
Dryer	5.0
Water Heater	4.5
Oven	4.0
Range (large burner)	2.5
Broiler	2.5
Microwave Oven	1.4
Range (small burner)	1.3
Dishwasher	1.2
Frying Pan	1.2
Toaster	1.2
Hair Dryer	1.2
Iron	1.0
Coffee Maker	.9
Vacuum Cleaner	.7
Refrigerator	.5
Washing Machine	.5
Desktop Computer	.2
52" LED TV	.067

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**673-4461 or
1-800-742-0085**



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