



DIVING DEEPER INTO ENERGY DEMAND



By Jesse Singerhouse, General Manager

Last month we started to talk more about energy demand and how that impacts your

electricity bill. For members, demand is the single instance in the month that your energy use hits its peak. For the Cooperative, there are three different demand components: transmission, capacity, and coincident peaks. It can be a complicated topic for those who don't work in the energy industry. My hope is that we provide enough information here and in the following pages to help you have a better understanding of the components of your energy bill.

Just like each of our members receives an energy bill each month, Dunn Energy also receives a bill each month. However, ours comes from Dairyland Power Cooperative, the generation and transmission cooperative that we are a member-owner of. This bill reflects the cost of generating the electricity we use, the cost of transmitting electricity to our area, and our portion of the cost of the infrastructure (power plants, poles, etc.) needed to cover our peak energy

demand. When we break down our bill, it shows that 52% of the cost is related to our peak demand and 48% is related to the energy used. To put that from a financial perspective, our power bill for December was \$1.6 million dollars. That means about \$830,000 of the bill was

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related to peak demand costs alone, with the balance attributed to the energy used.

Dunn Energy currently bills residential accounts for an energy charge based on the amount of electricity you consume, as well as a fixed monthly charge that is intended to recover the costs of our local distribution system. We do not currently bill our residential members a demand component. That cost is recovered by the per kWh rate. As I mentioned last month, our board is considering breaking down the electricity charges to include a demand component as well as an energy component to better (7601001)

reflect how we are being billed for producing, transmitting, and distributing electricity to you.

January showed us why it is so important to understand peak demand. Winter storm Fern, and the severe cold temperatures during the last two weeks of January, had a significant impact on our energy grid. The storm and cold temperatures covered a large portion of the Midwest and sent demand levels soaring. Energy prices followed suit, with natural gas prices also increasing. Natural gas is used to generate much of our peak electricity.

Thankfully, our grid remained resilient, and our all-of-the-above energy strategy helped to keep the lights on. Many of you helped as well. I'd like to thank those of you who participate in the load management program, as well as those who saw our social media posts and voluntarily shifted non-essential energy outside of the peak demand time. Your participation made a difference during winter storm Fern.

Working for You

LET'S TALK ABOUT DEMAND AND HOW TO REDUCE IT

Over the years you've probably heard us talk about "The Summer Shift", when we ask you to move non-essential energy use outside of a specific set of hours. Starting this year, you will see us asking you to shift non-essential energy usage outside of peak hours more often – not just in the summer months.

Why are we making this change?

Dunn Energy Cooperative is billed by our power provider, Dairyland Power Cooperative, not only on the energy you use, but also the demand created during peak hours throughout the year. If we can lower the peak of our system demand, with members moving their non-essential energy use outside of specific hours, we can possibly reduce our wholesale power bill. By doing this, the cooperative saves money, which reduces pressure on rates.

What is non-essential energy use?

When we ask you to shift non-essential energy usage, the appliances that will make the most impact are your dishwasher, clothes washer, dryer, pool pump, humidifiers

and dehumidifiers, hot tubs, and anything else you don't particularly need to have to survive during that time.

How does me changing when I use it make a difference?

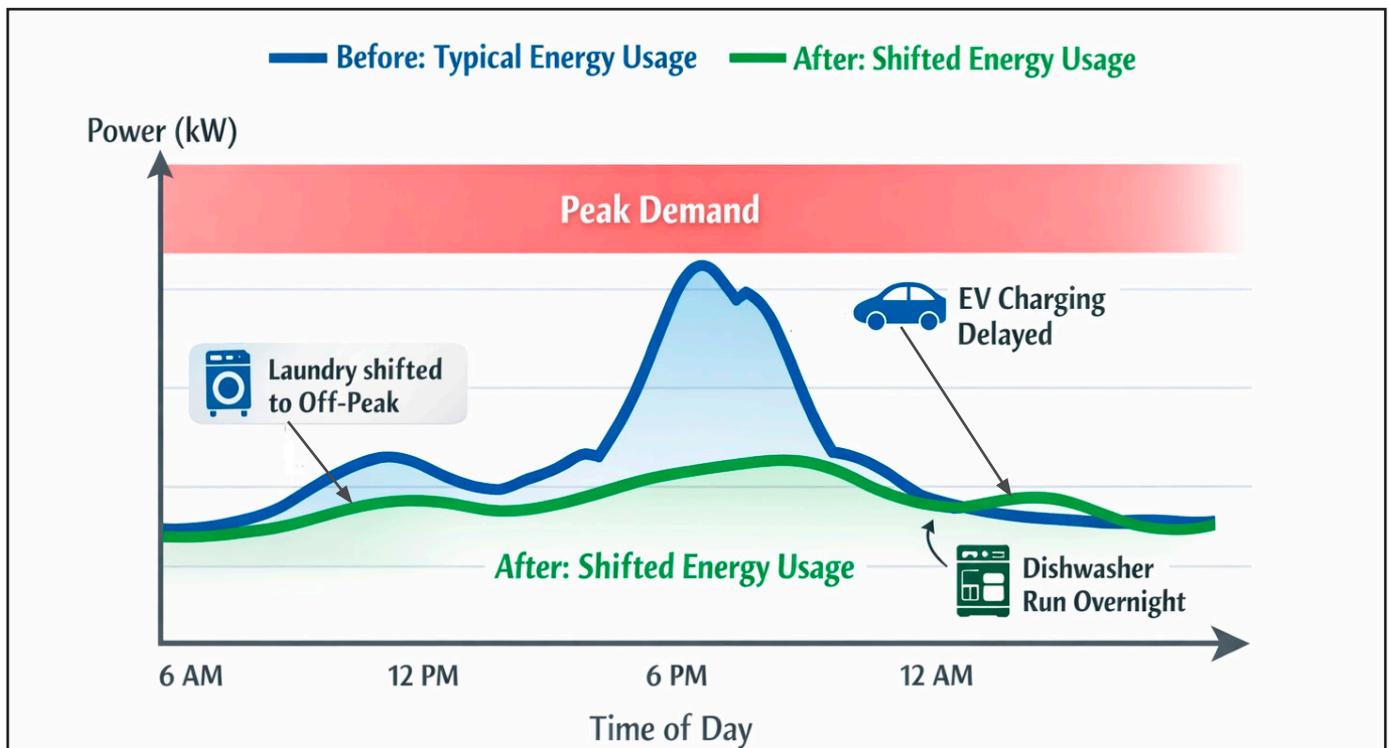
Well, let's look at a typical evening in an average home.

5 p.m. – Family starts arriving home from work and school activities; lights and TV get turned on.

5-6 p.m. – Supper starts up: refrigerator compressor starts running because the doors open and close a few times, stovetop or oven are turned on, microwave gets used, and (depending on season) the A/C or heat kicks in.

6-7 p.m. – After-activity showers are taken and the water heater kicks on, exhaust fans are running, clothes are thrown in the washing machine, clothes left in the dryer from this morning are fluffed, and you might as well vacuum the floor while you're tidying up, right?

7-8 p.m. – Dinner is finished, dishwasher is loaded and started, and kids head to their rooms for homework (more



The blue line shows typical daily energy use with a sharp peak in the evening, while the green line illustrates how shifting activities—like laundry, EV charging, and running the dishwasher—to off-peak hours helps reduce peak demand and balance energy use across the day.

lights are turned on and computers are plugged in for charging).

8-9 p.m. – The evening starts quieting down – clothes are folded with the next load getting put in the dryer and lights are turned off one by one.

You can see how energy use is stacked up (refrigerator, washer, dryer, water heater, exhaust fans, HVAC all running at once). When this happens, this creates your home’s peak demand, the singular point in

If every member unstacked their energy use by using one thing at a time instead of all at one, that peak in our system demand would flatten, bringing down the amount Dunn Energy is billed that month...

the day when your demand for energy is at its highest. Now, we know not every home is like this, but based on academic research, we know that something to this effect is happening on our system, because we can see the increase in request for power that creates the Dunn Energy system-wide peak demand. (140018347)

If every member unstacked their energy use by using one thing at a time instead of all at once, that peak in our system demand would flatten, bringing down the amount Dunn Energy is billed that month, which ultimately benefits the membership.

However, when you hear us talk about any sort of Energy Shift, we’re most likely going to ask members to move energy usage outside of a larger set of hours than just our three highest. We ask for that larger window due to the fact that purchasing energy when grid usage is high costs more. By grid, we’re talking more than just the Dunn Energy system. We’re talking about the whole midwestern electrical grid. As a part of MISO,

UNDERSTANDING DEMAND

As more appliances in your home run at the same time, your demand for power increases. The members in the following example use the same amount of energy to run their appliances, but each member is putting a different demand on the electric grid.

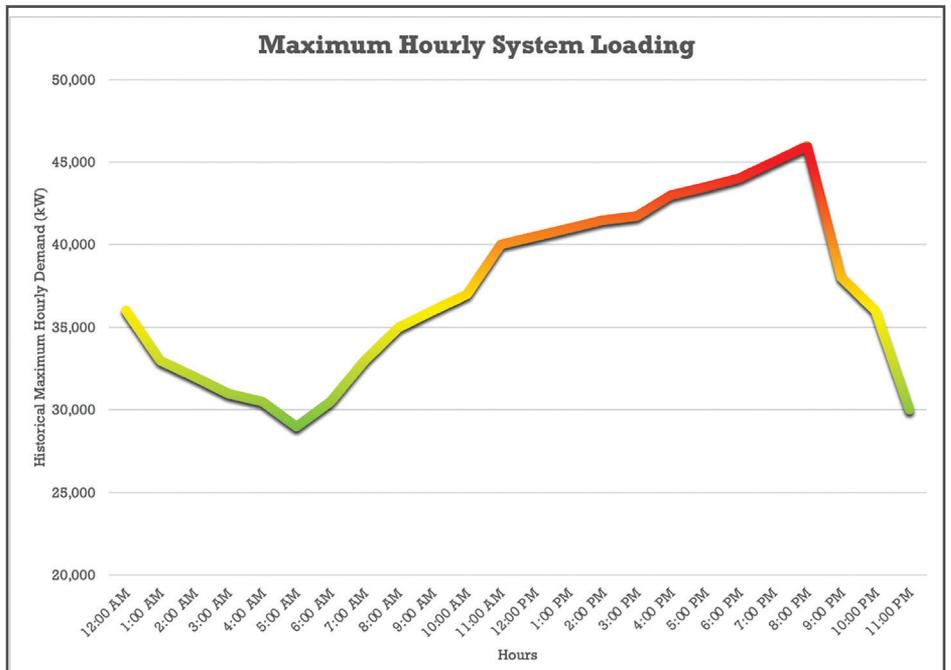
Megan cooks her food for one hour, then runs the dishwasher the next hour.

Megan:
Energy: 3.3 KWh
Demand 1.8 kW

Jason runs the dishwasher during the same hour he cooks his food.

Jason:
Energy: 3.3 KWh
Demand 3.3 kW

Average Appliance Use (60 min runtime)
Range: 1500 Watts = 1.5kWh/1.5kW
Dishwasher: 1800 Watts = 1.8kWh/1.8kW



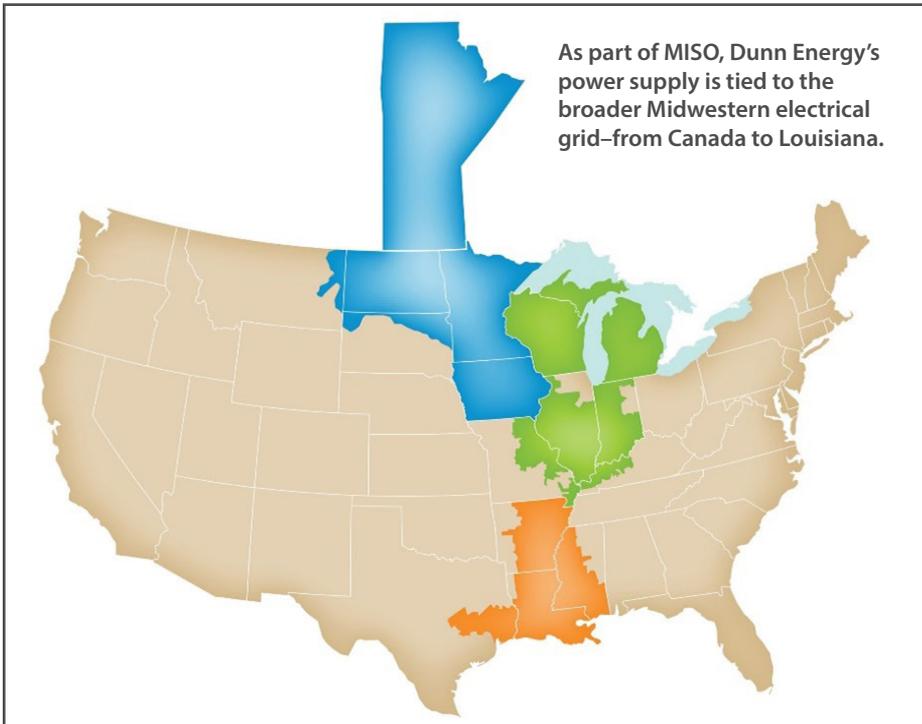
This chart shows the historical maximum hourly system load in 2025 with demand lowest in the early morning hours and rising steadily to an early evening peak before tapering off overnight.

the Midcontinent Independent System Operator, our energy use and demand are tied with electric utilities from Canada to Louisiana. So, the larger window for shifting usage helps reduce demand across a greater portion of the Midwest, not just on our system.

The easiest way for members to help is to enroll eligible devices—your central air conditioning or electric water heater—in the load management program. There is no cost to enroll. Our Energy Specialist will install a controller near the unit that then receives a signal

when demand is high and the system needs to shed load.

So next time you hear us on the radio or see a social media post asking for you to do an Energy Shift, you know why, and you can do your part to help your cooperative use energy wisely.



Typical Energy Shifting Times

 **June-August:** 2-6 p.m.

 **December-February:** 7-10 a.m. or 5-8 p.m.

 **All other months:** Unexpectedly hot or cold days

As our local grid is tied to the entire Midwest region, a request for an energy shift may be due to circumstances in other regions of the MISO footprint.

Hidden Account Numbers

If you find your account number hidden in the pages of this magazine and you call and tell us before the next issue is mailed, we'll put a **\$50 credit** on your electric bill. Happy hunting!

Last month's winners: Mike Harsh and Matthew & Amy Travis

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