"KNOWING THE RULES WILL LET YOU PLAY THE GAME"

By Jacob Gardner

As a municipal electric consumer, it is likely that a large portion of your monthly electric bill is composed of demand charges. Demand charges are part of the delivery portion of your utility bills, the portion of your bill that goes to the cost of maintaining the electric grid that delivers electricity to your facility. Electricity, as a commodity, needs to be generated, transported, sold, and consumed all at the same time. This leads electric utilities to constantly balance electric generation with consumer demand. Demand charges are a penalty of sorts for drawing too much power out of the grid at one time. This charge is calculated in Kilowatts and represents the most electricity drawn from the grid at a single time.

As large motors start, they draw an amount of electricity much larger than when they normally operate. This spike is what gets measured when your electric utility is determining your demand charge for the month. The average cost for demand that we see across the state is $10.31 per KW, but I have assessed systems as low as $8.67/KW and as high as $17.00/KW. Demand can make up 75% of your system's delivery fees, but there are several simple ways to help mitigate that charge.

The first step is to understand how your utility provider is determining your demand charge. In most cases it is by the largest spike during any 15-minute period during the month, but some utilities will have a period that is 30 minutes or even an hour long. If you are not able to find an explanation of the charge on your monthly electric bill it is important to contact your customer representative and identify how the charge is calculated. Understanding the rules that you are playing by will allow you to start to actively game your charge.

Many times, the best way to mitigate your demand charge is to adjust your operating procedures. If you are, for example, a water system with two well pumps that produce similarly and each pump for 4 hours per day, you could reduce your demand charge by running one pump, waiting 15-30 minutes, then running the other pump. Alternatively, you could just use one pump per day and let it run for 8 hours per day.

Adjusting the pumping schedule in this way will cause the spike from each motor start up to show up in two different fifteen-minute periods on your electric meter. Some processes cannot be decoupled, but any time you can stagger the startup of equipment you stand to reduce your demand charge.

Another technique for reducing demand is known as kilowatt shaving. The generators you have at your facilities can save you in an emergency, but they can also save you on your monthly electric bill. There are times that you will have to start multiple pieces of equipment in a short period of time, like after a power outage or control failure, and operating your generators when restarting your plant will produce electricity that can offset the amount of electricity you are drawing from the grid. This practice is known as kilowatt shavings.

While it can be painful to see your demand charges in your monthly bills, you can learn the rules and game the system. If you would like help finding ways to reduce your system's demand, and overall, electric charges, please contact us for a free and confidential energy assessment. 💧💧💧

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