



Demand Charge Q & A

Some commercial and industrial customers of CRMU are charged a demand charge. The demand charge is based on the maximum amount of electricity that is needed for these customers.

How does electrical consumption (kWh) relate to demand (kW)?

Demand (kW) is the average kilowatt load over a specified interval of time. Because electricity cannot be stored, the cost of serving a customer who runs a 100-hp motor for 1 hour a day is much greater than the cost to serve a customer who operates a 10-hp motor 10 hours a day, even though both consume the same amount of energy (kWh). The 100-hp motor creates a larger demand (kW) and requires larger generating capacity, heavier cables to carry the electrical energy, larger transformers, switches, fuses, and protective apparatus.

What is a demand charge?

Demand charges are customer fees which the utility charges to electricity users to recover the costs of providing maximum electrical load. CRMU pays demand charges to its wholesale electricity supplier, the North Iowa Municipal Electric Cooperative Association (NIMECA). CRMU also must build and maintain equipment and extra capacity to be able to satisfy the customers' maximum load requirement.

Why not just raise the energy consumption (kWh) cost to cover demand?

It is not equitable to raise the energy charge for all users because small customers with constant loads would be paying for equipment used only by large customers with varying loads.

How does CRMU select which customers get a demand meter?

Demand rate schedules may be applied if CRMU deems that a customer uses, or will use, a sufficient amount of service to justify demand metering – generally 50 kW and above.

How is a customer's monthly demand use determined?

The CRMU demand meter registers in 15-minute blocks of time. The billed demand is based on the highest demand for any 15-minute block of time in the billing cycle. The demand meter is reset each billing cycle once it has been read and recorded.

What type of meter is used to measure demand?

A demand meter can be thought of as a standard watt-hour meter which has the ability to measure load over a specific interval of time. The new demand meters are microprocessor-based instead of electromechanical, and just as the cost of computers have dropped, so have the cost of demand meters while accuracy has increased.

What can I do to limit my demand charges?

Reducing demand charges or "demand leveling" can be as simple as rescheduling the time when equipment is started to avoid simultaneous use during any 15-minute cycle. More sophisticated energy management activities include demand controllers which typically shed discretionary loads (heating, air conditioning, ventilation fans, electric hot water tanks, refrigerators/freezers, and air compressors) for short periods of time. These loads have "flywheel" capacity so they can be interrupted for short periods without affecting people or business operations. One common problem that can occur is short-cycling, which can be destructive to loads like air conditioners and large motors. These types of loads should be assigned minimum on/off times or duty cycles to prevent problems.