

# Tips to reduce your rink's electrical demand charges

What is a demand charge?

The monthly electrical demand charges are based on the peak electrical use recorded during any 20 minute interval that exceeds 50 kilovolt-amperes (kVA) during the billing period. In almost all artificial ice rinks (but not in natural ice rinks and smaller curling rinks), electrical demand is high enough (greater than 50 kVA) that the rink must pay electrical demand charges.



The demand charge will be a large part of the bill if the customer uses a lot of power over a short period of time, and a smaller part of the bill if the customer uses power at a more constant rate throughout the month.

For example, a customer using 200 kVA over half an hour uses the same amount of electricity as a customer using 100 kVA over one hour. Both ultimately used the same amount of electricity, but the first customer demanded electricity at a rate of 200 kVA per half hour. The second customer demanded electricity at a rate of 100 kVA per half hour over a longer period of time. The first customer's demand - or rate at which that customer requires the electric energy to be delivered - was twice that of the second customer.

While both customers are charged for the same amount of energy, it costs SaskPower more to serve the higher-demand customer. This is because SaskPower must have sufficient facilities in place to meet each customer's highest demand for electricity at all times. The demand charge reflects this higher cost of service.

See reverse for some ways to reduce your rink's demand charges.

For more information visit [saskpower.com/rinks](http://saskpower.com/rinks)



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1. Avoid demand charges for one month in the fall by not starting the refrigeration compressors until after the meter has been read.
2. Similarly, avoid one month's electrical demand charges by not running the refrigeration compressors once the meter has been read in the month of shutdown for the season.
3. Add power factor correction to help reduce the peak electrical demand for rinks with artificial ice.
4. In cold weather consider operating only one refrigeration compressor at a time. This can result in significant savings to your demand charges and overall electricity use.
5. Rink start-up is typically when the greatest electrical demand peak is reached. This sets the minimum bill for the next 11 months. Make every effort to minimize the use of non-essential electrical equipment such as drink coolers, refrigerators, freezers, etc. during this critical start-up period.
6. When replacing electrical motors on the ice plant and brine pump, choose the highest efficiency (called premium efficiency) motors.
7. Stage big-power activities, like starting the ice plant and turning on arena lights, at least 20 minutes apart.
8. Install demand-limiting equipment and controls (usually within computerized energy management system) that senses when a new demand peak is approaching and immediately warns building operator or automatically shuts off non-critical loads.
9. Speak with your SaskPower Business Manager to determine if adding a separate service for the ice plant is cost effective.
10. Disconnect your ice plant meter during off-season months.
11. Shave ice as part of daily maintenance to maintain 1" ice thickness. The amount of power required to keep ice frozen increases incrementally based on its thickness.

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