

UNDERSTANDING ELECTRIC DEMAND

At first glance, the Municipal Utility Board bill you receive at your business looks a lot like the one you receive at home. There is an energy charge billed in kilowatt-hours. Then there is a charge that is quite different than anything you have seen on your bill at home: it's the demand charge.

Whenever you turn on a piece of equipment, you expect there will be enough power available to operate it. Because electricity isn't stored, it must be generated, as it is needed, the Municipal Utility Board must have access to enough generating and distribution capacity to meet all customers' maximum power needs. Demand business customers pay a separate demand charge to cover the cost of having this capacity in reserve. Residential customers and regular business customers pay for this capacity through a higher residential energy rate.

It is a bit like owning a car. You have to make loan and insurance payments no matter how much you drive. Those are fixed costs. If you drive only down to the corner store once a week, the cost per mile for driving will be very high.

Here is an example of how demand works. Say you have two large motors, each rated at 25 kilowatts (kw). Operating one motor creates 25 kw of demand. Operating both motors at the same time creates 50 kw of demand. If your operation allows, you can reduce demand charges by staggering motor use, so that only one runs at a time.

To measure demand, electric meters at business locations record the average demand over each 15-minute period. Because this is an average, a short spike, such as a power surge when a motor starts up, will have a negligible demand measurement for that period. On the other hand, equipment that operates for longer periods will increase electric demand.

In many cases, you can manage your demand with controls, changes in your operation or improvements to equipment efficiency. This means lower utility generation and distribution cost, and lower bills for you.