ENERGY® wise

Demand Charge
Irrigators

Understanding Demand & Demand Charges

What is demand charge?

Demand charge is based on each customer's maximum "demand" on the cooperative's distribution system. "Demand" is the total amount of electricity being used at any one time and is measured in kilowatts.

Runestone Electric monitors this demand in 15-minute intervals on a monthly basis. That means the 15 minutes that your business is consuming (or "demanding") the most electricity in a given month establishes your demand for the month. You are then billed accordingly.

To illustrate how demand charge can affect your bill, let's look at a few examples:

We will use a 50 hp irrigator well pump that uses 37 kW with a pivot that uses 3 kW. Combined, the system will have a demand of 40 kW.

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kW = kilowatt (demand)
kWh = kilowatt-hour (energy)

Irrigation Energy Charge: $.0985/kWh

Demand Charges:
Controlled Off-Peak Rate - $5/kW
Uncontrolled Rate - $20/kW

Blended cost: energy + demand
          (kWh) + (kW)

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#1   Moving the pivot could take 3 hours
         Demand = 3 kW
              3 kW x 3 hours = 9 kWh
              9 kWh @ $.0985 = $.89
              3kW @ $5.00 = $15.00 Demand
                        Total $15.89
         Blended cost $1.76 / kWh

#2   Running the **total** system for one circle - 30 hours
         Demand = 40 kW
            40 kW x 30 hours = 1,200 kWh
         1,200 kWh x $.0985 = $118.20
              40 kWh x $5.00 = $200.00 Demand
                        Total $318.20
         Blended cost $.27 / kWh

#3   Running the **total** system for four circles - 120 hours
         Demand = 40 kW
            40 kW x 120 hours = 4,800 kWh
         4,800 kWh x $.0985 = $472.80
              40 kWh x $5.00 = $200.00 Demand
                        Total $472.80
         Blended cost $.14 / kWh

See back for more information

Why are demand charges used?

Demand charges are the way your co-op pays for generation and distribution capacity it needs to meet peak loads that occur from time to time.

The demand charge your co-op pays is calculated on the basis of the highest demand or load over a period of 15 minutes during the month. We use the same method to bill demand to our demand rate customers.

How can demand charges be reduced?

Participating in Runestone Electric's Off-Peak program is the first step in reducing your demand charge. With the Controlled Off-Peak Irrigation rate, members allow power to their irrigators to be interrupted for up to four hours per day when demand for electricity is high (i.e. on a hot summer day). Control times are usually 4:00 to 8:00 p.m. Systems may be equipped with automatic or manual restart.

An irrigation example would be: it is mid June and your irrigator has not been used. You want to be sure it is working before you need it in July. You know that your meter is read at the end of the month or close to the end of the month. It is better to wait and run your irrigator at the beginning of the month than it is to operate the irrigator for a short period of time before the meter is read. If you operate the irrigator in June, you will be billed for the energy used, plus a demand charge for the whole month of June.

Who is charged a demand charge?

Basically, larger customers who have a high demand for electricity at any given period during a month are charged demand.

This would include:
• Three phase customers requiring a transformer over 50 KVA
• Single phase customers requiring a transformer over 75 KVA
• Irrigators

What more can you do to reduce your demand charge?

Consult the energy experts at Runestone Electric to help you evaluate your load factor. We are happy to help you evaluate ways to improve the energy efficiency of your operation.

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