

Power Factor Charges – Frequently Asked Questions

In general terms, what is meant by “power factor?”

Power factor is a ratio of working power, which is metered and billed in kW (kilowatts), to apparent power which is measure in kVA (kilovolt-amps). A high power factor (95% or higher) signals effective utilization of electrical power, while a low power factor (less than 95%) indicates poor utilization of electrical power. Low power factor leads to higher than necessary system losses in VEC’s transformers, conductors and other equipment. Power factor is not the same as *efficiency*. A facility may be very efficient, but have low power factor due to the make-up of the loads served.

How can a low power factor at a member’s property impact what that member pays for electricity?

VEC’s large user power tariffs provide for a minimum monthly average power factor, below which the member will see power factor charges. A large power user with high demand and low power factor will see the highest charges.

Services where there is a high percentage of inductive loads, such as motors, compressors, ballasts, and dry-type transformers will usually have a lower power factor. Motors that must be oversized, but don’t always utilize their full rated horsepower, are particularly poor.

What types of members are typically subject to power factor charges?

Accounts with usage of 30,000 kWh per month for any two consecutive months can be subject to power factor charges. These members may be middle/high schools, large farms, sawmills, manufacturing facilities and sometimes even larger retail establishments like convenience and grocery stores.

What can members do to be sure they are not subject to power factor charges?

Before assessing power factor charges to members with low power factor, VEC allows members a two-month window to evaluate options and/or take corrective measures. Your electrician may be able to help, but it is always best to start with VEC. Members can install equipment that corrects the power factor so that they are not subject to the power factor charges. This is usually a one-time correction. VEC can help the member calculate whether installing equipment to correct the power factor deficiency – and thereby avoid the power factor monthly charge – is worth the investment.

Who can I talk to if I need more information?

Contact Key Accounts Manager Dave Lahar at dlahar@vermontelectric.coop