

ELECTRIC RATES AND PROVISIONS

SCHEDULE PF

POWER FACTOR RATE

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The monthly charge for average monthly power factors below 0.97 shall be as follows:

0.15¢ per kVarh

Section 21.49.080

- A. When any inductive load causes unsatisfactory conditions on the Department's system due to induction, the Department may, at its discretion, install reactive kVA-hour meters and make a monthly charge in addition to demand and energy charges whenever electricity delivered to the customer has an average monthly power factor of less than 0.97.
- B. Unless specifically otherwise agreed, the Department shall not be obligated to deliver electricity to the customer at any time at a power factor below 0.85.
- C. The average power factor is determined as follows:

$$\text{AveragePowerFactor} = \frac{kWh}{\sqrt{(kWh)^2 + (kvarh)^2}}$$

For application of the Power Factor Rate, the Average Power Factor calculated with this formula will not be rounded.

- D. The meter for measurement of reactive kVA hours shall be ratcheted to prevent reverse registration.
- E. All installations of power factor corrective equipment shall be subject to the approval of the Department. The customer's corrective equipment shall be switched with the load so that at no time will it supply leading reactive kVAs to the Department's distribution system unless written Department approval is obtained to do so.
- F. This monthly charge may be waived in whole or in part to the extent that the Department determines that a power factor of less than 0.97 would be advantageous to the Department or if the addition of corrective equipment would be detrimental to the operation of the Department's distribution system.

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- G. Customers who install new or enlarged arc furnaces shall install static VAR generators for flicker control and power factor correction for the entire arc furnace load. The generators shall have one-half (1/2) cycle response time and independent phase control, supply sufficient reactive power to prevent objectionable flicker at the common connection point of the arc furnace with other utility customers, maintain a minimum power factor of 0.97, and be filtered to limit the total harmonic current to no more than the percentage of fundamental current given in "IEEE Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, IEEE-519," latest revision.