

Is Low Power Factor increasing your Utility Bill?

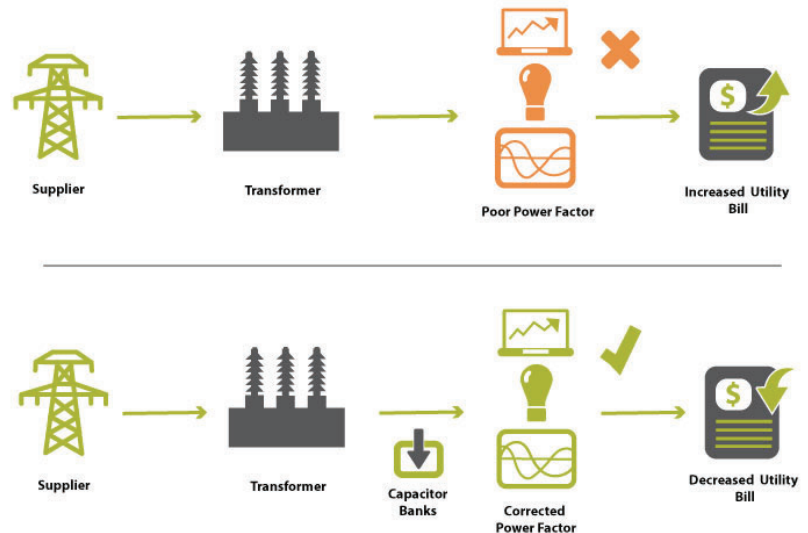
POWER FACTOR CORRECTION

Enhanced Power Quality solutions can help your facility minimize energy loss and decrease costly utility bills.

A low power factor is caused by an electrical system having a greater amount of inductive load than capacitive load. This can cause increased utility bills, reduced voltage, increased motor failure, and decreased capacity of the electrical system.

Our Services:

- **Consultation, Evaluation**
- **Site and Conditions Assessment**
- **Design Specification Development**
- **Estimates and Project Proposal**
- **Full Financial Case Assessments**
- **Turn-key Installation Services**
- **Construction Management**
- **Ongoing Service and Preventive Maintenance Programs**



Why impose adjustments and penalties?

A low power factor means your operations are not utilizing all the electrical capacity that your utility company is supplying. A large power load with a poor power factor draws a larger current and places a heavier drain on the power source as well as on the transmission and distribution system.

For this reason, many utilities impose an adjustment or power factor penalty on the bills of industrial customers when their power factor falls below a predetermined threshold.

How do we correct Power Factor?

Our experts calculate precisely the right amount of reactive power required for the operation of your inductive loads. Harmonic filtering, in-rush current, size, capacity, and location, are all considered in our design and specification process to provide you the most practical and economic solution customized to your needs.

Power factor correction capacitors are an essential part of modern electric power systems. Power factor correction capacitors are the simplest and most economical means of providing the reactive power required for the operation of inductive loads.

Electrical systems that have been optimized with Power Factor Correction increase the capacity of the power system, minimizing energy losses and correcting low power factor. In addition, power factor penalties can be reduced, and power quality can be greatly enhanced.

What to Look for on Your Bill: Power Factor Charges, Reactive Demand Charges, KVAR Adjustments

Billing Example		
Demand Step 1	200.000 KW X \$21.92	\$4,384.00
Demand Step 2	800.000 KW X \$21.74	\$17,392.00
Demand Step 3	2385.000 KW X \$21.45	\$51,158.25
Regional Transmission Service	3385.000 KW X \$8.75	\$29,618.75
Demand Charge 10.6% PF Below 90% X Net		\$9,639.98
Energy Charge	1561361.000 kWh X \$0.02519	\$39,330.68
Energy Cost	1561361.000 kWh X \$0.02593	\$40,486.09
Energy Efficiency Programs Charge	1561361.000 kWh X \$0.0037	\$5,777.04
Excess Facilities Charge		\$2,721.77
Local Option Sales Tax	\$200,508.56 X 1%	\$2,005.09
State Tax	\$20,0508.56 X 6%	\$12,030.51
Total Current Charges		\$214,544.16

Customer Example: Large Steel Mill

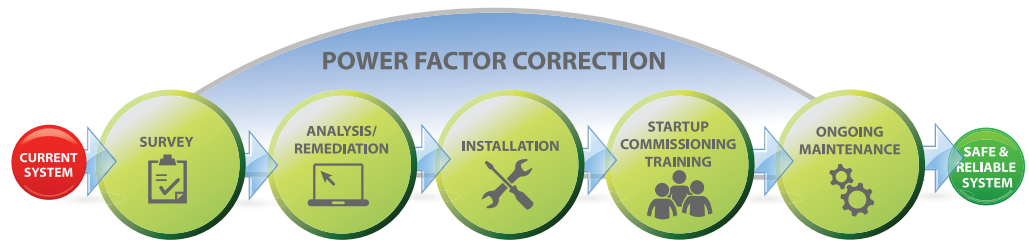


This customer's utility company charges a power factor penalty by increasing the net kW demand charge. This amount is based on a predetermined power factor target and the percentage that the customer's power factor varies above or below this target determines adjustment/penalty or credit to their bill.

A power capacitor bank was installed to improve the power factor of this facility. The project mitigated an annual power factor penalty of \$273,000 and provided an ongoing annual credit of \$175,000, totaling \$448,000 a year in savings.

The installed cost for the custom designed Medium Voltage, Metal Enclosed, Automatic, Protected, Power Capacitor Bank was \$355,000 which yielded an ROI of under 10 months.

We can help your facility implement and maintain money-saving power quality solutions to fit your needs.



Visit inoLECT.com for more information or call your Representative for a FREE Consultation Today.

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