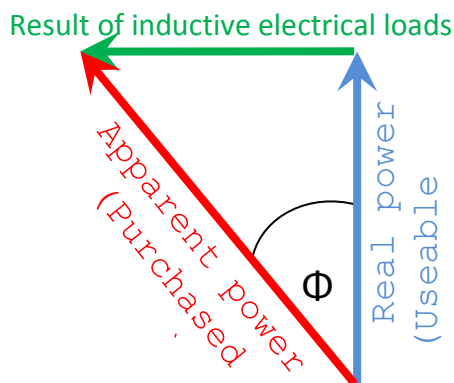


What is Power Factor Correction?

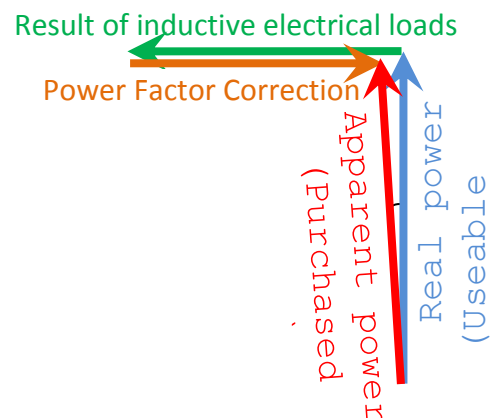
Many commercial and industrial electrical loads (motors, machines, lights etc) are inductive in nature. Operating them causes the electrical supply voltage and current to be out of phase. When the electrical supply voltage and current are out of phase, more power must be drawn from the grid than would otherwise be required. The additional power draw is used to compensate for the phase imbalance.

You pay for it, but you can't use it.

Often the additional power required can be as much as 40%.



Power factor = $\text{Cos}(\Phi)$
= %age of purchased power which is useable



With power factor correction
Real power is at least 95% of Apparent power

What does poor power factor cost?

Operating with a poor power factor may incur two direct costs.

1. You use more power than is required.
If you require 500A for your site and your power factor is 0.7, you will draw 714A from the supply.
2. You may incur penalty charges from your retailer for having a low power factor.
You may see kVAR charges in the "Network Charges" part of your electricity bill.
Your retailer may charge you for requiring them to have bigger supply infrastructure than they would otherwise need.

Additionally, expanding your operations as your power draw approaches the limit for your site may be impossible or prohibitively expensive (eg if a new supply transformer is required).

Installing a Power Factor Correction Unit

Power Factor Correction units are engineered solutions designed to suit each customers' requirements. DPDS has supplied and installed many units for customer applications from fabrication facilities to showrooms, packing to wine making and more.

The results from using a Power Factor Correction unit can be significant with payback periods from as little as 6 months (less than 2 years typical).

Once installed, Diverse Power & Data Solutions will service your Power Factor Correction unit (usually annually) to ensure it continues to operate at peak efficiency.