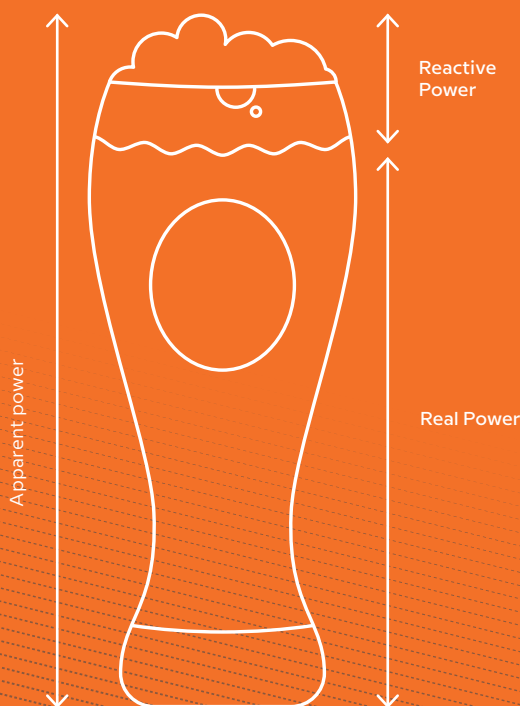


Power Factor and Loss Factor

If you imagine Apparent Power as being a glass of beer, the Real Power is the liquid and the Reactive Power is the head.

Power Factor measures the ratio of Real Power to Apparent Power (or the proportion of liquid in the glass). The higher the Power Factor (or the more liquid) the better.



Real Power measured in kilowatts (kW)

Reactive Power measured in kilovolt-amperes-reactive (kVAr)

Apparent Power measured in kilovolt-amperes (kVA)

What does Power Factor mean?

Power Factor is a figure between zero and one that shows how efficient your business is at using the electricity it draws from the grid. It shows:

- How much power is used to actually achieve results like heat, light or motion – this is called 'Real Power'.
- How much power is used to maintain the electromagnetic fields of equipment such as air conditioners, motors, air compressors and welders – this is called 'Reactive Power'.

Real Power plus Reactive Power equal the total amount of electricity supplied to you – this is called 'Apparent Power'.

How can I improve my Power Factor?

The simplest way to improve the Power Factor is to install a Power Factor correction capacitor. This will provide you with your own Reactive Power and reduce the total amount of power you draw.

What are the benefits?

Installing a Power Factor correction capacitor has many benefits for you as a customer, for your electricity supplier and for the environment. They include:

- Reducing your business' kVA demand tariff, therefore reducing your costs
- Prolonging the life of your motorised equipment
- Improving voltage to distribution and within your premises
- Improving the efficiency of the electricity system, leading to savings on future capital works investments
- Protecting the environment by reducing emissions and making better use of the power supplied to you.

What does Loss Factor mean?

As electricity flows through the transmission and distribution networks, energy is lost due to electrical resistance and the heating of conductors. The Loss Factor takes into account the loss of energy as electricity flows through the networks.

In Darwin for example, the losses are between 3.37 - 4.62% of the total electricity transported between power stations and customer premises.

Loss Factors are published by Power and Water Corporation. The Loss Factor is generally included in each customer's applicable rates.

For large customers,
call your Corporate
Account Manager
on 08 8985 7298.

