



## **GENERATOR SET PARAMETERS**

### **VOLTAGE & FREQUENCY**

Generator sets are normally used for standby or emergency use when the public utility supply fails. The voltage and frequency parameters of the generator set are therefore dictated by the public utility supply parameters.

### **POWER FACTOR**

Generator sets are normally rated in KVA at a specific power factor (PF).

The PF is by convention chosen to be 0.8 lagging.

### **FORMULA**

The formula for generator set power is calculated as follows:

$$\text{Power in kW} = \text{kVA} \times \text{PF}$$

$$\text{Power in kW} = \text{kVA} \times 0.8$$

### **ACTUAL POWER FACTOR**

In practice it is the applied load that dictates the system power factor.

Generator sets perform satisfactorily at any power factor in the range of 0.8 lagging to unity PF.

Lagging power factors below 0.8 require alternator de-rating.

Leading power factors can cause voltage problems.