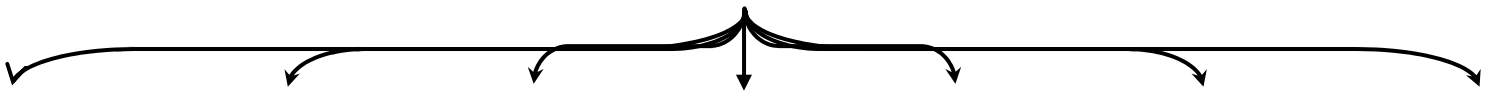
Tariff is the rate at which energy is supplied to consumers

Tariff types



Simple **Flat rate** **Block rate** **Two part** **Maximum demand** **Three part** **P.F.**

Simple Tariff

-The price charged per unit energy supplied is constant irrespective of the number of supplied units

- Energy consumption is recorded at consumer's terminals via an energy meter

- Most simple type, but doesn't discriminate between types of consumers

Flat rate Tariff

- Consumers are grouped into different classes according to diversity and load factors.

- Each class of consumers is charged at a different uniform rate.

- More fair to different types of consumers & quite simple in calculations.

- Expensive & complicated as separate meters are required for different load types

- Consumers are charged at the same rate irrespective of the magnitude of energy consumed.

Block rate Tariff

-Energy consumption is divided into fixed price per unit blocks. The price per unit in the first block is the highest ***(or lowest)*** according to the provider's necessities and priorities; accordingly, it is progressively reduced ***(or increased)*** for the succeeding blocks of energy.

-Consumer gets an incentive to consume more ***(or less)*** electrical energy. Increased consumption increases the load factor of the system and hence the cost of generation is reduced, nevertheless, it may also overstress a heavily loaded grid with constrained resources, which may in turn imply increasing the cost of generation!!!

- Lacks a measure of the consumer's demand.

- Used for majority of residential and small commercial consumers.

Two part Tariff

- **The total charge is split into two components; fixed charges that depend upon the consumer's *maximum demand*, & running charges that depend upon the *number of consumed units*.**

$$\textit{Total charges} = b \times kW + c \times kWh$$

-Fixed charges are paid irrespective of consuming or not consuming electric energy

- ***Assessing consumer's maximum demand is always erroneous***

Maximum Demand Tariff

- Similar to “two part” tariff with the exception that the maximum demand is actually measured by installing a maximum demand meter in the consumer premises

- Applied to big consumers

Three part Tariff

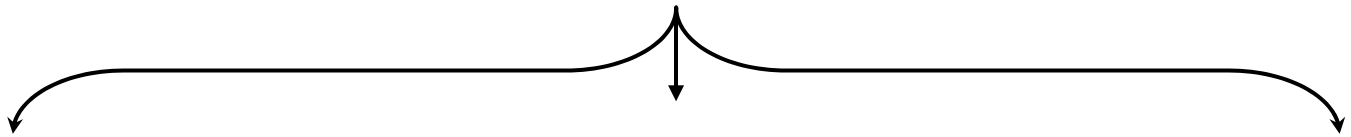
-Comprise fixed, semi-fixed and running charges

$$\textit{Total charges} = a + b \times kW + c \times kWh$$

- **Applied to big consumers**

Power Factor Tariff

- Low power factor should be penalized as it increases the Station's equipment rating and line losses



kVA maximum demand tariff

Total charges

= b×kVA + c×kWh

Sliding scale tariff (Average power factor tariff)

Below *(or above)* p.f. reference results in additional *(or discounted)* charges

kW & kVAR tariff

Both active and reactive power are separately charged