

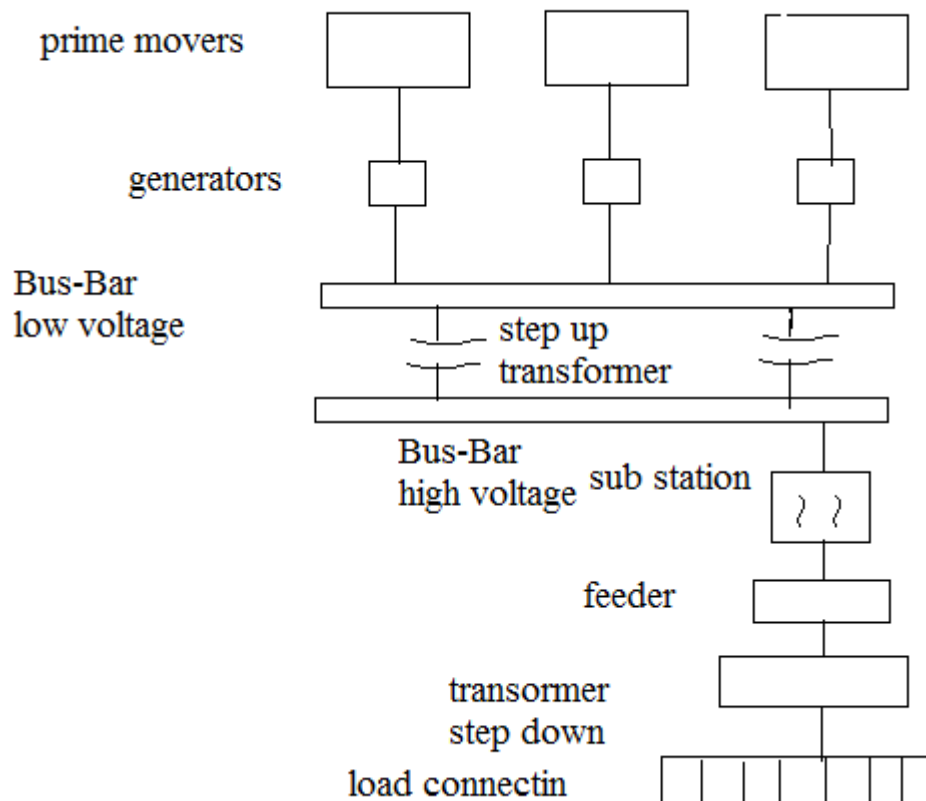
Load Variation:

What happens when load change on station ,say at particular point or instant the plant carries a steady load and energy input balances plant output of losses ,suddenly many lights are switched on the effect will be as follows:

1- This reduces over all resistance of the system and a greater current flows through the generator armature and connected circuit .

2- Reduces the turbine generated shaft speed.

Distribution of Electricity:



Demand Factor:

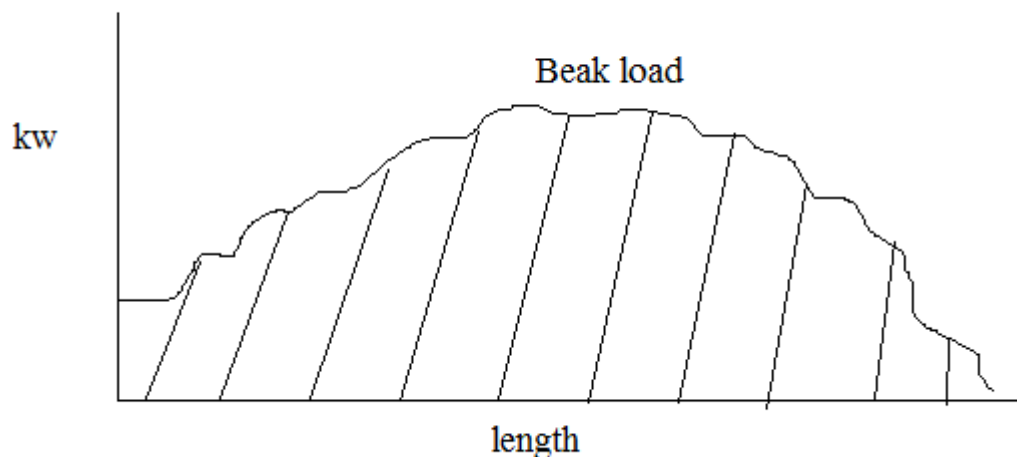
demand factor=Maximum demand / connected load

is the ratio of the maximum demand of a system or part of the a system to the total connected load of the system under consideration .

Diversity factor:

$$DF = \frac{\text{sum of the max. individual demand}}{\text{Max. demand of the system}}$$

is the ratio of the sum of the individual max demand of the various sub division of a system or part of a system to the max demand of the whole system or part of the system under consideration the partial subdivision may be one substation where there are several in a system or may be a group of residential customs .Supplied by one Transformer.



Ex(1):Given (70 Mw) power plant (installed capacity),Annual output=250,000,000 kw/h, having peak head=56700 kw,plant was not use for (500 hr) in one year, find the load factor ,capacity factor and use factor?

Plant location:

- 1- Transmission of energy.
- 2- Supply of fuel (transportation).
- 3- Supply of water.
- 4- Availability of land and its cost.

