Presentation on Tariff

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Introduction

- The rate at which electrical energy is provided to the consumers is known as the tariff.

- Although tariffs should include the total cost of producing and supplying electrical energy and the profit, they cannot be the same for all types of consumers.

Objectives

- Recovery of cost of electrical energy generate at generating station.
- Recovery of cost in transmission and distribution of electricity.
- Maintenance costs should be recover.
- Generating station should not get more profit from consumer

Factors affecting Tariff

- Types of Load
- Maximum Demands
- Time at which load is Required
- The amount of energy used
- The power factor of the load

Types of Tariff

- Simple Tariff
- Two-Part Tariff
- Three -Part Tariff
- Maximum Demand Tariff
- Flat Rate Tariff
- Block Tariff

Simple Tariff

- In Simple tarriff per unit rate is fixed and consumers pay the charge as per unit rate.
- It is also known as a uniform tariff.
- This type of tarrif encourge consumers to disconnect the equi[ment after being used.

Two Part Tariff

- In Two Part Tariff , the fixed and the running charges are seperated.
- Fixed charge is proportional to Maaximum Demand and running charge is proportional to unit consumed.
- In this consumer have to pay the bill on Maximum Demand irrespective of their consumption.

Three Part Tariff

- When the total charge to be made from the consumer is split into three parts ie., fixed charge , semi-fixed charge and running charge then it is Three Part Tariff.

- By adding fixed charge to two-part tariff, it becomes three-part tariff.

- It is represented as :-

Total charge = Rs $(a + b \times kW + c \times kWh)$

Maximum Demand Tariff

- Two Part Tariff charges fixed rate on the maximum demand which is not actually measured so consumers have to pay unnecessary price.

- These disadvantages are removed using a maximum demand tariff structure in which the maximum demand is actually measured .

- This type of tariff stucture is usually applied to bulk supply.

Flat Rate Tariff

- In this type of tariff , different consumers are charges at a different rate.
- Higher rates are charged for power load than normal loads.
- This type of rate is defined on the basis of load factor and diversity factor.
- This method is usually employed in public.

Block Rate Tariff

- In this type of tariff , different consumers are charges at a different rate.
- Higher rates are charged for power load than normal loads.
- This type of rate is defined on the basis of load factor and diversity factor.
- This method is usually employed in public.

Advantages

- The consumers are encouraged to consume more energy
- Simple to calculate and easy to understand and apply.
- This increase load factor of the system and the cost of generation is reduced
- Each consumer has to pay according to his utilization.
- In the right time of maximum demand no extra plant capacity is charged.

Disadvantages

- Due to low power factor, load current increases and the losses in the system increases.
- A particular class of consumers is charged at the same rate irrespective of the magnitude of energy consumed.
- The installation of power factor correction equipment causes the generation cost to increase.
- In some types of tariff different load sare used in different ratings so separate meters are required which increases installation cost.

Few Related Terms

Fixed Cost:

Fixed costs are expenses that remain the same no matter how much a company produces, such as rent, property tax, insurance, and depreciation.

Variable Cost:

Variable costs are any expenses that change based on how much a company produces and sells, such as labor, utility expenses, commissions, and raw materials.

Thank you

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