SolarCabinet Energy

How to calculate the maximum load power of the base station

Overview

What is a base load power station?

The total load on a power station consists of two parts viz., base load and peak load. In order to achieve overall economy, the best method to meet load is to interconnect two different power stations. The more efficient plant is used to supply the base load and is known as base load power station.

What is the difference between base load and peak load power station?

The more efficient plant is used to supply the base load and is known as base load power station. The less efficient plant is used to supply the peak loads and is known as peak load power station. There is no hard and fast rule for selection of base load and peak load stations as it would depend upon the particular situation.

How to calculate electric power demand on intermediate substations?

The expected electric power demand on intermediate substations, and on the main electric power supply, shall be calculated from the connected load layout by applying appropriate factors. Determine these factors by load analysis and by combining loads progressively.

What is the load factor of a power station?

A power station is to supply four regions of loads whose peak values are 10,000 kW, 5000 kW, 8000 kW and 7000 kW. The diversity factor of the load at the station is 1.5 and the average annual load factor is 60%. Calculate the maximum demand on the station and annual energy supplied from the station.

What are the load requirements for a power station?

A power station has to meet the following load demand : Load A 50 kW between 10 A.M. and 6 P.M. Load B 30 kW between 6 P.M. and 10 P.M. Load C 20 kW between 4 P.M. and 10 A.M. Plot the daily load curve and determine (i)

diversity factor (ii) units generated per day (iii) load factor. 8. A substation supplies power by four feeders to its consumers.

What is the demand factor of a power station?

It is expected because maximum demand on the power station is generally less than the connected load. If the maximum de-mand on the power station is 80 MW and the connected load is 100 MW, then demand factor = 80/100 = 0·8. The knowl-edge of demand factor is vital in determining the capacity of the plant equipment. (iv) Average load.

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[Reference: Textbook, Chapter 2 Instructor: Vassilis Kekatos]

o Demand factor maximum customer demand 6.19 kW Demand factor = = = 0.18 sum of device ratings 35 kW 1 f electrical devices that are on whe Characterized load for one customer. How ...

[Introduction to Electrical Power Requirements for Buildings]

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