

Methodology regarding Power Factor Penalty / Incentive

Hon. Commission has recently issued MTR order no 195/2017 dtd.12.09.2018 for the period 2018-2020. The Hon. Commission has revised the tariff for all categories. The detail tariff order is available on MSEDCL's website "www.mahadiscom.in". Some important changes mentioned in tariff order are as below.

A) The methodology of POWER FACTOR computation has been changed.

Before passing of MERC order in case no 195/2017, power factor was calculated by following formula

$$PF = \frac{KWH}{\sqrt{KWh^2 + (RKVAh Lag)^2}}$$

In this tariff order RKVAh Lead component is added and now POWER FACTOR computation is as below .

Now, in the above referred order MERC had modified incentives and disincentives of power factor. For incentives when avg. PF is more than 0.95 lag and upto 1, incentive is given. Similarly, wherever avg. PF is less than 0.9 (lag or lead) ,penal charges are levied. Therefore, PF is calculated by following formula:

$$PF = \frac{KWH}{\sqrt{KWh^2 + (RKVAh Lag + RKVAh Lead)^2}}$$

As Lead PF is not liable for incentive, if RKVAh lead is more than RKVAh lag, then, PF incentive is not given.

B) Categories of consumer for which POWER FACTOR incentive and penalty is applicable.

Sr. No.	Tariff Code	Description
1	HT-I	Industry
2	HT-II	Commercial
3	HT-III	Railways, Metro & Monorail
4	HT-IV	Public Water Works (PWW)
5	HT-V	Agriculture
6	HT-VI	Group Housing Society
7	HT- VIII	Temporary supply
8	HT-IX	Public service
9	HT- X	Electric vehicle Charging Station
10	LT- II(B), LT- II(C)	Non-Residential / Commercial
11	LT- III	Public Water Works(PWW)
12	LT- V A(ii)	Industry –Power looms (above 20kW)
13	LT -V(B)(ii)	Industry –General (Above 20kW)
14	LT-X(A)(ii), LT-X(A)(iii), LT-X(B)(ii) and LT- X(B)(iii)	Public Services
15	LT- XI	Electric Vehicle Charging Station.