

**BEFORE THE TAMIL NADU ELECTRICITY REGULATORY COMMISSION
CHENNAI**

Order No. T.O 1 - 102 dated 22/05/2007

Present:	Thiru S.Kabilan,	Chairman
	Thiru B.Jeyaraman,	Member

In the matter of: Amendment to para (iii) of clause 1 under Part 1 (High Tension Supply) of Para (v) of clause 9.0 and Para (iii) of clause 11 of Chapter 7.17 of Tariff Order dated 15.3.2003.

WHEREAS the Commission's Tariff Order dated 15.3.2003 provided for payment of compensation charged by the HT and LT consumers for maintaining power factor in their services below 0.90 **lag** and 0.85 **lag** respectively:

(2) WHEREAS the Board requested the Commission to issue amendments to Tariff Order deleting the word '**lag**' in the penalty clause for the following reasons:

- (a) The electronic meters provided in HT / LTCT services previously were designed in such a way that **it will record unity power factor even if the actual power is on the leading side.**
- (b) To implement the PF Penalty / **incentive scheme** ordered by the TNERC, the design aspect of the meter has been changed.
- (c) Meters are procured with facility to measure average power factor both under leading and lagging condition.
- (d) As per the Tariff Order dt. 15.3.2003, penalty is leviable only for lagging condition.
- (e) Both capacity var and inductive var pumped into system are detrimental to distribution net work as below:
 - (i) On the pretext of incentive, consumers were over compensating.
 - (ii) The Utilization of transformer capacity (KVA) is blocked due to increase in current.
 - (iii) Line loss get increased due to increase in current.
 - (iv) Over voltage problems occur in LT side of Distribution Transformer under leading PF condition.

- (f) To overcome the above difficulties, the TNEB decided to go in for meters which will record power factor **both for lead and lag conditions.**
- (g) Presently, the TNEB procure meters which records **average power factor based** on four quadrant principles.
- (h) At present TNEB is following the **lead as lead method to compute average power factor** which is being adopted widely by reputed meter manufacturers depending upon utility requirement.
- (i) Necessary amendments to the Tariff Order deleting the word '**lag**' in the penalty clause may be issued.

(3) NOW, THEREFORE in exercise of the powers conferred on it by sub-section (4) of section 62 of Electricity Act 2003 (Central Act 36 of 2003) and all other powers enabling it in this behalf the Tamil Nadu Electricity Regulatory Commission hereby issues the following amendment to the Tariff Order dated 15.3.2003.

Amendment to Tariff Order dt.15.3.2003

- (a) Para (iii) of Clause 1 under Part 1 (High Tension Supply) of **Chapter 7.17** (Tariff Schedule) (Page 182) may be substituted with the following; namely:

"(iii) Power Factor / Low Factor surcharge: In respect of High Tension service connections, the average power factor of the consumers installation shall not be less than 0.90. While the average power factor of High Tension service connection is less than the stipulated limit of 0.90, the following compensation charges will be levied.

Below 0.90 and upto 0.85	One percent of the current consumption charges for every reduction of 0.01 in power factor from 0.90.
Below 0.85 to 0.75	One and half percent of the current consumption charges for every reduction of 0.01 in power factor from 0.90
Below 0.75	Two percent of the current consumption charges for every reduction of 0.01 in power factor from 0.90."

- (b) Para (v) under clause 9 in Part 2 (Low Tension Supply) of Chapter 7.17 (Tariff Schedule) (page 194) may be substituted with the following namely:

"(v) All Low Tension services under this category and with a connected load of 25 HP and above, should maintain a power factor of not less than 0.85. Where the average power factor of Low Tension service connection is less than the stipulated limit of 0.85, the following compensation charges will be levied.

Below 0.85 and upto 0.75 One percent of the current consumption charges for every reduction of 0.01 in power factor from 0.85

Below 0.75 One and half percent of the current consumption charges for every reduction of 0.01 in power factor from 0.85

(c) Para (iii) under Clause 11.0 (Low Tension Tariff V) in Part 2 of Chapter 7.17 (Tariff Schedule) (Page 197 and 198) may be substituted with the following; namely:

"(iii) All Low tension services under this category and with a connected load of 25 HP and above, should maintain a power factor of not less than 0.85. Where the average power factor of Low Tension service connection is less than the stipulated limit of 0.85, the following compensation charges will be levied.

Below 0.85 and upto 0.75 One percent of the current consumption charges for every reduction of 0.01 in power factor from 0.85

Below 0.75 One and half percent of the current consumption charges for every reduction of 0.01 in power factor from 0.85

(4) The TNEB is advised to notify the method of computing KVA to all the consumers to whom PF penalty / incentive scheme is applicable..

(By order of the Commission)

**R. Balasubramanian,
Secretary**

To
The Chairman, Tamil Nadu Electricity Board, Chennai 600 002.