

ANNEXURE 9

REPORT ON KVAH BILLING

As per tariff order dated 30th March 2012, the Hon'ble Commission has directed TANGEDCO under chapter 11 of "Summary of Directives" as follows:

The Commission directs TANGEDCO to introduce KVAH billing for LT and HT consumers, as recommended by Forum of Regulators.

However, TANGEDCO would like to submit that there are some practical difficulties for implementation of kVah billing for the consumers. The issues related to implementation of kVah are submitted as follows

1. Tri-vector Meter installation

All HT and LT services with connected load of 18.6 kW in TANGEDCO are provided with meters for KVAh measurement. However KVAh measurement methods differ in different makes; some meters may be adopting vector summation, some arithmetic and some True RMS VxI method. Hence, there will be disparity in the billed KVAh energy for the same load if metered by different makes of meters.

Another issue of major concern is class of accuracy of kvah meter, in absence of any standards for kvah measurement may lead to dissatisfaction within the consumers which may result to dispute in billing and legal issues.

2. Accounting Issue

Some of the HT consumer comes under banking arrangements, and also in certain cases LT consumers are eligible for the same benefits, wherein Power Purchase agreements are executed based on the KWh and adjustments are also made on KWh only. If the energy billing is carried out by KVAh for the HT and LT consumers, then there would be a mismatch in banking adjustments whereby power generated is measure at kWh level and energy consumed will be at KVAh level. Also, if Power Purchase is made by TANGEDCO from private or other producers on KVAh basis, it may even result in loss for TANGEDCO as they may pump more Reactive power and demand the same rate as for active power.

3. Lead + Lag Logic for penalty

All the States, where kVAh tariff has been introduced, the HT meters are capable of measuring lagging power factor only and leading power factor is blocked (lead as unity). Whereas in Tamil Nadu, the HT meters with lead + lag (lead as lead) logic is being followed. This will result in increase in the KVAh tariff structure if the consumer supplies reactive power to the grid.

Proposal of TANGEDCO

It is difficult to implement kVAh billing due to above practical issues and implementation may kindly be deferred.

Under the above circumstances in order to improve the grid stability, TANGEDCO proposes that Power Factor penalty limit may be revised from the present 0.9 to 0.95 to HT services and 0.85 to 0.90 to LT services whose connected load exceeds 25 HP (18.6 KW) by making suitable amendments in the regulations.