

BEFORE THE FORUM
FOR REDRESSAL OF CONSUMER GRIEVANCES
IN SOUTHERN POWER DISTRIBUTION COMPANY OF A.P LIMITED TIRUPATI

On this the 25th day of November' 2022

C.G.No.26/2022-23/Tirupati Circle

Present

Sri. K. Ramamohan Rao

Chairperson(I/c) &

Member(Finance)

Sri. S.L. Anjani Kumar

Member (Technical)

Smt. G. Eswaramma

Independent Member

Between

B. Subramanyam Chetty,
C/o. M/s. Sree Lakshmi Venkateswara Filling Station,
Kolamasanapalli,
Palamaner(M),
Chittoor Dt.

Complainant

AND

1. Assistant Accounts Officer/O/Palamaner
2. Deputy Executive Engineer/O/Palamaner
3. Executive Engineer/O/Chittoor Rurals
4. Executive Engineer/M&P/Tirupati

Respondents

ORDER

1. The case of the complainant is that the service was released in the month of January'2022 and commenced the business in February'2022. He received a bill for Rs.42,000/- for the months from February'2022 to April'2022. He received bill for Rs.39,100/- in the month of May'2022. He paid those bills. He received an abnormal bill of Rs.75,100/-for the month of June'2022. Hence he presented the complaint. He also filed an application on 14.7.2022 to grant interim stay from disconnecting the service for non-payment of disputed amount of CC bill for the month of June'2022 issued in July'2022 till the disposal of the complaint before this forum and interim directions were issued as per orders in IA No.4/2022-23/Tirupati Circle, Dt: 18.07.2022.
2. Respondent No.3 submitted written submission stating that, 125/5 Amps LT CT Meter was commissioned on 16.12.2021 to the premises and the service was

DESPATCHED
DATE 25/11

released on 29.03.2022. On 07.05.2022 the first bill was issued for Rs.42,626/- with the consumption of KWH as 1652 units and KVAH as 3670 units. On 06.06.2022 the second bill was issued for Rs.39,108/- and the consumption of KWH is 429 units and KVAH is 3431 units. On 07.07.2022 the third bill was issued for Rs.75,100/- with a consumption of KWH as 431 units and KVAH as 6659 units.

The meter commissioned to this service was directly connected to the line with over rated capacitors causing abnormal KVAH consumption in turn abnormal CC charges bill was issued in the month of July'2022.

The Assistant Engineer/Rurals/Palamaner requested Assistant Engineer/CT Meters/Chittoor to test the CT Meter and arrange the meter test results as the consumer got abnormal CC bill. The AE/CT Meters/Chittoor tested the meter on 01.08.2022 at 11.00 Hrs in the presence of complainant, Sri.B.Subramanyam Chetty and Sri. A. Suhel, Line Inspector, Kolamasanapalli. The meter test results found satisfactory and CT Meter error within limits. The complainant without having proper knowledge connected over rated capacitors directly to the line. Hence the KVAH consumption was boosted up and caused abnormal CC charges bill. The same was intimated to the consumer. The complainant has paid Rs. 25,000/- on 23rd July' 2022 and the service was not disconnected up to that date.

3. On 07.10.2022 complainant submitted another representation stating that he already made a complaint to this forum regarding revision of abnormal CC bill for the month of June'2022. He further submitted that he received normal bill in the months of July'2022 for Rs. 12,286/-, August'2022 for Rs.7,540/-and September'2022 for Rs.8,136/- respectively and paid those bills. Due to meter mistake only he received abnormal bill in the month of June'2022. He is requesting the forum to revise the bill basing on the consumption of average units recorded for the months from July'2022 to September'2022 and refund Rs.25,000/- already paid for the month of June'2022 in the CC bill showing arrears of Rs. 50,000/-. Hence he is requesting the forum for reduction of bill received in the month of June'2022 and stated that he will pay monthly CC bills regularly without fail.

4. Personal hearing through video conferencing was conducted on 11.10.2022. Complainant and respondents present. Heard both sides.

The Dy.Executive Engineer/CT Meters/Chittoor has stated that on receipt of the complaint the existing meter was tested by Assistant Engineer/CT Meters/Chittoor and found satisfactory. The excess consumption recorded only due to connection of over rated capacitors directly to the line by the complainant. Hence stated that this is not the department fault to revise the bill received during the month of June' 2022 for Rs. 75,100/-.

Complainant Mr.B.Subramanyam Chetty stated that he received huge amount of CC bill for the month of June' 2022 for Rs.75,100/- only due to the meter defective. He also enquired with the neighboring petrol bunks regarding CC bills, they stated that they are receiving CC bills about Rs.10,000/- regularly. Hence requested the forum to revise the abnormal CC bill.

5. Point for determination is whether the abnormal CC bill issued for the month of June' 2022 for Rs.75,100/- for service No. 5622403002511(after section bifurcation Service No. 13 digit code changed as 5821403002511) can be revised or not ?

As per the APERC order on tariff for retail sale, the HT& CT metered consumers who are provided with metering capable of measuring active and reactive power under the orders of the Commission, shall maintain their power factor preferably in between 0.95 lag and 0.95 lead in the interest of the system security. The present complainant not maintained the power factor leading side less than 0.95 lead. If any consumer maintains the power factor less than 0.95 lead for a period of 2 consecutive months, it must be brought back in the range of (+) or (-) 0.95 within a period of 3 months failing which without prejudice to such other rights as having accrued to the licensee or any other right of the licensees the supply to the consumer may be discontinued.

As per para. 6.9 Chapter -X in Tariff for retail sale of Electricity during F.Y. 2022-23 issued by Hon'ble APERC, the consumer has to maintain power factor at their end preferably in between 0.95 lag and 0.95 lead in the interest of the system security. The consumers should not maintain the power factor leading side less than 0.95 lead.

The Para 3.12 Chapter –X at Page No. 194 of 534 in Tariff for Retail Sale of Electricity during F.Y. 2022-23 issued by Hon'ble APERC is as follows:-

3.12. Maintenance of power factor at consumer end

The consumers should not maintain less than 0.95 power factor on the leading side. If any consumer maintains the power factor of less than 0.95 lead for a period of 2 consecutive months, it must be brought back in the range of (+) or (-) within a period of 3 months failing which without prejudice to such other rights as having accrued to the Licensees or any other right of the Licensees, the supply to the consumer may be discontinued. This condition is not applicable to the consumers whose connected load is less than 20 kW.

As per Para 398 Chapter- IX in Tariff for Retail sale of Electricity during F.Y. 2019-20

Unblocking of leading kVArh :

“ For the purpose of billing, leading KVARh is blocked hitherto for all categories of consumers in LT except Domestic and Agriculture and for all categories of consumers in HT. As kVAh billing is taking care of the reactive power management by the consumers, the Commission has decided that the blocked leading kVARh recording in the meters provided for applicable consumers be unblocked. Therefore, the licensees are hereby directed to take note of this change and action shall be taken accordingly”.

Month wise demand statement for SC No. 5821403002511 from the date of release of supply is as follows:-

Bill - Date	Opening Date	Open Reading Kwh	Close Reading Kwh	Bill Units Kwh	Open Reading Kvah	Close Reading Kvah	Bill Units Kvah	Amt	PF
04-Oct-22	02-Sep-22	3495	4034	539	15292	15877	585	8136	1
02-Sep-22	04-Aug-22	3015	3495	480	14764	15292	528	7540	0.91
04-Aug-22	07-Jul-22	2512	3015	503	13760	14764	1004	12286	0.5
07-Jul-22	06-Jun-22	2081	2512	431	7101	13760	6659	75100	0.06
06-Jun-22	07-May-22	1652	2081	429	3670	7101	3431	39108	0.13
07-May-22	29-Mar-22	0	1652	1652	0	3670	3670	42626	0.45

As per the demand it is observed that the complainant received bill for the month of June'2022 issued in July'2022 for an amount of Rs.75,100/- and PF recorded as 0.06. Due to non-maintenance of capacitors the complainant received huge amount of CC bill during the month of June'2022. The lead PF recorded only due to connection of over rated capacitors directly to the line by the complainant.

https://www.mahadiscom.in/wp-content/uploads/2020/01/002_ANNEXURE-6_FAQs-REGARDING-kVAh-BILLING

Why is kVAh billing necessary? Both Active (kWh) and Reactive (kVARh) energies are consumed simultaneously. Reactive Energy (kVARh) occupies the capacity of electricity network and reduces the useful capacity of system for generation and distribution & hence its consumption also needs to be billed. kWh based billing is associated with PF incentive /penalty mechanism. Considering that the kVAh based billing has an inbuilt incentive /penalty mechanism and separate mechanism for the same is no more required; instead of billing two energies separately, billing of kVAh energy is preferred as a commercial inducement.

When will kVAh billing be implemented? As per MERC Order in Case No. 195 of 2017 dated September 12, 2018, The Commission intends to implement kVAh billing to all HT consumers and LT consumers having load above 20 kW from 1st April, 2020.

How kVAh billing is different from existing billing & what are its benefits? kVAh billing has an inherent mechanism to incentivize or penalize consumers according to their power factor. The Prime Objective of the kVAh based billing is to encourage the consumers to maintain near unity Power factor to achieve loss reduction, improve system stability, power quality and improve voltage profile. At the national level, emphasis is being given to Energy Conservation, Energy Efficiency and Demand Side Management (DSM) to optimize the energy usage. Through kVAh billing, the consumers will be encouraged to adopt energy efficiency programs and will be benefited by reduced electricity bills.

Explain more about reactive Power & its effects on system?

In case of inductive loads like motors, electrical energy can't directly be converted into useful work (rotation of motor shaft in this particular case). This is because, to convert electrical energy into rotational energy, magnetic field has to be created in between the gaps of stator and rotor of Motor. Hence, some amount of energy has to be used in

creating magnetic field. The portion of power that contributes in creating magnetic field is known as Reactive Power. Though reactive power is needed to run many electrical devices, it can cause harmful effects on your appliances and other motorized loads, as well as electrical infrastructure. Since the current flowing through your electrical system is higher than that necessary to do the required work, excess power dissipates in the form of heat as the reactive current flows through resistive components like wires, switches and transformers. How can reactive power be reduced or compensated? Improving Power Factor by installing capacitors of appropriate ratings [or Automatic Power Factor Corrector (APFC) Panels] you can locally compensate reactive power requirement, thereby reducing reactive power drawl from grid.

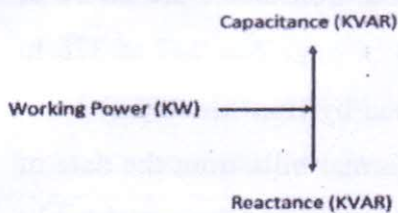
Explain more about Power Factor (PF)? Desired Power Factor is unity i.e. 1, and its range is Zero Lag – unity - Zero Lead. For purely capacitive loads PF is Zero Lead and for purely inductive loads PF is zero Lag. Unity Power Factor signifies that there is no reactive power exchange between consumer and grid. Power Factor is an indicator for efficiency of Energy Conversion. If PF is 0.85 it means that 15% of power is not resulting in actual work. If PF is 0.85 lagging it means that 15 % of power is used by inductive elements and If PF is 0.85 leading it means that 15 % excess reactive power is supplied by capacitive elements. In both the aforementioned cases 15 % of power is not resulting in to actual work. Both Leading and lagging power factor are equally harmful to the power system.

How do I know my Power Factor? For consumers having installed TOD, Tri-vector Meters, Meters, depending upon the nature of instantaneous load, instantaneous power factor is displayed on consumer's meter. Consumers can also opt to install PF meters at their LT panel to measure the PF. It is advisable to monitor PF of each individual circuit / machine / plant, as may be possible, in their internal distribution network so that the "low PF section" can be easily identified and attended.

What is Power Factor improvement? Power factor improvement means minimizing drawl of reactive power from power system so as to make power factor unity. It is nothing but providing adequate compensation so that the reactive power requirement of the load is locally fulfilled instead of drawing it from the power system. This means determination of adequate size / rating of capacitors to be installed at each major inductive load is necessary.

How can I improve my Power Factor? If power factor is on the lagging side it can be improved by installing capacitors of appropriate ratings and if the power factor is on leading side it can be improved by installing reactors/ removing excess capacitors of appropriate ratings.

Forum of Regulators (FOR), has recommended kVAh billing. FOR in its report on "Metering Issues" published in August 2009 has stated that kVAh billing is the new trend in electricity billing, which is adopted worldwide.



NEED OF IMPROVING POWER FACTOR:

- a) To avoid the penalty imposed by distribution utilities for poor power factors.
- b) Now utilities have been started the billing in KVAH instead of KWH, so improved power factor helps in reducing our electricity charges.
- c) Reducing demand
- d) Increased voltage level in electrical system due to which efficiency level of motor gets better as well as life span also gets increased.

When the system is loaded lightly, the voltage increases, increasing the magnetization current demand of the machine.

<https://www.electrical-technology.com/2019/05/Causes-and-Disadvantages-of-Low-Power-Factor.html>

Disadvantages of Low Power Factor

These are the main **disadvantages of Low Power Factor** in our electrical system.

- Large kVA rating and size of Electrical equipments
- Large conductor size and so higher cost of transmission line
- High Transmission loss hence poor efficiency

- Poor Voltage regulation
- Penalties imposed by power utility companies (DISCOM)

The improved power factor will further reduce spending on power purchase, creating the opportunity to lower tariffs.

If power factor not maintained by the consumer the DISCOMS will be penalized and it is burden on the department also. At the same time DISCOMS will also levy capacitor surcharges to the consumer to overcome the problem. Hence it is the duty of the consumer to maintain the power factor to unity.

This forum is of the opinion that the department followed the guidelines issued by Hon'ble APERC after completion of about 2years' time period. Consumers are aware of the said programming as mentioned in **Chapter IX Para398 in page No. 247 of 375 in Tariff for Retail sale of Electricity during F.Y. 2019-20 issued by Hon'ble APERC.**

The contention of the complainant that he is receiving abnormal bills from the date of release of the service and on inquiry he came to know that the other similar petrol bunks are receiving only CC bill around Rs.10,000/- and the bills are abnormal. Hence it clearly shows that when he is aware of the CC bills received every month to the similar petrol bunks, he would have also knowledge about the capacitors that how much rated capacitors required to his petrol bunk and where to provide the capacitors at his unit.

Complainant can be given an opportunity to prove his contention. Hence interim orders were issued on some conditions that :

“Respondents are directed not to disconnect the service connection No.5622403002511 during the pendency of the complaint before this forum on payment of Rs. 25,000/- (Rupees twenty five thousand only) against the CC bill of June'2022 raised in July'2022”. The complainant is advised to pay regular CC bills.

This forum is of the opinion that the complainant not maintained the capacitors of required rating to install to his unit, he installed the over rated capacitors directly to the line side. Hence he received huge amount of CC bill for the month of June'2022 issued in the month of July'2022. As per the monthly bill information it is observed that the PF gradually increased from lead to unity and hence he received CC bills correctly after the month of June'2022. As per the complainant request the existing meter was also tested by the department on 1.8.2022 and found satisfactory and errors are within the limits. During

inspection the respondents advised the complainant to provide required rating of capacitors only and also informed to the complainant not to install the capacitors directly to the line side.

The respondents are directed to collect the arrears CC bill amount against the service SC No. 5622403002511 (after section bifurcation Service No. 13 digit code changed as 5821403002511) after deducting the amount already paid by the complainant as per the interim orders passed by this forum.

When contacted with the EE/M&P-II/Tirupati by this forum@ 12.00P.M. on 14.11.2022 to enquire about the said meter features, EE/M&P-II/Tirupati has stated that meter has been fixed with un-blocking of Kvarh lead feature. Hence the service itself is released with the above features of un-blocking of Kvarh lead. Consumer not maintained PF during the disputed month of 6/2022 . The complainant connected over rated capacitors to his service which leads to high kvah consumption and the high kvah consumption recorded is only due to improper maintenance of the capacitors by the consumer. Hence the high KVAh consumption recorded during 06/2022 was due to over compensation and not due to the defect in the meter/due to un-blocking of Kvarh lead in the meter.

Hence there are no grounds to interfere with the revision of bill for the month of 6/2022 raised in the month of 7/2022 for the said service SCNo.5821403002511(after section bifurcation Service No.13 digit code changed as 5821403002511). Hence complaint is liable to be dismissed.

Accordingly, the C.G.No.26/2022-23/TirupatiCircle is disposed off. The point answered accordingly.

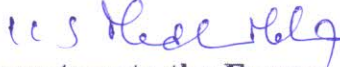
6. In the result the complaint is dismissed.

Sd/-
Member (Technical)

Sd/-
Independent Member

Sd/-
Chairperson (I/c)

Forwarded By Order


Secretary to the Forum

This order is passed on this, the day of 25th November'2022

If aggrieved by this order, the Complainant may represent to the Vidyut Ombudsman, Andhra Pradesh, 3rd Floor, Sri Manjunatha Technical Services, Plot No:38, Adjacent to Kesineni Admin Office, Sri Ramachandra Nagar, Mahanadu Road, Vijayawada-520008, within 30 days from the date of receipt of this order.

To

The Complainant

The Respondents

Copy to the Nodal Officer (Chief General Manager (O&M)/ Operation)/ CGRF/ APSPDCL/ Tirupati.

Copy Submitted to the Vidyut Ombudsman, Andhra Pradesh , 3rd Floor, Sri Manjunatha Technical Services, Plot No:38, Adjacent to Kesineni Admin Office, Sri Ramachandra Nagar, Mahanadu Road, Vijayawada-520008.

Copy Submitted to the Secretary, APERC,11-4-660, 4th Floor, Singareni Bhavan, Red Hills, Lakdikapool, Hyderabad- 500 004.