

BEFORE THE FORUM
FOR REDRESSAL OF CONSUMER GRIEVANCES
IN SOUTHERN POWER DISTRIBUTION COMPANY OF A.P LIMITED TIRUPATI
On this the 14th day of December' 2022
C.G.No.60/2022-23/ Nellore Circle

Present

Sri. K. Ramamohan Rao

Sri. S.L. Anjani Kumar

Smt. G. Eswaramma

Chairperson (I/c) &
Member (Finance)
Member (Technical)
Independent Member

Between

K. Ravi,
C/o. M/s. Sree Rajyalakshmi Raw & Boiled Rice Mill,
Chemudugunta (V)
Venkatachalam(M),
Nellore Dt.

Complainant

AND

1.Executive Engineer/O/Nellore Rurals
2.Superintending Engineer/O/Nellore
3.Senior Accounts Officer/Circle Office/Nellore

Respondents

ORDER

1. The case of the complainant is that the complainant having HT service vide HT SC No.NLR 480 and he is utilizing the said service to Rice Mill purpose. The complainant Mr.K.Ravi is one of the Managing Partner to the said rice mill. The department issued huge amount of CC bill for the month of August'2022 for an amount of Rs.7,04,468/- and issued huge amount of CC bill for the month of September'2022 for an amount of Rs.7,41,242/-. But the complainant stated that he utilized supply units only(expected units) for about Rs.2,50,000/- for the month of August'2022 and utilized supplyunits (expected units) only for about Rs.2,70,000/- for the month of September'2022. Hence requested the forum to resolve his grievance.
2. The case was registered as C.G.No.60/2022-23/Nellore Circle and sent to respondents for written submissions.

3. Joint written submission submitted by the respondents stating that the complainant is the H. consumer of NLR 480 M/s.Rajya Lakshmi Raw and Boiled Rice Mill, Chemudugunta (V), Venkatachalam (M). The department issued huge amount of CC Bills during the months of August 2022 and September 2022 (Rs.7,04,468/- and Rs 7,41,242/- respectively against their expectation of Rs 2,50,000/- and Rs. 2,70,000/- respectively .

The Hon'ble Chairperson/ CGRF issued interim directions vide I.A No.09/2022-23/Nellore Circle dated: 23.9.2022 not to disconnect the above said service for non-payment of disputed amount of CC Charges and also directed to collect Rs. 3,70,620/- for September'2022. Accordingly the consumer also paid the same charges of Rs.3,70,620/- vide P.R.No.3221007120912001 Dt:06.10.2022.

The consumer sent a written complaint on 27.8.2022 through registered post stating that he got huge amount of CC Charges bill for the month of August' 2022 and also to rectify the bill for the month of August'2022. Accordingly the Deputy Executive Engineer/Operation/Rurals/Nellore inspected the premises on 01.09.2022 and suggested the manager of the Rice Mill to rectify capacitor problem of the Rice Mill. Accordingly the consumer rectified capacitors and got the bills during October bill as per his expectation.

It is also to submit that on 18.4.2022 the kvarh lead was un-blocked by M&P wing and the same was failed and same was again un-blocked on 2.7.2022.

The month wise consumption with power factor HT SC No.NIR-480 from 4/2022 to 9/2022 furnished is as follows:-

SL.NO	DATE	KWH CONSUMPTION	KVAH CONSUMPTION	POWER FACTOR	CC BILL IN RUPEES
1	2.4.2022	61808	61812	1.0	4,81,464
2	2.5.2022	25676	25676	1.0	2,46,123
3	2.6.2022	14820	14820	1.0	1,96,770
4	2.7.2022	13570	13572	1.0	1,85,374
5	2.8.2022	20312	82820	0.245	7,04,468
6	1.9.2022	20044	86322	0.232	7,47,245
7	1.10.2022	43782	48038	0.91	4,71,964

Hence submitted for resolving the grievance.

4. Personal hearing through video conferencing was conducted @ 11.30A.M on 11.10.2022 Complainant Mr.K.Ravi present, EE/Rural /Nellore, Dy. EE/R/NLR & EE/M&P-1/Nellore present. Heard both sides.

The complainant stated that he received huge amount of CC bill for the month of August' 2022 and September' 2022. Hence requested to revise the bills.He also stated that the department did not serve any notice to him regarding un-blocking of KVarh lead and updating the software in the meter.

The Dy.EE/R/Nellore has stated that on receipt of consumer written complaint on 27.8.2022 through registered post stating that he got huge amount of CC bill for the month of August'2022. The Deputy Executive Engineer/Operation/Rurals/Nellore inspected the premises on 01.09.2022 and suggested the manager of the Rice Mill to rectify capacitor problem of the Rice Mill. Accordingly the consumer rectified capacitors and got the bills as per his expectation during October bill. Further stated that on 18.4.2022 the kvarh lead was un-blocked by M&P wing and the same was failed and same was again un-blocked on 2.7.2022.

5. Point for determination is whether the abnormal CC bill issued for the month of August' 2022 and September' 2022 for service No. vide SCNo.480-NLR can be revised or not ?

As per the Hon'bleAPEREC 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 APEREC, 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 KVAh 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 bill information statement for HT SCNo.NLR480 for the months from January’2021 to November’2022 is as follows:-

S.NO	MON/ YEAR	LOAD	CAT	KWH CON	KVAH CON	MD	OB	DEMAND	Collection	CB	PF
1	Nov-22	225	3A	32383.96	35942.06	163.24	857972.77	361317	471964	747325.77	0.90
2	Oct-22	225	3A	43782	48038	138.6	756628.77	471964	370620	857972.77	0.91
3	Sep-22	225	3A	20044	86322	170	594383.77	747245	585000	756628.77	0.24
4	Aug-22	225	3A	20312	82820	174.2	75289.77	704468	185374	594383.77	0.23
5	Jul-22	225	3A	13570	13572	127.8	110084.23	185374	0	75289.77	1.00
6	Jun-22	225	3A	14820	14820	136.6	105620.77	196770	412475	110084.23	1.00
7	May-22	225	3A	25676	25676	147	340961.77	282495	481464	105620.77	1.00

8	Apr-22	225	3A	61808	61812	161.6	315182.77	481464	455685	340961.77	1.00
9	Mar-22	225	3A	57706	57708	166.4	77244.77	455685	217747	315182.77	1.00
10	Feb-22	225	3A	20186	20186	144.6	294197.77	217747	434700	77244.77	1.00
11	Jan-22	225	3A	53808	53808	152.2	140309.23	434507	0	294197.77	1.00
12	Dec-21	225	3A	47828	47828	143.8	220336.77	394617	755263	140309.23	1.00
13	Nov-21	225	3A	42920	42924	151.4	445713.77	366216	591593	220336.77	1.00
14	Oct-21	225	3A	65320	65328	165.4	487212.71	508627	486070	445713.77	1.00
15	Sep-21	225	3A	52074	52078	154.4	470198.71	486070	469056	487212.71	1.00
16	Aug-21	225	3A	58112	58196	192	446016.71	469056	444874	470198.71	1.00
17	Jul-21	225	3A	54094	54132	194.8	468169.71	444874	467027	446016.71	1.00
18	Jun-21	225	3A	56518	56634	203	422773.71	469396	424000	468169.71	1.00
19	May-21	225	3A	52308	52468	231.4	579923.71	453929	580923	422773.71	1.00
20	Apr-21	225	3A	67380	68076	263.2	236225.71	580923	237225	579923.71	0.99
21	Mar-21	225	3A	22596	22598	130	176559.71	237225	177559	236225.71	1.00
22	Feb-21	225	3A	12174	12594	108	229121.71	177559	230121	176559.71	0.97
23	Jan-21	225	3A	36756	36840	159.8	280073.71	330121	381073	229121.71	1.00

As per the bill information statement, it is observed that the Power factor recorded low during the months of August'2022 and September'2022 is 0.23 and 0.24 respectively, which is very low power factor .The service meter Kvarh lead was un-blocked by the department and updated the software of the meter on 2.7.2022.

On receipt of consumer written complaint on 27.8.2022 through registered post stating that the complainant got huge amount of CC bill for the month of August'2022. The Deputy Executive Engineer/Operation/Rurals/Nellore inspected the premises on 01.09.2022 and suggested the manager of the Rice Mill to rectify capacitor problem of the Rice Mill. Accordingly the consumer rectified capacitors and got the bills during October as per his expectation. It is also observed that the M&P wing un-blocked the Kvarhlead and updated the software in the meter first on 18.4.2022, butthe same was failed. Hence again the M&P wing un-blocked the Kvarh lead and updated software in the meter on 2.7.2022. So the complainant should be aware of maintenance of power factor. As already during April'2022 the department updated the software and un-blocked the Kvarh lead in the meter, after 3 months of time period again they updated the software and un-blocked the Kvarh lead in the meter due to failure.

Hence it is clear that the complainant well known about the updating of the software in the meter as the procedure was already implementedby the department before three months. So being HT consumer the complainant should be aware of the procedure and should maintain the

power factor to unity. If complainant maintained the power factor, this problem may not have arisen.

Again the department inspected the premises on 1.9.2022 and as per the department advice only the complainant maintained power factor to unity by providing adequate capacitors to the said unit.

It is the responsibility of the consumer as per Clause 12.2 of GTCS to connect rated capacitors for different load conditions which is as follows:

12.2 Maintenance of Power factor at consumer end:

“HT 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 and shall comply with conditions stipulated in the relevant orders issued from time to time”.

19.3 of GTCS :- Knowledge of Facts and Rules:-

The consumer shall be deemed to have full knowledge of the provisions of the Electricity Act, 2003 the A.P. Electricity Reform Act, 1998, and all regulations and notifications made there under, as also all laws relating to the supply of electricity.

As per the above clause the consumer shall be deemed to have full knowledge of the provisions of Acts relating to the supply of electricity.

As per Clause 5.7.1.1 of GTCS *“for inspections and testing of consumer installation the duty of the LT consumer clearly stated that the consumer shall arrange for a representative of the licensed electrical contractor technically qualified and employed by him”.*

In this case the complainant is a HT consumer. Being HT consumer, the complainant should have to put more efforts than LT consumers and have to arrange for a representative of the licensed electrical contractor technically qualified compulsorily for monitoring of the electrical equipment existing at their unit and also take necessary immediate action whenever such power factor problem arises/ any other failure/non-functioning of electrical equipment in their unit for un-interrupted supply and also should maintain power factor preferably in between 0.95 lag and 0.95 lead in the interest of the system security to record correct

consumption by the meter.

The M&P wing served notice on 18.4.2022 and 2.7.2022 regarding un-blocking the Kvarh lead to the said meter and updating the software in the meter. The complainant representative refused to take the notices and refused to sign in it. If the complainant representative collected the notice served by the department and if followed the procedure this problem may not be occurred.

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.

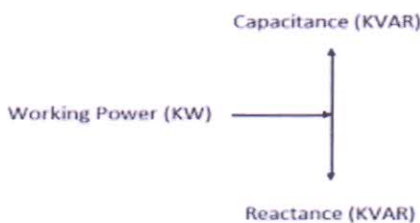
How do I know my Power Factor? For consumers having installed TOD, Tri-vector Meters, Meters, depending upon the nature of instantaneous load, instantaneous power factor is displayed on consumer's meter. Consumers can also opt to install PF meters at their LT panel to measure the PF. It is advisable 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 is that he received huge amount of CC bill during August'2022 and September'2022. Complainant can be given an opportunity to prove his contention. Hence interim orders were issued on some conditions that :

“Complainant is directed to pay an amount of Rs.3,70,620(Rupees three lakh seventy thousand six hundred and twenty only) out of arrears amount of Rs.7,41,242 as on September'2022 within one week from the date of receipt of this order. On payment of the above said amount, Respondents are directed not to disconnect the service connection HT SC No.480 NLR during the pendency of the complaint before this forum for non-payment of the balance disputed CC bill amount issued for the month of September'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 and not installed required rated appropriate capacitors to his unit during August'2022 and September'2022. Hence he received huge amount of CC bill for the

said HT service during the disputed period of August'2022 and September'2022. As per the monthly bill information it is observed that the PF gradually increased from lead to unity from October'2022 and November'2022. During inspection the respondents advised the complainant to provide required rating of capacitors to their unit to avoid such problems in future.

In this case the complainant is known about the un-blocking of Kvarh lead in the meter and also about the software updation in the meter, as the complainant's representative(worker) present at the time of inspections by the M&P wing on 18.4.2022 & 2.7.2022. He refused to collect the test reports and also refused to sign in it. As seen from the test report of M&P wing, it is noticed that the name of the firm furnished by the M&P wing as "M/s.Siva Sankar R&B Rice mill with SC No.HT NLR 480. Where as in the CC bill the service is in the name of "M/s.Sri Rajyalakshmi R&B Rice Mill, with SC No.HT NLR480.

When the Secretary of this forum contacted over phone with M&P wing they informed that "M/s.Siva Sankar R&B Rice Mill" and "M/s.Sri Rajyalakshmi R&B Rice Mill, both are one and the same service. In the test report copy inspected by M&P wing on 18.4.2022 it is also observed that the PF recorded is 0.85and on same day TOD software updated. Hence it shows that before updating the TOD software in the meter itself the PF recorded low i.e., 0.85, the software updated by M&P wing was failed. Hence again the M&P wing updated the software on 2.7.2022 and un-blocked the Kvarh lead in the meter. In the Inspection report dated: 18.4.2022 in remarks column the M&P wing furnished as "**RTC/TOD software updated**".

Here in this case the complainant stated that the department did not serve any prior notice to him is not correct. Had the complainant/ the complainant representative present at the time of inspection by the M&P wing would have taken the inspection report served by M&P wing without refusing,this problem may not have arisen. When the complainant representative refused to collect the inspection report, the M&P wing had chosen other way to reach the inspection report to consumer through registered post. But they did not follow the same.

On the other hand this forum is of the opinion that, it is the responsibility of the consumer as per Clause 12.2 of GTCS to connect rated capacitors for different load conditions.

In this case the complainant is a HT consumer. Being HT consumer, the complainant should have to put more efforts than LT consumers and have to arrange for a representative of

the licensed electrical contractor technically qualified compulsorily for monitoring of the electrical equipment existing at their unit and also take necessary immediate action whenever such power factor problem arises/ any other failure/non-functioning of electrical equipment in their unit for un-interrupted supply and also should maintain power factor preferably in between 0.95 lag and 0.95 lead in the interest of the system security to record correct consumption by the meter. If the complainant arranged a representative of the licensed electrical contractor technically qualified to his unit this problem would not have occurred.

Hence the complainant is more aware of the power factor, which reflects on the billing system. Hence there are no points found in this case to resolve the grievance. The respondents are directed to collect the arrears CC bill amount against the service HT SC No. NLR 480, after deducting the amount already paid by the complainant as per the interim orders passed by this forum.

Hence there are no grounds to interfere with the revision of bill for the disputed period of August'2022 and September'2022 for HT NLR 480. Hence complaint is liable to be dismissed. Accordingly, the C.G.No.60/2022-23/Nellore Circle is disposed off. The point answered accordingly.

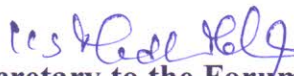
6. In the result the complaint is dismissed.

**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 14th December'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.