



TAMIL NADU ELECTRICITY OMBUDSMAN

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BEFORE THE TAMIL NADU ELECTRICITY OMBUDSMAN, CHENNAI
Present : Thiru. S. Devarajan, Electricity Ombudsman

Appeal Petition No. 43 of 2017

M/s Angel Label Division,
32, Parasakthi Koil Street,
Kongu Nagar,
Tiruppur – 641 607.

..... Appellant
(Thiru. A.D. Thirumoorthy)

Vs

The Superintending Engineer,
Tiruppur Electricity Distribution Circle,
TANGEDCO,
19A, Jyothi Nagar, Perumal Nallur Road,
Tiruppur – 641 603.

..... Respondent
(Thiru. M. Ashok Kumar/AEE/MRT/Tiruppur)

Date of hearing : 22-9-2017

Date of order : 14-12-2017

The petition dated 31.5.2017 filed by M/s Angel Label Division, Parasakthi Koil Street, Kongu Nagar, Tiruppur was registered as Appeal Petition No. 43 of 2017. The above appeal petition came up before the Electricity Ombudsman for hearing on 22.9.2017. Upon perusing the appeal petition, counter affidavit and after hearing both sides, the Electricity Ombudsman passes the following order.

ORDER

1. Prayer of the Appellant:

1.1 The prayer of the appellant is to nullify the measurement taken by MRT at ET SC No.63, Tiruppur on 8.9.2015 since it is not as per the instructions given by the TANGEDCO.

2. Brief History of the case:

2.1 M/s.Angel Label Division is utilizing the HTSC 63 for manufacturing labels. MRT/Tiruppur measured harmonics on 08.09.2015 and has levied penal charges of Rs.8,96,240/- for dumping of harmonics beyond the permissible limit. They had requested SE/Tiruppur to withdraw the penal charges.

2.2 The Appellant filed a petition dt.21.3.2017 before the CGRF of Tiruppur EDC. The petition was not disposed of even after the stipulated time. As more than 50 days has since been elapsed from the date of filing of petition before the CGRF, the above appeal came to be filed before Ombudsman which is registered as A.P.No.43 of 2017.

4. Contentions of the Appellant :

4.1 The measurement taken by MRT at our ET SC No.63, Tiruppur on 08.09.2015 is not as per the instructions given by the TANGEDCO.

4.2 As per the circular of TANGEDCO load at the time of measurement should be above 75%, but the load during the measurement on 8.9.2015 was well below the norms and it was only 64%.

4.3 The duration of measurement should have been based on IEC 61000-3.

4.4 The formula to compute TDD, along with the measurement details has not been furnished to the Appellant to compute total demand distortion (TDD) and to verify its correctness.

4.5 The test carried out on 8.9.2015 by MRT/Tiruppur is not as per standards guidelines issued by the TANGEDCO. As per the guidelines the load at the time of measurement should be more than 75% of the average load recorded in previous 12 months which was not followed.

4.6 Guidelines for measurements as per TANGECO:

- a. Instrument used : Power quality analyser of class A type
(based on IEC 61000-4-7 & IEC 61000-4-30)
- b. Point of evaluation : at PCC based on IEC 61000-3-6
- c. Duration of measurement : Based on IEC 61000-3-6(the period shall be sufficient to capture at least two operation cycle of the largest harmonic providing elements)
- d. Load at the time of Measurement : 75% or more of the average maximum demand of the past 12 months.
: Aggregation and algorithm-based on class-A as per IEC 61000-4-30.
: 95% probability value will be considered as per IEC 61000-4-30.
: TDD will be considered based on the application example in IEEE 519, to avoid unnecessary penalization of consumers operating at the lower loads when measurements are taken.
- e. Limit values : As per TNERC directives based on CEA Regulation 2007.

4.5 The details of Harmonics test conducted and test report at HTSC No.63.

Sl.No.	Content	Value
1.	Date of test	8.9.2015
2.	Duration of test	Not mentioned
3.	Sanctioned demand	395 kVA
4.	Last 12 months average demand/current	183.69 kva 9.642A
5.	Average current during measurement	6.21 (measurement taken at 6.21A instead of 7.23A)

6.	individual voltage harmonics distortion (max) order 5 th	1.08%
7.	Total voltage harmonics distortion(THD)	1.09%
8.	Total current harmonics distortion (TDD)	9.342%

5. Contentions of the Respondent :

5.1 M/s Angel Label Division having HT service connection No.63, with a maximum demand of 225KVA in Tiruppur EDC. HTSC No.63 of M/s Angel Label Division premises was tested by MRT wing on 8.9.2015 for harmonics measurements.

5.2 The test carried out by MRT wing is relevant, moreover the technical guidelines issued by TANGEDCO with the interest that none of the harmonics generating load of the consumers may not be voluntarily isolated to avoid harmonics dumping penal charges at the time of measurement.

5.3 Test results clearly indicates that there was harmonics dumping beyond the TNERC norms at lower loads itself. Hence, it is proved that M/s Angel Label Division was injecting current harmonics even at lower loads. Hence, the penal charges levied based on the harmonics measurement is correct.

5.4 Test carried out by MRT wing, Tiruppur on 8.9.2015 is technically as per the guidelines.

5.5 Based on the tests carried out and as per the exceeded value of current harmonics measured at the time of testing, the penal has been levied.

6. Hearing held by the Electricity Ombudsman:

6.1 To enable the Appellant and the Respondents to put forth their arguments in person, a hearing was conducted on 22.9.2017.

6.2 Thiru. A.D. Thirumoorthy, has attended the hearing on behalf of M/s Angel Label Division and putforth his side arguments.

6.3 Thiru M. Ashok kumar, Assistant Executive Engineer/MRT/Tiruppur EDC has attended the hearing on behalf of the Respondent and putforth his arguments.

7. Arguments putforth by the Appellant's Representative on the hearing date:

7.1 The Appellant's representative reiterated the contents of the arguments furnished in the Appeal Petition. He argued that the test carried out by MRT on 08.09.2015 is not as per the TANGEDCO guidelines and also technically not correct. Because of this irrelevant test, penal charges have been levied.

7.2 Hence requested to withdraw the penal charges which has been levied based on the irrelevant Harmonic measurement.

7.3 Further any consumer connected to below 33kv to the Distribution system shall not be covered under part IV of the CEA Regulations, 2007.

7.4 The appellant stated that the respondents being the employees of the TANGEDCO have not followed the guidelines specified by their headquarters letter dated 25.03.2015.

8. Arguments furnished by the Respondent on the hearing date:

8.1 Respondent's representative reiterated the contents of the arguments furnished in the counter affidavit.

8.2 He has stated that HTSC No.63, M/s.Angel Label Division premises was tested by MRT wing on 08.09.2015 for Harmonics measurements as per the Technical guidelines issued by TANGEDCO.

8.3 During the hearing, the Respondents agreed that they have taken harmonic measurements for only one operation cycle instead of two operation cycle and they have not served any notice to the appellant to maintain load at 75% or more of the average maximum demand of the past 12 months during measurement.

8.4 As per CEA regulation permissible limits for TDD is 8%, however the TDD measured on 08.09.2015 at the Appellant's premises M/s.Angel Label Division was 9.342% and hence compensation charges has been levied.

9. Findings of the Electricity Ombudsman:

9.1 The appellant requested order for nullifying the harmonics measurement taken by MRT at HT SC No.63 and requested to withdraw the penal charges for dumping of harmonics beyond permissible limit. In order to find out the provision to levy compensation charges for dumping of harmonics I would like to refer Tariff order issued vide T.P.No.9 of 2014 dt.11.12.2014 effective from 12.12.2014 since the period of compensation charges levied is covered under the respective tariff order. The relevant para of the Tariff order is given below:

6.1 General Provisions applicable for High Tension Supply

ii. Harmonics:

As specified in the Supply Code, when the consumer fails to provide adequate harmonic filtering equipment to avoid dumping of harmonics into Licensee's network beyond the permissible limits as specified by CEA regulations, the consumer is liable to pay compensation at 15% of the respective tariff. As and when the consumer brings down the harmonics within the limit, compensation charges shall be withdrawn. The measurement of harmonics shall be done by the Distribution Licensee using standard meters/equipment in the presence of consumers or their representatives. This compensation charges is applicable to HT-I & HT-III category of consumers. TANGEDCO shall give three months clear notice to all consumers under these categories stating that they shall pay 15% compensation charges if the harmonics introduced by their load is not within the limits set by CEA. The TANGEDCO shall implement the compensation provision after three months period from the date of measurement if the harmonics measured is more than the permissible limits.

9.2 On a plain reading of the above provision it is to be noted that when the consumer fails to provide adequate harmonic filtering equipment to avoid dumping of harmonics into Licensee's network beyond the permissible limits as specified by CEA regulations, the consumer is liable to pay compensation at 15% of the respective tariff.

9.3 Further the measurement of harmonics shall be done by the Distribution Licensee using standard meters/equipment in the presence of consumers or their representatives. This compensation charge is applicable to HT-I & HT-III category of consumers.

9.4 If the harmonics introduced by their load is not within the limits set by CEA, all consumers under these categories shall pay 15% compensation charges. The TANGEDCO shall implement the compensation provision after three months period from the date of measurement if the harmonics measured is more than the permissible limits.

9.5 The CEA (Technical Standards for connectivity of the Grid) Regulation 2007, set limits of voltage & current Harmonic in regulation 3 of Part IV. The same is extracted below:

“Voltage and Current Harmonics

- (1) The total harmonic distortion for voltage at the connection point shall not exceed 5% with no individual harmonic higher than 3%
- (2) The total harmonic distortion for current drawn from the transmission system at the connection point shall not exceed 8%
- (3) The limits prescribed in (1) and (2) shall be implemented in a phased manner so as to achieve complete compliance not later than five years from the date of publication of these regulation in the official gazette.”

9.6 On a careful reading of the regulation, it is noted that the following are the maximum permissible limits.

- (a) Total harmonic distortion for voltage at the connection point shall not exceeds : 5%
- (b) Individual harmonics shall not be exceed : 3%
- (c) Total harmonic distortion for current drawn from the transmission system at the connection point shall not exceed : 8%

9.7 Further, I would like to refer the Commission's view given in the para 2.422 of the Tariff Order No.1 of 2013, dt.20.06.2013.

“The Railways have requested the Commission to defer charging of harmonics surcharge since there is no standard procedure available for measurement of harmonics. The harmonics norms have been fixed by the CEA in its Regulations notified on 21.02.2007. The Regulation specifies that the norms shall be implemented and complied with not later than 5 years from the date of publication of the regulation. Accordingly, the Commission only implemented the provision in its Order T.P.No.1 of 2012. The measurement of harmonics has already been done jointly by Salem Steel Plant and TANGEDCO as per the norms of the CEA and this has been recognized by the Commission in its order on M.P.No.22 of 2011, dated 28.09.2012.”

9.8 On a careful reading of the said para, it is noted that the Commission has recognized the test conducted jointly by TANGEDCO and Salem Steel Plant as per the norms of the CEA. Both Railways and Salem Steel Plant are EHT consumers, but the case on hand, M/s.Angel Label Division is a HT consumer connected with 11KV supply.

9.9 For the consumers connected with 11/22KV supply, I would like to refer the Common Order issued in W.P.Nos.25, 1900 to 19038053 of 2016 (Batch Cases) by the Hon'ble High Court of Judicature at Madras on 05.06.2017. The relevant paras are reproduced below:

COMMON ORDER

30. Moreover, when this Court directed the learned Additional Solicitor General of India to get instruction whether the consumers connected to a distribution system irrespective of the capacity of supply they receive including 11kv and 22kv supply lines need to provide harmonic control equipments, as a reply thereto, the Chief Engineer (Legal), Central Electricity Authority, Ministry of Power, New Delhi, in his letter dated 10.08.2015, has clarified that the CEA Regulations, with respect to compensation on account of harmonic distortions, are applicable to only those

consumers, who are connected to 33kv or above, namely, only bulk consumers. For better appreciation, relevant portion of the said communication is extracted below:-

"This is reference to your letter dated 07.08.2015 on the above subject. It is to inform that almost 305 cases are filed in the Hon'ble Court by the petitioners having grievances similar to this case. It is to submit that:

(i) CEA Regulation with respect to compensation on account of harmonic distortions is applicable to only those consumers who are connected at 33kv or above.

(ii) Further any consumer who is connected below 33kv to the distribution system is not governed by the Grid Standards for connectivity to the Grid.

(iii) The Grid is defined under Electricity Act, 2003, stating that the Grid is high voltage backbone system of inter-connected transmission lines, sub station and generating plants.

Therefore, only systems which can directly affect the Grid are covered under such Standards and as such the present petition for the consumers connected at 33kv or above which are defined as Bulk Consumer shall be covered for Harmonic Compensation

31. Subsequent to the above said communication, one Mr.P.D.Siwal, Secretary to the Central Electricity Authority, New Delhi, issued a clarification on 26.08.2015 with regard to applicability of Part IV of CEA Regulations, 2007. Relevant portion of the said communication is extracted below :

This has reference to the Part IV of the CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007. It is clarified that :

(iii) The condition of voltage and current harmonic as prescribed under Part IV is applicable only to the consumers which are defined as bulk consumers and drawing power at 33kv and above.

(iv) For the purpose of bulk consumer means a consumer who avails supply at voltage of 33kv or above.

Therefore, Part IV of CEA Regulations is applicable only to consumers drawing power at 33kv or above and any consumer who is drawing power below 33kv shall not be covered under Part IV of CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007.

From the above said communications of the Chief Engineer (Legal) as well as the Secretary of the Central Electricity Authority, New Delhi, it is crystal clear that the consumers connected with 11kv/22kv supply lines are placed outside the scope and purview of the Part IV of the CEA Regulations, 2007, and that it has further categorically clarified that 11kv/22kv supply lines consumers are not subjected to harmonic control norms, however, 33kv and above supply lines consumers are alone directed to comply with harmonic control norms. Thus, the impugned demands issued by the respondent/TANGEDCO directing the petitioners, who are admittedly connected with 11kv/22kv supply lines, are against the CEA Regulations, 2007.

32. Further, it is also pertinent to note that the CEA, who is the competent authority to declare the harmonic distortion levels, has not declared harmonic distortion levels to the consumers connected with 11kv/22kv either through the CEA Regulations, 2007, or by any other relevant provisions. Therefore, until the CEA prescribes any standard of harmonics for 11kv/22kv supply lines consumers and makes them also obligatory for harmonic controls, no obligation can be cast upon the 11kv/22kv supply lines consumers for compliance.

33. Taking support from Sections 50, 86 and 181 of the Act read with Regulation 4(1)(iv) of the Tamil Nadu Electricity Supply Code, learned Additional Advocate General sought to sustain the impugned order levying harmonic charges on the 11kv/22kv supply line consumers. In this context, let me extract below the above said provisions:

50. The Electricity Supply Code :-

The State Commission shall specify an Electricity Supply Code to provide for recovery of electricity charges, intervals for billing of electricity charges, disconnection of supply of electricity for non-payment thereof, restoration of supply of electricity, tampering, distress or damage to electrical plat, electric lines or meter, entry of distribution licensee or any person acting on his behalf for disconnecting supply and removing the meter, entry for replacing, altering or maintaining electric lines or electrical plant or meter.

Section 86 - Functions of State Commission.-

- (1) The State Commission shall discharge the following functions, namely:--*
- (a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;*
 - (b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;*
 - (c) facilitate intra-State transmission and wheeling of electricity;*
 - (d) issue licences to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;*
 - (e) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;*
 - (f) adjudicate upon the disputes between the licensees and generating companies and to refer any dispute for arbitration;*
 - (g) levy fee for the purposes of this Act;*
 - (h) specify State Grid Code consistent with the Grid Code specified under clause (h) of sub-section (1) of section 79;*
 - (i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;*
 - (j) fix the trading margin in the intra-State trading of electricity, if considered, necessary;*
 - (k) discharge such other functions as may be assigned to it under this Act.*

Section 50 of the Act dealing with the Electricity Supply Code statutorily provides for the cases, inter alia, with regard to the tampering of electric lines or meter and method of collection of electricity charges. Similarly, Section 86 of the Act empowers the State Commission to determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk and retail within the State. But, till date, it has not provided for setting up of standards for harmonics charges. Therefore, neither Section 50 nor Section 86 of the Act supports respondent TANGEDCO in the matter of levying of harmonic charges on the 11kv/22kv supply line consumers.

34. Likewise, Section :- 181 gives power to the State Commission to make Regulations consistent with the Act and Rules to carry out the provisions of this Act. By exercising such power, the Tamil Nadu Electricity Regulatory Commission had issued the Tamil Nadu Electricity Supply Code, wherein the Regulation 4(1)(iv) of the Tamil Nadu Electricity Supply Code, which is extracted below, deals with additional charges for harmonic dumping.

4.Charges recoverable by the Licensee:- The charges, recoverable by the Licensee from the consumers are:-

xxxx

(1). Tariff related charges, namely, -

(iv). Additional charges for harmonics dumping

Where any equipment installed by a consumer generates harmonics, the consumer shall provide adequate harmonic suppression units to avoid dumping of harmonics into Licensee's distribution system and the Licensee is at liberty to provide suitable metering equipment to measure the harmonic level pursuant to such harmonic. Where the consumer fails to provide such units, he shall be liable to pay compensation at such rates as the Commission may declare from time to time.

In view of Regulation 4(1)(iv) of the Tamil Nadu Electricity Supply Code, although the State has got power to direct the consumers to install harmonic filters irrespective of their voltage connection as stated by learned Additional Advocate General for the TANGEDCO, the same cannot be sustained in view of non-specification of any standard of harmonics for 11kv/22kv/supply line

consumers by the CEA, who, being an Apex Body as per Section 73(d) of the Act, has exclusive powers to specify the Grid Standards for operation and maintenance of transmission lines.

9.10 On a careful reading of the above order, the following are observed in connection with the present case on hand:

- i) Part IV of CEA Regulations is applicable only to consumers drawing power at 33kv or above and any consumer who is drawing power below 33kv shall not be covered under Part IV of CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007.
- ii) the consumers connected with 11kv/22kv supply lines are placed outside the scope and purview of the Part IV of the CEA Regulations, 2007, in view of non-specification of any standard of harmonics and it has further categorically clarified that 11kv/22kv supply lines consumers are not subjected to harmonic control norms.

9.11 In view of the above, I am of the considered opinion that the HTSC No.63 of the Appellant, which is connected with 11 KV supply line is not subject to harmonics control norms and hence the request of the Appellant to withdraw the harmonic compensation charges levied in HTSC 63 is acceptable to me.

9.12 However, in view of non-specification of any standard of harmonics by CEA for the consumers connected with 11KV/22KV, the appellant prayer to nullify the measurement taken by MRT on 08.09.2015 for HT SC 63 of M/s.Angel Label Division is not taken up.

10. Observation :

It is observed that the Appellant's petition filed in the CGRF of Tiruppur EDC has not been registered and the grievance not redressed as per the regulation, which is not a healthy practice. I am optimistic that the CGRF of Tiruppur EDC will not allow such lapse to recur in future.

11. Conclusion:

11.1 In view of my findings in Para 9 above, the respondent is directed to withdraw the harmonic compensation charges levied in HT SC 63 of M/s. Angel Label Division.

11.1 With the above findings the AP. No 43 of 2017 is finally disposed of by the Electricity Ombudsman. No Costs.

(S. Devarajan)
Electricity Ombudsman

To

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32, Parasakthi Koil Street,
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2) The Superintending Engineer,
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3) The Chairman & Managing Director,
TANGEDCO,
NPKRR Maaligai,
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4) The Secretary,
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5) The Assistant Director (Computer) – **For Hosting in the TNEO Website please**
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