

TAMIL NADU ELECTRICITY REGULATORY COMMISSION
(Constituted under section 82 (1) of the Electricity Act, 2003)
(Central Act 36 of 2003)

PRESENT:-

Thiru S.Akshayakumar	Chairman
Thiru G.Rajagopal	Member
and		
Dr.T.Prabhakara Rao	Member

M.P.No.1 of 2016

Union of India
Represented through
Chief Electrical Distribution Engineer
Southern Railway
7th Floor, NGO Annex.
Park Town,
Chennai – 600 003.

... Petitioner
(Thiru Siddarth Bahety,
Counsel for Petitioner)

Vs.

1. Tamil Nadu Generation and Distribution Corporation
Represented through
The Chairman cum Managing Director
(TANGEDCO & TANTRANSCO)
Tamil Nadu Electricity Board
NPKRR Maligai, No.144, Anna Salai
Chennai – 600 002.
2. The Chief Engineer (Commercial)
TANGEDCO, 2nd Floor, NPKRR Maligai
No.144, Anna Salai, Chennai – 600 002.
3. The Superintending Engineer, TANGEDCO
Trichy / Metro
Mannarpuram Main Road
Trichy – 620 020.
4. The Superintending Engineer, TANGEDCO
230 kV Auto Substation Campus
Perambalur 621 220.
5. The Superintending Engineer, TANGEDCO
Meenakchinaikanpatti Post
Dindigul – 624 002.

6. The Superintending Engineer, TANGEDCO
Race Course Road, K.Pudur
Madurai – 625 007.
7. The Superintending Engineer, TANGEDCO
No. 948, E.V.N. Road
Erode – 638 009.

.....Respondents
(Thiru M.Gopinathan
Standing Counsel for the Respondents)

**Dates of hearing: 28-01-2016, 28-04-2016, 29-08-2016 and
09-09-2016**

Date of Order: 28-04-2017

The M.P.No.1 of 2016 came up for final hearing on 09-09-2016. The Commission upon perusal of the Petition and connected records and after hearing the submissions of both parties hereby makes the following:

ORDER

1. Prayer of the Petitioner:

The prayer of the Petitioner in M.P.No.1 of 2016 is to:-

- (i) stop providing New Energy meters with 15 minutes MD integration time at all Railway Traction Substations pending disposal of this petition.
- (ii) restore the MD integration time in the Energy Meters provided at all Railway Traction Substations from 15 minutes to 30 minutes.
- (iii) grant liberty to the Petitioner to file separate petition for refund of the MD charges and Excess MD Surcharges additionally collected based on 15 minutes integration of MD at all the Railway Traction Substations.

2. Facts of the Case:-

The Southern Railway is availing power supply at 110 kV from TANGEDCO for traction purposes through 27 supply points spread over the State of Tamil Nadu

with a total contracted demand of 271.20 MVA. The Southern Railway during the year 2013-14 has consumed 765.90 MU for traction and paid about Rs.503.19 crores as current consumption charges and that 823.77 MU and Rs.576.03 crores respectively for the year 2014-15. The Respondent have suo-motu changed the method of computing Billing Maximum Demand in violation of the extant orders of the Commission. Hence, this petition.

3. Contentions of the Petitioner:-

3.1. The Petitioner Southern Railway is availing power supply at 110 kV from TANGEDCO for Traction purposes through 27 supply points spread over the State of Tamil Nadu with a total Contracted Demand of 271.20 MVA. The Southern Railway during the year 2013-14 has consumed 765.90 MU for Traction and paid about ₹ 503.19 Cr. as current consumption charges and that 823.77 MU and ₹ 576.03 Cr. respectively for the year 2014-15. The Respondents herein have suo-motu changed the method of computing Billing Maximum Demand in violation of the extant orders of the Commission.

3.2. Considering the unique characteristics of Railway Traction, the Commission have adopted separate tariff category HT-IB for Railway Traction from 01-08-2010, tariff now being adopted for Railway Traction is as follows:-

Table

Tariff for Railway Traction

Tariff Order	Date with effect from	Category	Demand Charges ₹/ kVA	Energy Charges ₹ / kWh
T.O.1 of 2012	01-04-2012	HT – 1B	250	5.50
T.O.9 of 2014	12-12-2014	HT – 1B	300	6.35

3.3. The Maximum Demand for all consumers in HT categories in Tamil Nadu is being computed on the basis of 30 minutes integration cycle, except for High Tension Industries covered under Tariff Category 1-A having arc, induction furnaces or steel rolling process, for whom integration period of fifteen minutes is adopted as per extant tariff orders.

3.4. TANGEDCO is now replacing the existing energy meters of 0.5s class with high accuracy energy meters of 0.2s class, which have some added features such as real time communication facilities etc. The new energy meters being provided are said to be ABT compliant meters and the MD integration cycle of the MD recorder has been deliberately set to 15 minutes though these meters are designed with provision for selecting the MD integration cycle of 30 minutes or 15 minutes duration as per IS: 14697/1999 Reaffirmed 2004. The load on the Railway Traction Sub-Stations are constituted only by the moving trains, the demand will be varying over time unlike other industrial loads where the loads are substantially constant over large periods of time. Hence, due to the varying nature of Railway Traction load the Demand integrated over 15 minutes interval will be higher than that of integrated over normal integration cycle of 30 minutes for no change in the loading pattern (train schedule) and this amounts to indirectly increasing the tariff above the tariff approved by the Commission.

3.5. The "Load Survey Data" downloaded from the ABT Complaint Meters provided by TANGEDCO at Ariyalur (HT SC No.71), Vaiyampatti (HTSC No.202) and Dindigul (HTSC No.339) Traction Sub-Stations has been obtained from TANGEDCO and analyzed and it is found that the Maximum Demand obtained at 30

minutes integration is much lower than the Demand obtained in 15 minutes integration for the same loading condition. The analysis is submitted below:-

Table

Sl. No.	Name of TSS	HT SC No.	Data recorded		Recorded MD in kVA		Increase in Recorded MD in kVA	% diff	Addl MD charges in Rs.
			From	To	30 min integration	15 min integration			
1	Vaiyampatti	202	27-08-15	28-09-15	7540	9000	1460	19.36%	4,38,000
2	Ariyalur	71	27-08-15	28-09-15	7680	9360	1680	21.88%	5,04,000
3	Dindigul Fdr-1 #	339	30-06-15	29-07-15	8880	11280	2400	27.03%	7,20,000
4			30-07-15	29-08-15	6820	8160	1340	19.65%	4,02,000
5			30-08-15	27-09-15	9000	10480	1480	16.44%	4,44,000
6	Dindigul Fdr-2 #	339	30-06-15	29-07-15	9840	11600	1760	17.89%	5,28,000
7			30-07-15	29-08-15	9960	11000	1040	10.44%	3,12,000
8			30-08-15	27-09-15	8960	11040	2080	23.21%	6,24,000

at Dindigul the recorded MD is taken as the maximum value of Fdr-1 & Fdr-2

3.6. It could be seen from the above Table that by changing the MD integration time from 30 minutes to 15 minutes, Recorded MD has increased by 10.44% to 27.03%. This constitutes an additional levy of MD charges to the tune of Rs.3.12 lakhs to Rs.7.20 lakhs per month, which amounts to indirectly increasing the tariff for Railway Traction suo-motu over and above the tariff approved by the Commission.

3.7. The recording higher demand due to changing of MD integration from 30 minutes to 15 minutes at Railway Traction Sub-Stations and consequent payment of higher demand charges without any change in the load was brought to the notice of the respective Superintending Engineers of TANGEDCO Distribution Circles by the Divisional Offices of the Railway with a request to restore back the MD recorders to 30 minutes integration cycle as per extant tariff conditions, but no reply was received.

3.8. Hence, this was brought to the notice of the Chief Engineer (Commercial), TANGEDCO, Director (Distribution) TANGEDCO and the Chairman cum Managing Director, TANGEDCO through Letter No.E.46/ET/1/TNEB dated 23-06-2015 and followed up with Letter No.E.46/ET/1/TNEB dated 25-08-2015. In response to the representations, the Chief Engineer (Commercial), TANGEDCO issued a Memo No.CE/Comm/EET/AEE.1/F.S.Rly/D.No.397/15, dated 20-07-2015 to all Chief Engineers of Distribution Circles of TANGEDCO, with the approval of Chairman cum Managing Director / TANGEDCO, directing to provide energy meters with Static meter / ABT meter of class 0.2s accuracy with 15 minutes integration cycle at all Railway Traction Sub-Stations. The above direction issued by the Respondents 1 & 2 is in utter violation of the extant order of the Commission in the prevailing tariff orders.

3.9. By quoting the above direction of the Respondents 1 & 2, the Superintending Engineers of Distribution Circles have now declined the request of the Railway to restore the integration time of the MD recorders in the Energy meters from 15 minutes to 30 minutes and proceeding to replace the energy meters with 15 minutes integration cycle.

3.10. The Petitioner is neither an Open Access Consumer, nor covered by the class of consumers mentioned under HT-1A category in the Tariff Order of the Commission.

3.11. The mere provision of ABT compliant meters per-se does not entail TANGEDCO to suo-motu change MD integration cycle from 30 minutes to 15 minutes.

3.12. Due to the suo-motu changing of the MD recorders in the Energy meters of Railway Traction from 30 minutes to 15 minutes, the recorded MD has increased for no change in the load leading to higher payment of MD charges as explained above.

3.13. TANGEDCO has so far changed the existing energy meters having 30 minutes integration with energy meters having 15 minutes integration at 8 Traction Sub-Stations viz. Ariyalur (HTSC No.71), Trichirapalli (HTSC No.196), Vaiyampatti (HTSC No.202), Dindigul (HTSC No.339), Virudhunagar (HTSC No.362), Kovilpatti (HTSC No.308), Eranial (HTSC No.75), Ingur (HTSC No.84).

4. Contentions of the Respondents:-

4.1. The Licensee TANGEDCO has not initiated any suo-motu action as alleged by the petitioner in having changed the integration period in view of the following:-

(i) - Nowhere in suo-motu Tariff Order No. 9/2014 of the Commission, it has been indicated that the integration period for HT category I B shall be 30 minutes.

(ii) - The definition of Maximum Demand as defined in Tamil Nadu Electricity Distribution Code, regulation 2(n)(b) framed by the TNERC does not have any suffix that the same will be specified by the Licensee with the approval of the Commission. It clearly defines that the same will be based on the nature of load. The Licensee firmly believes that the nature of load of Railway Traction necessitates 15 minutes integration to record the actual demand.

4.2. The Commission after considering carefully the unique characteristics of Railway Traction had adopted a separate TF under category HT-1B with reduced demand charges by Rs.50/- per KVA (Rs.300/ KVA) whereas for other categories, it is Rs.350/-.

4.3. As per Tamil Nadu Electricity Supply Code, 2004, in case of HT consumers, the maximum Demand Charges for any month will be levied on the KVA demand actually recorded in that month or 90% of the contracted demand whichever is higher, whereas the definition of MD as per Distribution Code is "Maximum Demand" in a month means the highest value of the average Kilovolt- amperes in case of HT services and KW in case of LT services, delivered at the point of supply of the consumer during any consecutive thirty / fifteen minutes in a month depending on the nature of load. It is submitted that the applicability of the integration period for particular category of consumer has not been differentiated. But, 15 minutes integration period was adopted for Railway Traction based on nature of Load.

4.4. The contention of the petitioner stating all the consumers under category 1A except arc, induction furnaces or steel rolling mills are adopting 30 minute integration is not correct since all the open access consumers irrespective of the category are covered under 15 minutes Integration period.

4.5. The petitioner has requested the respondent to provide ABT based meters in their Traction Sub-Stations since Southern Railway has decided to go for procurement of traction power through open bidding. Based on the request and as per the procedure followed in TANGEDCO to provide Class 0.2s accuracy meter in all the service connection to have better accuracy, out of 27 Nos. Railway Traction EHT Service connections 12 Nos. Service connections have been so far provided with meters having 15 minutes integration period.

4.6. Under TF category 1A Industries having furnaces or steel rolling process are covered under 15 minutes integration due to nature of the load. In the same context,

the railways traction loads are considered to be having peak demand during the traction movement. Also railways often have the practice of bunching movement of trains at times thereby exceeding normal demand.

4.7. In order to establish the fact on Maximum demand a para from the suo-motu Tariff order No. 9 of 2014 dated 11.12.2014 which was based on the order dated 09.04.2013 in Appeal No. 257/ 2012, is respectfully reproduced below:-

“The demand charges are towards recovery of fixed charges of the distribution licensee towards the cost of infrastructure provided to meet the maximum demand recorded by a consumer and are not related to the hours of actual supply to the consumer.The same is upheld by Hon'ble ATE in its order on the same matter on 09-04-2013. Relevant para of the order is extracted below:-

“Imposition of Demand charges is perfectly legal. The Demand charges are imposed on the basis of maximum demand actually recorded or 90% of the demand quota during the period of restriction and control. We do not find any illegality in the impugned order in this regard.”

4.8. The contention of the Petitioner that by changing the integration period, the demand has increased without any additional load does not hold water, in view of the above observation. The above observation is made by Hon'ble ATE in Appeal No. 257 of 2012 dated 09.04.2013. .Also due to bunching movement of trains at times, the demand exceeds the limit.

4.9. Taking into consideration, the views and objections raised by Southern Railway, the Commission in its Tariff Orders dated 31-07-2010, 30-03-2012 and 20-06-2013 have the demand charges for Railway Traction as Rs.250/KVA i.e. less

by Rs.50/KVA compared to HT Industrial consumers. However, the energy charges were fixed on par with the HT Industries. In any month if the recorded demand exceeds the contracted (sanctioned) demand, the Tamil Nadu Electricity Supply Code permits the licensee to levy surcharge on the excess over contracted maximum demand charges. Accordingly, the TANGEDCO levies the surcharge for excess over contracted maximum demand.

4.10. The Commission approved demand charges of Rs.300/- per KVA in its 2014 tariff order against Rs.350/- per KVA approved for other consumers considering the special nature of the traction load.

4.11. The tariff schedule shall be read with the General Terms and Conditions of Supply Code and Distribution Code specified by the Commission.

4.12. It has also been stated that the Railway Traction tariff do not have peak hour charges as like the consumers of TF- IA. The argument of the Petitioner comparing its tariff with that of I-A category is not justified as it has been benefited much more than I-A category in many aspects. Also considering the nature of service the petitioner all along been exempted from R&C measures. Having benefitted in many ways compared to other consumers, the claim of the petitioner citing other categories is not justified.

4.13. Traction load is unique and avail supply only in two phases thereby causing un-balance in the system network and pollute the system by generating harmonics, the facts which were very well established by the Licensee in M. P. No. 5 of 2006, M.P.No.3 of 2009 and Appeal No.122 of 2010. The traction load will be incident on

the licensee's network very often during the movement of trains is well established in the Table of the affidavit filed by the Petitioner. The action of the licensee in having fixed ABT meters with 15 minutes integration period for MD in Railway Traction Sub-Station service connections is reasonably established by the above facts. Effecting change in integration period of a category for a consumer in accordance with the type of load shall be the responsibility of TANGEDCO.

4.14. In the order dated 11.07.2013 in M.P No.18 of 2012, the Commission has directed, in para 9.7 that all new and existing open access customers shall be provided with ABT meters in line with this order. Also in the above order, the Commission has approved the specification approved for ABT meter in Appendix, wherein item- 1 (2.8) specifies Maximum Demand Integration period shall be set at 15 minutes duration by default and 30 minutes programmable. As directed by the Commission, a compliance report has been filed on 06.01.2016 for having fixed ABT meters for all the 2307 Nos. HT Open Access Customers. Since the Petitioner has represented to provide ABT based meters in their traction Sub-Stations since it has decided to go for procurement of traction power through open bidding, similar ABT/ Static meters were provided in 12 Nos. Railway Traction Sub-Station service connections with 15 minutes integration period for MD. Hence, the petitioner is not entitled to the interim relief granted in I.A.No.1/2016 in M.P.No.1 of 2016 and as such I.A.No.1/2016 in M.P.No.1/2016 and also M.P.No.1/2016 is liable to be dismissed.

5. Written Submission filed by the Petitioner dated 21-09-2016:-

In the Written Submission dated 21-09-2016, the Petitioner has made the following submissions, in addition to the contention made in their petition, namely:-

5.1. The Petitioner Southern Railway is availing power supply at 110 kV from TANGEDCO for Traction purposes through 28 supply points spread over the State of Tamil Nadu with a total Constructed Demand of 297.40 MVA.

5.2. TANGEDCO is now replacing the existing energy meters of 0.5s class with high accuracy energy meters of 0.2s class, which are said to be ABT compliant meters and have some added features such as real time communication facilities etc. While providing the new energy meters, the MD integration cycle of the MD recorder has been deliberately reduced and set to 15 minutes, though these meters are having provision for setting the MD integration cycle of 30 minutes or 15 minutes duration as required without prior intimation and permission from the Commission.

5.3. The Petitioner has stated that as the minimum billing MD is fixed at 90% of Contracted MD as per the extant tariff conditions of TANGEDCO, consumers has to fix the Contracted MD at an optimum level such that the Recorded MD lies within the narrow margin of 90% to 100% of Contracted MD. Hence, the increase in Recorded MD due to change in MD integration time results in Recorded MD exceeding the Contracted MD and consequent surcharge payment to TANGEDCO for excess over MD at 200% of MD charges to be paid to TANGEDCO, incidentally which is one of the highest rate in the country.

5.4. In addition to the above additional recurring expenditure, consumer is forced to increase the Contracted MD for which the consumer has to incur the following additional expenditure to be paid to TANGEDCO:-

- (i) Registration charges @ Rs.500 per application per service (Non-Refundable).

- (ii) Earnest Money Deposit (EMD) @ Rs.8.00 lakhs per MVA (Refundable – will be adjusted against future Security Deposit).
- (iii) Development Charges @ Rs.3.50 lakhs per MVA (Non-Refundable).
- (iv) Meter testing charges @ Rs.2,000 per occasion (Non-Refundable).

5.5. The order in M.P.No.18 of 2012 passed by the Commission which is referred by the Respondent is not relevant as M.P.No.18 of 2012 was between TANGEDCO and a group of HT consumers in which Southern Railway was not a party to that litigation. Hence the order passed therein is not binding on Southern Railway. In any event, M.P.No.18 of 2012 is directed towards the embedded HT consumers availing “Open Access”, nothing is mentioned about non-open access consumers.

5.6. The Petitioner further stated that the Commission has also consciously mentioned in the Specification of Meter at the Annexure to the order that the meter has to have a DIP switch to set the MD integration to 30 minutes wherever required. Further, the Specification for metering sets is also given only for 11/22/33 kV service connection and not for 110/230 kV service connections and changing the MD integration time from 30 minutes to 15 minutes and its implication has not been discussed in the proceeding of M.P.No.18 of 2012 and therefore it has no relevance to the present case.

6. Written Submission filed on behalf of the Respondents:-

In the Written Submission dated 28-09-2016, the Respondents have only reiterated their contentions made in their counter affidavit dated 15-02-2016 mentioned in para 4 above and has pointed out that as per the Commission’s Daily Order dated 28-01-2016, the integration period in the meters provided in the 12 Nos.

service connections (wherein class 0.2s accuracy meters are provided) has been changed to 30 minutes during February 2016.

7. Findings of the Commission:-

7.1. The petitioner, Southern Railway, has submitted that they are availing power supply at 110kV from TANGEDCO for traction purpose through 28 supply points throughout the State with a total contracted demand of 297.40 MVA. The contention of the petitioner is that while providing the new ABT compliant meters of 0.2s class accuracy, the Respondent, TANGEDCO has suo-motu changed the method of computing Maximum Demand (MD) from 30 minutes integration cycle to 15 minutes in violation to the extant orders of the Commission and that TANGEDCO has so far changed the existing meters with new ABT compliant meters at 8 Traction Sub-Stations. The petitioner has further stated that due to the change in the MD integration cycle in the energy meters from 30 minutes to 15 minutes, the recorded MD has increased for no change in the loading pattern (train schedule) and this amounts to indirectly increasing the tariff approved by the Commission. The petitioner has approached the respondent to restore back the MD recorders to 30 minute integration cycle as per extant tariff conditions but the request has been declined and TANGEDCO proceeded to replace the energy meters with 15 minutes integration cycle. The petitioner through the present petition has prayed to stop providing new energy meter with 15 minutes MD integration time at all Railway Traction Sub-Stations pending disposal of this petition.

7.2. The Respondent, TANGEDCO contends that,-

- (i) Nowhere in suo-motu Tariff Order No.9/2014 of the Commission, it has been indicated that the integration period for HT category I B shall be 30 minutes.

- (ii) As per TamilNadu Electricity Supply Code, 2004, in the case of HT consumers the maximum Demand charges for any month will be levied on the KVA demand actually recorded in that month or 90% of the contracted demand whichever is higher, whereas the definition of MD as per Distribution Code is 'Maximum Demand' in a month means the highest value of the average Kilovolt-amperes in case of HT services and KW in case of LT services, delivered at the point of supply of the consumer during any consecutive thirty/ fifteen minutes in a month depending on the nature of load. The applicability of the integration period for particular category of consumer has not been differentiated. But, 15 minutes integration period was adopted for Railway Traction based on nature of Load.
- (iii) The definition of Maximum Demand as given in TamilNadu Electricity Distribution Code, Regulation 2(n)(b) framed by TNERC does not have any suffix that the same will be specified by the Licensee with the approval of the Commission. It clearly defines that the same will be based on the nature of load. The Licensee firmly believes that the nature of load of Railway Traction necessitates 15 minutes integration to record the actual demand.
- (iv) The Commission after considering carefully the unique characteristics of Railway Traction had adopted a separate TF under category HT I B with reduced demand charges by Rs.50/- per KVA (Rs.300/KVA) whereas for other categories, it is Rs.350/- per KVA.
- (v) The contention of the petitioner stating all the consumers under category I A except arc, induction furnaces or steel rolling mills are adopting 30 minute integration is not correct since all the open access consumers irrespective of the category are covered under 15 minutes Integration period.

7.3. In this context, the Commission desires to put forth that in its earlier Tariff Order dated 31.07.2010 and other subsequent Tariff Orders, the Commission has categorized Railway Traction separately as High Tension Tariff I B and fixed lesser demand charges for Railway Traction compared to other HT Industries under HT tariff I A and the energy charges on par with other HT Industries. It has also been provided that 15 minutes integration is applicable to the categories coming under Tariff I A having arc, induction furnace or steel rolling process.

7.4. The maximum demand integration time has thus been 30 minutes for the petitioner until the provision of ABT compliant meters by the respondent during which it has been changed to 15 minutes period. The Commission observes that ABT meters have been provided by the Respondent at the request of the petitioner as they have decided to go for procuring traction and non-traction power through open bidding process. It is observed that the respondent has all along been adopting the method of 30 minutes integration for arriving at the maximum demand availed and has all of a sudden decided to change the methodology to 15 minutes integration cycle. The Commission is of the view that the respondent ought not to have resorted to the change of methodology on its own without following any procedure. We understand and appreciate the need for early adoption of 15 minutes integration for the HT consumers as all the settlements of the interstate transactions of the respondent Utility are based on the 15 minutes integration cycle. However, the respondent ought to have adopted due procedures for changing the integration period of MD to 15 minutes instead of doing it unilaterally, abruptly and on adhoc basis. On this ground the Commission has to accept the claim of the petitioner for restoration of maximum demand integration time from 15 minutes to 30 minutes and for that reason, the interim relief sought by the petitioner was granted during the

hearing on 28.01.2016 and the integration period has been restored to 30 minutes during February 2016 in all meters of the petitioner wherever 15 minutes integration was adopted.

7.5. In the result, we order restoration of maximum demand integration time from 15 minutes to 30 minutes in the energy meters provided for Southern Railway Traction Sub-Station by TANGEDCO. The MD charges and MD surcharge, if any, collected additionally based on 15 minutes integration period of MD at the Railway Traction Sub-Stations shall be adjusted by the Respondent in the forthcoming current consumption bills of the petitioner.

8. Appeal:-

An appeal against this order shall lie before the Appellate Tribunal for Electricity under section 111 of the Electricity Act, 2003 within a period of 45 days from the date of receipt of a copy of this order by the aggrieved person.

(Sd)
(Dr.T.Prabhakara Rao)
Member

(Sd.....)
(G.Rajagopal)
Member

(Sd.....)
(S.Akshayakumar)
Chairman

/ True Copy /

Secretary
Tamil Nadu Electricity
Regulatory Commission