



**L&T Metro Rail**  
Hyderabad



Sp

LTMRHL/GEN/ALS/LETTER/4509

March 30, 2016

Chief General Manager (Commercial)  
TSSPDCL  
Mint Compound,  
**Hyderabad.**

Sir,

**Sub** : Annual Revenue Requirement (ARR) for the year 2016-2017.

With reference to the above please find enclosed copy of the objections filed on behalf of L&T Metro Rail (Hyderabad) Limited.

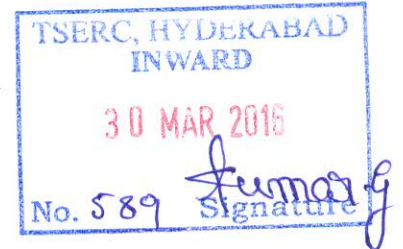
Kindly acknowledge the receipt.

Thanking you

Yours faithfully,  
For **L&T Metro Rail (Hyderabad) Limited**

**K M Manoj**  
Head- Project Controls & Contracts  
Km.manoj@ltmetro.com

**Encl** : As above.





**BEFORE THE HON'BLE TELANGANA STATE ELECTRICITY  
REGULATORY COMMISSION, HYDERABAD**

**IN THE MATTER OF:**

**FILING FOR ARR AND PROPOSED TARIFFS FOR HYDERABAD METRO RAIL  
PROJECT FOR FY 2016-17 BY SOUTHERN POWER DISTRIBUTION COMPANY  
OF TELANGANA LIMITED**

**OBJECTIONS FILED BY:**

**L&T METRO RAIL (HYDERABAD) LIMITED ('PETITIONER')  
4<sup>TH</sup> FLOOR, CYBER TOWERS, HITECH CITY, MADHAPUR, HYDERABAD.**

**OBJECTIONS TO THE PROPOSAL OF TSSPDCL IN THE MATTER OF ARR &  
TARRIFF FOR THE YEAR 2016-2017 BEFORE THE HON'BLE TELANGANA  
STATE ELECTRICITY REGULATORY COMMISSION, HYDERABAD**

1. TSSPDCL (the Distribution Company) in its Aggregate Revenue Requirement for the year 2016-17 (ARR) proposed that supply to Hyderabad Metro Rail (HMR) be made in the following categories:
  - a. HMR Traction purpose HT V(B) Category
  - b. HMR Stations purpose HT III Category
  - c. Others under HT II Category
  
2. Post filing of ARR, the Government issued a policy direction for creating a separate category for HMR at Cost of Service (CoS). This was based on the Article 6.4 of the Concession Agreement (reproduced hereunder) that the Government had entered into with the Concessionaire, L&T Metro Rail (Hyderabad) Limited:

**"6.4 Obligations relating to supply of electricity**

*The Government shall procure that the Rail System gets priority in the supply of electricity from the grid and the tariff thereof shall be determined on commercial principles such that the Rail System is not required to subsidise any or all other segments of electricity consumers. The Government shall further procure that in the event the Concessionaire receives a supply of electricity from any source other than the area distribution company, it shall be deemed to be a supply from a captive power station under and in accordance with the provisions of Sections 9 and 42 of the Electricity Act, 2003. For the*

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**Ashish Malhotra  
Company Secretary & Head – Legal**



avoidance of doubt, this Clause 6.4 is not applicable to Real Estate Development.”

3. It is pertinent to add here that the rationale behind the aforesaid Article 6.4 in the Concession Agreement, has been provided in the Detailed Project Report of Hyderabad Metro Rail Project, prepared by Delhi Metro Rail Corporation and accepted by erstwhile united Government of Andhra Pradesh. Extracts from Clause 8.9 of the Detailed Project Report are appended as Annexure 2, and are reproduced herein below:

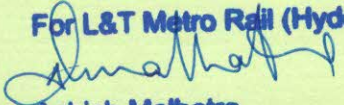
*“The cost of electricity is a significant part of Operation and Maintenance (O&M) charges of the Metro System, which constitutes about 25-35% of total annual working cost. Therefore, it is the key element for the financial viability of the Project. The annual energy consumption is assessed to be about 80 million units in initial years (2008) which will double by horizon year 2021.*

*In addition to ensuring optimum energy consumption, it is also necessary that the electric power be kept at a minimum in order to contain the O&M costs. Therefore, the power tariff for Hyderabad Metro should be effective rate of purchase price (at 132 & 33 KV voltage level) plus nominal administrative charges i.e. on a no profit no loss basis. This is expected to be in the range of Rs.2.50-3.00 per unit. It is proposed that Government of Andhra Pradesh takes necessary steps to fix power tariff for Hyderabad Metro at "No Profit No Loss" basis. Similar approach has been adopted for Delhi Metro.*

*Managing Director, DMRC has already requested Principal Secretary, Municipal Administration & U.D. Department, Government of A.P to take up the matter with the Government and electricity bulk distribution authorities vide letter no. DMRC/Elec16/Hyd-M/03/07 dated 25th March, 2003”.*

Joint reading of Article 6.4 of the Concession Agreement and Clause 8.9 of the Detailed Project Report clearly demonstrate that Hyderabad Metro Rail entitled to electricity tariff at Cost of Service.

4. Accordingly, the Distribution Company has filed an addendum recommending separate category for Hyderabad Metro Rail (HMR) Loads as HT-IX with CoS at Rs. 7.07/unit (**Addendum**). The details of the CoS furnished made available in the Addendum are furnished hereunder:

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Voltage Level	Category	MVA	MU
132 kV	HMR V(B): Traction	17.5	37.4
132 kV	HT-III: Airports, Bus Stations and Railway Stations	7.5	16.0
<b>TOTAL</b>		<b>25.0</b>	<b>53.4</b>


The Petitioner having been aggrieved by this determination of CoS at Rs. 7.07/unit has filed this petition before the Hon'ble Commission seeking correction of the same.

5. Before proceeding to the facts of the determination, it is relevant to highlight that Metro Rail Services has been classified as distinct class of consumer across the other regions of the nation on a cost of supply tariff. There is a set precedence of Delhi Metro Rail Corporation, which was allocated separate category on cost of supply tariff by the jurisdictional Regulatory Commission. Delhi Electricity Regulatory Commission in its order dated 26<sup>th</sup> June, 2003 in Petition No. 10 / 2002 had categorically stated that:

*"After considering and analysed in detail the submissions made by the petitioner and DMRC and also the response from the Government. The Commission recognises that DMRC is a social sector utility for the public of Delhi and its viability is greatly impacted by the prices of electricity. Being a new consumer at 220 kV and with its differentiating nature of services and operations, the Commission is inclined to agree with the view of the Government that DMRC may be treated as a separate category of consumers whose tariff would be based upon the **actual cost of supply** excluding both the subsidy and cross-subsidy elements"*

6. The matter of treating DMRC as a special category consumer on cost of supply was upheld by Appellate Tribunal for Electricity (ATE) when Railways sought to challenge the same. Thus, Delhi Electricity Regulatory Commission has been treating Railways and DMRC as different tariff categories. DMRC continues to be provided electricity at cost of supply.
7. It is to be noted that the Petitioner is engaged in the activities of providing Mass Rapid Transit System in the city of Hyderabad and is a public utility and social sector project having many social benefits, which would be bestowed upon a section of traveling public, majority of who belong the economically weaker sections of society. In connection with the above activities, electricity is

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required for traction (running trains), railway systems and facilities at stations and for maintenance depots.


8. It is submitted that unlike other consumers all infrastructure and facilities after the point of interconnection with TRANSCO/DISCOM system are established, maintained and operated by the Petitioner at its own cost and the TRANSCO/DISCOM do not incur any dedicated expense for supply to Hyderabad Metro Rail. The Petitioner has established four Receiving Sub-stations at various locations in proximity to Metro Rail System at its own cost. These will receive power at 132 kV. The onward distribution within the Traction System and the Depots/Stations is done by the Petitioner, thus absorbing all the losses (if any) incurred in the course of distribution.

#### **Determination of Cost of Service**

9. The legal framework for determination of CoS is outlined in the Electricity Act and the National Tariff Policy cited hereunder:
  - a. **Section 61 (g) of the Electricity Act** "...that the tariff progressively reflects the cost of supply of electricity and also, reduces cross-subsidies within the period to be specified by the Appropriate Commission"
  - b. **Section 62 (3) of the Electricity Act** "The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required."
  - c. **Section 8.3 of the National Tariff Policy** "For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify roadmap such that tariffs are brought within  $\pm 20$  % of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy."

10. The provisions of the Electricity Act, 2003 and the National Tariff Policy do not permit the Distribution Company to determine the CoS on marginal cost. In

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particular the National Tariff Policy requires determination of CoS on average cost basis.

11. It is further brought to notice of the Commission that TSSPDCL and its predecessor has been using the Embedded Cost approach for determining the Cost of Service. In particular, in its determination of the Cost of Service for all categories of consumers TSSPDCL has followed this approach. However in the case of the Petitioner, TSSPDCL has followed the Marginal Cost approach which is discriminatory. It is also relevant to highlight that no state within the country determines CoS on Marginal Cost approach.
12. TSSPDCL's Cost of Service model is presented in para 7.2 of the ARR. As per the Cost of Service model all the cost elements are classified into demand related, energy related and customer related and then subsequently allocated to various consumer categories. As per para 7.2.6 the customers of TSSPDCL are segregated into HT customers and LT customers, which includes EHT (220 kV and 132 kV). **It is to be noted that Hyderabad Metro Rail Project is an EHT consumer.** It is further stated that technical loss experienced in EHT systems are apportioned to EHT, 33 kV, 11 kV and LT loads.
13. In its Addendum, HT-IX category has been projected to have a load of 25 MVA with a consumption of 53.4 MU. The break-up of HMR load across the various categories and the Cost of Service for each category is provided hereunder:

Category	Consumption	Cost of Service (Rs./kwh)	
Stations	16.0 MU	5.32	CoS for HT-III category in ARR
Traction	37.4 MU	5.49	CoS for HT-V category in ARR

On a simplistic weighted average basis, the CoS for HT-IX would therefore amount to Rs. 5.43/unit.

14. For Railway traction TSSPDCL has determined coincidence factor at 94.6% and the class load factor at 84.4%. A detailed analysis of the CoS is attached herewith. This analysis (extracted from the ARR filed by TSSPDCL) shows that CoS for HT-V Traction should be Rs. 5.41/kwh. If this were to be considered as CoS for Traction in the analysis presented in paragraph 13 above, then the CoS for HT-IX would work out to Rs. 5.38/unit.
15. In the above circumstances, TSSPDCL's attempt to change the CoS to Rs. 7.07/unit is incorrect and contrary to law and practice of determining CoS.



**PRAYER**

It is therefore prayed that this Hon'ble Commission may be pleased to:

1. Determine the CoS for category HT-IX using the Embedded Cost approach followed for all other consumers and the fix the tariff at Cost of Service as per the policy directions of the Government.
2. Kindly grant separate / personal hearing to the Petitioner to put across its contentions.

and pass necessary orders as may deem fit and necessary in the interest of the justice.

For L&T Metro Rail (Hyderabad) Limited



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Company Secretary & Head - Legal

PETITIONER

**ANNEXURE: ANALYSIS FOR CoS FOR TRACTION**

<b>Expenditure Item</b>	<b>Total</b>	<b>Demand</b>	<b>Energy</b>	<b>Customer</b>	<b>Remarks</b>
Power Purchase and procurement cost	<b>16,906.14</b>	6354.72	10551.42	0	Fixed Charge is allocated to Demand, Variable charge to Energy
Transmission Cost	<b>1037.09</b>	1037.09			All transmission costs are allocated towards demand
PGCIL & ULDC Cost	<b>892.78</b>	892.78			
SLDC Charges	<b>28.86</b>	28.86			
Distribution Cost	<b>2267.98</b>	2,268.44	-280.02	279.56	Described in next slide
Interest on Consumer Security Deposits	<b>224.40</b>		224.40		Allocate towards energy i.e consumption
Supply Margin	<b>19.61</b>			19.61	Allocated to customers
Other Costs	<b>0.00</b>				
<b>Aggregate Revenue requirement</b>	<b>21,376.86</b>	<b>10,581.89</b>	<b>10,495.80</b>	<b>299.17</b>	

1. All demand charges are allocated towards traction based on the contracted demand.

2. As per the filings the contracted demand for traction is taken as 107.25 MW and total system contract load is taken as 18,280 MW

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3. All the demand charges to an extent of 0.6% (107.25/18280) is allocated to traction i.e. Rs. 24.8 Crs
4. Demand charges related to Power Purchase is allocated based on the coincident peak share in the system peak, Coincident peak for traction is derived as 31.54 MW based on coincident factor of 94.6%, class load factor of 84.4% and consumption of 246.49 Mus [246.49/84.4%/8.76 X 94.6%]. System peak is taken as 5011 MW inclusive of system losses. Based on this a 0.6% of the total fixed charges of power purchase is allocated to traction i.e. Rs 40 Crores
5. Energy related component is allocated based on the sales ratio to total purchases. Sales of 246.49 Mus are grossed up by transmission losses as there are no distribution losses at 132 kV level. Based on the above 0.65% of energy charges is allocated to traction i.e. Rs. 68.59 Crs.
6. Customer charges are allocated based on number of customers; as traction has very low number of customer this cost is not allocated.
7. Based on the above total cost of Rs 133.39 Crs are allocated to traction.
8. **For sales volume of 246.49 MUs and Total Cost of Rs 133.39 Crs the cost of service for traction comes to Rs 5.41/Unit against Rs 5.49 /unit as filed by TSSPDCL.**

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