



**MEGHALAYASTATEELECTRICITYREGULATORY  
COMMISSION**

**Review of Tariff and Cross Subsidy  
Surcharge for FY 2016-17**



**MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION**

**New Administrative Building, 1<sup>st</sup> Floor (Front Block Left Wing),**

**Lower Lachumiere, Shillong-793001**

**East Khasi Hills District, Meghalaya**

**In the matter of:**

Review of tariff and cross subsidy surcharge determined in Tariff Order for FY 2016-17 dated 31.03.2016.

**And**

In the matter of: Byrnihat Industries Association, Byrnihat, Meghalaya  
(Hereinafter referred to as BIA)

**- Petitioner**

**Coram**

**WMS Pariat, IAS (Retd)**

**Chairman**

**Order**

Date of Order: 30.03.2017

This order relates to the review petition filed by Byrnihat Industries Association, Byrnihat, Meghalaya seeking review of the Tariff and Cross Subsidy Surcharge for FY 2016-17 as per Tariff Order dated 31.3.2016.

**1. Introduction:**

The Commission has issued Tariff Order dated 31.03.2016 for true up of FY 2011-12, FY 2012-13 and FY 2013-14, Provisional true up for FY 2014-15 and determination of Tariff for FY 2016-17 for Meghalaya Power Distribution Company Limited (MePDCL). The Byrnihat Industries Association (BIA), Byrnihat, Meghalaya has filed Review Petition

against the Tariff Order dated 31.03.2016. The grounds of the petition are as given below:

- (i) Cross Subsidy Surcharge for FY 2016-17 has been determined in contravention to the provisions of Tariff Policy 2016, orders of the Appellate Tribunal for Electricity (APTEL) and the earlier orders issued by the Commission.
- (ii) No attempt has been made to determine voltage-wise cost of supply to determine the cross subsidy surcharge.
- (iii) Wrongly allowed the expenses of Meghalaya Electricity Corporation Limited (MeECL) as a part of operation and maintenance expenses in the ARR of Distribution Company. This is erroneous as being in direct contravention of the Tariff Regulations, 2014 and the judgement of APTEL.
- (iv) MePDCL has erred in assuming the opening loan balance at Rs.92.74 crore for FY 2016-17 based on the closing balance of FY 2014-15 which itself was an assumed value. The assumption has lead to error in computation of interest and finance charges at Rs.15.81 Crore for FY 2016-17.
- (v) The Commission approved bad debts of Rs.3.00 Crore during FY 2016-17 in complete contravention to the Tariff Regulations.

For examination of the above issues, the Commission hereafter revisits the issue-wise claims of the MePDCL, Commission's analysis and approval in the Tariff Order dated 31.03.2016, submissions of the Petitioner (BIA) and further analysis of the Commission on the review petition filed by BIA.

**2. Cross subsidy surcharge:**

**MePDCL's submission in the tariff petition for FY 2016-17 on issue of wheeling charge and Cross Subsidy Surcharge:**

The Petitioner had proposed to increase the distribution wheeling charges and cross subsidy surcharge by 25% in FY 2016-17 as shown in the Table below:

Sl. No.	Particulars	Existing (Rs./kWh)	Proposed (Rs./kWh)
1	Distribution Wheeling Charges	1.24	1.55
2	Cross subsidy surcharge for HT consumers	1.41	1.75
3	Cross subsidy surcharge for EHT consumers	1.51	1.90

The Petitioner has also submitted that the levy of open access charges shall be as per MSERC Open Access Regulations, 2012 and its subsequent amendments.

**Commission’s analysis in the Tariff Order dated 31.03.2016:**

The Commission had noted the submission of the Petitioner and had fixed the ARR of MePDCL for FY 2016-17 in accordance with the Regulations and taken it as the basis for determining the wheeling charges in accordance with MSERC (Terms and Conditions of Open Access) Regulations, 2012. The average demand for FY 2016-17 is assessed as 168.65 MW. The Wheeling Charges for all consumers for FY 2016-17 was shown in the Table below:

Particulars	(Rs. Crore)
ARR of MePDCL for FY 2016-17	899.57
Total Power Purchase cost of MePDCL	606.48
Total Transmission Charges	141.30
ARR- PPC- Tx. Charges	151.79
	<b>MU</b>
Total Sale including outside sale	1117.86
Average load	107.07 MW
Wheeling Charges	Rs.38840.29/MW/Day

The Wheeling charges were fixed at Rs. 38840.29/MW/Day and the per unit rate works out to Rs. 1.36. The Commission directed that these charges would be recovered, as per Regulations, payable on the basis of contracted Capacity/Scheduled Load or actual power flow whichever is higher.

**MePDCL submission in Tariff Petition for FY 2016-17 on the issue of Cross subsidy Surcharge**

The MePDCL submitted its Tariff Petition that the open access consumers are liable to pay cross subsidy surcharge to compensate the distribution utility for any loss of revenue due to shifting of its consumer to the open access system.

**Commission's Analysis in Tariff Order for FY 2016-17 dated 31.03.2016 reproduced as under:**

*"The Commission has examined the sale to EHT category, which have opted for Open Access in FY 2012-13 to FY 2014-15. It was noted that the trend of consumption has been declining year after year, being 224 MU, 203 MU and 161 MU respectively. In the Tariff exercise, this category actually provide the cross subsidy to the subsidized consumers. If these consumers optout of the grid, then the utility may suffer financially as well as the Domestic/BPL/Agriculture consumers, who will be affected as the cross subsidy which they were getting in earlier years, would come down in FY 2016-17 The Commission has also calculated that the amount of cross subsidy required by subsidized category has now become approximately Rs. 24 Crore which was earlier around Rs. 10 Crore. This has happened because the consumption by Industrial consumers has gone down. It is therefore necessary that the Commission should allow cross subsidy surcharge at such a level which will compensate the common consumers and the utility while not becoming so onerous to the Open Access consumers. It is also important in the present scenario in the State where the surplus power has been allowed right from the ARR of FY 2013-14 up to date to the Licensee by allowing him to purchase power more than their demand. In a situation of surplus, it is experienced that the Licensee is selling the power to the exchange at a cheaper rate than the average power purchase cost. If these open access consumers opt to buy from the Licensee, which they are not in present, this shall add additional revenue to the State. In accordance with the Law, if the consumer opts for Open Access, he needs to pay at least the amount of Cross subsidy surcharge, so as to compensate the subsidized category of consumer. It is studied that the Open Access consumers are still in*

comfortable position even after paying present cross subsidy surcharge, wheeling charges to the Licensee and purchase of power from power exchange/trader. The Commission endeavors that with the current cross subsidy surcharges, interest of both the consumer including Open Access consumers and the Licensees are balanced and are at win-win situation where everyone is availing 24x7 power supply.

The cross subsidy surcharge for open access consumers for the year 2016-17 is calculated in accordance with the Regulations. The Regulation prescribes that the amount of surcharge shall be so calculated as to meet the current level of cross subsidy from that category of consumers and shall be paid to the distribution licensee of area of supply where the consumer is located. In order to meet this objective, the Commission has tried to find out the cross subsidy surcharge in the following manner:

**Cross Subsidy Surcharge (S)=Tariff payable by the relevant category (T) – Cost of Supply (C)**

Average Cost of Power Purchase = Rs. 2.84/kWh

Loss in EHT level = 4%

Weighted Average Cost of Power Purchase including losses = Rs. 2.95/kWh

Wheeling charges at EHT level =Rs.0.75/kWh

Cost of service to EHT category (C) = Rs.3.70/kWh

Average Tariff of EHT category (T)= Rs. 6.68/kWh

**S= 6.68-3.70 = Rs. 2.98/kWh**

Similarly, for HT Level,

Weighted Average Cost of Power Purchase = Rs. 2.84/kWh

Loss in HT level = 6%

Weighted Average Cost of Power Purchase including losses = Rs. 3.02/kWh

Wheeling charges at HT level =Rs.1.36/kWh

Cost of service to HT category (C) = Rs.4.38/kWh

Average Tariff of HT category (T)= Rs. 7.20/kWh

**$S = 7.20 - 4.38 = \text{Rs. } 2.82/\text{kWh}$**

*In the above calculations, the commercial losses have not been factored in because the voltage wise losses are yet to be filed, which will increase the cost of service at least by 10%. In spite of the APTEL Order dated 01.12.2015, the Licensee could not submit the information. The Commission is therefore constrained to work out the loss estimation and voltage wise cost of supply to each category in the absence of required data. The Commission accordingly directs the Licensee that the calculation of cross subsidy at each voltage should be filed to the Commission within 6 months time for FY 2015-16. The Commission shall thereafter analyze the data and work out the Cost of Supply at each voltage level and re-evaluate the cross subsidy surcharge, if felt necessary.*

*The Licensee in its petition has proposed the Cross subsidy surcharge as under*

- a. For EHT level = Rs. 1.90/kWh*
- b. For HT level = Rs. 1.75/kWh*

*Accordingly, as stated above, the Commission in order to balance the interest of consumers, Open Access Consumers and Licensee, allowed the proposal of the Licensee for FY 2016-17. It was believed that the Cross Subsidy Surcharge shall suffice to the requirement of the cross subsidy amount of the Domestic, BPL and Agriculture sectors. The Commission also indicated that it would review the matter with the actual transactions of the Open Access in the State in the next quarter, for which the Licensee was directed to furnish the details in the first week of July'2016. The Commission accordingly directed that the following rates shall be recovered from the Open Access Consumers on the other charges from 01.04.2016 along with the same terms and conditions as per the Regulations.*

- For EHT level = Rs. 1.90/kWh @ 4% loss*
- For HT level = Rs. 1.75/kWh @ 6% loss “*



**3. Petitioner's (BIA) submission in the review petition:**

**Petitioner's Submission on Issue of Cross Subsidy Surcharge**

The Petitioner has submitted that the determination of the cross subsidy surcharge at Rs. 1.90 per unit for EHT consumers (132 KV) and Rs. 1.75 per unit for HT consumers (33 KV) for the financial year 2016-17 has no basis whatsoever.

The Petitioner has accordingly requested the Commission that the observations and computations done by the Commission in respect of Cross Subsidy Surcharge for FY 2016-17 in Tariff Order dated 31.03.2016 may be revised.

**Commission's Analysis on issue of Cross Subsidy Surcharge**

The Commission has noted that the Central Government has notified new Tariff Policy, dated 26.01.2016 by amending the erstwhile Tariff Policy, 2006 and introduced several reform measures, with a prime focus on the need for 'reasonable rates' to the consumers. Among the other things, the Tariff Policy, 2016 has introduced a change in the methodology in calculating the cross-subsidy surcharge (CSS). Most importantly, the Tariff Policy, 2016 at clause 8.5.1 prescribes that the amount of cross subsidy surcharge and additional surcharge to be levied on the open access consumers should not be so onerous so as to eliminate competition which is intended to be fostered in generation and supply of power directly to the consumers through open access. Clause 8.5.1 of the Tariff Policy, 2016 is as below:

***"Cross-subsidy surcharge and additional surcharge for open access***

*8.5.1 National Electricity Policy lays down that the amount of cross-subsidy surcharge and the additional surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates competition which is intended to be fostered in generation and supply of power directly to the consumers through open access.*

*A consumer who is permitted open access will have to make payment to the generator, the transmission licensee whose transmission systems are used, distribution utility for the wheeling charges and, in addition, the cross subsidy surcharge. The computation of cross*

*subsidy surcharge, therefore, needs to be done in a manner that while it compensates the distribution licensee, it does not constrain introduction of competition through open access. A consumer would avail of open access only if the payment of all the charges leads to a benefit to him. While the interest of distribution licensee needs to be protected it would be essential that this provision of the Act, which requires the open access to be introduced in a time-bound manner, is used to bring about competition in the larger interest of consumers.*

*SERCs may calculate the cost of supply of electricity by the distribution licensee to consumers of the applicable class as aggregate of (a) per unit weighted average cost of power purchase including meeting the Renewable Purchase Obligation; (b) transmission and distribution losses applicable to the relevant voltage level and commercial losses allowed by the SERC; (c) transmission, distribution and wheeling charges up to the relevant voltage level; and (d) per unit cost of carrying regulatory assets, if applicable.”*

Further, as against the earlier method using the cost of marginal power (top 5% power at the margin), the Tariff Policy, 2016 uses weighted average cost of power including transmission and wheeling losses. ***The most important aspect of Tariff Policy relevant to the issue at hand is that as per the provision to the cross subsidy surcharge formula in clause 8.5.1, the cross-subsidy surcharge cannot be more than 20% of the applicable tariff to the category of consumer seeking open access.***

***“Surcharge formula:***

$$S = T - [C / (1 - L/100) + D + R]$$

*Where,*

*S is the surcharge*

*T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation*

*C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation*

*D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level*

*L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level*

*R is per unit cost of carrying regulatory assets.*

*Above formula may not work for all distribution licensees, particularly for those having power deficit. The State Regulatory Commissions, while keeping the overall objectives of the Electricity Act in view, may review and vary the same taking into consideration the different circumstances prevailing in the area of distribution licensee.*

***“Provided that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access.”***

#### **Petitioner’s Submission on Issue of Voltage-wise cost of supply**

The BIA, in its petition has held that the Commission has permitted an increase in cross subsidy surcharge even though important parameters which are essential for calculation for cross subsidy surcharge such as voltage wise cost of supply were not presented by the Distribution Company. It was held by the Petitioner that such an approach is in contravention to the Tariff Policy, Judgments of the Hon’ble Supreme Court and the APTEL. The Tariff Order dated 31.03.2016 records as below:

*“The mandate of NTP is that tariff should be within  $\pm 20\%$  of the average cost of supply for the year. It is not possible for the Commission to lay down the road map for reduction of cross subsidy, mainly because of lack of data regarding Cost of Supply (COS) at various voltage levels. In view of the prevailing situation, the Commission has gone on the basis of average cost of supply for working out consume category wise cost of supply. The better performance in reduction in loss level will result in substantial reduction in average cost of supply.*

*In the above calculations, the commercial losses are not factored in because the voltage wise losses are yet to be filed, which will increase the cost of service at least by 10%. In spite of the APTEL Order dated 01.12.2015, the Licensee could not submit the information. The Commission is therefore constrained to work out the loss estimation and voltage wise cost of supply to each category in the absence of required data. The Commission accordingly directs the Licensee that the calculation of cross subsidy at each voltage should be filed to the Commission within 6 months' time for FY 2015-16. The Commission shall thereafter analyse the data and work out the Cost of Supply at each voltage level and re-evaluate the cross subsidy surcharge, if necessitated."*

It was also held by the BIA in its review petition that as per Regulations 99 and 103 of the MYTR Regulations, 2014 the Hon'ble Commission is duty bound to compute the voltage wise cost of supply. The Petitioner had duly raised these objections during the tariff proceedings before this Commission and had stated that voltage wise cost of supply has to be determined and tariff has to be framed based on voltage wise cost of supply.

The judgments by the Hon'ble Supreme Court and the Tribunal stress on the importance of deriving cross-subsidy surcharge based on actual cost of supply. The APTEL lays down the methodology to be followed while determining voltage wise cost of supply at Para 31-34 of the Tata Steel judgment. This methodology is to be employed while determining voltage wise cost of supply in absence of data submitted by the distribution licensee. Based on the methodology, the expert consultants appointed by Petitioner has carried out the exercise of calculating voltage wise cost of supply and subsequently determining the cross subsidy surcharge as the difference between the 'T' and voltage wise cost of supply. Based on the data in the Impugned Order, the voltage wise cost of supply for EHT consumers is Rs. 5.48/unit and HT consumers is Rs. 5.66/unit. This voltage wise cost of supply is computed as against the cost of supply determined by the Commission at Rs. 3.70/ kWh and Rs. 4.38/ kWh for EHT and HT category respectively. Thus, the cross subsidy surcharge arrived at as the difference between 'T', (ABR i.e. average revenue realization) and the voltage wise cost of supply would be as below:

	<b>Average Revenue Realization per unit (Rs./kWh)</b>	<b>Voltage-wise COS (Rs./kWh)</b>	<b>CSS (Rs./kWh)</b>
132 kV	6.06	5.48	0.58
33 kV	6.30	5.66	0.64

**8. Commission’s analysis.**

The Commission has arrived at the Cross Subsidy Surcharge for EHT at Rs.2.98/kWh and HT at Rs.2.82/kWh for FY 2016-17. The Commission has aptly discussed the issue in Chapter 8 & 9 of the Tariff Order dated 31.03.2016.

**(a) Voltage-wise cost of supply**

Tariff payable by relevant category of consumer shall be based on voltage-wise cost of supply. The Commission has not yet determined the Tariff based on voltage-wise cost of supply.

It has been ascertained by the Commission that many of the SERCs have not been able to determine the voltage-wise cost of supply to arrive at the cross subsidy surcharge in spite of orders of the APTEL in a number of cases filed before it. This is primarily because the concerned licensees have not furnished the required data to enable the Commission to arrive at voltage-wise cost of supply.

The MePDCL was directed to furnish the voltage-wise cost of supply for HT and EHT consumers with details of transmission charges, wheeling charges and also commercial losses in the system along with the tariff petitions to be filed year on year. This data is yet to be submitted to the Commission.

In the instant case, it is noted that the BIA (Petitioner) had under taken an exercise to work out the voltage-wise cost of supply within the State and had submitted that the voltage wise cost of supply is Rs.3.71/kWh at EHT level and Rs. 4.50/kWh at HT level. The above exercise cannot be validated readily by the Commission at the present juncture but it also observes that alternatively Cross Subsidy Surcharge (CSS) may be revised by limiting the CSS to 20% of the applicable tariffs for FY 2016-17 as specified in the National Tariff Policy.

Restricting the Cross subsidy Surcharge to 20% of applicable Tariff:-

The Commission, after examination, has recognized the facts that most of the SERCs have applied the formula provided in the Tariff Policy, 2016 have restricted the CSS to 20% of the applicable tariff, because of the inability of the most of the licensees to submit the voltage-wise cost of supply.

Based on the data available in the MePDCL tariff petition, and Tariff Order of the Commission for FY 2016-17, the cross subsidy surcharge limiting to 20% of applicable Tariff is worked out as given below:

$$S=T-[C/(1-L/100)+D+R]$$

Cross Subsidy Surcharge(S)= Tariff payable by the relevant category (T)– Cost of Supply (C)

Weighted Average Cost of Power Purchase = Rs. 2.84/kWh

Loss in EHT level = 4%

Weighted Average Cost of Power Purchase including losses at EHT level = Rs. 2.95/kWh

Wheeling charges at EHT level =Rs.0.75/kWh

Cost of supply to EHT category (C) = Rs.3.70/kWh (2.84+0.11+0.75)

Average Tariff of EHT category as per Tariff Order, 2016(T) =Rs. 6.68/kWh

$$S=6.68-3.70 =Rs.2.98/kWh$$

Hence the Cross Subsidy Surcharge considered for EHT Category for FY 2016-17, when limited to 20% of the applicable tariff works out toRs. 1.34/kWh as against Rs. 2.98/kWh.

Similarly, for HT Level,

Weighted Average Cost of Power Purchase = Rs. 2.84/kWh

Loss in HT level = 6%

Weighted Average Cost of Power Purchase at HT level including losses = Rs. 3.14/kWh

Wheeling charges at HT level =Rs.1.36/kWh

Cost of supply to HT category (C) = Rs.4.50/kWh (3.14+1.36)

Average Tariff of HT category (T)= Rs. 7.20/kWh

**S=7.20-4.50 =Rs.2.70/kWh**

Hence the Cross Subsidy Surcharge considered for HT Category for FY 2016-17 limited to 20% of the applicable tariff works out to Rs. 1.44/kWh as against Rs. 2.70/kWh.

**The Commission hereby approves cross subsidy surcharge at Rs. 1.34/kWh to EHT consumer and Rs. 1.44/kWh to HT consumers, effective from 01.04.2016.**

**Shillong**

**Date: 30.03.2017**

**Chairman**

**MSERC**