



**MEGHALAYA STATE ELECTRICITY REGULATORY
COMMISSION (MSERC)**

Tariff Order

For

Annual Revenue Requirement of

Distribution & Retail Tariff

For

FY 2015-16

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ABBREVIATIONS

ABT	Availability Based Tariff
A&G	Administration & General
ARR	Aggregate Revenue Requirement
ATPEL	Appellate Tribunal For Electricity
CAGR	Compound Annual Growth Rate
CD	Contract Demand
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Stations
CoS	Cost of Supply
CPSU	Central Power Sector Undertakings
Cr	Crore
CWIP	Capital Work In Progress
DE	Debt Equity
EHT	Extra High Tension
NER	North Eastern Region
FAC	Fuel Adjustment Costs
FDR	Fixed Deposits Receipts
FY	Financial Year
GFA	Gross Fixed Assets
HP	Horse Power
HT	High Tension
KV	Kilo Volt
KVA	Kilo Volt Amps
KW	Kilo Watt
kWh	kilo Watt hour
LNG	Liquefied Natural Gas
LT	Low Tension
MVA	Million Volt Amps
MW	Mega Watt
PLR	Prime Lending Rate
RIMS	Regulatory Information and Management System
YoY	Year on Year
NAPAF	Normative Annual Plant Availability Factor
MePGCL	Meghalaya Power Generation Corporation Limited
MePDCL	Meghalaya Power Distribution Corporation Limited
MePTCL	Meghalaya Power Transmission Corporation Limited
CoD	Commercial Operation Date
MSERC	Meghalaya Electricity Regulatory Commission
SLDC	State Load Despatch Centre

MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION
1st Floor (Front Block Left Wing), New Administrative Building
Lower Lachumiere, Shillong – 793001
East Kasi Hills District, Meghalaya

In the matter of

True up of ARR for FY 2011-12 and Determination of Multi Year Aggregate Revenue Requirement (ARR) for control period FY 16 to FY 18 and Retail Tariff for FY 2015-16.

AND

Meghalaya Power Distribution Corporation Limited
(herein after referred to as MePDCL)

Petitioner

Coram

Anand Kumar, Chairman

ORDER

(dated: 31.03.2015)

2. The Meghalaya Power Distribution Corporation Limited (herein after referred to as MePDCL) is a deemed licensee in terms of section 14 of the Electricity Act 2003 (herein after referred to as Act), engaged in the business of distribution of electricity in the state of Meghalaya.
3. As per the directive of the Commission, the MePDCL has filed the Petition for true up of expenses and revenues for FY 2011-12, and determination of Aggregate Revenue Requirement (ARR) for FY 2015-16, FY 2016-17 and FY 2017-18 and Retail Tariff for FY 2015-16.

4. In exercise of the powers vested under section 62(1) read with section 62(3) and section 64 3(a) of the Electricity Act 2003 and MSERC MYT Regulations, 2014 (Notified on 09.06.2014) (herein after referred to as Tariff Regulations) and other enabling provisions in this behalf the Commission issues this order for truing up of the ARR and revenues for FY 2011-12 and approval of the ARR for control period FY 2015-16 to FY 2017-18 and determination of retail Tariff for FY 2015-16 for supply of electricity in the state of Meghalaya.
5. Tariff Regulations specify that the distribution licensee shall file ARR and Tariff Petition in all aspects along with requisite fee as specified in Commission's fee, fines and charges regulations on or before 30th November of the preceding year. Accordingly the MePDCL has filed the ARR and Tariff Petition for the control period FY 2015-16 to FY 2017-18 along with the Petitions for truing up for FY 2011-12.
6. Regulation 11 of the Tariff Regulations, 2014 provides that the Commission shall undertake true up of previous year's expenses and revenues approved by the Commission with audited accounts made available to the Commission subject to prudence check including pass through of impact of un-controllable factors.
7. Regulation 19 of the Tariff Regulations, 2014 provides for giving adequate opportunities to all stake holders and general public for making suggestions/objections on the Tariff Petition as mandated under section 64(3) of the Electricity Act 2003. Accordingly the Commission directed MePDCL vide order dated 02.01.2015 to publish the ARR and Tariff Petition for the control period FY 2015-16 to FY 2017-18 in an abridged form as public notice in news papers having wide circulation in the state inviting suggestions/objections on the Tariff Petition.
8. Accordingly MePDCL has published the Tariff Petition in the abridged form as public notice in various news papers and the Tariff petition was also placed on the website of MePDCL. The last date of submission of suggestions/objections was fixed after 30 days of the notice.
9. The Commission, to ensure transparency in the process of Tariff determination and for providing proper opportunity to all stake holders and general public for making suggestions/objections on the Tariff petition and for convenience of the consumers and

general public across the state, decided to hold the public hearing at the headquarters of the state accordingly the Commission held public hearing at Shillong on 10.03.2015.

10. The proposal of MePDCL was also placed before the state advisory committee in its meeting held on 20.02.2015 and various aspects of the Petition were discussed by the committee. The Commission took the advice of the state advisory committee on the ARR and Tariff Petition of MePDCL for the control period FY 2015-16 to FY 2017-18 during the meeting of the committee.
11. The Commission took into consideration the facts presented by the MePDCL in its Petition and subsequent various filings, the suggestions/objections received from stakeholders, consumer organizations, general public and State Advisory Committee and response of the MePDCL to those suggestions/objections.
12. The Commission taking into consideration all the facts which came up during the public hearing and meeting of the State Advisory Committee, has true up the ARR and revenue for FY 2011-12 and approved the ARR for control period FY 2015-16 to FY 2017-18 and distribution tariff for FY 2015-16.
13. The Commission has reviewed the directives issued earlier in the Tariff orders for FY 2010-11 to FY 2014-15 and noted that some of the directives are complied and some are partially attended. The Commission has dropped the directives complied with and the remaining directives are consolidated and fresh directives are added.
14. This order is in Nine chapters as detailed below:
 1. Chapter 1 Introduction
 2. Chapter 2 Summary of ARR for FY 16 to FY 18 and Revenue Gap
 3. Chapter 3 Public hearing process
 4. Chapter 4 Approach of the Commission
 5. Chapter 5 Review on Performance of MePDCL
 6. Chapter 6 True up of ARR for F 2011-12
 7. Chapter 7 Analysis of ARR for FY 16 to FY 18 and Commission's in approvals
 8. Chapter 8 Tariff Principles and Design

9. Chapter 9 Wheeling charges and cross subsidy surcharges

10. Chapter 10 Directives

The MePDCL should ensure implementation of the order from the effective date after issuance of a public notice, in such a font size which is clearly visible in two daily newspapers having wide circulation in the state within a week and compliance of the same shall be submitted to the Commission by the MePDCL.

This order shall be effective from 1st April, 2015 and shall remain in force till 31st March, 2016 or till the next Tariff Order of the Commission.

(Anand Kumar)
Chairman-MSERC

1. Introduction

1.1 Background

The Meghalaya Power Distribution Corporation Limited (here after referred to as MePDCL or Petitioner) has filed its Petition on 22.12.2014 under section 62 of the Electricity Act 2003, read with Meghalaya State Electricity Regulatory Commission MYT Regulations, 2014 for determination of Aggregate Revenue Requirement for control period FY 16 to FY 18 and determination of distribution tariff for FY 2015-16.

The Commission has admitted the Petition on 02.01.2015.

1.2 Meghalaya Power Distribution Corporation Limited

The Government of Meghalaya has unbundled and restructured the Meghalaya State Electricity Board with effect from 31st March, 2010 into the Generation, Transmission and Distribution businesses. The erstwhile Meghalaya State Electricity Board was transferred into four successor entities, viz,

1. Generation: Meghalaya Power Generation Corporation Ltd (MePGCL)
2. Transmission: Meghalaya Power Transmission Corporation Ltd (MePTCL)
3. Distribution: Meghalaya Power Distribution Corporation Ltd (MePDCL)
4. Meghalaya Energy Corporation Limited (MeECL) a holding company.

The Government of Meghalaya issued further notification on 16th September, 2013 notifying the revised statement of assets and liabilities as on 1st April, 2010 to be vested in Meghalaya Energy Corporation Limited.

As per the said notification issued by the Government of Meghalaya a separate corporation “Meghalaya Power Distribution Corporation Limited” (MePDCL) was incorporated for undertaking Distribution Business.

1.3 Meghalaya State Electricity Regulatory Commission

Meghalaya State Electricity Regulatory Commission (here in after referred to as “MSERC” or the Commission) is an independent statutory body constituted under the provisions of the Electricity Regulatory Commission (ERC) Act, 1998, which was superseded by Electricity Act (EA), 2003. The Commission is vested with the authority of regulating the power sector in the state inter alia including determination of tariff for electricity consumers.

1.4 Admission of the Petition and Public hearing process

The MePDCL has submitted the current Petition for true up of expenses and revenues of FY 2011-12 and determination of Multi Year Aggregate Revenue Requirement (ARR) for control period FY 16 to FY 18 including determination of tariff for FY 2015-16. The Commission undertook the technical validation of the Petition and admitted the Petition on 02.01.2015.

In accordance with section 64 of the Electricity Act, 2003, the Commission directed the MePDCL to publish the application in abridged form to ensure public participation. The public notice, inviting objections/suggestions from its stakeholders on the ARR and tariff Petition filed by it, was published in the following news papers on the dates noted against each.

Sl	Name of paper	Language	Date of Publication
1	The Shillong Times	English	07.01.2015
2	U Mawphor	Khasi	07.01.2015
3	Chitylli	Jaintia	07.01.2015
4	Salantini Janera	Garos	07.01.2015

The Petitioner has also placed the public notice and the Petition on the website (www.meecl.nic.in) for inviting objections and suggestions on its Petition. The interested parties/stakeholders were asked to file their objections/suggestions on the Petition within 30 days of notification.

MePDCL/ Commission received some objections/suggestions from Consumers/consumer organisations. The Commission examined the objections/suggestions received and fixed the date for public hearing on MePDCL's petition to be held on 10.03.2015. Commission also informed the objectors to take part in the public hearing process for presenting their views in person before the Commission. The Public hearing was conducted at Commission's office in Shillong as scheduled. The Commission also held meeting with state Advisory committee. Proceedings of the meeting are given in Annexure I

The names of consumers/consumer organisations those filed their objections and the objectors who participated in the public hearing for presenting their objections are given in the Annexure II.

A short note on the main issues raised by the objectors in the written submissions and also in the public hearing along with response of MePDCL and the Commission views on the response are briefly given in chapter-3.

2. Summary of Multi Year ARR and Tariff Petition for Control Period FY 16 to FY 18

2.1 Aggregate Revenue Requirement (ARR) for Control Period FY 16 to FY 18

The Meghalaya Power Distribution Corporation Limited (MePDCL) has submitted the Petition on 22-12-2014 seeking approval for Aggregate Revenue Requirement for control period FY 16 to FY 18 and Determination of distribution tariff for FY 2015-16. The MePDCL has projected the revenue requirement for the control period as under:

Table 2.1: ARR Projected by MePDCL for control period

Sl. No	Item of expenditure	(Rs. Cr)			
		FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Cost of Power Purchase	621.54	570.77	676.65	762.65
2	Inter-State Transmission	57.45	72.41	78.98	90.26
3	MePTCL Transmission	72.72	76.95	81.36	86.01
4	Employee costs	83.28	98.73	108.41	118.75
5	<u>R&M expenses</u>	<u>7.24</u>	<u>7.89</u>	<u>8.61</u>	<u>9.38</u>
6	A & G Expenses	62.31	71.34	79.58	81.78
7	Depreciation	18.73	27.44	39.44	50.35
8	Interest on Loan Capital	15.69	52.5	47.66	43.33
9	Interest on Working	9.43	33.93	39.19	43.55
10	Return on equity	35.36	38.04	40.28	40.28
11	Income Tax	-	-	-	-
12	Provision for bad and	9.39	10.06	11.58	12.85
	Total revenue	993.14	1,060.08	1,211.73	1,339.19
	Less: Non tariff income	26.78	26.78	26.78	26.78
	Less: Cross Subsidy	986	9.86	9.86	9.86
	Less: RE Subsidy Subsidy	<u>17.5</u>	<u>17.5</u>	<u>17.5</u>	<u>17.5</u>
	Net revenue requirement	939	1,005.93	1,157.58	1,285.05

2.2 Revenue Gap for the 1st Year of Control Period

2.2.1 Revenue at Current Tariff

The Revenue at Current Tariff is calculated based on the current tariff and projected sale of energy category wise for the 1st year of Control Period i.e. FY 2015-16. The detailed calculation of revenue at current tariff is shown in Format 14 A, B, C, and D. The total revenue at current tariff works out to be Rs. 564.12 Cr for FY 2015-16.

2.2.2 Revenue from Sale of Surplus Power

It is submitted that as per the Energy Balance submitted in Table 12 of the Petition during FY 2015-16 MePDCL is expected to be having 391 MUs of surplus power after meeting the State Demand of Energy and Returning of Swapping Obligation. As this surplus power is expected to be available only during the rainy season, MePDCL has to depend upon the Short Term market for sale of this surplus power. Over last 3-5 years, it is observed that there are huge fluctuations in the short term market rate especially during the rainy season. Therefore, it is extremely difficult to project a realistic rate per unit of power.

However, after analyzing the past trend and current market trend it is assumed that MePDCL will be receiving revenue at Rs. 3.00 per unit. The calculation of Revenue from sale of Surplus Power is shown in the table below:

Table 2.2: Revenue from Sale of Surplus Power

Particulars	FY 2015-16
Surplus Power (MU)	390.56
Per Unit Revenue (Rs./Unit)	3
Revenue from Surplus Power (Rs. Cr)	117.17

MePDCL submits before the Hon'ble Commission to kindly approve Rs. 117.17 Cr as revenue from sale of surplus power.

2.2.3 Revenue Gap/Deficit at Current Tariff

The projected Net ARR in clause 3.16, Revenue at current tariff in clause 4.1 and Revenue from Sale of Surplus power in clause 4.2 is compared and a Revenue Gap/Deficit of Rs. 324.64Cr is arrived for FY 2015-16. The details are shown in the table below:

Table 2.3: Revenue Gap for FY 2015-16

Particulars	Rs. Cr
Net ARR of FY 2015-16	1,005.93
Revenue from Surplus Power	117.17
Revenue at Existing Tariff	564.12
Revenue Gap	324.64

MePDCL submits before the Hon'ble Commission to kindly approve Rs. 324.64 Cr as Revenue Gap for the FY 2015-16.

2.3 MePDCL has requested the Commission

To pass appropriate order on the following:

- a) Approval of Business Plan for the Control Period of FY 2015-16 to FY 2017-18
- b) Approval of Tariff Proposal for FY 2015-16
- c) Approval of Net ARR amounting to Rs. **1005.93** Cr for FY 2015-16 as proposed in this Petition.
- d) Approval of Net ARR amounting to Rs. **1,157.58** Cr for FY 2016-17 as proposed in this Petition.
- e) Approval of Net ARR amounting to Rs. **1,285.05** Cr for FY 2017-18 as proposed in this Petition.
- f) To pass such orders, as Hon'ble Commission may deem fit and proper and necessary in view of the facts and circumstances of the case.
- g) To condone any inadvertent omissions, errors & shortcomings and permit the applicant to add/change/modify/alter this filing and make further submissions as required.

3. Summary of Objections, Response of MePDCL and Commission's Observation

In this chapter, the Commission has dealt with the suggestions/objections received by it on the ARR for FY 2015-16 to 2017-18. The summary of objections, response of the licensee and Commission's view are given below:

Issue 1: Non-submission of True up petition along with audited accounts.

M/s Byrnihat Industries Association has stated that the ARR and Tariff Petition for FY 2015-16 has not been filed in accordance with the Regulations of MYT. The petitioner has not submitted the Audited Accounts, and True up Petition for FY 2013-14. This is necessary to assess correctly the revenue requirement of FY 2015-16. BIA has also raised objections on the actual values for FY 2014-15 to be known before estimating the ARR. BIA also raised objections to the tariff of HT & EHT consumers which is very high.

Response of MePDCL

MePDCL informed that the accounts for FY 2011-12 are available and FY 2012-13 are being audited. Thereafter on the basis of FY 2012-13 records the segregation of all entities will be done and accounts will be prepared. Therefore no true up petition for FY 2013-14 along with the MYT petition.

Issue 2: Objection to Business Plan

BIA has stated that due to high tariff to industrial category there is decline in the consumption by this category. The increase in consumption by subsidizing category shall affect the ARR. BIA stated that due to this increase in tariff it should not be borne by industries. BIA further objected to the Energy availability. BIA submitted that as is seen from the petition, the PLF in the case of most of the MePGCL Generating Stations is quite low and in the range of 45% - 50%. However, the cost of this power is extremely high. Therefore, the expensive power from the inefficient MePGCL stations is being passed on to the consumers.

Response of MePDCL

MePDCL responded that sale in the industrial category in the last few years have reduced hence the projection for sale is at the same level for entire control period. They submitted that the business plan is in line with Regulations and parameters projected for ARR are also in accordance with the Regulations. The details of projections have been provided to the Commission.

Issue 3: Distribution loss trajectory

BIA objected to licensee's proposal to achieve distribution losses of 26.41% in FY 2015-16, 25.88% in FY 2016-17 & 25.35% in FY 2017-18. BIA submitted that the loss is proposed to be brought down only by 0.5% each year which is extremely low despite of high capital investment.

Response of MePDCL

MePDCL submitted that distribution loss is projected to reduce by 0.5% each year based on the capital expenditure program. However, the actual losses shall be submitted at the time of truing up exercise.

Issue 4: Proposed capital schemes

BIA submitted that all the capital expenditure proposed is funded by grant by State Government / Central Government or its agencies. However, MePDCL has not given any clear timeline or commitment as to when such scheme will be implemented. Therefore, only Operation & Maintenance expenses (if applicable) should be allowed on them. No depreciation or other element of tariff should be given to MePDCL on such assets.

Response of MePDCL

BIA submitted that capital expenditures schemes have been proposed based on the planning that needs to be implemented during future years. Therefore, their submissions are not vague but based on planning for control period.

Issue 5: Power purchase cost

BIA stated that out of the total ARR projected, the claim on account of Power Purchase Cost is Rs. 570.77 crores for FY 2015-16, Rs. 676.65 crores for FY 2016-17 and Rs. 762.65 crores for FY 2017-18. Out of all the power purchase, the most expensive purchase is from Leshka HEP of MePGCL. MePDCL has projected purchase power from the Leshka HEP of the Meghalaya Generating Company of 410 MUs at a cost of Rs. 132.11 crores, Rs. 138.71 crores and Rs 145.65 crores for the three years. This power purchase is extremely adverse as the final tariff of the project itself has not yet been determined. With regard to the power purchase cost related to the NTPC, NEEPCO & OTPC, the Hon'ble Commission should only allow the tariff as determined by the Central Commission and nothing more. Further, the power purchase cost for upcoming stations should not be allowed till such time a proper and legal Order has been passed by the Central Commission.

Response of MePDCL

MePDCL submitted that they have considered the generation and cost of generation as per tariff order issued by the Commission for MePGCL in FY 2014-15. The gross generation and PLF are therefore as per the order. Moreover, the cost of power from MePGCL is comparatively low and not expensive as stated by BIA. MePDCL further submitted that availability of power from CGS have been considered based on the past trend in realistic manner. Cost of Myntdu Leshka project is on provisional basis subject to finalization by the Commission. MePDCL has considered 5% increase in the cost of power purchase and cost of purchase from NEEPCO is based on available information.

Issue 6: Transmission cost

The MePDCL has proposed substantial changes in MePTCL and ISTS transmission charges. The ARR of MePTCL is also over stated and ought to be reduced by the Hon'ble Commission. The effect of the same must be passed on to the consumers through the distribution tariff.

Response of MePDCL

MePDCL has projected inter state transmission charges considering increase in their share and addition of new lines. They have also increased 5% in fixed charges for PGCIL and POSOCO. Similarly, for MePTCL they had increased the existing charges by 5.72%. However, they have submitted that it will be as per the Commission's order for transmission for FY 2015-16.

Issue 7: Gross fixed assets

BIA objected to the assets shown as closing balance as on 31.03.2015 to be checked and correct figures may be allowed. BIA further objected that there is no fixed assets register and no guarantee that even Rs. 430.73 crores worth of assets are there as on 31.3.2015 since MePDCL has not bothered to give any details.

Response of MePDCL

MePDCL submitted that increase in GFA is based on the projected expenditure to be carried and expected completion of works to be done during the control period. MePDCL submitted that the capital expenditure shall benefit the consumers by improvement in the network.

Issue 8: Return on equity (ROE)

BIA objected that MePDCL has claimed an ROE of Rs. 38.04 crores (2015-16), Rs. 40.28 crores for FYs 2016-17 & 2017-18. It is not understood if the GFA is increasing year on year, how can the ROE be constant for 2016-17 & 2017-18. Further, the GFA itself should be reduced on which the ROE would depend. BIA further stated that ROE should be determined in accordance with the Regulation.

Response of MePDCL

MePDCL stated that as per regulation and the size of the assets.

Issue 9: Interest in finance charges

BIA submitted that the Interest and Finance Charges shall be determined in accordance with the Regulation and MePDCL should establish to the satisfaction of this Commission that it made efforts to re-finance the loan and if so, what was the result of the same.

Response of MePDCL

MePDCL pointed out that as per regulation 32 the interest charges are on outstanding loans duly considering the schedule of loan repayment, terms and conditions of loan agreement and lending rates of banks. However, interest on the Central Government Loans is based on actuals. Repayment is not considered for moratorium period.

Issue 10: Operation and maintenance expenses

BIA objected and stated that the O & M expenses for the first year of the control period shall be approved by the Commission taking into account the actual expenses for the past and norms/prudence check. They further objected that the O&M expense are in accordance with the norms fixed by the Commission, and any excess or shortage over the norm shall have to be justified by the licensee.

Response of MePDCL

MePDCL submitted that all the expenses are projected in line with the regulations and are legitimate and necessary for smooth operation of the utility.

Issue 11: Employees' expenses

BIA objected to employees cost and stated that there is no justification whatsoever for the MePDCL to claim an very high increase in employees cost especially when there is nothing on record to show any increase in the efficiencies of the employees. BIA required that MePDCL should be directed to come with a viable long term plan.

Response of MePDCL

MePDCL submitted that after corporatization the employees and management have mutually decided that earlier trend of revision of pay will continue in future. Accordingly after every five years the pay has to be revised. Moreover on a yearly basis there is a normal increase. They have also submitted for viable long term plans and creation of pension trust the actuarial work is going on.

Issue 12: Repair and maintenance expenses

BIA stated that R & M expenses should be in accordance with regulations and MePDCL should file a proper budget and co-relate the expenses of repair and maintenance with the actual assets being maintained by MePDCL.

Response of MePDCL

MePDCL submitted that due to hilly terrain and due to recent electrification work in rural area the R& M works required more funds. It is therefore a genuine need to keep the current assets under satisfactory running condition. Furthermore, with new addition of assets there is increase in R&M expenses. Accordingly they have taken 9% increase in the last three years.

Issue 13: Administrative and general expenses

BIA objected to MePDCL's proposal and asked MePDCL to furnish the details. They also required that it should relate to assets size.

Response of MePDCL

MePDCL submitted that A&G expenses is taken at the average inflation rate of 9% over the last three years period on actuals. MePDCL has considered apportionment of O&M cost, depreciation, interest of the holding company into A&G cost of subsidiary company. Therefore, it leads to significant increase in A&G as per the approach.

Issue 14: Interest on working capital

BIA submitted that interest on Working Capital varies as per the time periods of the loans. The rate of 14.75 % should therefore not be constant and the reduced SBI bank Rate should be applicable to compute the Interest on Working Capital.

Response of MePDCL

MePDCL submitted that transmission cost is part of power purchase cost and therefore included in the working capital. They have further said that the SBI PLR rate is taken as on 01.11.13, which is not changed till now.

Issue 15: Depreciation

BIA objected to depreciation charges and required MePDCL to first have the capital cost of any proposed projects approved by the Hon'ble Commission after subjecting itself to complete prudence check, provide all the necessary data including the audited statements of the capital cost of the project and provide full justification for the expenditure incurred.

Response of MePDCL

Depreciation is calculated as per the Regulations for the entire control period. The assets wise depreciation rates and depreciation calculated has already been submitted.

Issue 16: Bad and doubtful debts

BIA required that the pre condition for allowing the bad and doubtful debts is that the 'licensee gets the receivables audited.' Unless the above is done, there can be no question of allowing any bad and doubtful debts.

Response of MePDCL

MePDCL submitted that entire sale is on credit and mostly done in semi urban and rural areas which are geographically spread. In accordance with Regulation they have claimed 1% of receivables as bad debts.

Issue 17: Other income, cross subsidy surcharge & RE subsidy

BIA objected to the revenue projected by MePDCL from Other Income, Cross Subsidy Surcharge & RE subsidy. Obviously, if MePDCL has excess power and the same will be treated, the other income on account of the same will also increase. Further, it is seen that cross subsidy surcharge is also going up year on year since there is also an increase in cross subsidization. Therefore, the figure of 'Other Income', 'Cross Subsidy Surcharge' & 'RE Subsidy' should be appropriately increased.

Response of MePDCL

MePDCL has offered no comments on the income from other sources.

Issue 18: Revenue gap

BIA objected that the excess projections made by MePDCL of its revenue requirements, MePDCL has arrived at an artificial revenue gap at existing tariffs and proposed tariff increase for all categories of consumers. BIA submitted that if the excess costs as claimed by MePDCL are disallowed after thorough prudence check by the Commission, there will be no need for any tariff increase.

Response of MePDCL

MePDCL responded that the petition is as per the regulations projected for entire control period and is legitimate.

Issue 19: Tariff should be reflective of cost

BIA submitted that tariff must be reflective of the cost of supply and MePDCL should give proposal or roadmap for reduction of the existing level of cross subsidies in the system. The industrial consumers are being charged tariff at much higher than the cost of supply, the cross subsidy being contributed by the industrial consumers ought to be reduced as per the provisions of the Electricity Act, the National Tariff Policy and also as per the consistent decisions of the Hon'ble Appellate Tribunal for Electricity.

Response of MePDCL

MePDCL responded that existing tariff is used as basis for tariff increase and is proportionately across all categories. They have further submitted that tariff proposed is reflective of cost and MePDCL has made an effort to ensure that none of the consumer categories are offered with tariff shock.

Issue 20: Tariff of Crematorium

M/s Greater Shillong Crematorium and Mortuary Society represented to the Commission that any increase in the crematorium shall have an impact on the society in a big way and requested the Commission that in order to run the society there should be no tariff increase in next five years.

Public Hearing

The Commission held a public hearing on 10.03.2015 on MePDCL petition. The Commission explained the salient features of the MYT and related issues to it. The Chairman has shown his concern that the audited records are required to be filed for validations of the revenue and expenditure of MYT period. It was submitted by MeECL that the accounts for FY 2012-13 are completed and the State Government is in the process of publishing its transfer schemes for segregated entities very soon. The Commission required MeECL to submit the status of accounts and its audit including the Government Notification in this regard within a week's time. The Chairman explained that the truing up application for FY 2011-12 has been filed by MePDCL on 09.03.2015 and it is admitted. Byrnihat Industries Association, through its representative expressed concern of the industries and submitted to the Commission that truing up of previous year is long overdue and the statement of accounts audited by Chartered Accountants can be considered for such purpose. BIA objected to the licensee's proposal showing less consumption in the industries. Similarly, BIA raised an objection to the surplus energy available within the State vis-a-vis reduced load in the control period. BIA objected to the investment proposed by the licensee in the ARR which are funded by grants and subsidies. BIA requested the Commission not to allow any cost like return on equity, depreciation and interest on the capital investment made out of grants.

BIA also objected to the open access proposal of the licensee related with charging of cross subsidy surcharge and wheeling charges based on capacity. He has suggested to reduce the cross subsidy surcharge in FY 2015-16 and suggested the formula of National Tariff Policy for determination of such surcharges. BIA objected to increase in tariff of industries and suggested load factor rebate for consumption more than 50%. Similarly, BIA objected to KVAH tariff for industries and demanded to remove this arrangement.

Meeting with Members of Advisory Committee

A meeting was held on 20.02.2015 with the members of the State Advisory Committee (SAC). The Chairman gave a brief presentation on the Multi Year Tariff Regulations to the members of the Advisory Committee. He explained the statutory requirements to be adhered by the licensees and generating companies. The Chairman explained the salient features of the MYT ARRs filed by Generating Corporation (MePGCL), Distribution Licensee (MePDCL) and Transmission Licensee (MePTCL) for the control period i.e. 2015-16 to 2017-18. He has explained the time schedule as laid down in the Regulations and Hon'ble APTEL orders within which the tariff process has to be completed. He has explained the important issues relating with the ARRs for FY 2015-16 which have its bearing on the consumer's tariff. Members of the Advisory Committee were briefed that the Commission has already admitted ARR petitions from all three utilities and responses received so far in this regard. The Chairman invited suggestions with regard to present petition from the members. The issues which were presented before the members are AT & C losses, power availability in the State, business plan for next three years, status of investments in the State and commissioning of the projects. The Chairman has shown his concern on the present level of losses in the State which have bearing on the tariff of the consumers. It was deliberated in the meeting that the control on the losses is must and the Commission should not allow the licensee over and above the targets fixed by the Commission in its earlier orders. The Commission has also shown its concern that the licensee's statement of accounts after 2011-12 are still unaudited and the only accounts audited by statutory auditors at the moment is for FY 2011-12. IEX has invited Commission's attention on the extent of losses in the distribution system in the State. He requested the Commission that the trajectory of

losses fixed by the Commission in its earlier order should be adhered with. He also placed his views to incorporate voltage wise cost of supply so as to facilitate open access at different voltages. He has made a point that extent of cross subsidy should be gradually reduced in the tariff. Similarly, he has suggested to allow depreciation as per the CERC Regulation for determining the ARR. Shri. S. K. Lato raised his objection towards abnormal increase in the fixed charges. He explained that increasing in the fixed charges beyond certain limits shall encourage the inefficiency in the licensee's system of meter reading. He also objected to the licensee's proposal on reduction in AT & C losses and suggested that the Commission should adhere to its trajectory as done earlier. He shown his concern on preparedness of balance sheet at licensee's level and suggested that the licensee should put up their recent balance sheet to the Commission as per the Regulations. Shri Marak has shown his concern about the supply situation in different part of the State and explained that in the last few months the supply situation in East Garo Hills has improved significantly. He has also suggested that the licensee should improve its present system of billing and collection in the Garo Hills so that collection will be improved. Shri Bawri has given his objection on the present status of the audited accounts in MeECL and suggested that the licensee should complete their accounts. He has objected to certain part of the MYT Regulations with regard to controllable and uncontrollable factors. He has suggested that transmission losses should be a part of controllable factor as it does not have commercial losses. He has required clarification with regard to applicability of MYT Regulations on determination of tariff from renewable sources of energy. He has objections on different parts of the statement of accounts for FY 2011-12. For e.g. the size of equity, allotment of shares, retrospective application of share money, un-ambiguity about authorized capital, incomplete data of work in progress. As regard with generation tariff, Mr Bawri has objection to normative annual plan load factor. He has suggested that the proposal of the generating company should not be entertained as far as concession in NAPAF as required by MePGCL. He has suggested that Commission's approach made in past is correct and should be adhered with. Similarly, has suggested that depreciation should be charged on statement method as per the Regulations. With regard to employees cost he has suggested that there should be improvement in the efficiency and the Commission should direct the licensee to

go for a study on present man power utilization, placement of correct man at correct place and standard normative. He requested the Commission to allow them the reasonable employees cost and required MeECL to use its existing manpower efficiently without wasting money for imprudent expenditure. A copy of the proceedings is attached at Annexure – I.

Commission’s observation

The Commission has gone through each issue raised by the consumers, members of the Advisory Committee and issues raised in Public Hearing held on 10.03.2015 and have considered them in the tariff order at appropriate places. While discussing the ARR in its related chapter the Commission would deal with such issues. With regard to performance of the licensee, the Commission has already initiated action for energy audit, performance review, reports on AT&C losses, etc. This is covered in the chapter of performance review. While determining the tariff the Commission has considered its regulation, provisions of Electricity Act, and National Tariff Policy and also has not ignored the ground reality of the State. In this tariff order the Commission is truing up for FY 2011-12 subject to adjustments if required so on the receipt of C&AG report on the accounts. The Commission further directed the licensee to file the true up petition for FY 2012-13 at the earliest.

4. Commission's Approach

The Tariff petition was filed under MSERC (Multi Year Tariff) Regulation 2014. Under Section 61 of Electricity Act 2003, the Commission has to specify terms and conditions for determination of tariff and in doing so it shall be guided by the following:

- The principles and methodology specified by CERC for determination of generation and transmission tariff.
- Business of generation, transmission and distribution are to be conducted on commercial principles.
- The factors which encourage competition efficiency, good performance and optimum investments.
- Safeguarding consumers interest and at the same time recovery of the cost of electricity in a reasonable manner.
- Principles rewarding efficiency in performance.
- Multiyear tariff principles based on efficiency target.
- Tariff should reflect cost of supply.
- Promotion of generation from renewable energy.
- National Electricity Policy and Tariff policy.

National Electricity Policy prescribes that there is an urgent need for ensuring recovery of service from consumer to make the power sector sustainable. A minimum level of support may be required to make the electricity affordable for consumer of a very poor category. Consumers below poverty line may receive a special support in terms of tariff which is cross subsidized. It also says that existing cross subsidies should also be corrected to hide inefficiencies and losses. The act requires all consumers to be metered within two years time and TOD meters for large consumers with a minimum load of 1 MVA shall also be encouraged.

Regarding transmission and distribution losses, the policy prescribed that State Government would prepare a 5 year plan with annual milestone to bring down T & D losses expeditiously. Continuation of present level of losses would not only owes a threat to the power sector but also jeopardise the growth of the economy as a whole. Similarly electricity policy envisages encouragement of energy conservation and demand site management. Periodic energy audits are mandated for power intensive industries and encouragement of solar water heating system.

Keeping in view the intent of electricity act, National Electricity Policy and National Tariff Policy, the Commission has framed tariff regulations for generation, transmission and distribution tariff. The tariff regulations prescribe the following:

4.1 Application for Determination of Tariff

The distribution licensee shall file application for determination of tariff along with Annual Revenue Requirement in accordance with the procedure laid down by the Commission.

4.2 Estimation of Sales

Regulation prescribes that the licensee shall adopt a suitable methodology like CAGR in computing category wise sales for the base year and ensuing year. The Commission accepted the approach used by the licensee wherever appropriate with corrections as per present trend.

4.3 Distribution losses

The licensee shall furnish information on distribution losses for previous year and current year and the basis on which such losses have been worked out. The Commission has already framed a trajectory for reduction of losses for next three years and accordingly allowed distribution loss at 23% for 2015-16.

4.4 Estimation of energy requirement

Based on the estimated energy sales and the proposed distribution losses the Commission may determine the quantum of electricity required to meet the estimated sales and accord its approval. The Commission may approve the power purchase requirement with a modification as it deems fit for the ensuing year. In the tariff order for 2015-16, the Commission in accordance with regulation has allowed power purchase from all sources available/allotted to Meghalaya. MePGCL new projects shall be considered after actual commissioning.

4.5 Power purchase cost

The licensee shall procure power from approved sources. Additional energy required after taking into account the availability of the energy from such approved sources shall be reasonably estimated and procurement arrangement made for long and medium term purchases by following standard contractual procedures. All such purchases shall only be made with the prior approval of the Commission and in accordance with Commission's regulation on power purchase. In case of short term power purchase is necessary on unprecedented development the licensee shall do the purchases in accordance with Commission regulation for power purchase. The cost of power purchase from central generating station shall be based on tariff determined by CERC. However, for state own existing generating stations the cost of power purchase shall be based on prices as determined by the MSERC. The Commission has in accordance with the regulation allowed CERC rates for central generating station and commission's approved rate for MePGCL. The Commission has also allowed RPO requirement from renewable sources of energy in accordance with the Commission's regulation for control period as well over dues from previous years.

4.6 Transmission and wheeling charges

Transmission, wheeling charges shall be considered as expenses and included in the power purchase cost. The Commission has allowed transmission charges for intra-state operation as per Commission's order for MePTCL for control period FY 16

to FY 18 and others at the rate proposed by the licensee.

4.7 Annual Revenue Requirement

The annual expenses of distribution licensee shall comprise of the following:

- (i) Power purchase cost
- (ii) Capital Cost
- (iii) Debt Equity
- (iv) Return on Equity
- (v) Interest on Loan capital
- (vi) Operation and Maintenance expenses
- (vii) Interest on working capital
- (viii) Income Tax
- (ix) Depreciation as may be allowed
- (x) Bad and doubtful debt.

The net annual revenue requirement shall be made after deducting the following

- 1) Non Tariff Income
- 2) Subsidy from State Government

4.8 Amount of Non Tariff Income

Income from surcharge from open access consumers.

Wheeling charges recovered from open access consumers.

Any grant received other than subsidy.

4.9 Capital cost

The capital cost includes the actual capital expenditure till the date of commercial operation subject to prudence check by the Commission. Scrutiny of the cost shall be limited to reasonableness of the capital cost, financial plan, interest during construction as considered by the Commission. Any abnormal delay causing cost and time overrun attributable to the failure of utility, the Commission may not approve the full capitalization of interest and overhead expenses. In the absence of Audited

Accounts, the Commission has provisionally accepted the licensee's proposal and the same shall be validated after audited accounts are made available.

4.10 Debt Equity Ratio

For the purpose of determination of tariff the debt equity ratio of 70:30 will be applied for all new investments. Where equity employed is more than 30% the amount of equity for the purpose of the tariff shall be limited to 30% and where equity is less than 30% the actual equity shall be considered.

4.11 Return on Equity

Return on equity shall be computed on the equity base determined as above at a fixed rate of 14% per annum. The equity amount appearing in the audited balance sheet or as per transfer scheme will be taken into account for the purpose of calculating ROE. In absence of audited accounts the Commission is unable to accept return on equity as projected for control period FY 16 to FY 18 and therefore on provisional basis the Commission has allowed same return on equity as allowed last year.

4.12 Interest on loan capital

Interest on loan capital shall be computed on the outstanding loan at the prevailing lending rate. However, it should not exceed the loan ceilings as defined above. The interest attributable to capital work in progress shall not be allowed.

4.13 Operation and maintenance expenditure

Operation and maintenance expenses shall include the following:

Employees cost.

Repair and maintenance.

Administration and General Expenses.

The distribution licensee shall submit to the Commission a statement of O&M expenses under each head in the actuals of last year, estimates for the current year

and projection for the next year. In the absence of any norms the Commission shall determine O & M expenses based on prudence check. The Commission has allowed expenses based on the information of actual expenses in the previous year after applying escalation. Segregation of expenses of holding company among its subsidiaries however lies with the management which should be done as per standard practice.

4.14 Interest on working capital

The working capital for supply of electricity shall consists of:

Operation and maintenance expenses for one month.

Budget for maintenance of spares.

Receivables equivalent to 2 months for sales of electricity.

Interest on working capital shall be equal to SBAR as on 1st April of relevant year.

The Commission allowed interest as per Regulations.

4.15 Depreciation

The depreciation shall be computed on the cost of fixed assets as approved by the Commission on the opening assets values recorded in the Balance Sheet as per transfer scheme notification. For new assets the depreciation shall be given on the date of commercial operation. Consumer contribution or grant subsidy shall be excluded from the asset value for purpose of depreciation. Depreciation shall be calculated as per CERC norms. Depreciation shall be chargeable from the 1st year of commercial operation. In absence of information on grants and consumer's contribution, the Commission has allowed provisionally a part of charges.

Bad and Doubtful Debt – The Commission may after the distribution licensee gets the receivable audited allow a provision for bad debts not exceeding an amount equal to 1% receivable in the revenue requirement. In the absence of audited accounts, the Commission has provisionally provided a token amount.

4.16 Forecast of Revenue

The revenue of the distribution licensee shall be calculated from the sale of power

to each category of consumer, non tariff income and income from other sources. The non tariff income shall consist of delay payment surcharge, meter rent, income from investment, etc. The Commission has allowed non tariff income based on previous year actuals.

4.17 Revenue gap

For the tariff year, the difference between the net annual revenue requirement and expected revenue at the current tariff shall be the revenue gap. This gap shall be bridged by improvement in internal efficiency, utilization of reserves and tariff changes as approved by the Commission.

4.18 Tariff Design

Tariffs should be designed in two parts comprising fixed charges and energy charges. Tariffs shall be applicable to consumer categories and as per slab as determined by the Commission. The Commission may rationalise the tariff structure so that is beneficent to consumers and the licensee. A differential tariff for peak and off peak may be designed to promote demand site management. The Commission has directed the licensee to propose time of day tariff for all HT/EHT consumers. However, the distribution licensee has requested the Commission to allow them time for programming their existing meters in accordance with the peak hours. Therefore the Commission could not apply TOD rates in 2015-16.

4.19 Validation of ARR

Regulation prescribes that previous year expenses should be based on audited accounts of the licensee so as to validate the details of expenses and revenue in the ARR for ensuing year.

The Commission while determining the tariff for FY 2015-16 has followed its Regulation keeping in view the ground realities of the State. The Commission has tried to make a balance between the interest of the consumers and the interest of licensee.

5. Review of Performance of MePDCL

METERING, BILLING AND COLLECTION SYSTEM AND ITS LOSSES

As in the previous years, this chapter deals with the analysis of the performance of the Meghalaya Electricity Power Distribution Corporation Ltd (MePDCL) in terms of achievement of given targets set by the Commission for improving the metering, billing and collection system in order to reduce the aggregate technical and commercial (AT & C) losses. As against several directions given to the Corporation in this regard the Commission has tried to review the present position and carried out detailed analysis of the billing data base of 2014-15 (April-Sept) of HT & EHT consumers. It is interesting to note that only 8 EHT consumers are using about 15% energy of the State, while 570 consumers are using 42%. This means that 0.16% of the total consumers are using 57% energy the State. Accordingly, the Commission has considered only key consumers of the State which are HT & EHT categories for this exercise. The consumers of the State in 2014-15 are as follows:

Table 5.1: Consumers & Connected Load 2014-15

Sl. No	Consumer Category	Voltage	Numbers	Load	Cons.	%Mix		
				KVA	MU	No.	MU	KVA
1	Domestic	HT	73	17986	22	0.02%	2.04%	2.61%
2	Water supply	HT	28	8310	29	0.01%	2.70%	1.20%
3	Bulk supply	HT	159	41332	73	0.05%	6.78%	5.99%
4	Commercial	HT	166	24934	19	0.05%	1.77%	3.61%
5	Industries	HT	143	97705	286	0.04%	26.58%	14.15%
6	Assam	HT	1	2514	18	0.00%	1.67%	0.36%
7	Industries	EHT	8	69440	165	0.00%	15.33%	10.06%
8	Others	LT	349726	428190	464	99.84%	43.12%	62.02%
	Total HT		570	192781	447	0.16%	41.54%	27.92%
	Total EHT		8	69440	165	0.002%	15.33%	10.06%
	Total HT+EHT		578	262221	612	0.16%	56.88%	37.98%
	Total LT		349726	428190	464	99.84%	43.12%	62.02%
	Total HT+LT+EHT		350304	690411	1076	100.00%	100.00%	100.00%

1. Distribution loss trajectory

National Electricity Policy mandates that Regulatory Commissions draw a program for segregation of technical and commercial losses through energy audit, energy accounting and declaration of its results. To meet this objective, the Commission has in its previous tariff framed a three year trajectory for reduction of losses. The trajectory was approved keeping in view the ground realities of the State. It was further segregated to distribution losses and commercial losses so as to control the commercial losses without further delay and at no cost. The trajectory of loss reduction is given as below:

Particulars	2013-14	2014-15	2015-16
Distribution losses	25%	24%	23%
Commercial losses	1.5%	1.5%	1.5%
Collection efficiency	98.5%	99%	99.5%
AT&C losses	24.64%	21.79%	20.4%

In order to meet the target losses the Commission has issued several instructions from time to time for energy audit, regular meter reading, increase of collection counters, replacement of defective meters, and also of electro mechanical meters by electronic meters at all high revenue yielding areas, introduction of remote meter reading and also electro meter reading through MRI, generation of bills without human intervention, introduction of KVAH billing in all HT consumers, energy accounting from distribution transformer level, etc. The level of distribution losses in 2012-13 was found to be 28.70%, in 2013-14 27.07% and in 2014-15 it is estimated at 27.59%. The reasons for non achievement of target of 2013-14 (25%), as given by the licensee that their distribution network is overloaded and that is the main cause of higher technical losses. With the implementation of rural electrification schemes the situation has become worst. Keeping the present situation in view and the various measures taken for reduction of losses. MePDCL has projected losses in 2015-16 to be at 26.41% as against the target of 23% set by the Commission. Accordingly, MePDCL has projected a trajectory for reduction of losses in next three year by 0.5% per year.

2. Aggregate and commercial losses and trajectory

The AT & C losses are a combination of technical and commercial losses. The Corporation has prepared a trajectory of AT & C losses in MePDCL to be at 27.88% in 2015-16, 27.22% in 2016-17 and 26.55% in 2017-18. However, the Commission has set a target of 24.64% losses in 2015-16. Therefore, there is a difference of about 3% in AT&C losses as well as in distribution losses. The Corporation has indicated various measures like prepaid metering, online bill payment, computer billing to improve the AT & C losses in the State. Still following are the methods for improvement in controlling the AT & C losses and MeECL is advised to adopt and implement them.

- a) Energy audit
- b) Intensification of vigilance
- c) Metering of actual consumption
- d) Improvement of collection efficiency
- e) Improvement in network conditions

i. Energy audit

- **Energy Audit at Circle level.**

The Commission has initiated an exercise for monitoring AT & C losses at each circle of MePDCL and started getting quarterly reports. The Commission has introduced a ranking base system which gives different ranks to each circle according to their losses. This exercise gives an idea to the management of the utility to pursue those circles where losses are higher than the targets on which tariff are fixed. The losses in different circles as per the reports in 2012 and 2014 are as follows:

2012

Circle	% billing	% collection (including arrears)	% distribution loss	% AT & C loss	Ranking
Shillong	76	96	24	27	1
Eastern	75	60	25	55	3
Western	65	114	35	26	2
Central	75	79	25	39	4
East Garo	39	66	60	73	6
West Garo	55	63	44	65	5

2014

Circle	% billing	% collection (including arrears)	% distribution loss	% AT & C loss	Ranking
Shillong	87	109	13	4.65	1
Eastern	71	91	29	35.3	3
Western	73	112	27	17.8	2
Central	62	96	38	39.7	4
East Garo	30	78	70	76.3	6
West Garo	55	81	45	55.2	5

The Commission has also directed the Corporation to monitor the revenue and billing of each circle by providing them the average through rate (revenue/sale) in Rs./unit terms. If in any quarter the through rate is achieved by any circle the management is required to look into the matter and take necessary action with the circle head. With this exercise the losses in different circles can be monitored regularly. The Commission has also taken initiatives to hold meeting with the management and to review the performance of each circle. The Commission has given directions to the management that every effort should be made by MeECL officer to make sufficient collection from each circle to overcome the cash crisis in the Corporation. It has also discussed in the meetings that all 132/33 KV feeders shall be read and recorded from check meter and main meters and the data base should be examined regularly by a dedicated cell.

- **Energy audit at feeder/consumer level.**

The Commission in the year 2013-14 initiated the exercise of energy audit in selected samples in Shillong so as to know the correct level of losses in 33/11 KV and LT network. The Commission directed the Corporation to conduct energy audit in the selected substations and high revenue yielding areas.

While reviewing the performance of MePDCL in respect of AT & C losses, the Commission required the licensee to furnish the level of losses in 33/11 KV Keating Road substation, 11 KV Barabazar feeders, 11 KV Laban feeder and 11 KV Malki feeder. Similarly, consumers connected on these feeders are considered for checking the losses. As per data furnished by MePDCL the level of losses is as follows:

SI No	Name of the feeder	Period	Distribution loss %
1	Burra Bazar (11 KV)	3/4 – 2013	15.26
2	Malki (11 KV)	3/4 – 2013	14.21
3	Laban	3/4 – 2013	20.7%

On instructions by the Commission the connection were got rechecked by the Corporation and the report was given to the Commission for removing the faults.

The losses as assessed after this exercise are as follows and transformers

SI No	Name of the feeder	Period	Distribution loss %
1	Burra Bazar (11 KV)	4/5 – 2013	13.13
2	Malki (11 KV)	4/5 – 2013	10.68
3	Laban	4/5 – 2013	19.72

The Commission took the matter suo motto and passed an order on 13.06.2013 giving directions to the licensee to prepare an action plan for reduction of losses in

each circle and to nominate a nodal officer to monitor the exercise. The Commission also directed the Corporation to replace defective meters, to correct assess the consumption through proper and regular meter readings, to conduct vigilance check and change electro mechanical meters, electronic meters for high yielding revenue consumers. The Commission gave six months time to the Corporation to complete the exercise.

The Corporation in its letter dated 12.09.2013 reported the losses in the selected samples areas were as follows:

Sl. No	Name of the feeder	Period	Distribution loss %
1	Burra Bazar (11 KV)	4/5 – 2013	13.13
		5/6 – 2013	11.80
		6/7 – 2013	9.96
		7/8 – 2013	9.81
2	Malki (11 KV)	4/5 – 2013	10.68
		5/6 – 2013	10.71
		6/7 – 2013	10.76
		7/8 – 2013	10.15
3	Laban	4/5 – 2013	19.72
		5/6 – 2013	
		6/7 – 2013	17.13
		7/8 – 2013	10.14

Similarly, connections of certain big marketing complexes were checked by installing meters on distribution transformers. The losses were reported to be as follows:

Sl. No	Complex	Period	% loss
1	Hotel Moonsoon	6/9 - 2013	22.04
2	MD Goenka Complex	6/9 - 2013	8.18
3	Merullah Bldg	6/9 - 2013	17.59
4	J. Kharshandi Complex	6/9 - 2013	1.55
5	Ajmera Marbles Complex	6/9 - 2013	5.89

The Commission started getting reports on the losses every quarter. The recent report for first quarter of 2014-15 is as follows:

Sl No	Name of the feeder	Period	Distribution loss %
1	Burra Bazar (11 KV)	8/9 – 2014	10.99
		9/10 – 2014	10.73
		10/11 – 2014	10.44
		11/12 – 2014	10.58
2	Malki (11 KV)	8/9 – 2014	11.43
		9/10 – 2014	11.11
		10/11 – 2014	11.19
		11/12 – 2014	11.43
3	Laban	8/9 – 2014	11.46
		9/10 – 2014	11.35
		10/11 – 2014	11.17
		11/12 – 2014	11.23

Similarly the commercial losses in the business complexes in Shillong as per the latest report is as follows:

Sl. No	Complex	Period	% loss
1	Hotel Moonsoon	8/9 – 2014	7.92
		9/10 - 2014	7.81
		10/11 - 2014	7.74
		11/12 - 2014	7.79
2	MD Goenka Complex	8/9 – 2014	6.56
		9/10 - 2014	6.69
		10/11 - 2014	6.81
		11/12 - 2014	6.99
3	Merullah Bldg	8/9 – 2014	9.71
		9/10 - 2014	9.58
		10/11 - 2014	9.62
		11/12 - 2014	9.94
		12/1 - 2014	
4	Ajmera Marbles Complex	8/9 – 2014	7.81
		9/10 - 2014	7.72
		10/11 - 2014	7.51
		11/12 - 2014	7.26

• **Results of Commission’s Initiatives**

After the energy audit of selected areas was taken up the losses have come down significantly. Three major steps were taken to control the losses these are:

- (i) Metering system at feeders and at distribution transformers and it consumers end were checked.
- (ii) Defective meters and electro mechanical meters were replaced by electronic meters as per CEA guidelines.

(iii) Reconciliation of energy account at feeder and consumers level and billing was done.

This exercise has been done regularly for the last one year and quarterly reports are being furnished by the licensee. The losses at feeders end were reduced from 15 – 20% to 10 – 11%. This means that there is a reduction in the loss by at least 5% by conducting energy audit on regular basis. Similarly at consumer end by energy audit from DT level to consumer level the losses have been reduced from 17-22% to 7-8%. This would mean that all high revenue yielding consumers should be monitored regularly from the distribution transformers and up to consumers' meters. The Corporation has also stated in its tariff application for 2015-16 that this taking up energy audit in phase manner throughout the State starting from Keating Road substation and up to the Byrnihat industrial area. Similarly, MePDCL is implementing R-APDRP projects for completing the boundary metering, DT metering, feeder metering for taking up regular energy accounting. They have also started operation on commercial normative in Nongpoh, Mairang, Cherra, Jowai, Nongstoin and Shillong. They have started plants for completing the energy audit in Byrnihat area, segregation of distribution losses in technical terms, to carry out monthly consumption analysis, assessment of existing metering status of all HT & EHT consumers. This work is being outsourced to be carried out by independent agency.

MePDCL stated that their vigilance activity in major industrial area has been constantly taken up. Recently in addition to the elaborate sealing and other arrangements MEPDCL has introduced various measures for insulating the metering equipment.

ii. Metering arrangement

MePDCL has stated that they have replaced 8,400 single phase defective meters and the remaining 11,600 will be replaced across the state by 31st March, 2015. MePDCL has also stated that 34 HT Industrial Consumers have been covered under Automated Meter Reading (AMR) in Western Circle, Umiam. The performance of

these meters is under observation. Similarly they have started prepaid metering by ordering for 4000 Single Phase meters and 50 Nos Three Phase pre-paid meters. All the pre-paid meters were received in October 2014. Construction of room at B.C House, Shillong, for vending station was completed on 24th October 2014 and installation & commissioning of vending station is expected to be completed by the first week of December 2014. Installation of pre-paid meters in MeECL quarters and Govt. quarters in Shillong will be started in December 2014.

iii. Improvement of collection efficiency:

MePDCL has stated that they have tied up with Bill desk for implementation of online payment mechanism for the 9 project towns under R-APDRP. Out of which for 6 towns online billing has been implemented. MePDCL is also planning to implement online payment mechanism in other project areas based on experience in these towns. They have also executed the tripartite agreement with Common Service Centre SPV (CSC-SPV) and Bharatiya Samruddhi Investments and Consulting Services Ltd (BASIX) for the collection of revenue from consumers in rural areas by the Village Level Entrepreneurs (VLE) in these centers. At present, 6 Subdivisions and 8 revenue sections have been covered and 28 VLE's are operational for collection of revenue. It is expected that other Common Service Centers will start collection subsequently. This initiative has proved to be beneficial for better and faster collection of revenue.

iv. Improvement in Network conditions:

MePDCL has already got the DPRs for R-APDRP Part-B approved by PFC. Under R-APDRP Part-B it is expected that MePDCL will be able to improve and augment the network in the 9 project towns. This will help in reduction of technical losses for these project towns. Other than R-APDRP Part-B, for reduction of technical loss, strengthening and up-gradation of the existing sub-transmission and distribution lines & sub-stations is proposed to be undertaken under different schemes, viz. Special Plan Assistance (SPA), North Eastern Council (NEC), NERPSIP etc.

v. Creation of Key Consumer Data Base

The Commission has also taken up an exercise by creating a data base of all HT & EHT consumers in the State. In this exercise the data from Eastern circle, Western Circle, Shillong Circle and Central Circle were taken and uploaded at the Commission's computer. The data base of consumers connected at 132 KV, 33 KV and 11 KV are maintained separately. The Commission started monitoring the monthly billing data regularly and started sending list of consumers where following discrepancies are found:

- (1) Connections with maximum recorded demand is more than 100% consistently for three months.
- (2) Connections with load factor (% use of contracted load) is less than 5 %.
- (3) Connections with wrong billing (KWH billing instead of KVAH billing).

Complete lists of such consumers were given to concerned CEOs of the area with the instruction to check these consumers. The Commission feels that with this kind of exercise there would be an improvement in the revenue stream of the Corporation.

3. Conclusion

The brief review above will indicate that some positive results have come out in the efforts to bring down the AT & C losses. In 2013-14 the losses in the selected areas were 24.64% while in 2014-15 it has come down to 21.79%. The achievement is due to the energy audit exercise undertaken by the Corporation in industrial and commercial areas where consumption of energy is high. The exercise should be continual so that the trajectory of the loss reduction as fixed by the Commission from year to year is realized.

Correct billing and collection of the charges will improve the revenue of the Corporation. Regular and timely readings of meters at prescribed intervals will also make consumers aware of the social responsibility to make payment of the bills in time.

6. True up for FY 2011-12

6.1 ARR of 2011-12 against Actuals as per Annual Accounts

The revenue and expenses of MeECL during FY 2011-12 as reflected in the audited accounts have been considered and compared with those contained in the earlier tariff order dated 20.01.2012 after a prudence check. The Commission has tried to make a balance between the interest of utility, consumer and other stake holders while deciding the true up for FY 2011-12. The details of ARR and revenue approved by the commission for FY 2011-12 vide its order dated 20.01.2012 and actuals now furnished by MePDCL as per audited accounts are furnished in the table below.

Table 6.1 Aggregate Revenue Requirement and Revenue gap/ Surplus for FY 2011-12

Particulars	FY 2011-12		Remarks
	Approved by Commission vide Order dated 20.1.12	Actuals Furnished by MePDCL	
Power Purchase Cost including Transmission Charges	347.98	431.2	
Repair & Maintenance Expenses	23.33	19.89	
Employee Expenses	162.91	174.21	
Administration & General	10.54	10.22	
Depreciation	28.37	27.1	
Interest & Finance Charges	9.6	40.29	
Other Debits (Incl Provisions for Bad Debts)	5	33.43	
Income Tax	-	-	
Prior Period Charges/(Credits)	-	2.8	
Others (Losses relating to Fixed)	-	0.01	
Revenue Expenditure	587.73	739.16	
Add: Return on Equity Capital	28.28	127.15	
Aggregate Revenue Requirement	616.01	866.3	

Particulars	FY 2011-12		Remarks
	Approved by Commission vide Order dated 20.1.12	Actuals Furnished by MePDCL	
Less: Non Tariff Income	-	-	
Other income	87.61	59.83	
R.E_Subsidy	13.28	13.42	
Amortization			
Net Aggregate Revenue	515.12	793.06	
Requirement			
Revenue from Sale of Power	459.46	414.96	
Net Surplus/(Deficit)	(55.66)	(378.09)	

6.2 ARR for FY 2011-12 Truing proceedings and Analysis

The Commission has analyzed the actual energy sales, expenses and revenue and computed gains/Losses in the process of truing up for FY 2011-12 as detailed below: Category wise energy sales approved by the Commission in its Tariff order dated 20.01.2012 and actuals furnished by the Petitioner and now approved by the Commission are furnished below.

Table 6.2: Summary of category wise energy sales for FY 2011-12

Particulars	Approved		Audited	
	Sales (MUs)	Revenue (Rs.Crs)	Sales (MUs)	Revenue (Rs.Crs)
Domestic			354.53	87.08
Commercial			75.73	35.4
Industrial			519.93	211.15
Public Lighting			1.1	0.84
Agriculturei			0.41	0.06
Public Water Work	1,190.86	459.46	37.98	16.68
Bulk Supply			68.24	30.57
Misc/General Purposes			14.9	0.53
Const. Projects HT			2.05	0.66
Sale to ASEB			19.1	7.54
Short Term			87.66	14.59
Others	49.89	21.45	NA	
Total	1,240.75	480.91	1,181.64	414.96

The Commission approves energy sales at 1093.97 MU and UI sales of 87.66 MU for FY 2011-12 as per actuals for true up. The total sale as per true will be 1181.64 MU in 2011-12.

6.3 Transmission and distribution Loss

The Commission in its tariff order dated 20.01.2012 had approved T&D Loss Projection at 28.38% for FY 2011-12 as proposed by the licensee.

Commission Analysis

As per the actual data made available to the commission the T&D Losses with in the state are worked out as detailed in table below.

Table 6.3 T&D Loss calculation for FY 2011-12

S.No	Particulars	Unit	2011-12
1	Power purchase from ER	MU	275.53
2	Less ER Tr.Loss	%	2.69%
3	Less ER Tr Loss	MU	7.41
4	Net energy from ER (1-3)	MU	268.12
5	Power purchase from NEEPC	MU	579.50
6	Power purchase from NHPC	MU	58.57
7	Total power available in NER (4+5+6)	MU	906.19
8	Less NER Tr Loss	%	3.89%
9	Less NER Tr Loss	MU	35.25
10	Net power purchase (7-9)	MU	870.94
11	Add short term power purchase	MU	252.44
12	Less UI sales/ sales outside state	MU	87.66
13	Net power available at NERLDC (10+11-12)	MU	1035.72
14	Own Generation	MU	518.45
15	Less Intra state Transmission Loss @4 % on (4)	MU	20.74

16	Net own Generation (13-14)	MU	497.71
17	Total power available for sales within state (13+16)	MU	1533.43
18	Actual sales within state	MU	1093.97
19	T&D Loss	MU	439.44
20	T&D Loss	%	28.66%

The Commission accordingly approves T&D Loss at 28.66% for FY 2011-12 as per actuals for True up.

6.4 Own Generation

Summary of own generation approved in T.O dt 20.01.2012 and actuals furnished in true up petition and now approved by the commission are furnished in table below.

Table 6.4 Own Generation approved for true up for 2011-12

Sl.No	Particulars	Approved Tariff Order 2011-12	Actuals furnished	Now approved
1	Own Generation	527.3	518.45	518.45

The Commission approves own generation at 518.45 MU as per actuals for true up for 2011-12

6.5 Power purchase

Power purchase approved by the Commission in its order dated 20.01.2012 for FY 2011-12 and actuals

Furnished by MePDCL and now approved by the Commission for True up are furnished in Table below.

Table: 6.5 Power purchase approved by the Commission for True up for FY 2011-12

Sl. No	Particulars	Approved by Commission in order dt 20.01.2012	Actuals furnished by MePDCL	Now approved by the Commission for True up
1	NEEPCO	655.52	579.5	579.5
2	NTPC	269.01	275.53	275.53
3	NHPC	61.46	58.57	58.57
4	Short term	149.52	252.44	252.44
5	Total power purchased	1135.51	1166.04	1166.04

The Commission approves power purchase of 1166.04 MU during FY 2011-12 as per actuals for True up.

6.6 Energy Balance

The MePDCL has purchased power from Eastern Region as well as from North Eastern Region. During Transmission of power from generating stations to distribution point., it will undergo interstate transmission Losses besides intra state transmission Loss which have to be taken into consideration to arrive at exact energy available for sale within the state.

The regional transmission losses of the respective regions for FY 2011-12 are obtained and average regional losses during FY 2011-12 are as follows:

E.R - 2.69%

N.E.R - 3.89%

Intra state transmission loss at 4% and distribution loss at 28.66% as worked out in para 3.3 supra are considered and energy balance is computed as detailed in table below:

Table 6.6 Energy Balance of MEPDCL for FY 2011-12 approved by the Commission for true up (MU)

Sl. No	Particulars	Unit	Now approved by the Commission
A	Energy Requirement		

1	Energy sales within state	MU	1093.97
2	T&D Loss	%	28.66%
3	T&D Loss	MU	439.44
4	Energy Requirement	MU	1533.45
B	Energy availability	MU	
5	Energy Purchased from ER	MU	275.53
6	ER Transmission Loss	%	2.69%
7	ER Transmission Loss	MU	7.41
8	Net energy from ER	MU	268.12
9	Energy purchased from NER	MU	638.07
10	Sub Total (8+9)	MU	906.19
11	NER Transmission Loss	%	3.89%
12	NER Transmission Loss	MU	35.25
13	Net energy available (10-12)	MU	870.94
14	Own Generation	MU	518.45
15	Intra state transmission Loss on (10)	%	4%
16	Intra state transmission Loss on(14)	MU	20.74
17	Net own Generation (15-16)	MU	497.71
18	Bilateral UI Purchases	MU	252.44
19	Total energy available (13+17+18)	MU	1621.09
20	Surplus (19-4)	MU	87.66

6.7 Power purchase cost

The Commission in its Tariff order dt 20.01.2012 had approved power purchase cost at Rs 347.98cr for FY 2011-12 for purchase of 1662.81 MU including free power 76.98 MU and own generation of 527.52MU

Now the MEPDCL has furnished that 1684.49 MU power purchased at a cost of Rs 431.20cr as detailed in table below.

Table 6.7 power purchase cost during FY 2011-12

Particulars	Approved			Audited		
	Quantum (MUs)	Cost (Rs cr)	Per Unit Cost (Rs./Unit)	Quantum (MUs)	Cost (Rs cr)	Per Unit Cost (Rs./Unit)
Own Generation	527.3	NA	NA	518.45	NA	NA
NEEPCO	655.52	131.61	2.01	579.5	189.19	3.26
NTPC	269.01	93.86	3.49	275.53	103.01	3.74
NHPC	61.46	14.7	2.39	58.57	23.87	4.08

Short Term	149.52	59.81	4	252.44	61.74	2.45
Inter State Transmission Cost	NA	48	NA	NA	53.38	NA
Total	1662.81	347.98	2.09	1,684.49	431.2	2.56

Commission Analysis

In view of significant gap between the power purchase amount as approved by the Commission for FY 2011-12 and the audited amount, the Commission sought detailed information on the power purchase amount and licensee was required to submit the supplementary bills in support. The licensee was given ample time to respond with it and produce supplementary bills in support of previous arrears on account of revision in the charges as per CERC regulation 2009-14. However in spite of repeated reminders, the supplementary bills of arrears are not produced. While examining the bills of the current year (Q1), the Commission found that the late payment surcharge- supplementary bills are of the tune Rs. 53 crores which relates to 2007-2009 and so on. Recently, it is informed by the licensee that there are pending arrears of power purchase (Principle amount of Rs. 283.23 crores and late payment surcharge of Rs. 108.42 crores) towards NEEPCO. It is also informed that the late payment surcharges are now being reduced by 40% by NEEPCO. In his situation and in the absence of proper records the Commission is allowing Rs. 389.38 crores as power purchase cost in FY 2011-12 which includes transmission cost of Rs. 53.38 crores. This exercise is based on estimates of power purchase cost arrived due to the revised regulations of CERC. However, the Commission directs the licensee to get a proper audit of power purchase amount and furnish a report to the Commission by 30.9.2015 so that necessary adjustments will be made at appropriate time.

The Commission approves power purchase cost at Rs 389.38 Cr including interstate transmission costs at Rs 53.38 Cr for FY 2011-12 after true up.

6.8 Operation and maintenance expenses (O&M expenses)

6.8.1 MePDCL has submitted that the operation and maintenance expenses consist of the following elements.

- Employee expenses comprise of salary, dearness allowance, bonus and terminal benefits in the form of pension and gratuity leave encashment and staff welfare expenses etc.
- Repairs and Maintenance Expenses: Comprise of expenses incurred for day today up keep of the assets of MePDCL and form an integral part of the company is efforts towards reliable quality of power supply and reduction of losses in the system.
- Administrative and General expenses Comprise of rents, telephone and other commercial expenses, professional charges, conveyance and travelling expenses etc.

6.8.2 Employee Expenses

The employee expenses approved by the Commission in its order dated 20.12.2012 and actuals furnished by the MePDCL as per annual accounts and now approved by the Commission for true up are furnished in table below.

Table 6.8 Employee expenses approved by the commission

(Rs Cr)

Sl. No	Particulars	Approved in T.O. dated 20.1.2012	Actuals furnished by MePDCL	Now approved by the Commission
1	Employee Cost	192.96	184.54	160.76
2	Less Expenses capitalized	—	10.33	10.33
3	Net Employee Cost	192.96	174.21	150.43

Commission`s Analysis

As verified from the Para 30.9 of notes to financial statements Rs. 39.74 Cr are paid to pensioners / family pensioners. The Commission is not allowing the provisions towards trust as it is not functional and not funded by the State Government so far. Accordingly Rs. 23.78 (20.24+3.54) is disallowed from the employees cost. Commission approves employee expenses at Rs 149.41 Cr after capitalization of Rs 10.33 Cr.

Accordingly the Commission approves employee expenses at Rs 150.43 Cr after capitalization of Rs 10.33 Cr.

6.8.3 Repairs and Maintenance Expenses (R&M expenses)

The Commission in its order dated 20.1.2012 had approved R&M expenses at Rs. 23.33 Cr for FY 2011-12. The MePDCL in its true up Petition has furnished actual R&M expenses at Rs. 19.89 Cr as per annual accounts for 2011-12, the R&M expenses are Rs 19.89 Cr. As such the same are allowed.

Commission`s Analysis

The Commission approves R&M expenses at Rs. 19.89 Cr for FY 2011-12 as per Annual Accounts for true up.

6.8.4 Administrative and General Expenses

The Commission in its order dated 20.1.2012 had approved A&G expenses at Rs. 10.54 Cr for FY 2011-12. The MePDCL in its true up Petition for FY 2011-12 has furnished A&G expense at Rs. 11.15 Cr and capitalization of 0.93 Cr and net A&G expenses at Rs. 10.22 Cr.

Commission`s Analysis

As verified from the annual accounts the A&G expenses are only Rs. 11.11 Cr and capitalization in Rs. 0.93 Cr. Thus the net expenses are Rs. 10.18 Cr.

The Commission approves A&G expenses at Rs. 11.11 Cr and capitalization at Rs. 0.93 Cr and net expenses at Rs. 10.18 Cr for FY 2011-12 after true up.

6.9 Depreciation

The Commission had approved depreciation at Rs 28.37 Cr for FY 2011-12. The MePDCL in its true up Petition for FY 2011-12 has furnished depreciation at Rs 27.10 Cr as per actuals as per annual accounts for FY 2011-12.

The Commission now approves depreciation at Rs 27.10 Cr FY 2011-12 as per actuals.

6.10 Interest and Finance Charges

The Commission in its order dated 20.01.2012 had approved interest and finance charges at Rs 89.51 Cr for FY 2011-12 less capitalization of Rs 79.91 Cr and net amount allowed is Rs 9.60 Cr.

The MePDCL in its true up Petition has furnished interest and Finance charges at Rs 127.79 Cr less capitalization at Rs 87.50 Cr and net amount claimed is Rs 40.29 Cr.

However there are no supporting documents to substantiate the payment of interest. In its letter dated 24.3.2015, the details of interest of Rs, 120.90 crores were given which includes 2.08 crores of penalty, Rs. 104.34 crores towards capital. The Commission while allowing interest on loan also considered interest on working capital as per regulation and allowed Rs. 15.00 Crores interest to be charged in FY2011-12. Similarly for capital projects, allowed Rs. 12.5 Crores after capitalization of Rs. 87.5 crores. Accordingly interest in FY 2011-12, the Commission has allowed Rs. 27.5 crores against MePDCL demand of 40.29 crores.

The Commission approves interest and Finance charges at Rs 27.5 Cr after capitalization in the truing up.

6.11 Other Debits (Including provision for bad debts)

The Commission in its order dt 20.01.2012 had approved provision for bad debts at Rs 5 Cr for FY 2011-12. The MePDCL has proposed Rs 33.43 Cr towards other debits (including provision for bad debts) for FY 2011-12 as detailed below.

Table: 6.9 Other debts projected by MePDCL for FY 2011-12 (Rs Cr)

Sl. No	Particulars	Amount
1	Loss due to foreign exchange rate Variation pertaining to JBIC & OECF	29.05
2	Bad debts written off	2.91
3	Priliminary expenses written off	1.20
	Total	33.16

Commission`s Analysis

The details for 0.27 Cr are not furnished by the Petitioner.

In view of non consideration of OECF/JBIC loans, the foreign exchange rate variation of Rs. 29.05 Cr is not consider and the balance amount of Rs. 4.11 Cr is allowed.

The Commission accordingly approves other debits at Rs. 4.11 Cr for FY 2011-12 after true up.

6.12 Prior Period expenses

The MePDCL has submitted that as per Accounting standard 5 (AS5) issued by Institute of Chartered Accountants of India, prior period debits/credits as a result of errors or omissions in preparation of the financial statements are provided in the table below.

Table: 6.10 prior period expenses for FY 2011-12 furnished by MePDCL

Particulars	FY 2011-12 (Audited)
Income relating to previous year	
Oil Related Gains of prior periods	0.08
Interest & Other Finance charges relating to prior period	1.24
Others	1.14
Total prior period income	2.45
Prior Period Wheeling Charge	2.71
Employee costs relating to prior period	1.56
Depreciation under provided in prior period	0.89
Interest & Other Finance charges relating to prior period	0.03
Administrative expenses relating to prior period	0.07
Total prior period expenses	5.26
Net prior period Expense	2.80

The MePDCL has furnished the reasons for the prior period expenses in respect of the following:

- *Purchase of power Charge: Prior Period power purchase charge pertains to rectification entry in respect of power purchase from PGCIL which was less accounted for during FY 2010-11.*
- *Employee Cost: Prior period Employee Cost pertains to accumulated liability towards Time Bound Financial Benefits, Revised Arrear DCRG, Pension, Shift Allowance, Arrear DA, Compensatory Allowance, which were not accounted in earlier years and hence booked as prior-period expense in FY 2011-12.*
- *Depreciation: It is submitted due to delayed capitalization of some of the assets, the provision of Depreciation for prior period was provided during FY 2011-12.*
- *Interest and Other Finance Charges: The prior period Interest and finance charge relates to rectification entry pertaining to Interest and Finance charge of Central Bank of India.*

The Commission has considered the power purchase expenditure to be allowed in the truing up which almost matches with the income and therefore no prior period expenses is allowed.

Commission`s Analysis

After examining the data submitted by MePDCL the Commission approves the net prior period expenses as nil.

6.13 Return on Equity

The Commission in its order dated 20.1.2012 had approved ROE at Rs. 28.28 Cr at 14%. The MePDCL in its true up petition has claimed ROE at Rs. 127.15 Cr on equity amount of Rs. 908.18 Cr at 14% as detailed in table below.

Table: 6.11 Return on equity claimed by MePDCL for FY 2011-12

Particulars	FY 2010-11 (Actual)	FY 2011-12 (Actual)
Opening Equity (Rs. Cr)	767.55	903.53
Additions during the year (Rs. Cr)	135.98	104.75
Closing Equity (Rs. Cr)	903.53	1,008.28
Equity consider for RoE (Rs. Cr)	903.53	908.18
RoE%	14%	14%
Return on Equity (Rs. Cr)	126.49	127.15

Commission`s Analysis

The MePDCL has not furnished the valid data to consider the equity of Rs. 908.18 Cr. As such the Commission considers the ROE of Rs. 28.28 Cr already approved in its order dated 20.1.2012.

The Commission approves ROE at Rs. 28.28 Cr for FY 2011-12 after true up.

6.14 Other Income

The Commission in its order dated 20.1.2014 had approved other income at Rs. 87.61 Cr for FY 2011-12. As per annual accounts for 2011-12 the other income is Rs. 100.88 Cr as detailed in table below.

Table: 6.12 Other Income for FY 2011-12

Sl. No.	Particulars	2011-12 (Rs.Cr)
1	Delayed Payment Surcharge	85.64
2	Interest from Long term investment	12.91
3	Others	2.33
	Total	100.88

The MePDCL stated that out of Rs. 12.51 Cr being the interest on long term investment Rs. 4.99 Cr pertains to interest earned on fixed deposits created from funds received for RGGVY projects and hence to be refunded to REC and hence requested not to consider Rs. 4.99 Cr.

Further stated that as per Supreme Court order dated 28.8.2012 electricity bills of industrial HT & EHT consumers were revised from October 2008 onwards due to

which the delayed payment surcharge has been reduced by Rs. 36.06 Cr from Rs. 85.64 Cr to 49.58 Cr and hence requested not to consider Rs. 36.06 Cr. Thus the net other income shall be as follows.

Sl. No.	Particulars	Amount
1	Total other income	100.88
2	Less interest on RGGVY funds	4.99
3	Less difference of DPS	36.06
	Net other income to be considered	59.83

Commission`s Analysis

The other income actually accounted for during FY 2011-12 is Rs. 100.88 Cr. Any adjustments will be considered in the year in which such adjustments take place and audited accounts are submitted.

Further the following amounts pertaining to non tariff income were accounted for under revenue from sale of power.

Sl. No.	Particulars	Amount
1	Meter rent	1.58
2	Wheeling charges	4.32
3	Misc revenue	3.96
	Total	9.86

The amount of Rs. 9.86 Cr is deducted from the revenue from sale of power and added to other income. Thus the total other income shall be Rs. 110.74 Cr (100.88+9.86)

The Commission approves other income at Rs. 110.74 Cr for FY 2011-12 after true up.

6.15 Revenue from sale of power

The Commission in its order dated 20.1.2012 had approved revenue from sale of power at Rs. 454.78 Cr including outside sale of Rs. 6 Cr for FY 2011-12.

The MePDCL has furnished revenue from sale power at Rs. 414.96 Cr during FY 2011-12 as per annual accounts.

Commission`s Analysis

Out of the revenue of Rs. 414.96 Cr, Rs. 9.86 Cr pertains to non tariff income as such the same is transferred to non tariff income. Thus the revenue from sale of power including UI sales is Rs. 405.10 Cr (Rs. 414.96 – 9.86)

The Commission approves revenue from sale of power at Rs. 405.10 Cr for FY 2011-12 after true up

6.16 RE Subsidy

The Commission in its order dated 20.1.2012 had approved RE subsidy at Rs. 13.28 Cr for FY 2011-12.

The MePDCL in its true up petition for FY 2011-12 has furnished RE subsidy at Rs. 13.42 Cr as per annual accounts for FY 2011-12.

Commission`s Analysis

The Commission approves RE Subsidy at Rs 13.42 Cr for FY 2011-12 as per annual accounts.

6.17 Financial Loss due to AT&C Loss

Revenue billed and revenue realized during FY 2011-12 for the purpose of computation of AT&C Loss for FY 2011-12 as per audited accounts are as detailed in the table below.

Table 6.13 Revenue billed during FY 2011-12

Sl. No.	Particulars	2011-12
1	Total Revenue from sale of power	405.10
2	Less Revenue from UI sales	14.59
3	Net Revenue billed	390.51

Table 6.14 Revenue collected during FY 2011-12

Sl. No.	Particulars	2011-12
		(Rs. Cr)
1	Opening balance of receivables	427.65
2	Add Revenue billed in 2011-12	390.51
3	Total	818.16
4	Less closing balance of receivables	519.03
5	Revenue realised	299.13
6	Add RE Subsidy	13.28
7	Add Amortization	5.90
8	Revenue realised considered for AT&C loss computation	318.31

6.18 Computation of AT&C Loss in FY 2011-12 works out to 41.85% as shown in the table below

Table: 6.15 Computation of AT&C los in Fy 2011-12

Sl. No.	Particulars	Calculation	Unit	Actuals furnished by MePDCL	Now approved by the Commission
1	Generation (own as well as any other connected generation net after deducting auxiliary consumption) within area of supply of DISCOM	A	MU		497.71
2	Input energy (metered import) received at interface points of DISCOM network.	B	MU		1123.38
3	Input energy (metered export) by the DISCOM at interface point of DISCOM network	C	MU		87.66
4	Total energy available for sale within the licensed area of the DISCOM	D=A+B-C	MU		1533.43
5	Energy billed to metered within the licensed area of the DISCOM	E	MU		1093.97
6	Energy billed to un-metered consumers within the licensed area of the DISCOM	F	MU		–
7	Total Energy billed	G=E+F	MU		1093.97
8	Amount billed to consumer within the licensed area of DISCOM	H	Rs. Core		390.51
9	Amount realized by the DISCOM out of the amount billed at H#	I	Rs. Core		318.31

10	Collection efficiency (%) (=Revenue realized/Amount billed)	$J=(I/H) \times 100$	%		81.51%
11	Energy realized by the DISCOM	$K=J \times X \times G$	MU		891.7
12	Distribution loss (%)	$L=\{(D-G)/D\}$	%		28.66
13	AT&C Loss (%)	$M=\{(D-K)/D\} \times 100$	%		41.85%

Accordingly AT&C Loss as per audited accounts works out to 41.85% as against 35.64% approved in commission order for truing up of FY 2010-11. Penalty for failure to cause minimum reduction in AT&C loss in FY 2011-12 works out to as shown in table below.

Table: 6.16 Truing up financial loss for failure to achieve a minimum of 3% reduction in AT&C loss during FY 2011-12

S.No	Particulars	Unit	FY 2010-11
1	Maximum permissible AT&C loss for MePDCL during FY 2010-11	%	35.64%
2	Mandatory minimum reduction of AT&C loss	%	3.00%
3	Maximum permissible AT&C loss for MePDCL during FY 2011-12	%	32.64%
4	Actual AT&C loss in FY 2011-12	%	41.85%
5	Short fall in minimum reduction	%	9.21%
6	Energy sale in FY 2011-12	MU	1093.97
7	Average rate for sale of power in FY 2011-12 (390.51/1093.97)	Rs./kWh	3.57
8	Short fall in amount of energy 9.21% of 1093.97 MU	MU	100.76
9	Penalty for not reducing the loss by 9.21% at Rs 3.57/kWh	Rs Crore	35.97

Therefore the Commission now fixes the penalty for failure to achieve the minimum required reduction of AT&C loss in FY 2011-12 at Rs. 35.97 Crore.

The trued up ARR for FY 2011-12 therefore works to Rs. 514.52 crores as against Rs 515.12 crores determined in the order dated 20.01.2012.

After working out the net revenue as per audited records the deficit in the year 2011-12 is Rs. 109.42 crores as against deficit of Rs. 55.66 crores determined in Commission’s Order dated 20.01.2012. The adjustments if any shall be accounted for while truing up FY 2012-13 ARR.

The Computation of present ARR is as mentioned below:

6.19 Aggregate Revenue Requirement

Aggregate Revenue Requirement and Revenue gap/Surplus for FY 2011-12

The Aggregate Revenue Requirement approved by the Commission in its tariff order dated 20.01.2012 and actuals furnished by MePDCL in true up Petition and now approved by the Commission are furnished in table below.

Table: 6.17 Aggregate Revenue Requirement and Revenue gap/ Surplus for FY 2011-12

Sl. No.	Particulars	FY 2010-11		
		Approved by MSERC	MePDCL (Actual)	Now approved by the Commission
1	Power Purchase Cost Including Transmission Charges	347.98	431.20	389.38
2	Repair & Maintenance Expenses	23.33	19.89	19.89
3	Employee Expenses	162.91	174.21	149.41
4	Administration & General Expenses	10.54	10.22	10.18
5	Depreciation	28.37	27.10	27.10
6	Interest & Finance Charges	9.60	40.29	27.5
7	Other Debits (Including Provisions for Bad Debts)	5.00	33.43	4.11
8	Income tax	-	-	-
9	Prior Period Charges/(Credits)	-	2.80	-
10	Others (Losses relating to fixed Assets)	-	0.01	-

Sl. No.	Particulars	FY 2010-11		
		Approved by MSERC	MePDCL (Actual)	Now approved by the Commission
11	Revenue Expenditure	587.73	739.16	627.57
12	Add: Return on Equity Capital	28.28	127.15	28.28
13	Aggregate Revenue Requirement	616.01	866.30	655.85
14	Less: Non-Tariff Income	-	-	
15	Other Income	87.61	59.83	110.74
16	R.E Subsidy	13.28	13.42	13.42
17	Financial loss for 3% reduction in AT&C loss			35.97
18	Amortization			5.09
19	Net Aggregate Revenue Requirement	515.12	793.06	490.63
20	Revenue from Sale of Power	448.78	414.96	405.10
21	Net Surplus/(Deficit)	(66.34)	(378.09)	(85.53)

While allowing the gap in the ARR of FY 2011-12, the Commission had considered the same in the ARR of FY 2012-13 as both the orders were done simultaneously. The Commission shall consider the same in the exercise of true up of FY 2012-13 and consider the report of C&AG on the accounts of FY 2011-12 and if require the appropriate adjustments shall be thereafter.

The true up for FY 2011-12 is accordingly decided as discussed in the fore going paragraphs of this order and the true up application of the licensor is disposed of in the light there of It may be mentioned that in the process for deciding the present true up for FY 2011-12, Commission had given opportunity to the consumers including B/A and other stake holders to be heard. Their responses, verbal or written were considered during the exercise. The gap arrived at Rs. 85.53 crores shall be adjusted in the ARR of FY 2015-16.

7. Aggregate Revenue Requirement (ARR) for the control period FY 2015-16 to FY 2017-18 and determination of Tariff for FY 2015-16

7.1 Energy Sales

Proper estimation of category-wise energy sales for the control period FY 2015-16 to FY 2017-18 is essential to arrive at the quantum of power to be purchased and the likely revenue by the sale of energy.

This section examines in detail the consumer category-wise energy sales projected by MePDCL in its Petition for control period FY 2015-16 to FY 2017-18 for approval of ARR.

7.2 Consumer Categories

The MePDCL serves over 3.68 lakh consumers in its licensed area and the consumers are broadly categorised as under:

LT Category

Domestic

Commercial

Industrial

Public Lighting

Public water works

Agriculture

General Purpose

HT Category

Domestic HT

Commercial HT

Public water works HT

Industrial HT,

Bulk Supply

Supply to ASEB

EHT category

Industrial - EHT

The DISCOM serves the consumers at different voltages at which the consumers avail supply. The rural consumers are not metered and their consumption is assessed.

7.2.1 Over all approach to sales projection

MePDCL has projected the energy sales for control period FY 2015-16 to FY 2017-18 taking the actual sales for FY 2013-14 as its base. It is stated that it has projected the category wise energy sales for control period FY 2015-16 to FY 2017-18 based on the past trend of energy consumption for different categories of consumers. It is further stated that the projection of energy sales for control period is based on the steps mentioned below:

7.2.2 Energy Sale Projection for the control period

After analysis the past trend the Energy sale for control period is projected as under:

Table: 7.1 Energy Sale Projection Assumptions and Steps

Step 1: Estimation of Energy Sale for FY 15	· Energy Sale for FY 15= (Q1-FY 2015 Energy Sale) X (Multiplying Factor)
	· Multiplying Factor is the factor to capture seasonal variation in energy sale.
	· Multiplying Factor= (Total Energy sale for FY 13)/ (Energy sale for 1st quarter of FY 13)
	· FY 13 sales is considered because the load shedding done during FY 13 was insignificant
Step 2: Growth	· 5 year CAGR upto FY 15 (estimated sale as per step-1) determined for various categories
	· 10% Growth Rate considered for categories having CAGR more than 10%

rate determina tion for different categories	· 0% Growth Rate considered for categories having –ve CAGR
	· For all other categories Growth Rate considered same as 5 year CAGR
Step 3: Within the State Energy Sale Projection for the Control Period	· FY 16 Sales Projection: (FY 15 Estimated Sale) X (1+Growth rate arrived in step 2)
	· FY 17 Sales Projection: (FY 16 Projected Sales) X (1+Growth rate arrived in step 2)
	· FY 18 Sales Projection: (FY 17 Projected Sales) X (1+Growth rate arrived in step 2)
Step 4: Outside the State Energy Sale Projection for the Control Period	· Swapping: As per MePDCL's obligation to meet return swap obligation
	· Any Surplus power to be sold at short term market such as Power Exchange, Bilateral etc.

(Source Figure 4 of Petition)

The MePDCL has furnished the category wise energy sales over the last 5 years (FY 2009-10 to FY 2013-14). Based on the actuals the MePDCL has projected the sales to the control period of FY 2015-16 to FY 2017-18. The category wise sales over the last 5 years as furnished by the MePDCL and category-wise growth rates computed are shown in the Tables below:

Table 7.2 Category wise sales during FY 2009-10 to FY 2013-14 (Actuals)

Category	FY 10	FY 11	FY 12	FY 13	FY 14	CAGR
LT CATEGORY						
Domestic (DLT)	246	283	324	332	337	8%
Commercial (CLT)	40	48	56	56	71	16%
Industrial (ILT)	6	7	7	6	6	1%
Agriculture (AP)	1	0	0	0	0	-29%
Public Lighting (PL)	1	1	1	1	1	-3%
Water Supply (WSLT)	6	7	9	8	8	8%
General Purpose	12	14	15	14	20	14%
Kutir Jyoti	5	7	10	13	19	41%
Crematorium	0	1	0	0	0	-1%
HT & EHT CATEGORY						
Domestic (DHT)	19	19	20	20	22	4%
Water Supply (WS HT)	25	27	29	28	29	4%
Bulk Supply	63	64	70	68	73	4%
Commercial (CHT)	12	16	20	19	19	11%
Industrial (IHT)	220	272	289	274	286	7%
Industrial (IEHT)	243	205	224	203	161	-10%
Assam (33kV)	13	15	19	19	20	11%
Energy Sale	912	984	1,094	1,061	1,073	

Petition)

The MePDCL projection of energy sales for the control period of FY 2015-16 to FY 2017-18, based on assumptions vide Table 6.1 are furnished in table below

Table: 7.3 Energy Sales Projection by MePDCL for FY 2015-16 to FY 2017-18

S.No	Particulars	FY 2014-15 (Estimated)	5yr CAGR (%)	Growth rate considered (%)	FY 2015- 16 (P) (MU)	FY 2016-17 (P) (MU)	FY 2017-18 (P) (MU)
	LT CATEGORY						
1	Domestic (DLT) including MeECL's Employees	356.56	6%	6%	377.79	400.28	424.12
2	Commercial	59.21	6%	6%	62.53	66.03	69.73
3	Industrial	5.54	-4%	0%	5.54	5.54	5.54
4	Agriculture	0.11	-26%	0%	0.11	0.11	0.11
5	Public	1.46	2%	2%	1.49	1.52	1.56
6	Water	9.95	10%	10%	10.94	12.04	13.24
7	General	26.44	18%	10%	29.09	32	35.2
8	Kutir Jyoti	21.52	34%	10%	23.67	26.04	28.64
9	Crematoriu	0.19	-29%	0%	0.19	0.19	0.19
	HT						
11	Domestic	21.71	4%	4%	22.57	23.46	24.39
12	Water	29.51	2%	2%	30.17	30.84	31.53
13	Bulk Supply	53.63	-4%	0%	53.63	53.63	53.63
14	Commercial	17.92	3%	3%	18.53	19.16	19.82
14	Industrial	226.46	-5%	0%	226.46	226.46	226.46
	EHT						
15	Industrial	149.14	-8%	0%	149.14	149.14	149.14
	Others						
16	Assam	17.6	4%	4%	18.25	18.93	19.63
17	Short Term	-			390.56	629.29	733.98
18	Swapping	-			80.96		
	Total Sale	996.95			1,501.62	1,694.66	1,836.89

(Source Figure 6 of Petition)

7.3 Category wise number of consumers and connected load

As on 31.03.2014, total number of consumers of MePDCL is 3,50,306. The number of consumers under Domestic category (DLT) constitutes 76 % of the total consumers with 47% of the connected load. Though the number of Industrial consumers (IHT & IEHT) is very low (only 151), these constitute about 25% of the total connected load and 42% of the total sales in FY 14. The number of consumers and connected load are projected based on past trend. The category-wise number of consumers and connected load are as indicated in table below for the control period of FY 2015-16 to FY 2017-18.

Table 7.4: Category-wise Number of Consumers and Connected Load

Sl.No.	Particulars LT CATEGORY	FY 2015-16		FY 2016-17		FY 2017-18	
		No of Consumer	Connected Load (MVA)	No of Consumer	Connected Load (MVA)	No of Consumer	Connected Load (MVA)
1	Domestic (DHT)	278,42	379.65	2,90,906	407.83	3,03,601	438.1
2	Commerical	21,952	7.5	22,071	75.74	22,191	81.37
3	industrial (ILT)	887	11.86	887	11.86	887	11.86
4	Agriculture (AP)	23	0.28	23	0.28	23	0.28
5	Public Lighting (PL)	40	0.41	40	0.41	40	0.42
6	Water Supply (WSLT)	393	7.12	411	7.45	430	7.81
7	Genral Purpose	2,132	13.45	2,123	14.02	2,115	14.61
8	Kutir Jyoti	63,609	20.34	69,969	22.38	76,996	24.61
9	Crematorium	1	0.15	1	0.15	1	0.15
	HT CATEGORY						
11	Domestic (DHT)	72	17.99	75	19.6	79	21.36
12	Water Supply (WS HT)	27	8.31	27	8.46	28	8.6
13	Bulk Supply	148	41.33	148	41.33	148	41.33
14	Commerical	197	24.93	217	27.43	238	30.17
	Industrial	143	97.71	145	97.71	146	97.71
	EHT CATEGORY						
15	Industrial	8	69.44	8	69.44	8	69.44
	Total	3,68,374	763	3,87,052	804	4,06,900	848

(Source Figure 7 of Petition)

7.4 Commission’s analysis

The category-wise energy sales given in Table 6.2 for the years 2009-10 to FY 2013-14 are the actuals, the energy sales for FY 2014-15 are estimated and the energy sales for the control period of FY 2015-16 to FY 2017-18 are projected based on assumptions furnished in table 6.1.

Since the MePDCL has submitted latest actual energy sales for FY 2013-14 and six months actuals for FY 2014-15, it is considered appropriate to estimate the sales for FY 2014-15 and project sales for control period of FY 2015-16 to FY 2017-18 based FY 2013-14 figures, with appropriate CAGR. The various growth rates are worked out as detailed in table below.

Table 7.5 Energy Sales Growth rate (CAGR)

Sl. No.	Category	Energy Sales (Actuals)					CAGR for 3 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
		FY 10	FY 11	FY 12	FY 13	FY 14	FY 2010-14 (%)	FY 2011-14 (%)	FY 2012-14 (%)	FY 2013-14 (%)
1	Domestic (DLT)	246	283	324	332	337	8.19	5.99	1.99	1.51
2	Commercial (CLT)	40	48	56	56	71	15.42	13.94	12.6	26.79
3	Industrial (ILT)	6	7	7	6	6	0	-5.01	-7.42	0
4	Agriculture (AP)	1	0	0	0	0	-100			
5	Public Lighting (PL)	1	1	1	1	1	0	0	0	0
6	Water Supply (WSLT)	6	7	9	8	8	7.46	4.55	-5.72	0
7	General Purpose	12	14	15	14	20	13.62	12.62	10.06	42.86
8	Kutir Jyoti	5	7	10	13	19	39.62	39.49	37.84	46.15
9	Crematorium	0	1	0	0	0		-100		
10	HT & EHT CATEGORY									
11	Domestic (DLT)	19	19	20	20	22	3.73	5.01	4.88	10
12	water Supply (WSHT)	25	27	29	28	29	3.78	2.41	0	3.57
13	Bulk Supply	63	64	70	68	73	3.75	4.48	2.12	7.35
14	Commercial (CHT)	12	16	20	19	19	12.17	5.9	-2.53	0
15	Industrial (IHT)	220	272	289	274	286	6.78	1.69	-0.52	4.38
16	Industrial (IEHT)	243	205	224	203	161	-9.78	-7.74	-15.22	-20.69
17	Assam (22kv)	13	15	19	19	20	11.37	10.06	2.6	5.26

Sl. No.	Category	Energy Sales (Actuals)					CAGR for 3 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
		FY 10	FY 11	FY 12	FY 13	FY 14	FY 2010-14 (%)	FY 2011-14 (%)	FY 2012-14 (%)	FY 2013-14 (%)
18	Total Energy Sales	912	986	1,093	1,061	1,072				

Actual energy sales during FY 2013-14 and six month actuals for 2014-15 are considered as base and estimated sales for FY 2014-15 and projected sales for the control period at reasonable CAGR based on the trend over the year are indicated against each category as detailed in the table below. The Commission while projecting sale for each category considered licensee’s proposal that there is a stagnation among the consumption by HT &EHT industries because of various reasons. The Commission has accepted it and if there is any change in the consumption in this category the same will be taken care of while midterm review of the multiyear tariff. The Commission has also considered the licensee’s data while estimating sale in commercial category. Accordingly the Commission approves the sales in control period in the Table 7.6.

Table 7.6 Energy Sales Projection approved by the Commission for control period FY 2015-16 to FY 2017-18

	MePDCL			MSERC		
	2015-16 Projected (MU)	2016-17 Projected (MU)	2017-18 Projected (MU)	2015-16 Approved (MU)	2016-17 Approved (MU)	2017-18 Approved (MU)
LT						
Domestic (including MeECL employees)	377.79	400.28	424.12	378	401	425
Commercial	62.53	66.03	69.73	75	87	101
Industrial	5.54	5.54	5.54	6	7	8
Agriculture	0.11	0.11	0.11	0.11	0.11	0.11

	MePDCL			MSERC		
	2015-16	2016-17 Projecte	2017-18 Projected	2015-16 Approved	2016-17 Approved	2017-18 Approved
Public Lighting	1.49	1.52	1.56	1.50	1.52	1.56
Water Supply	10.94	12.04	13.24	11	12	13
General Purpose	29.09	32.00	35.20	29	32	36
Kutir Jyoti	23.67	26.04	28.64	24	26	29
Crematoriu m	.19	.19	.19	0.19	0.19	0.19
Subtotal	511.35	543.75	578.33	524.8	566.82	613.86
HT						
Domestic	22.57	23.46	24.39	24	25	26
Water Supply	30.17	30.84	31.53	30	31	32
Bulk Supply	53.63	53.63	53.63	55	56	57
Commerica l	18.53	19.16	19.82	25	29	34
Industrial	226.46	226.46	226.46	230	230	230
Assam	18.25	18.93	19.63	19	20	21
Subtotal	369.61	372.48	375.46	383	391	400
EHT						
Industrial	149.14	149.14	149.14	160	160	160
Subtotal	149.14	149.14	149.14	160	160	160
Total	1030.1	1065.37	1102.93	1068	1118	1173

*Note: While determining sale the rounding of numbers have been done.

7.5 Renewable Purchase Obligation

In accordance with the Meghalaya State Electricity Regulatory Commission (Renewal Energy Purchase Obligation and Compliance) Regulation 2010 as notified on 21st December 2010, MePDCL is obligated to purchase electricity from renewable energy sources. Clause 4 of the said Regulation specifies the quantum of Renewable Purchase Obligation (RPO) by the Licensees, and the same is reproduced below:-

“4. Quantum of Renewable Purchase Obligation (RPO)

(1) Every obligated entity shall purchase electricity (in KWh) from renewable energy sources at a quantum which is not less than the minimum calculated on the basis of percentage of the total consumption of the consumers in an area of the entity.

(2) At the commencement of these regulations the minimum percentage shall be as herein below specified, that is:-

Year	Minimum quantum of purchase (in%) from renewable energy sources			
	Total	Wind	Solar	Other
2010-11	0.50%	0.10%	0.20%	0.20%
2011-12	0.75%	0.15%	0.30%	0.30%
2012-13	1.00%	0.20%	0.40%	0.40%

(3) At the end of 2012-13 The Commission may, by Order passed, refix the percentage for subsequent years:

Provided that if no such Order is passed the percentage specified for 2012-13 shall continue until it is revised.

6.7.2.2 It is submitted that the commission is yet to determine the RPO for period of FY 2015-16 to FY 2017-18, hence as per Regulation 4(3) of Meghalaya State Electricity Regulatory Commission (Renewal Energy Purchase Obligation and Compliance) Regulation 2010, the RPO % will be same as FY 2012-13.

6.7.2.3 The detailed calculation of category wise Renewable Purchase Obligation (RPO) (solar, small hydro etc) is shown below:

Table 7.7: Renewable Purchase Obligation projected for control period

Year	Energy within area of MePDCL (MU)	Renewable Purchase Obligation (MU)				Purchase from Small Hydro (MU)
		Wind	Solar	Others	Total	
FY 2015-	1,011.85	2.02	4.05	4.05	10.12	78.97
FY 2016-	1,046.44	2.09	4.19	4.19	10.46	84.82
FY 2017-	1,083.29	2.17	4.33	4.33	10.83	92.45

7.6 Commission's Analysis on RPO

a. RPO compliance of previous years:

The Commission has considered the compliance of RPO to be met by licensee, open access consumers and captive power plants for 2010-11 and up to FY 2014-15 as per the RPO regulations 2010 in the following manner:

Renewable Purchase Obligations% (RPO)				
Year	Wind	Solar	Others	Total
2010-11	0.10%	0.20%	0.20%	0.50%
2011-12	0.15%	0.30%	0.30%	0.75%
2012-13	0.20%	0.40%	0.40%	1.00%
2013-14	0.20%	0.40%	0.40%	1.00%
2014-15	0.20%	0.40%	0.40%	1.00%

The Commission passed order on 11.3.2015 requiring the nodal agency, STU, MePDCL and Electrical Inspector to furnish report on compliance of RPO since beginning. The Commission has determined on the data furnished by MePDCL for prior period on consumption in the present ARR. The Commission on the basis of consumption has determined the RPO requirement year wise of the licensee MePDCL in the following manner:

RPO Compliance (MU) for the previous period					
Year	Consumed (MU)	Wind (MU)	Solar (MU)	others (MU)	Total (MU)
2010-11	984.00	0.98	1.97	1.97	4.92
2011-12	1094.00	1.64	3.28	3.28	8.21
2012-13	1061.00	2.12	4.24	4.24	10.61
2013-14	1073.00	2.15	4.29	4.29	10.73
2014-15	996.95	1.99	3.99	3.99	9.97
		8.89	17.77	17.77	44.43

While truing up of FY 2010-11 and FY 2011-12, the Commission found that no power has been purchased as above from the renewable energy sources. MePDCL submitted information in relation to compliance of RPO regulations for FY 2010-11, 2011-12, 2012-13 & 2014-15. As per the information there is a net deficit of 13.54 MU (1.94 + 3.22 + 4.17 + 4.21) to be met from solar plant. Similarly, for wind it is 6.76 MU (0.97+1.61+2.08+2.10). It is also mentioned that they have surplus for small hydro which is about 267 MU over and above the requirement. According as per the regulations, the Commission is allowing to carry over the RPO requirement of FY 2010-11 and FY 2011-12 to be met in FY 2015-16 by providing Rs. 3.00 crores for compliance of RPO regulations 2015. In accordance with the regulation it is provided that if under any scheme for promoting generation from renewable source is made through generation from off-grid renewable generation in the State, the same may be accounted for RPO of the distribution licensee. The Commission shall treat the remaining RPO requirement in the same manner in its next order.

The Commission has made a provision of Rs.3 crores for meeting the RPO requirement of FY 2015-16 and requirement of FY 2010-11 & 2011-12 where true up is already done on the audited accounts. It is therefore directed that MePDCL should account for the state generation (off grid) and other solar projects run by State and meet the requirement as per the RPO regulations.

It is advised to Inspectorate of Electricity, Government of Meghalaya to study and examine the status of captive power plants in the State. In accordance with MSERC (Renewable Purchase Obligations and its Compliance) Regulations, 2015, every

obligated entity shall purchase a minimum percentage of its total electricity consumption (in kWh) from renewable energy sources under the renewable purchase obligation during each financial year. As per the regulations the requirement for 2015-16 is 1.5% out of which 0.41% is to be met from solar power. The Obligated Entities shall be the distribution licensee, a consumer owing a captive power plant and an open access consumer in the State, which is mandated to fulfil renewable purchase obligations. In a recent communication dated 25.03.2015 to the Commission, the Electrical Inspector informed that there are about 20 consumers in the State who owns more than 1 MW power plants for the captive use. Some of them have more than 10-25 MW plants. It is therefore essential to see that they also meet the RPO compliance given by the Commission. In this Commission the Commission has already issued orders and expect from Electrical Inspector to look into it and work out a proper system in consultation with nodal agency MNREDA for implementation of RPO in the State. The information should be collected in the following manner for all captive power plants having 1 MW and above generators using conventional fuel.

Year**	Solar	Wind	Others
Captive capacity (MW)			
Type of fuel			
Target RPO (%)			
Category of fuel	Conventional		
RPO to be met			
Actual purchase from RE sources including purchase of REC (MU)			
Shortfall (MU)			

b. RPO compliance for FY 2015-16 to 2017-18:

The Commission has determined the RPO requirement for the control period starting from FY2015-16 in accordance with the present regulation 2015 in the following manner:

Renewable Purchase Obligations % (RPO)			
Year	Solar	Non-Solar	Total
2015-16	0.41%	1.09%	1.50%
2016-17	0.42%	1.58%	2.00%
2017-18	0.43%	2.07%	2.50%

RPO Compliance (MU) for the Control period				
Year	Consumption(MU)	Solar (MU)	Non-Solar (MU)	TOTAL (MU)
2015-16	1068	4.38	11.64	16.02
2016-17	1118	4.70	17.66	22.36
2017-18	1173	5.04	24.28	29.33

The Commission has allowed Rs. 2.5 crores for meeting the solar RPO compliance in FY 2015-16, Rs. 2.73 crores for FY 2016-17 and Rs. 2.92 crores in FY 2017-18. However in FY 2015-16, the Commission is allowing Rs. 5.5 for meeting pending RPO relating to FY 2010-11, 2011-12 and 2015-16. Further Commission directs the nodal agency MNREDA to monitor the RPO compliance as per the regulations and send its report to the Commission by 30.09.2015. Similarly the Commission directs the licensees MePDCL/MePTCL, SLDC to enforce RPO compliance by open access consumers while sanctioning open access with immediate effect from 1.4.2015 for compliance of previous year consumption and estimated consumption in FY 2015-16 and so on. The licensee shall also send reports of compliance to the Commission by 30.9.2015. Similarly the Electrical Inspector shall enforce RPO compliance on captive power plants as per regulation in the same manner and send its report to the Commission by 30.09.2015. In case of any difficulty, the secretary, MSERC may be approached.

7.7 Distribution Loss

Petitioner's submission

The MePDCL has submitted that there is considerable number of unmetered consumers in domestic category mainly in rural areas. The consumption of unmetered category is assessed, and thus there is possibility of higher actual consumption resulting in lower distribution loss. The proposed distribution loss level by the Petitioner for control period of FY 2015-16 to FY 2017-18 is shown in table below.

Table 7.8: Distribution Loss Trajectory

Particular	FY 2015-16	FY 2016-17	FY 2017-18
Distribution Loss (%)	26.41%	25.88%	25.35%

Commission's Analysis

Based on the actual data furnished by MePDCL for FY 2013-14 the actual distribution loss is calculated as detailed in table below.

Table 7.9 Distribution Loss Calculation for FY 2013-14

Sl.No.	Particulars	2013-14
1	Power Purchase from NTPC	312.59
2	Loss ER Tr. Loss @ 2.34%	7.32
3	Net Power Purchased	305.27
4	Power Purchased from NER	397.02
5	Sub Total (3+4)	702.29
6	Less NER Tr. Loss @ 2.99%	21.00
7	Net energy of NERLDC	681.29
8	Power Purchased from MePGCL	838.67
9	Less Intra state Tr. Loss @ 4%	33.55
10	Net energy from MePGCL	805.12
11	Energy from other sources	318.20
12	Total energy at NERLDC (7+10+11)	1804.61
13	Less UI sales	41.95
14	Less Swapping	267.76
15	Net energy available	1494.90
16	Less Intra state Tr. Loss @ 4.0%	59.79
17	Net energy available for sale	1435.10

18	Energy sales	1072.53
19	Distribution Loss	362.57
		25.26%

Thus distribution loss during FY 2013-14 works out to 25.26% Distribution loss for control period of FY 2015-16 to FY 2017-18 are fixed as follows:

While calculating distribution loss the following regional transmission losses are considered.

Eastern Region transmission losses during FY 2013-14 are considered at 2.34% being the average weekly loss for the period from 1.4.2013 to 6.4.2014 (52 weeks) North Eastern Region Transmission losses during FY 2013-14 are considered as 2.99% being the average weekly loss during the period from 1.4.2013 to 31.3.2014 (52 weeks).

Intra State Transmission loss is considered at 4.0% for FY 2013-14.

Table 7.10 Distribution Loss trajectory for control period FY 2015-16 to FY 2017-18 approved by the Commission

Years	2014-15	2015-16	2016-17	2017-18
Distribution Loss	24%	23%	22%	21%

7.8 Energy Requirement

The total energy requirement of a distribution company to meet the total demand of its consumers would be the sum of estimated energy sales and the system losses (Distribution Losses) as approved by the Commission. Based on the approved energy sales and the distribution losses as fixed above, the energy requirement for the control period as approved by the Commission are given in the Table below:

Table 7.11: Total energy requirement for control period of FY 16 to FY 18 approved by the Commission

Sl. No	Particulars	2015-16	2016-17	2017-18
1	Estimated Energy Sales (including ASEB) (MU)	1068	1118	1173
2	Distribution losses %	23%	22%	21%
3	Distribution losses (MU)	319	315	312
4	Energy input required at the distribution periphery (MU)	1387	1433	1485

7.9 Energy Availability

Petitioner Submission

7.9.1 Energy Availability from MePGCL stations - Assumptions

The MePGCL station wise assumptions considered by the Petitioner for projecting energy availability for the control period are as follows:

Station	Assumption
Sonapani	PLF of 45% and Auxiliary consumption of 1%
Umiam Stage-I	Average of Actual Generation during the last 5 Financial Years i.e. FY 10 to FY 14
Umiam Stage-II	50% of Generation by Umiam Stage-I
Umiam Stage-III	Based on recent generation trend
Umiam Stage-IV	Average of Actual Generation during the last 5 Financial Years i.e. FY 10

Station	Assumption
Umtru HEP	1 Unit will remain under shut down till FY 17. Therefore for FY 16 & FY 17 considered 75% of Average of Actual Generation for the entire station during the last 5 Financial Years i.e. FY 10 to FY 14.
Myntdu Leshka	Considered to generate same as FY 14
New Umtru	Expected COD by the end of FY 16. PLF of 45% and Auxiliary
Lakroh	Expected COD by the end of FY 16. PLF of 45% and Auxiliary consumption of 1%

7.9.1.2 Energy Availability from NEEPCO stations-Assumptions

The NEEPCO station wise assumptions considered for projecting energy availability for the control period are as follows:

Station	Assumption
Kopili Stage-I	Average of Actual Generation during the last 4 Financial Years i.e. FY 10 to FY 13
Kopili Stage-II	
Khandong HEP	
RANGANAD I HEP	
DOYANG HEP	
AGBPP	Average of PLF achieved during FY 13 & FY 14
AGTPP	Auxiliary consumption of 2.5% as per CERC Tariff Regulations, 2014
AGTPP (Combined Cycle)	Expected COD by the end of FY 15 PLF of 85% and Auxiliary consumption of 2.5%

7.9.1.3 Energy Availability from NTPC stations-Assumptions

The NTPC station wise assumptions considered for projecting energy availability for the control period are as follows

Station	Assumption
Farakka	PLF of 72% and Auxiliary consumption of 8.5% power will be procured only for 6 months in a year
Kahalgaon I	PLF of 71% and Auxiliary consumption of 8.5% power will be procured only for 6 months in a year
Kahalgaon II	PLF of 71% and Auxiliary consumption of 8.5% power will be procured only for 6 months in a year
Talcher	PLF of 82% and Auxiliary consumption of 10.5% power will be procured only for 6 months in a year
Bongaigaon	Average PLF of existing NTPC stations and Auxiliary consumption of 8.5%# COD assumptions: 1st Unit- May'16, 2nd Unit-May'17, 3rd Unit-Oct`17

7.9.1.4 Energy Availability from NHPC Loktak-Assumptions

The Power Purchase Agreement with NHPC is going to expire by 31.3.2016. Therefore, the energy availability from NHPC Loktak is considered only for FY 2015-16 and is projected by taking the average energy availability from NHPC Loktak in last 5 years.

7.9.1.5 Energy Availability from OTPC-Assumptions

As per the OCC meetings of NERPC it is understood that the 2nd unit of OTPC will be commissioned by December'14. Therefore, it is assumed that both the units will be generating power for the control period. However, due to the prevalent gas problem it is assumed that plant will be able to run on 70% capacity overall. As per the NERPC REA as on October'14, the PLF is assumed to be 73% and as per CERC Tariff Regulations, 2014, the Auxiliary consumption is assumed to be 2.5%.

7.9.1.6 Energy Availability from Short Term Sources-Assumptions

At present no power is proposed to be procured from short term market. However in case of lean hydro generation if required MePDCL may purchase power from short term market.

7.9.1.7 Total Energy Availability from various sources

Based on the above assumptions the projected energy availability from various sources is shown in the table below

Table 7.12: Energy Availability from various stations projected by MePDCL

Company	Power Plant	Capacity	% share	MW Share	Energy Availability (MU)		
					FY 2015-16	FY 2016-17	FY 2017-18
	Farakka	1,600	0.53%	8.44	24.36	24.36	24.36
	Kahalgaon I	840	0.53%	4.43	12.61	12.61	12.61
	Kahalgaon II	1,500	1.47%	22.06	62.78	62.78	62.78
NTPC	Talcher	1,000	0.53%	5.28	16.96	16.96	16.96
	Bongaigaon	750	7%	54	-	86.94	229.22
OTPC	OTPC Pallatana	726.6		79	346.68	346.68	346.68
	Kopili Stage-I	200	17.40%	34.79	82.23	82.23	82.23
	Kopili Stage-II	25	13.70%	3.42	8.48	8.48	8.48
	Khandong HEP	50	16.90%	8.45	17.53	17.53	17.53
	Ranganadi HEP	405	11.50%	46.6	131.25	131.25	131.25
	Doyang HEP	75	11.50%	8.59	23.65	23.65	23.65
NEEPCO	AGBPP	291	11.80%	34.38	187.65	187.65	187.65
	AGTPP	84	11.80%	9.92	69.71	69.71	69.71
	Free Power				58.99	58.99	58.99
	AGTPP C-Cycle	51.2	10%	5	36.3	36.3	36.3
NHPC	NHPC Loktak	105	12.40%	13.01	50.63	-	-
	Sonapani	1.5		1.5	5.85	5.85	5.85
	Lakroh	1.5		1.5	-	5.85	5.85
	Umiam Stage-I HEP	36		36	100.46	100.46	100.46
	Umiam Stage-II HEP	20		20	50.23	50.23	50.23
	Umiam Stage-III HEP	60		60	65.85	65.85	65.85
MePGCL	Umiam Stage-IV HEP	60	100%	60	191.17	191.17	191.17
	Umtru HEP	11.2		11.2	22.89	22.89	30.52
	Myntdu Leshka HEP	126		126	410.22	410.22	410.22
	New Umtru HEP	40		40	-	156.1	156.1
	Total	8,169		702.58	1,976.47	2,174.75	2,324.65

7.10 Commission's Analysis

MePDCL has allocation of Power from the central generating stations of NEEPCO, NHPC OTPC and NTPC – Banganigaon area located in North Eastern Region (NER) and four stations of NTPC in Easter Region (ER). In addition the generation MePGCL stations is available to MePDCL. Power from NHPC – Loktak is considered for FY 2016-17 & FY 2017-18 at the same quantity as was proposed in FY 2015-16 with an assumption that the PPO will extend for the MYT control period up to FY 2017-18.

The Commission has examined the petition and found that the availability of power from different sources is quite different from what the Commission had allowed last year. For example MePDCL has proposed that they will buy only for six months from NTPC sources and pay the fixed and energy charges in that proportion. After checking from MePDCL the Commission understands that when MePDCL surrender its share during any month there is an agreement that fixed charges shall also to be not charged. The Commission accordingly allowing MePDCL proposal on NTPC for tariff calculations. However the purchase from all centre allocations shall be made as per requirement of the State and protecting commercial interest of the Corporation. Similarly from MePGCL they have estimated energy on the actual generation they had in 2014-15. The average of past ten years generation has been provided by MePGCL in its ARR filing is Umiam Stage I (110 MU), Umiam Stage II (46 MU), Umiam Stage III (138 MU), Umiam Stage IV (194 MU), Umtru (44 MU), Sonapani (6 MU). After checking from SLDC about the lower generation in 2014-15 in spite of good rains and better level of water at Umiam Lake, it is found that MePGCL has generated less than designed energy just to maintain the water level in Umiam to meet the demand in lean season and to meet the frequency. The Commission shall not go into the management issues and it is up to the Corporation to examine its business viability and make prudent decisions. Accordingly, the Commission is allowing the availability as given below and any change in it shall be examined at the time of truing up. Thus the power availability approved by the commission for the control period is shown in Table below.

Table 7.13 Source-wise Energy Availability Approved by the Commission for control period

Company	Power Plant	Capacity	% Share	MW Share	Energy Availability (MU)		
					FY 2015-16	FY 2016-17	FY 2017-18
NTPC	Farakka	1600	0.53%	8.44	24.36	24.36	24.36
	Kahalgaon I	840	0.53%	4.43	12.61	12.61	12.61
	Kahalgaon II	1500	1.47%	22.06	62.7	62.7	62.7
	Talcher	1000	0.53%	5.28	16.96	16.96	16.96
	Bongaigaon	750	7%	54		86	200
OTPC	OTPC Pallatana	726.6		79	346	346	346
NEEPCO	Kopli Stage-I	200	17.40%	34.79	85	85	85
	Kopli Stage-II	25	13.70%	3.42	8	8	8
	Khandong HEP	50	16.90%	8.45	17	17	17
	Ranganadi HEP	405	11.50%	46.6	131	131	131
	Doyang HEP	75	11.50%	8.59	23	23	23
	AGBPP	291	11.80%	34.38	187	187	187
	AGTPP	84	11.80%	9.92	69	69	69
	Free Power				58	58	58
	AGTPP C-Cycle	51.2	10%	5	36	36	36
NHPC	NHPC Loktak	105	12.40%	13.01	50	50	50
MePGCL	Sonapani	1.5		1.5	5	5	5
	Lakroh*	1.5		1.5	-	5	5
	Umiam Stage-I HEP	36		36	116	116	116
	Umiam Stage-II HEP	20		20	46	46	46

Company	Power Plant	Capacity	% Share	MW Share	Energy Availability (MU)		
					FY 2015-16	FY 2016-17	FY 2017-18
	Umiam Stage-III HEP	60		60	139	139	139
	Umiam Stage-IV HEP	60	100%	60	207	207	207
	Umtru HEP	11.2		11.2	39	39	39
	Myntdu Leshka HEP	126		126	480	480	480
	New Umtru HEP	40		40	0	75	150
	Total				2158.63	2319.63	2508.63

*5 MU from lakroh station is not considered in the total availability and shall be considered after actual commissioning of the project.

7.11 Energy Balance

Energy balance projected by MePDCL is furnished in table below: -

Table 7.14: Energy Balance projected by MePDCL for control period of FY 2015-16 to FY 2017-18

Particular	FY 2015-16	FY 2016-17	FY 2017-18
Power Purchase from NER Source (MU)	1,013.10	1,049.40	1,191.70
North Eastern Region Loss (%)	1.95%	1.95%	1.95%
Net NER Power available at MePTCL Periphery (MU)	993.3	1,029.00	1,168.50
Power Purchase from ER Source (MU)	116.7	116.7	116.7
Eastern Region Loss (%)	1.29%	1.29%	1.29%
Total Applicable loss for ER Sources (%)	3.24%	3.24%	3.24%
Net ER Power available at MePTCL Periphery (MU)	112.94	112.94	112.94
Power Purchase from MePGCL (MU)	846.66	1,008.61	1,016.24

Total Powr Available at MePTCL Periphery (MU)	1,952.94	2,150.50	2,297.63
Surplus (MU)	390.56	629.29	733.98
Swapping Obligation (MU)	80.96		
Energy Requirement at MePTCL Periphery (MU)	1,481.42	1,521.21	1,563
Transmission Loss (%)	5.51%	5.51%	5.51%
Net Power available @MePDCL periphery	1,399.79	1,437.39	1,477.49
Distribution Loss (%)	26.41%	25.88%	25.33%
Within the state Energy Sale (including ASEB) (MU)	1,030.10	1,065.37	1,102.91
T&D Loss(%)	30.47%	29.97%	29.47%

Source Table: 12 of Petition

7.12 Commission’s Analysis

The average regional transmission loss for NER system and ER system as per weekly losses during the period from 13.4.2013 to 30.3.2014 of NERLDC and from 31.3.2014 to 3.10.2014 of ERLDC are at 2.99% and 2.12% respectively. The same losses are considered for the control period of FY 2015-16 to FY 2017-18. Intra state transmission loss is considered at 4% instead 5.51% projected by MePTCL. The Commission has approved the transmission loss at 4% while arriving ARR of MePTCL.

Based on the approved energy sales, distribution losses and intra state transmission losses at 4% and Regional transmission Losses in NER and ER systems as indicated above and availability of power approved vide Table 6.13 supra the energy balance approved is as given in the Table below:

Table 7.15: Energy Balance approved by the Commission for control period

Sl. No.	Particulars	2015-16 (P)	2016-17 (P)	2017-18 (P)
A	Energy Requirement			
1	Energy Sales within state	1049	1098	1152
2	Energy Sales to Assam	19	20	21
3	Total Energy Sales (1+2)	1068	1118	1173
4	Distribution loss%	23.00%	22.00%	21.00%
5	Distribution loss (MU)	319	315	312
6	Energy Requirement (3+5)	1387	1433	1485
B	Energy Availability			
7	Energy Purchase from ER	136	136	136
8	Less TR Loss %	2.12%	2.12%	2.12%
9	Less TR Loss (MU)	2.9	2.9	2.9
10	Energy Purchase from ER (7-9)	133.1	133.1	133.1
11	Energy Purchase from NER	1010	1096	1210
12	Total Power (10+11)	1143.1	1229.1	1343.1
13	Less NER Tr Loss%	2.99%	2.99%	2.99%
14	Less NER Tr Loss (MU)	34.2	36.8	40.2
15	Net Energy available at NERLDC	1108.9	1192.4	1303.0
16	Net Energy Purchase from MePGCL	1032	1107	1182
17	Less intra state Tr Loss @ 4%	41.28	44.28	47.28
18	Net Energy Purchase from MePGCL (16-17)	990.72	1062.72	1134.72
19	Other Sources	-	-	-
20	Total Energy available at NERLDC (15+18+19-----)	2099.7	2255.1	2437.7
21	Less intra state Tr Loss @ 4%	84.0	90.2	97.5
22	Net Energy available for MePDCL (21-22)	2015.7	2164.9	2340.2
23	Surplus (Deficit) (23-6)	628.7	731.9	855.2
24	Grossed up by 4%	654.9	762.4	890.8
25	UI Sales			
26	Swapping	80.96		
27	Total Surplus Power (MU)	573.9	762.4	890.8

The Commission has allowed power purchase from all sources as per entitlement subject to correction as per MePDCL proposal. MePDCL shall sell/bank/swap the surplus power after meeting the State requirement without restriction in supply.

The revenue from such surplus sale has been adjusted in the ARR for FY 2015-16. MePDCL shall in compliance to the power purchase regulations make the demand schedule for all months in the year and manage the load accordingly.

7.13 Revenue Requirement for the control period of FY 2015-16 to FY 2017-18

The components for calculation of revenue requirement (total expenses) for the control period are as follows:

- Power Purchase Cost
- Operation and Maintenance expenses
- Depreciation
- Interest on loans and Finance charges
- Interest on Working Capital
- Provision for Bad debts
- Return on Equity
- Provision for Tax
- Less Non Tariff income

The projected expenses by MePDCL under each head and the analysis and decisions of the Commission are discussed below:

7.14 Power Purchase Cost Projection

Petition`'s Submission:

The Regulation 85 of the MYT Regulations, 2014, provides provisions for Power Purchase Cost, the relevant clauses are mentioned below:

“85 Power Purchase Cost

85.1 The Licensee shall procure power from approved sources. Additional energy required after taking into account the availability of energy from such approved

sources, shall be reasonably estimated well in advance and procurement arrangements

made for such long and medium term purchases, by following standard contractual procedures. All such purchases shall only be made with the prior approval of the Commission.

85.2 For purchase of electricity from sources outside the state, the transmission loss level agreed to in the Power Purchase Agreement (PPA) or worked out from energy accounts of RLDC ./ SLDC shall be taken into account for purchase of power from such sources.

85.3 The cost of power purchased from the central generating companies shall be worked out based on the tariff determination by the Central Electricity Regulatory Commission (CERC).

85.4 Where power is purchased by the licensee from State-owned existing generating stations, the cost of power purchase shall be worked out based on the price determined by the State Commission and in case of power purchased from Renewable energy sources the quantum and the cost shall be as per the policy approved by the State Commission / Central Commission depending upon their jurisdiction.

85.5 The cost of power purchase from IPPs shall be considered based on existing Power Purchase Agreement if any, till the agreement period is over.

85.6 In case of short-term power purchase necessitated based on unprecedented development, the licensee may resort to short term procurement.”

7.15 Projection of Power Purchase Cost- MePGCL Stations

7.15.1 Projection of cost for existing stations

The cost of procurement of power from MePGCL is projected considering nominal yearly increase of 5% on the approved cost of FY 2014-15. However it is submitted

that the cost of power procurement from MePGCL will be same as approved AFC of MePGCL for the control period of FY 2015-16 to FY 2017-18.

7.15.2 Projection of cost for the upcoming stations

Among the upcoming stations for Lakroh HEP provisional tariff was approved by the Hon'ble Commission vide order dated 30.03.13. MePDCL has considered the provisional tariff to be applicable till approval of final tariff by the Commission. For New Umtru HEP, MePDCL has projected the cost based on the information on tariff received from project officials.

7.15.3 Projection of Power Purchase Cost- NEEPCO Stations

Projection of cost for the existing stations

The cost of procurement of power from existing stations of NEEPCO is projected based on available information of expected AFC. For the gas based thermal stations of NEEPCO i.e. AGBPP and AGTPP the energy charge is considered based available information of expected energy charge.

7.15.4 Projection of cost for the upcoming stations

For the upcoming AGTPP Combined Cycle of NEEPCO the cost is projected based on the information received from NEEPCO.

7.15.5 Projection of Power Purchase Cost- NTPC Stations

Projection of cost for the existing stations

The fixed cost of procurement of power from existing stations of NTPC is projected based on the information of expected AFC as provided in the MYT petitions filed by NTPC before CERC. The energy charge rate (ECR) is projected by taking a yearly increase of 5% over the recent energy charge.

7.15.6 Projection of cost for the upcoming stations

For the upcoming Bongaigaon Thermal Power station of NTPC the fixed cost is projected by taking the maximum of projected fixed cost (per MW) of existing

stations of NTPC. The energy charge is projected by taking the average of yearly projected energy charge of existing station.

7.15.7 Projection of Power Purchase Cost- NHPC Stations

The Power Purchase Cost of NHPC Loktak station is projected based on the information of expected AFC as provided in the MYT petition filed by NHPC before CERC.

7.15.8 Projection of Power Purchase Cost- OTPC Stations

For the OTPC Palatana station at present power is being received only from 1 unit of the plant. Based on the present market information from FY 2015-16 onwards it is expected that MePDCL will be receiving power from 2 units of OTPC. However, OTPC is yet to file the final MYT and Tariff petition before CERC. Therefore, the fixed cost of OTPC station (2units) is expected to be twice the present fixed cost of OTPC station (1unit). Further from FY 2015-16 onwards the fixed cost is estimated to increase by 5%. The energy charge rate of OTPC station is projected by taking a yearly increase of 5% over the existing energy charge rate.

7.15.9 Projected Power Purchase Cost for the Control Period

Based on the above assumptions the projected year wise power purchase cost projected for the Control Period of FY 2015-16 to FY 2017-18 is shown in the tables below.

Table 7.16: Power Purchase Cost projected by MePDCL for FY-2015-16

Company	Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average Cost (Rs./ kWh)
1	2	3	4	5	6	7	8
NTPC	Farakka	24.36	2.95	7.2	2.57	9.77	4.10
	Kahalgaon I	12.61	2.89	3.65	1.53	5.17	
	Kahalgaon II	62.78	2.73	17.13	8.94	26.08	
	Talcher	16.96	1.53	2.6	1.61	4.21	
	Bongaigaon	86.94	-	-	-	-	
OTPC	OTPC Pallatana	346.68	1.23	42.59	76	118.59	

Company	Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average Cost (Rs./ kWh)
	Kopili Stage-I	82.23	0.51	4.18	9.14	13.32	
	Kopili Stage-II	8.48	0.93	0.79	0.95	1.74	
	Khandong HEP	17.53	0.74	1.3	3.04	4.34	
	Ranganadi HEP	131.25	0.97	12.71	14.66	27.37	
	Doyang HEP	23.65	2.5	5.91	5.67	11.58	
NEEPCO	AGBPP	187.65	2.53	47.47	37.62	85.09	
	AGTPP	69.71	2.52	17.54	10.28	27.82	
	Free Power	58.99	-	-	-	-	
	AGTPP C-Cycle	36.3	2.12	7.7	13.47	21.17	
NHPC	NHPC Loktak	50.63	1.72	8.71	8.37	17.08	
	Sonapani	5.85	0.71	0.42	0.39	0.81	
	Lakroh	-	-	-	-	-	
	Uiam Stage-I HEP	100.46	0.61	6.12	6.98	13.1	
	Uiam Stage-II HEP	50.23	0.86	4.32	3.89	8.21	
	Uiam Stage-III HEP	65.85	0.85	5.6	11.64	17.24	
MePGCL	Uiam Stage-IV HEP	191.17	0.57	10.84	11.64	22.48	
	Umtru HEP	22.89	0.57	1.3	2.17	3.47	
	Myntdu Leshka HEP	410.22	1.49	60.95	71.16	132.11	
	New Umtru HEP	-	-	-	-	-	
	Total	2,063.42		269.03	301.74	570.77	

Source Table: 21 of Petition

Table: 7.17 Power Purchase Cost projected by MePDCL FY 2016-17

Company	Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average Cost (Rs./ kWh)
NTPC	Farakka	24.36	3.1	7.56	2.74	10.29	
	Kahalgaon I	12.61	3.04	3.83	1.59	5.42	
	Kahalgaon II	62.78	2.87	17.99	9.02	27.01	
	Talcher	16.96	1.61	2.73	1.71	4.44	
	Bongaigaon	229.22	2.65	23.06	12.5	35.56	
OTPC	OTPC	346.68	1.29	44.72	79.8	124.52	
	Kopili Stage-I	82.23	0.53	4.36	9.54	13.9	
	Kopili Stage-II	8.48	0.91	0.77	0.95	1.72	

Company	Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average Cost (Rs. /kWh)
	Khandong HEP	17.53	0.76	1.33	3.12	4.45	
	Ranganadi HEP	131.25	0.99	12.97	14.96	27.93	
	Doyang HEP	23.65	2.56	6.05	5.83	11.89	
	AGBPP	187.65	2.53	47.47	40.44	87.91	
NEEPCO	AGTPP	69.71	2.52	17.54	11.26	28.8	
	Free Power	58.99	-	-	-	-	
	AGTPP C-Cycle	36.3	2.12	7.7	14.75	22.45	
NHPC	NHPC Loktak	-	-	-	-	-	
	Sonapani	5.85	0.75	0.44	0.41	0.85	
	Lakroh	5.85	0.39	0.23	0.4	0.63	
	Uiam Stage-I HEP	100.46	0.64	6.42	7.33	13.76	
	Uiam Stage-II HEP	50.23	0.9	4.54	4.08	8.62	
	Uiam Stage-III HEP	65.85	0.89	5.88	12.23	18.11	
	Uiam Stage-IV HEP	191.17	0.6	11.38	12.23	23.61	
MePGCL	Umtru HEP	22.89	0.6	1.36	2.28	3.64	
	Myntdu Leshka HEP	410.22	1.56	64	74.72	138.71	
	New Umtru HEP	156.1	2	31.22	31.22	62.44	
	Total	2,317.02		323.55	353.1	676.65	

Source Table: 22 of Petition

Table 7.18: Power Purchase Cost projected by MePDCL for FY 2017-18

Company	Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average Cost (Rs./kWh)
NTPC	Farakka	24.36	3.26	7.93	3	10.93	
	Kahalgaon I	12.61	3.19	4.02	1.66	5.68	
	Kahalgaon II	62.78	3.01	18.89	9.11	28	
	Talcher	16.96	1.69	2.87	1.89	4.75	

Company	Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average Cost (Rs./kWh)
Sub Total							
OTPC	Bongaigaon	229.22	2.79	63.85	30.68	94.53	
	OTPC Pallatana	346.68	1.35	46.96	83.79	130.75	
	Kopili Stage-I	82.23	0.55	4.55	9.97	14.52	
	Kopili Stage-II	8.48	0.69	0.59	0.73	1.31	
	Khandong HEP	17.53	0.78	1.36	3.2	4.56	
	RANGANADI HEP	131.25	1.01	13.24	15.28	28.52	
	DOYANG HEP	23.65	2.62	6.21	6.01	12.22	
	AGBPP	187.65	2.53	47.47	42.27	89.75	
NEEPCO	AGTPP	69.71	2.52	17.54	11.94	29.48	
	Free Power	58.99	-	-	-	-	
	AGTPP C-Cycle	36.3	2.12	7.7	15.64	23.34	
NHPC	NHPC Loktak	-	-	-	-	-	
Sub Total							
MePGCL	Sonapani	5.85	0.79	0.46	0.43	0.89	
	Lakroh	5.85	0.39	0.23	0.4	0.63	
	Uiam Stage-I HEP	100.46	0.67	6.74	7.7	14.44	
	Uiam Stage-II HEP	50.23	0.95	4.77	4.28	9.05	
	Uiam Stage-III HEP	65.85	0.94	6.17	12.84	19.01	
	Uiam Stage-IV HEP	191.17	0.63	11.95	12.84	24.79	

Company	Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average Cost (Rs./kWh)
	Umtru HEP	30.52	0.63	1.91	2.4	4.3	
	Myntdu-Leishka HEP	410.22	1.64	67.19	78.45	145.65	
	New Umtru HEP	156.1	2.1	32.78	32.78	65.56	
	Total	2,324.65	36.82	375.37	387.28	762.65	

Source Table: 23 of Petition

7.15.10 Commission Analysis:

Power Purchase Cost for the control period of FY 2015-16 to FY 2017-18 is arrived based on the quantity of power purchase approved in Para 6.7.3 Supra. The station wise rate of power purchase is adopted as follows:

- In respect of NTPC, NEEPCO, NHPC and OTPC, the rates furnished by MePDCL in it's latest FPPPA proposals submitted are adopted for the control period.
- While allowing power purchase rates for CGS, the Commission has kept in mind the implication of CERC new regulations for 2015 onwards.
- MePDCL has not proposed purchase of power from NHPC – Loktak HEP since the PPA is over by 1.4.2016, but the Commission consider the power from the above HEP beyond agreement period.
- The Commission has considered the licensee proposal on NTPC power purchase. However it is management and State Government decision to consider centre allocation in the interest of the State.
- In respect of MePGCL power the rates approved by the Commission for control period of FY 2015-16 to FY 2017-18 are adopted. The generation from own station is taken on designed energy approved by the Commission in

MePGCL order. In the absence of tariff petition for Leshka Project, the Commission has provisionally allowed the existing rate of MLHEP.

- Since there is surplus power UI purchases are not considered
- If any contingency arises the MePDCL may purchase power under UI etc
- Fixed cost for CGS are kept at the same level as on today, however the energy charges are escalated as per current trend. Quantities are taken as per latest orders.
- Station wise actual rates at which the power purchased and the actual quantity of power purchased will be considered while truing up.
- For new generations, power purchase rates are on adhoc basis and shall be allowed in the power purchase cost only after approval of appropriate Commission at appropriate time.

With the above observations the Power Purchase Cost approved by the Commission for the control period of FY 2015-16 to FY 2017-18 are furnished in tables below:

Table 7.19: Power Purchase Cost approved by the Commission for FY 2015-16
(Rs.Cr)

Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average
NTPC						
Farakka	28	2.85	7.98	3.03	11.01	3.93
Kahalgaon I	15	2.68	4.02	1.85	5.87	3.91
Kahalgaon II	75	2.49	18.68	9.50	28.18	3.76
Talcher	18	1.44	2.59	1.76	4.35	2.42
OTPC						
OTPC Pallatana	346	1.19	41.17	42.66	83.83	2.42
NEEPCO						
Kopili Stage-I	85	0.45	3.83	4.83	8.66	1.02
Kopili Stage-II	8	0.94	0.75	0.66	1.41	1.77

Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average
Khandong HEP	17	1.11	1.89	3.56	5.45	3.20
Rangandai HEP	131	1.22	15.98	24.42	40.40	3.08
Doyang HEP	23	2.08	4.78	5.49	10.27	4.47
AGBPP	187	1.84	34.41	29.49	63.90	3.42
AGTPP	69	2.36	16.28	9.23	25.51	3.70
AGTPP C-Cycle	36	2.12	7.63	7	14.63	4.06
Free Power	58		0.00		0.00	0.00
NHPC						
NHPC Loktak	50	1.41	7.05	8.28	15.33	3.07
MePGCL						
Sonapani	5	0.91	0.46	0.455	0.91	1.82
Lakroh			0.00			
Umiam Stage-I HEP	116	0.66	7.66	7.61	15.27	1.32
Umiam Stage-II HEP	46	0.92	4.23	4.23	8.46	1.84
Umiam Stage-III HEP	139	0.91	12.65	12.685	25.33	1.82
Umiam Stage-IV HEP	207	0.61	12.63	12.685	25.31	1.22
Umtru HEP	39	0.61	2.38	2.37	4.75	1.22
Myntdu Leshka HEP	480	1.41	67.68	67.77	135.45	2.82
R.P.O					5.50	
Total	2178				539.78	2.48

Similarly, the Commission has worked out cost of power purchase for 2016-17 and 2017-18 which are produced below in the tables:

Table 7.20: Power Purchase Cost approved by the Commission for FY 2016-17(Rs. Cr)

Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average
NTPC						
Farakka	28	2.99	8.38	3.03	11.41	4.07
Kahalgaon I	15	2.814	4.22	1.85	6.07	4.05
Kahalgaon II	75	2.6145	19.61	9.50	29.11	3.88
Talcher	18	1.512	2.72	1.76	4.48	2.49
Bongaigoan	86	2.65	22.79	12.5	35.29	4.10

Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average
OTPC						
OTPC Pallatana	346	1.2495	43.23	42.66	85.89	2.48
NEEPCO						
Kopili Stage-I	85	0.45	3.83	4.83	8.66	1.02
Kopili Stage-II	8	0.94	0.75	0.66	1.41	1.77
Khandong HEP	17	1.11	1.89	3.56	5.45	3.20
Rangandai HEP	131	1.22	15.98	24.42	40.40	3.08
Doyang HEP	23	2.08	4.78	5.49	10.27	4.47
AGBPP	187	1.932	36.13	29.49	65.62	3.51
AGTPP	69	2.478	17.10	9.23	26.33	3.82
AGTPP C-Cycle	36	2.12	7.63	7	14.63	4.06
Free Power	58		0.00		0.00	0.00
NHPC						
NHPC Loktak	50	1.41	7.05	8.28	15.33	3.07
MePGCL						
Sonapani	5	0.68	0.47	0.47	0.93	1.86
Lakroh						
Umiam Stage-I HEP	116	0.69	7.99	7.99	15.97	1.38
Umiam Stage-II HEP	46	0.96	4.44	4.44	8.87	1.93
Umiam Stage-III HEP	139	0.96	13.31	13.31	26.62	1.92
Umiam Stage-IV HEP	207	0.64	13.31	13.31	26.62	1.29
Umtru HEP	39	0.64	2.49	2.49	4.97	1.27
Myntdu Leshka HEP	480	1.41	67.77	67.77	135.54	2.82
Umtru New	75	2.58			19.35	2.58
R.P.O					6.35	
Total	2339		305.85	274.015	605.57	2.59

Table 7.21: Power Purchase Cost FY 2017-18 approved by the Commission

(Rs, Cr)

Station	Energy (MU)	Energy Charge Rate (Rs./Unit)	Variable Cost (Rs. Cr)	Fixed Cost (Rs. Cr)	Total Cost (Rs. Cr)	Average
NTPC						
Farakka	28	3.14	8.80	3.03	11.83	4.22
Kahalgaon I	15	2.95	4.43	1.85	6.28	4.19
Kahalgaon II	75	2.75	20.59	9.50	30.09	4.01
Talcher	18	1.59	2.86	1.76	4.61	2.56
Bongaigoan	200	2.65	53	12.5	65.5	3.28
OTPC						
OTPC Pallatana	346	1.31	45.39	42.66	88.05	2.54
NEEPCO						
Kopili Stage-I	85	0.45	3.83	4.83	8.66	1.02
Kopili Stage-II	8	0.94	0.75	0.66	1.41	1.77
Khandong HEP	17	1.11	1.89	3.56	5.45	3.20
Rangandai HEP	131	1.22	15.98	24.42	40.40	3.08
Doyang HEP	23	2.08	4.78	5.49	10.27	4.47
AGBPP	187	2.03	37.93	29.49	67.42	3.61
AGTPP	69	2.60	17.95	9.23	27.18	3.94
AGTPP C-Cycle	36	2.12	7.63	7	14.63	4.06
Free Power	58		0.00		0.00	0.00
NHPC						
NHPC Loktak	50	1.41	7.05	8.28	15.33	3.07
MePGCL						
Sonapani	5	0.68	0.37	0.475	0.85	1.69
Lakroh						
Umiyam Stage-I HEP	116	0.58	6.65	8.44	15.09	1.30
Umiyam Stage-II HEP	46	0.82	3.70	4.69	8.39	1.82
Umiyam Stage-III HEP	139	0.81	11.09	14.06	25.15	1.81
Umiyam Stage-IV HEP	207	0.54	11.09	14.06	25.15	1.21
Umtru HEP	39	0.54	2.07	2.63	4.70	1.20
Myntdu Leshka HEP	480	1.41	67.77	67.77	135.54	2.82
Umtru New	150	2.58			38.70	2.58
R.P.O					6.55	
Total	2528		335.61	276.355	657.22	2.60

The Commission approves power purchase cost of Rs. 539.78 Cr, Rs. 605.57 Cr and Rs. 657.22 Cr for FY 2015-16, FY 2016-17 and FY 2017-18 respectively.

However these are provisional figures which shall be validated and approved when the new plants will be commissioned. The Corporation shall consider the best option for power purchase depending upon market conditions and their financial interest. The Commission has allowed allocation and MePDCL proposal. In case of any deviation MePDCL may approach the Commission at midterm review.

7.16 Transmission Costs

Petitioner`s Submission

7.16.1 Inter-State Transmission Cost

MePDCL submits that it needs to pay Inter-State Transmission charge for the power procured from outside the state. The Inter-State Transmission Charges include Powergrid charge, Scheduling and Operating charge of RLDC and other Open Access charges. The inter-state transmission charge is projected considering increase in share, addition of new inter-state transmission lines etc. Further a yearly increase of 5% is considered for per MW/month rate of PGCIL & POSOCO.

7.16.2 MePTCL Transmission Cost

It is submitted that from FY 2013-14 onwards all the 3 corporations i.e. MePGCL, MePTCL and MePDCL have started separate functioning. The Hon`ble Commission had determined separate ARR and tariff for MePTCL for the FY 2014-15. MePDCL being the only Distribution Licensee within the state of Meghalaya is the sole long term beneficiary of MePTCL. For projection of transmission cost pertaining to MePTCL, a nominal yearly increase of 5.72% is considered. However it is submitted that the MePTCL transmission cost will be same as approved AFC of MePTCL for the control period of FY 2015-16 to FY 2017-18.

A summary of projected Transmission cost pertaining to Inter-State and MePTCL is mentioned in the table below.

**Table 7.22: Transmission Cost projected by MePDCL control period
FY 2015-16 to FY 2017-18 (Rs. Cr)**

Particular	FY 2014-15 (Approved)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Inter-State Transmission Cost	61.82	72.41	78.98	90.26
MePTCL Transmission Cost	72.79	76.95	81.36	86.01
Total	134.61	149.37	160.33	176.27

Source Table: 25 Petition

7.16.3 Commission Analysis:

The Commission has considered the licensee's proposal for first quarter of the FY 2014-15 submitted for the FPPPA exercise. In their letter dated 20.01.2015 MePDCL intimated that the total transmission cost for first nine months in FY 2014-15 was Rs.40.73 crores. If it is increased pro-rata the transmission cost for PGCIL and POSOCO will be Rs.54.3 crores. The Commission understands that the charges for interstate transmission have been levied on POC basis for PGCIL. The recent data for January 2015 to March 2015 shows that for Meghalaya the charges for highest slab are approximately 34 paisa per unit for injection and withdrawal. Considering the same and the sale of surplus power if and the estimated amount for FY 2015-16 shall be approximately Rs.55 crores including handling charges. Considering the actuals the Commission is allowing Rs.55 crores as the transmission and handling charges for interstate transmission for FY 2015-16. Similarly, for the control period the Commission is allowing Rs.58 crores for FY 2016-17 and Rs.61 crores for FY 2017-18. However, the Commission will examine with the actual at the time of next tariff revision.

For interstate transmission the Commission has already determined the transmission charges for MePTCL in its tariff petition for FY 2015-16. The Commission has allowed allows Rs.81.43 crores for 2015-16, Rs.87.74 for 2016-17 and Rs.90.61 crores for FY 2017-18. The same is being allowed in the ARR of MePDCL. In respect of MePTCL transmission cost, the costs approved by the

Commission in its ARR for control period of FY 2015-16 to FY 2017-18 are considered and transmission costs are approved as detailed in table below.

Table 7.23 Transmission Cost approved by the Commission for control period

Sl.No.	Particulars	2015-16	2016-17	2017-18
1	Transmission charges of PGCIL	55	58	61
2	Transmission charges of MePTCL	78.12	83.29	87.56
3	Total	133.12	141.29	148.56

The Commission approves transmission Cost at Rs. 133.12 Cr Rs. 141.29 Cr and Rs. 148.56 Cr for FY 2015-16, FY 2016-17 and FY 2017-18 respectively.

7.17 Operation and Maintenance Expenses

The O&M expenses comprises of employee expenses, Repairs and maintenance expenses and Administration general expenses. Item wise expenses projected by MePDCL for control period FY 2015-16 to FY 2017-18 and Commission’s approvals are discussed below:

7.17.1 Employee Cost

Petitioner`s Submission

It is submitted that before corporatization Meghalaya State Electricity Board (MeSEB) used to revise pay scale of employees every 5 years. Further at the time corporatization in the year 2010 the Management and Employees Association have mutually decided that the earlier trend of revision of pay will continue in future i.e. Management will revise pay scale of all the employees every 5 years. The last pay revision was made effective in the year 2010.

Therefore, from January 2015 onwards Revision of Pay will be made effective. The employee cost for the FY 2015-16 is projected by considering the revised pay of Employees. The following assumptions were considered to arrive at the revised pay of Employees:

Basic Pay: As per the pay revision procedure, at the time of revision of pay, the new Basic Pay is arrived by adding the existing Dearness Allowance (DA) to existing Basic Pay and then adding the percentage increase in pay scale. In the last pay revisions there was a 12% increase. As the revised pay structure is yet to be finalized, based on historical trend it is estimated that the increase will be in the range of 12%.

Moreover, on a yearly basis the permanent employees of MePDCL are given a nominal increment. Therefore, for FY 2015-16 the new Basic Pay is arrived by the following methodology:

New Basic Pay= (Existing Basic Pay) X (1+ DA rate + 12%) + Yearly Increment

Dearness Allowance (DA): The DA as a percentage of Basic Pay for the control period is shown in Table 6.24 below.

House Rent Allowance (HRA): The HRA is paid as a percentage rate of Basic Pay and the percentage HRA remains same throughout the effective period of revision of pay. At present HRA is as follows:

- 15% of Basic for Shillong area
- 12.5% of Basic for District Head Quarters
- 10% of Basic for other areas

The above rates are further capped at a fixed amount

It is assumed that for that HRA will be 12% of Basic after pay revision on an average

Other Allowance: The other allowance includes Medical Allowance, Hill Allowance, Electricity Allowance, Winter Allowance etc. It is assumed that the other allowance will increase by 22% over the existing level.

Pension Payments: With every pay revision the pension benefits are also increased in the same way as regular payments, i.e. The Basic Pension will be increased by taking the similar assumption as taken for Basic Pay.

Further, from FY 2016-17 onwards the employee cost is projected by the following assumptions:

Basic Pay is expected to grow at a nominal rate of 3% every year.

Dearness Allowance is projected by taking the following assumptions:

Table 7.24: DA rates for the Control Period

Financial Year	Period	DA as % of basic
FY 2015-16	1 Half of FY 16 2nd Half of FY 16	0% 3% of FY 16 4%
FY 2016-17	1 Half of FY 17 2nd Half of FY 17	8% 10% of FY 17 12%
FY 2017-18	1 Half of FY 17 2nd Half of FY 17	16% 18% of FY 18 20%

Source Table: 31 of Petition

The other allowance is estimated to remain at the same level as FY 2015-16

Terminal benefit provision for future years is not considered at present. The same will be claimed at the time of true-up as per the actual provisioning.

The yearly recruitment of technical and non-technical staff is also considered for projection of cost. The yearly increase in number of Employees is shown in Format-

Based on above assumptions, Estimated Employee cost for FY 2014-15 and projected Employee Cost for Control period of FY 2015-16 to FY 2017-18 are shown in the table below:

Table: 7.25 Employee Cost projected by MePDCL for FY 2015-16 to FY 2017-18 (Rs. Cr)

S.No.	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Salaries & Allowances				
2	Basic Pay	4154	72.26	7539	78.63
3	Lump sum/Arrear	0.17	-	-	-
4	Dearness	21.46	14.5	7.54	14.15
5	4 House rent Allowance	4.79	8.67	9.05	9.44
6	Other Allowance	3.92	4.84	4.9	4.97
7	Medical re-imbursment	0.86	0.86	0.86	0.86

8	Over time	1.78	1.78	1.78	1.78
8	Generation	0.14	0.14	0.14	0.14
9	Salaries-Casual	6.8	6.8	6.8	6.8
10	Sub-Total	81.44	96.8	106.45	116.77
	Terminal Benefits				
11	Leave	1.5	1.5	1.5	1.5
12	Staff welfare	0.06	0.06	0.06	0.06
13	CPS	-	-	-	-
14	Workman compensation	-	-	-	-
15	Ex-gratia	0.02	0.02	0.02	0.02
16	Sub-Total	1.58	1.58	1.58	1.58
	Pension Payment				
17	Basic Pension	0.2	0.34	0.34	0.34
18	Dearness	-	0.01	0.03	0.06
19	Any other	-	-	-	-
20	Sub-Total	0.2	0.35	0.38	0.41
21	Total (10+20)	83.22	98.73	98.73	118.75
	<i>Less: Amount capitalized</i>	-	-	-	-
	Net Amount	83.22	98.73	108.41	118.75
	<i>Add: Prior Period expenses</i>	0.06	-	-	-
	Grand Total:	83.28	98.73	108.41	118.75

Source: Table 32 of Petition

Table 7.26 Total Number Of Employees

S.No	Particulars	FY 2012-13 (Provisional)	FY 2013-14 (Provisional)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Number of employees as on 1 st April	1719	1677	1626	1560	1514	1465
2	Number of employees on deputation/for foreign service as on 1 st April	2	2	2	2	2	2

3	New Recruitment	21	4		16	24	24
4	Total Number of employees (1+2+3)	1742	1683	1628	1578	1540	1491
5	Number of employees retired/retiring during the year	65	57	68	64	75	80
6	Number of employees at the end of the year (4-5)	1677	1626	1560	1514	1465	1411

Table 7.27 Employee Productive Parameters

S.No	Particulars	FY2012-13 (Provisional)	FY 2013-14 (Provisional)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017— 18 (Projected)
1	Number of consumers in millions	0.31	0.35	0.35	0.37	0.39	0.41
2	Connected load in kW	7,42,920	7,41,210	7,28,252	7,63,463	804,084	8,47,827
3	Line circuit it KM (LT+HT)						
4	Within in the state energy sold in MU	1,061	1,073	997	1,030	1,065	1,103
5	Employees per MU of energy sold	1.58	1.52	1.56	1.47	1.38	1.28
6	Employees per 1000 consumers	5.38	4.46	4.45	4.11	3.79	3.47
7	Share of employees cost in total expenses	NA	0.09	0.09	0.1	0.09	0.09

8	Employees cost in paisa / kWh of energy sold	1.58	1.52	1.56	1.47	1.35	1.26
9	Line circuit KM (EHT lines)	NA					
10	Employees per KM of EHT line (Transmission is related)						
11	Power station installed capacity own generation (MW)						
12	Employees per MW of capacity of generating company						

7.17.2 Commission Analysis:

In its last order the Commission has allowed Rs.111 crores for FY 2014-15. This cost includes the MeECL cost of Rs.27 crores. Therefore, Rs.84 crores was allowed in FY 2014-15. The Commission has examined the actual expenses for first nine months of Rs.57 crores which comes around Rs.76 crores. The Commission considers it reasonable to adopt an escalation of 9% over the actual expenditure during FY 2014-15 to estimate expenditure during FY 2015-16 and onward. Accordingly, Commission allows projected expenditure for control period FY 2015-16 to FY 2017-18 which works out to Rs.83 crores Rs. 90 Cr, and Rs. 98 Cr.

The Commission approves employee cost at Rs. 83 Cr, Rs. 90 Cr and Rs. 98 Cr for 2015-16, FY 2016-17 and FY 2017-18 respectively.

7.18 Repairs and Maintenance (R&M) Expenses

Petitioner Submission

The MePDCL has projected R&M expenses at Rs.7.89 Cr, Rs. 8.61 Cr and Rs. 9.38 Cr respectively for the control period FY 2015-16 to FY 2017-18 at an escalation of 9% over the estimated expenditure during FY 2014-15. The petitioner submitted that Meghalaya being a hilly terrain and due to recent expansion in rural areas under RGGVY schemes the state demands comparatively more expenditure for maintaining the distribution network. Owing to ongoing restructuring activities and revenue deficit faced, MePDCL was not able to take up R&M works in extremely planned manner. The actual expenditure during FY 2013-14 and estimated for FY 2014-15 and projected for control period of FY 2015-16 to FY 2017-18 are furnished in Table below:

Table 7.28 REPAIRS AND MAINTENANCE EXPENSES PROJECTED BY MePDCL for control period FY 16 to FY 18 (Rs.Cr.)

S.No	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Prjoceted)	FY 2017-18 (Prjoceted)
1	Plant & Machinery	1.35	1.47	1.6	1.75
2	Building	0.44	0.48	0.52	0.57
3	Hydraulic works	-	-	-	-
4	Lines and Cables	4.95	5.4	5.88	6.42
5	Vehicles	0.16	0.17	0.19	0.21
6	Furnitures & Fixtures	0.06	0.07	0.07	0.08
7	Office Equipments	0.12	0.13	0.14	0.16
8	Civil Works	0.16	0.17	0.19	0.21
9	Total	7.24	7.89	8.16	9.38
10	Add/deduct share of other	-	-	-	-
11	Total expenses	7.24	7.89	8.61	9.38
12	Less capitalised	-	-	-	-
	Net expenses	7.24	7.89	8.61	9.38
	Add prior period	-	-	-	-
	Total R&M expenses	7.24	7.89	8.61	9.38

7.19 Commission Analysis:

AS verified from the Table above the MePDCL has estimated at an escalation of 56.37% for FY 2014-15 over the actual expenditure during FY 2013-14 and projected with an increase of 9% PA for FY 2015-16 to FY 2017-18 over the estimated expenditure during FY 2014-15. The Commission has examined the actual expenditure for nine months which is Rs.4 crores and it will be around Rs.5.3 crores in full FY 2014-15. The Commission considers it reasonable to allow an escalation of 9% PA over the actual expenditure during FY 2014-15 to project R&M expenditure for FY 2015-16 to FY 2017-18 which works out to Rs. 5.77 Crore for FY 2015-16, Rs.6.29 Cr for FY 2016-17, Rs.6.86 Cr for FY 2017-18

The Commission approves R&M expenditure of Rs. Rs.5.77 Cr, Rs.6.29 Cr and Rs.6.86 Cr for control period of FY 2015-16 to FY 2016-17 respectively.

7.20 Administrative and General Expenses (A&G)

Petitioner`s Submission:

The MePDCL has estimated Administrative and General Expenses (A&G) at Rs. 62.31 Crore for FY 2014-15 as against actual expenditure of Rs.63.98 Cr during FY 2013-14 including apportionment of MeECL expenditure of Rs.58.49 Cr. A&G Expenses comprise of rent, rates and taxes, A&G expense covers Conveyance and travel, telephone and postage expenses professional and technical fee, electricity and water charges etc. MePDCL has furnished actual expenses during FY 2012-13, estimated for FY 2014-15 and projection for FY 2015-16 to FY 2017-18 as detailed in Table below:

Table: 7.29 A&G expenses projected by MePDCL for control period FY 16 to FY 18 Rs.Cr

S.No.	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Actuals)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Rent, Rates & Taxes	0.03	0.03	0.04	0.04	0.05	0.05
2	Insurance	0.03	0.03	0.02	0.02	0.02	0.03
3	Telephone, Postage & Telegrams	0.09	0.1	0.1	0.11	0.12	0.13
4	Consultancy fees	0.02	-	0.1	0.11	0.12	0.13
5	Technical fees	-	-	-	-	-	-
6	Other Professional charges	0.44	0.01	-	-	-	-
7	Conveyance & travel expenses	3.6	4.51	5.08	5.54	6.04	6.58
8	Electricity and water charges	-	-	-	-	-	-
9	Others	0.47	0.37	0.56	0.61	0.67	0.73
10	Freight	-	-	-	-	-	-
11	Other material related expenses	0.35	0.44	0.2	0.22	0.24	0.26

S.No.	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Actuals)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
	Total expenses	5.03	5.49	6.1	6.65	7.25	7.91
	<i>Less capitalized</i>	-	-	-	-	-	-
	Net expenses	5.03	5.49	6.1	6.65	7.25	7.91
	<i>Add prior period</i>	0.28	-	-	-	-	-
	<i>Add Apportionment of MeECL expenses</i>	61.78	58.49	56.21	64.69	72.33	73.87
	Total expenses	67.09	63.98	62.31	71.34	79.58	81.78

7.21 Commission's Analysis

The actual expenditure in first nine in 2014-15 as shown by the licensee is Rs.4.06 crores which will be Rs.5.4 crores for full financial year. AS verified from the above Table the MePDCL has incurred expenditure to a tune of Rs. 5.49 crore towards A&G expenses during FY 2013-14. Considering escalation of 5.72% on A&G, the A&G cost shall be Rs.5.7 crores in FY 2015-16, Rs.6 crores in FY 2016-17 and Rs.6.4 in FY 2017-18. MePDCL has proposed that they will add MeECL cost in A&G cost. The Commission has checked the MePDCL cost and its allocation to MePDCL. The Commission considered the actuals in 2015-16 and amount provided to employees cost including pensions of the past employees made in FY2014-15. After detailed scrutiny the Commission allows Rs.55 Cr, Rs. 59 Cr and Rs. 64 Cr towards A&G expenses for the control period FY 2015-16, FY 2016-17 to FY 2017-18.

Summary of O&M expenses approved by the Commission for control period FY 2015-16 to FY to FY 2017-18 are furnished in Table below:

Table: 7.30 O&M Expenses approved by the Commission for control period 2015-16 to FY 2017-18. (Rs crore)

S.No.	Particulars	FY 2015-16 Projected by MePDCL	FY 2016-17 Projected by MePDCL	FY 2017-18 Projected by MePDCL
1	Employee Cost	83	90	98
2	R&M Expenses	5.77	6.29	6.86
3	A&G Expenses	55	59	64
4	Total O&M Expenses	143.77	155.29	168.86

7.22 Capital Investment Plan**Petitioner`s Submission**

The MePDCL has projected capital investment of Rs. 1185.25 crore and capitalisation of Rs. 735.98 crore during the control period from FY 2015-16 to FY 2017-18. MePDCL has submitted that the purpose of capital investment plan (CIP) is to provide a road map for planning and implementation of proposed capital investment for the control period of FY 2015-16 to FY 2017-18. The CIP has been prepared keeping in view of various long term needs and areas for capital expenditure as highlighted below.

Strengthening of Aging Network

Evacuation of power from up coming MePTCL grid substations

Supply of power to new load centres

Increasing Distribution Network capacity for increased load

Increased quality and reliability of power

Appropriate leading of Distribution Network

Increased control and protection for grid stability

Loss Reduction

Outage Reduction

CIP prepared by MePDCL includes the projects which are under implementation or commenced/expected to commence from FY 2012-13 to end of 1st control period in, FY 2017-18. Summary of year wise capital expenditure from FY 2012-13 to FY 2017-18 and source of funding are furnished in table below.

Table: 7.31 Summary of Capital Expenditure during FY 2012-13 to FY 2017-18 projected by MePDCL

Schemes	Project Cost (Rs. Cr)	Funding pattern (Rs. Cr)			
		Loan	Grant	Equity	Consumer Contribution
RAPDRP Part-A	33	-	33		-
RAPDRP Part-B	160	16	144		-
NER Power System Improvement Project	178	9	169		-
Ongoing Schemes for network strengthening	69	7	-	62	-
Proposed Schemes for network strengthening	86	8	-	78	-
Deposit works	23	-	12	-	11
Power system development fund	15	-	15	-	-
Integrated power development scheme	350	35	315	-	-
Deendayal Upadhyaya Gram Jyoti Yojna	400	40	360	-	-
Indo Bangla Border Flood Lighting	99	-	-	-	99
Green City Project (Solar Street Lighting)	25	-	-	25	-
RGVY	458	44	415	-	-
Total	1896	159	1463	165	110

Summary of year wise capital expenditure and capitalization from FY 2012-13 to FY 2017-18 are given in table below.

Table: 7.32 Work in Progress projected by MePDCL (Rs. in Lakhs)

S.No	Particulars	FY 2012-13 (Actuals)	FY 2013-14 (Actuals)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	2	3	4	5	6	7	8
1	Opening Balance	42,860.28	42,811.75	47,749.00	60,003.71	65,181.23	90,802.16
2	Add: New investments	8,847.90	7,630.29	20,280.96	32,746.90	48,348.12	37,429.61
3	Total	51,708.18	50,442.04	68,029.96	92,750.61	1,13,529.35	1,28,231.77
4	Less investment capitalised	8,896.43	2,693.04	8,026.96	27,596.38	22,727.19	23,302.65
5	Closing balance	42,811.75	47,749.00	60,003.71	65,181.23	90,802.16	1,04,929.12

7.23 Commission`s Analysis:

The Government of Meghalaya had unbundled and restructured the erstwhile Meghalaya State Electricity Board with effect from 31st March, 2010 into Generation, Transmission and Distribution Businesses. In the notification dated 31.03.2010 Government of Meghalaya has segregated assets between the above three functions as on 01.04.2008. According to the above notification, function wise capital work in progress as on 01.04.2008 is as detailed in Table below.

Table: 7.33 CWIP as on 01.04.2008

S.No.	Particulars	Amount Rs. Crore
1	Generation	464.02
2	Transmission	28.24
3	Distribution	244.56
4	Holding Company	-
5	Total	736.82

Subsequently in notification dated 16th September, 2013 the government of Meghalaya has modified the transfer value of the assets and liabilities replacing

earlier declared transfer value on 01.04.2008 and according to revised notification the total CWIP as on 01.04.2010 is Rs. 1330.80 crore (Function wise segregation is not furnished).

The capital investment of Rs. 1185.25 crore and capitalisation of Rs. 736.26 core during control period FY 2015-16 to FY 2017-18 as furnished by MePDCL in Table 6.33 Supra are considered.

7.24 Gross Fixed Assets (GFA)

Petitioner`s Submission

The MePDCL has furnished Gross Fixed Assets as on 1.4.2012 at Rs. 229.61 crore (after allotting GFA of MeECL proportionately to MePDCL, MePGCL and MePTCL) and furnished growth of GFA of MePDCL as detailed in table below.

Table: 7.34 Growth of GFA projected by MePDCL for control period of FY 2015-16 to FY 2017-15

Particulars	FY 2012— 13 (Actuals)	FY 2013— 14 (Actuals)	FY 2014— 15 (Estimated)	FY 2015— 16 (Projected)	FY 2016— 17 (Projected)	FY 2017— 18 (Projected)
Opening Gross Fixed Asset (GFA)	229.61	321.84	350.47	430.73	706.43	933.7
Add: Additions to GFA during the FY	92.23	28.63	80.26	275.69	227.27	233.03
Less: Withdraw during the year	-	-	-	-	-	-
Closing GFA	321.84	350.47	430.73	706.43	933.7	1,166.72

7.24.1 Commission’s analysis

The Government Meghalaya in its notifications dated 31.03.2010 and 16.09.2013, has furnished segregated opening GFA as on 01.04.2008 and consolidated opening GFA as on 01.04.2010 as detailed in Table below:

Table: 7.35 GFA as on 01.04.2008 (As per GoME notification dated 31.03.2010) (Rs. crore)

S.No.	Particulars	Amount
1	Generation	286.49
2	Transmission	58.2
3	Distribution	175.48
4	Holding Company	5
5	Total	525.17
6	Consolidated GFA as on 01.04.2010 (Replacing transfer value as)	607.51

As such the opening balance of GFA as on 01.04.2012 of Rs. 299.61 Cr as furnished by MePDCL is considered and the investment capitalised during the year as furnished in Table 6.33 above is considered as additions to GFA and the growth of GFA is reassessed as detailed in Table below:

Table: 7.36 Growth of GFA approved by the Commission for control period FY 2015-16 to FY 2017-18 (Rs crore)

Particulars	FY 2012— 13 (Actuals)	FY 2013— 14 (Actuals)	FY 2014— 15 (Estimated)	FY 2015—16 (Projected)	FY 2016— 17 (Projected)	FY 2017— 18 (Projected)
Opening GFA	229.61	318.57	345.5	425.76	701.45	928.72
Additions during the year	88.96	26.93	80.26	275.69	227.27	233.03
Closing GFA	318.57	345.5	425.76	701.45	928.72	1161.75

7.25 Depreciation

Petitioner’s Submission

The MePDCL has claimed depreciation of Rs. 27.44 Cr, Rs.39.44 Cr and Rs.50.35 Cr for control period FY 2015-16, FY 2016-17 and 2017-18 as detailed in respectively.

Table: 7.37 Value assets and Depreciation: 2013-13 (Rs. Cr)

Sl. No	Particulars	Opening GFA	Addition	Withdrawn	Closing GFA	Rate of Depreciation	Depreciation
1	Land	0.22	-	-	0.22	0.00%	
2	Buildings	4.06	0.32		4.38	3.34%	0.32
3	Hydraulic works	0.01		-	0.01	5.28%	
4	Other Civil works	1.41	0.93	-	2.34	3.34%	0.19
5	Plant & Machinery	18.54	17.6	-	36.14	5.81%	2.38
6	Lines & Cables	202.75	73.3		276.05	5.28%	17
7	Vehicles	0.34			0.34	9.50%	
8	Furniture	0.84	0.04		0.88	6.33%	0.05
9	Office equipment	1.44	0.04	-	1.48	6.33%	0.09
	TOTAL:	229.61	92.23		321.84		20.03

Table:7.38 value assets and depreciation: 2013-14 (Rs. Cr)

S.No	Particulars	Opening GFA	Addition	Withdrawn	Closing GFA	Rate of Depreciation	Depreciation
1	Land	0.22	-	-	0.22	0.00%	
2	Buildings	4.06	0.32		4.38	3.34%	0.32
3	Hydraulic works	0.01		-	0.01	5.28%	
4	Other Civil	1.41	0.93	-	2.34	3.34%	0.19
5	Plant &	18.54	17.6	-	36.14	5.81%	2.38
6	Lines & Cables	202.75	73.3		276.05	5.28%	17
7	Vehicles	0.34			0.34	9.50%	
8	Furniture	0.84	0.04		0.88	6.33%	0.05
9	Office	1.44	0.04	-	1.48	6.33%	0.09
	TOTAL:	229.61	92.23		321.84		20.03

Table: 7.39 value assets and depreciation: 2014-15 (Rs. Cr)

S.No	Particulars	Opening GFA	Addition	Withdrawn	Closing GFA	Rate of Depreciation	Depreciation
1	Land	0.39			0.39	0.00%	
2	Buildings	4.38	14.19	-	18.57	3.34%	0.34
3	Hydraulic works	0.01	-	-	0.01	5.28%	0
4	Other Civil works	2.34	21.48	-	23.82	3.34%	0.39
5	Plant & Machinery	44.19	24.58		68.77	5.81%	2.95
6	Lines & Cables	296.39	12.91		309.3	5.28%	14.39
7	Vehicles	0.34			0.34	9.50%	0.03
8	Furniture	0.89	-	-	0.89	6.33%	0.05
9	IT Equipment	-	7.1	-	7.1	15.00%	0.48
10	Office	1.54	-	-	1.54	6.33%	0.09
	TOTAL:	350.47	80.26		430.73		18.73

TABLE: 7.40 value assets and depreciation: 2015-16 (Rs. Cr)

S.No	Particulars	Opening GFA	Addition	Withdrawn	Closing GFA	Rate of Depreciation	Depreciation
1	Land	0.39	-	-	0.39	0.00%	-
2	Buildings	18.57	4.31	-	22.88	3.34%	0.62
3	Hydraulic	0.01	-	-	0.01	5.28%	0
4	Other Civil	23.82	32.81		56.63	3.34%	1.21
5	Plant &	68.77	191.14	-	259.91	5.81%	8.59
6	Lines &	309.3	44.34	-	353.64	5.28%	15.75
7	Vehicles	0.34	-	-	0.34	9.50%	0.03
8	Furniture	0.89	-	-	0.89	6.33%	0.05
9	IT	7.1	1.55	-	8.64	15.00%	1.06
10	Office equipment	1.54	1.55	-	3.09	6.33%	0.13
	TOTAL:	430.73	275.69	-	706.43		27.44

TABLE: 7.41 VALUE ASSETS AND DEPRECIATION: 2016-17 (Rs. Cr)

S.No	Particulars	Opening GFA	Addition	Withdrawn	Closing GFA	Rate of Depreciation	Depreciation
1	Land	0.39	12	-	12.39	0.00%	-
2	Buildings	22.88	7.47	-	30.35	3.34%	0.8
3	Hydraulic	0.01	-	-	0.01	5.28%	0
4	Other Civil	56.63	8.84	-	65.47	3.34%	1.84
5	Plant &	259.91	114.4	-	374.31	5.81%	16.57
6	Lines &	353.64	84.57	-	438.21	5.28%	18.81
7	Vehicles	0.34	-	-	0.34	9.50%	0.03
8	Furniture	0.89	-	-	0.89	6.33%	0.05
9	IT	8.64	-	-	8.64	15.00%	1.17
10	Office	3.09	-	-	3.09	6.33%	0.18
	TOTAL:	706.43	227.27	-	933.7		39.44

TABLE: 7.42 VALUE ASSETS AND DEPRECIATION: 2017-18 (Rs. Cr)

S.No	Particulars	Opening GFA	Addition	Withdrawn	Closing GFA	Rate of Depreciation	Depreciation
1	Land	12.39	-	-	12.39	0.00%	-
2	Buildings	30.35	-	-	30.35	3.34%	0.91
3	Hydraulic	0.01	-	-	0.01	5.28%	0
4	Other Civil	65.47	33.92	-	99.39	3.34%	2.48
5	Plant &	374.31	181.88	-	556.19	5.81%	24.31
6	Lines &	438.21	17.23	-	455.45	5.28%	21.23
7	Vehicles	0.34	-	-	0.34	9.50%	0.03
8	Furniture	0.89	-	-	0.89	6.33%	0.05
9	IT	8.64	-	-	8.64	15.00%	1.17
10	Office	3.09	-	-	3.09	6.33%	0.18
	TOTAL:	933.7	233.03	-	1,166.72		50.35

Table: 7.43 Depreciation for control period FY 2015-16 to FY 2017-18 furnished by the MePDCL

Sl.No.	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Land	-	-	-
2	Buildings	0.62	0.8	0.91
3	Hydraulic works	0	0	0
4	Other Civil works	1.21	1.84	2.48
5	Plant & Machinery	8.59	16.57	24.31
6	Lines & Cables	15.75	18.81	21.23
7	Vehicles	0.03	0.03	0.03
8	Furniture	0.05	0.05	0.05
9	IT Equipment	1.06	1.17	1.17
10	Office Equipment	0.13	0.18	0.18
	Total:	27.44	39.44	50.35

7.13.1 Commission's analysis

As seen from the computation of depreciation the rate for plant and machinery is not correctly adopted. As per CERC regulations the correct rate is 5.28% but not MePDCL adopted at 5.81%. There are in-consistencies in calculation also for which the MePDCL has not furnished the reasons. Further the depreciation has to be calculated on average value of GFA.

Further as seen from the capital investment plan furnished by the MePDCL most of the works are covered under R-APDRP and RGGVY schemes. Generally in such schemes 90% of funding is provided as grant and 10% as loan subject to fulfillment of certain conditions. The MePDCL has not furnished the value of grants received so far and contemplated in current and ensuing years. Further the value of consumer contribution for capital works is also not furnished by MePDCL. As such 10% of total depreciation worked out is considered. Further as per regulation 33 of MSERC (MYT tariff) Regulations 2014 depreciation shall be calculated on straight line method upto 90% of capital cost of the asset and Depreciation has to be calculated on average cost of GFA at the applicable rate of depreciation. For distribution function the average applicable rate of depreciation is 5.28%. The Commission has

considered all works under central assistance plan for the purpose determining ARR. However without proper information on each project amounting more than Rs.5.0 in the business plan, the Commission is not scrutinizing it. Accordingly MePDCL shall file its business plan for FY 2016-17 and FY 2017-18 by 30.8.2015 to the Commission for validation, scrutiny and adjustments in the Mid Term Review.

Accordingly depreciation for MePDCL for control period FY 2015-16 to FY 2017-18 is worked out as detailed in Table below:

Table: 7.44 Depreciation for MePDCL for Control period approved by the commission.

Sl.No.	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Opening GFA as on first April	425.76	701.45	928.72
2	Addition during the year	275.69	227.27	233.03
3	Closing GFA	701.45	928.72	1161.75
4	Rate of Depreciation	563.61	815.09	1045.24
5	Depreciation Rate	5.28%	5.28%	5.28%
6	Total Depreciation	29.76	43.04	55.19
7.	10% Depreciation	2.98	4.3	5.52
8.	Depreciation Allowed (Rs. Cr)	4.88	8.36	9.45

The Commission while allowing depreciation considered regulations, nature of funding(grant) and repayment of principle amount of loans shown against funding of schemes excluding PFC loan (Rs. 250 Cr.), approves depreciation at Rs. 4.88 Cr, Rs. 8.36 Cr and Rs. 9.45 Cr FY 16 to FY 17- 18 and respectively.

7.26 Interest and Finance Charges

The MePDCL has projected interest and finance charges at Rs. 50.79 Cr Rs. 46.09 Cr and 41.86 Cr control period FY 16, FY 17 to FY 18 respectively.

Table: 7.45 Interest on Loan (Rs. Lakhs)

Sl. No.	Particulars	Opening Balance	Rate of Interest	Addition during the year	Repayment during the year	Closing balance	Amount
1	REC (RGGVY)	3,583.00	–	279.24	–	3,862.24	441.4
2	Rec (Reschld)	4,521.40	–	51.53	74.21	4,498.72	580.61
3	PFC (R-APDRP)	1,019.00	–	–	–	1,019.40	91.74
4	PFC (R-APDRP) Part II						
5	PFC						
6	State Govt. Loan	–	–	–	–	–	–
7							
	Total	9,123.80	–	330.77	74.21	9,380.36	1,113.75
	Finance Charge						40.43
	Total						1,154.18

Sl. No.	Particulars	Opening Balance	Rate of Interest	Addition during the year	Re payment during the year	Closing balance	Amount
1	REC (RGGVY)	3,862.24	–	201.67	50.73	4,013	501.85
2	Rec (Reschld)	4,498.75	–	–	73.12	4,425.60	651.38
3	PFC (R-APDRP)	1,019.40	–	–	–	1,019.40	91.74
4	PFC (R-APDRP) Part II						
5	PFC						
6	State Govt. Loan	–	–	262.59	–	262.59	11.43
7							
	Total	9,380.36	–	4647.26	123.85	9,720.77	1,256.40
	Finance Charge						14.18
	Total						1,270.58

Sl. No.	Particulars	Opening Balance	Rate of Interest	Addition during the year	Re payment during the year	Closing balance	Amount
1	REC (RGGVY)	4,013.18	12.70%	295	68.07	4,240.11	525.93
2	Rec (Reschld)	4,425.60	0.00%	–	69.88	4,355.72	678.11
3	PFC (R-APDRP)	1,019.40	9.00%	453	–	1,472.40	112.12
4	PFC (R-APDRP) Part II	–	9.00%	4,792.00	–	4,792.00	215.64
5	PFC						
6	State Govt. Loan	262.59	9.30%	279.34	–	541.93	37.45
7							
	Total	9,720.77		5,819.34	137.95	15,402.16	1,569.25
	Finance Charge						
	Total						1,569.25

Sl. No.	Particulars	Opening Balance	Rate of Interest	Addition during the year	Re payment during the year	Closing balance	Amount
1	REC (RGGVY)	4,240.11	12.70%	–	406.39	3,833.72	514.49
2	Rec (Reschld)	4,355.72	0.00%	–	82.07	4,273.65	733.92
3	PFC (R-APDRP)	1,472.40	9.00%	1,802.00	–	3,274.40	213.59
4	PFC (R-APDRP) Part II	4,792.00	9.00%	–	–	4,792.00	431.28
5	PFC	25,000.00	12.50%	–	–	25,000.00	3,125.00
6	State Govt. Loan	541.93	9.30%	211.3	–	753.23	60.29
7							
	Total	40,402.16		2,013.30	488.46	41,927.00	5,078.58
	Finance Charge						
	Total						5,078.58

Sl. No.	Particulars	Opening Balance	Rate of Interest	Addition during the year	Repayment during the year	Closing balance	Amount of Interest paid
1	REC (RGGVY)	3,833.72	12.70%		406.39	3,427.33	462.7
2	REC (Reschld)	4,273.65	0.00%		429.5	3,844.15	386.5
3	PFC (R-APDRP)	3,274.40	9.00%	123	-	3,397.40	300.21
4	PFC (R-APDRP) Part II	4,792.00	9.00%	4,792.00	-	9,584.00	646.92
5	PFC	25,000.00	12.50%		6,250.00	18,750.00	2,734.38
6	State Govt. Loan	753.23	9.30%	176.93		930.16	78.36
	Total	41,927.00		5,091.93	7,085.89	39,933.04	4,609.07
	Finance Charge						
	Total						4,609.07

Sl. No.	Particulars	Opening Balance	Rate of Interest	Addition during the year	Repayment during the year	Closing balance	Amount of Interest paid
1	REC (RGGVY)	3,427.33	0.13	-	406.39	3,020.94	410.91
2	REC (Reschld)	3,844.15	-	-	538.78	3,305.37	277.22
3	PFC (R-APDRP)	3,397.40	0.09	-	-	3,397.40	305.75
4	PFC (R-APDRP) Part II	9,584.00	0.09	6,389.00	-	15,973.00	1,150.07
5	PFC	18,750.00	0.13		6,250.00	12,500.00	1,953.13
6	State Govt. Loan	930.16	0.09	44.46		974.61	88.67
	Total	39,933.04		6,433.46	7,195.17	39,171.32	4,185.73
	Finance Charge						
	Total						4,185.73

7.26.1 Commission Analysis:

As verified from the above data neither the opening balance of loan nor the additional loans availed are not in conformity with the actual closing balance of loans as on 31.3.2014 and capital investment proposed in the control period. Further

most of the works are either under RGGVY or AAPDRP schemes of which 90% are grants and only 10% in loan.

So the closing balance of loans at Rs. 92.74 Cr as approved in FyY2014-15 tariff order is considered and additional loans during the control period are considered at 10% of capital investment of respective years – Repayment of loans is however considered as proposed by MePDCL and rate of interest is considered at 9.91% being the average rate of interest worked out in tariff order of FY 2014-15 and interest on capital loan computed is detailed in table below.

Table: 7.46 Computation of Interest and Finance charges for control period .

Sl.No.	Particulars	2014-15	2015-16	2016-17	2017-18
1	Opening Balance	92.74	111.64	139.51	179.5
2	Additions during the year	20.28	32.75	48.35	37.43
3	Repayment during the year	1.38	4.88	8.36	9.45
4	Closing loan	111.64	139.51	179.5	207.48
5	Average loan	102.19	125.58	159.51	193.49
6	Rate of interest	9.91%	9.91%	9.91%	9.91%
7	Interest & Finance charges	10.13	12.44	15.81	19.17

The Commission approves interest and Finance charges at RS. 12.44 Cr, Rs. 15.81 Cr and Rs. 19.17 Cr for FY 2015-16, FY 2016-17 and FY 2017-18 respectively.

7.27 Interest on Working Capital

As per Regulations 34.3(1) of MSERC (Multi year Tariff) Regulation 2014 the working capital components will be

(i) The Distribution licensee shall be allowed interest on the estimated level of working capital for the distribution business for the financial year, computed as follows:

Operation & maintenance expenses and one month, plus.

Maintenance spares at one (1) percent of historical cost escalated at 6% from the date of commercial operation plus

Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution at the prevailing tariff.

Interest shall be allowed at the rate equal to the State Bank Advance Rate (SBAR)

The MePDCL has projected interest on working capital at Rs.33.93 Cr, Rs.39.19 Cr and Rs.43.55 Cr for control period FY 16 to FY 18 as detailed in Table below:

Table: 7.47 Working Capital Computation Projected by MePDCL

Sl.No.	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Power Purchase cost for 1 month*	47.56	56.39	63.55
2	One month O&M Expenses	14.83	16.38	17.49
3	Two months Receivables	167.66	192.93	214.18
	Total	230.05	265.7	295.22

Table: 7.48 Interest on working Capital projected by MePDCL

S.No.	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Opening GFA	425.76	701.45	928.72
2	Bank Advance Rate (SBAR) as on 1.4.14	14.75%	14.75%	14.75%
	Interest on Working Capital (Rs. Cr)	33.93	39.19	43.55

SBI Advance Bank rate (earlier SBI PLR) has not been revised since Nov`13.

Therefore the SBI PLR as on 1.11.13 considered for Interest on working Capital

(Source Table 37 of Petition)

7.28 Commission`s analysis

The Commission has allowed interest on working capital as per Regulations and calculated on the approved costs as detailed in Table below:

Table 7.49 Computation of Working Capital approved by the Commission for FY 16 to FY 18

Sl. No.	Particulars	2015-16	2016-17	2017-18
1	Maintenance Spares at 1%	4.3	7.06	9.33
2	O&M expenses 1 month	11.98	12.94	13.74
3	Receivable 2 months	101.33	101.33	101.33
	Total working capital	117.61	121.33	124.40

Table 7.50 Interest on working capital for control period FY 16 to FY 18 approved by commission

Sl. No.	Particulars	2015-16	2016-17	2017-18
1	Working capital	117.61	121.33	124.40
2	SBI PLR as on 1.4.2015	14.75%	14.75%	14.75%
3	Interest on working capital	17.35	17.90	18.35

The Commission approves interest on working capital at Rs. 17.35 Cr, Rs. 17.90 Cr and Rs. 18.35 Cr for control period FY 2015-16, 2016-17 and 2017-18 respectively.

7.29 Return on equity

As per regulation 31.1 of MSERC (Multi Year Tariff) Regulations 2014 return on equity shall be computed on the equity base determined in accordance with regulation 27 and shall not exceed 14%. As per regulation 27.1 for the project declared under commercial operation on or after 1.4.2015, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan. Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff. Provided any grant obtained for execution of the project shall not be considered as a part of capital structure for the purpose of debt equity ratio.

While so the MePDCL has projected return on equity at Rs.38.048, Rs.40.28Cr and Rs. 40.28 for control period FY 2015-16, FY 2016-17 and 2017-18 respectively as detailed in table below.

Table 7.51 Return on equity by projected by MePDCL for control period FY 16 to FY 18

Particulars	FY 2012— 13 (Actuals)	FY 2013— 14 (Actuals)	FY 2014— 15 (Estimated)	FY 2015— 16 (Projected)	FY 2016— 17 (Projected)	FY 2017— 18 (Projected)
Opening Equity (Rs, Cr)	194.54	228.57	234.88	266.53	285.63	301.65
Additions during the year (Rs. Cr)	34.03	6.31	31.64	19.11	16.01	-
Closing Equity (Rs. Cr)	228.57	234.88	266.53	285.63	301.65	301.65
Equity considered RoE (Rs. Cr)	222.211	228.52	252.6	271.71	287.72	287.72
RoE %	14%	14%	14%	14%	14%	14%
Return of Equity (Rs. Cr)	31.11	31.99	35.36	38.04	40.28	40.28

7.30 Commission’s analysis

As per the Meghalaya Power Sector reforms transfer scheme 2010 notified as 31st March 2010, function wise opening equity as o 01.04.2008 is as detailed in Table below:

Table 7.52 Function wise opening equity as on 01.04.2008

Sl.No.	Function	Amount
1	Generation	248.40
2	Transmission	68.61
3	Distribution	135.48
4	Holding Company	510.76
5	Total	963.25

The Government of Meghalaya in its latest notification dated 16.09.2013 has modified the transfer value of assets and liabilities and furnished revised considered equity amount of Rs. 767.55 crore as on 01-04-2013. But segregation of equity among the utilities is not done and the statement accounts for separate entities are not finalized so far. The Commission is informed that the statement of accounts for FY 2012-13 is still under finalization and is yet to be audited. In this situation it is difficult to accept the values of assets and liabilities including equity/grant. The

Commission is therefore allowing the same return on equity as allowed last year @ Rs. 9.43 crores per annum. However after getting the audited results with the report of C&AG the Commission shall review the same in the midterm review or in the true up. It is also informed to the Commission that the State Government is committed to take over the liabilities of the past employees as per the transfer schemes. The Commission shall take a consolidated view in the matter and take appropriate action in accordance with the Commission’s regulation.

Commission approves return on equity at Rs. 9.43 Cr for FY 2015-16, 2016-17 and 2017-18 respectively.

7.31 Bad and doubtful debts

The MePDCL has projected provision for bad and doubtful debts at Rs 10.06 Cr, 11.58 Cr and Rs. 12.85 Cr for the control period FY 2015-16, FY 2016-17 and FY 2017-18 respectively as detailed in table below

Table 7.53 Provision for bad and doubtful debts for FY2018-16 to FY 2017-18

Particular	FY 2015-16	FY 2016-17	FY 2017-18
Net Annual revenue requirement	1,005.93	1,157.58	1,285.05
Provision of Bad and doubtful debt	1%	1%	1%
Bad and Doubtful Debt	10.06	11.58	12.85

Commission’s Analysis

As per regulation 95, the Commission may after the distribution licensee gets the receivable audited allow a provision for bad debts not exceeding an amount equal to 1 percent receivables in the revenue requirement of the licensee. Here the receivable mean outstanding dues from the consumers at the end of the year. Further no provision need to be made for arrears due from Govt. departments. The MePDCL has worked out the provision for bad debts on ARR which is incorrect.

Since the audited accounts are not made available, the Commission considers a token provision of Rs. 3.0 crore P.A. towards provision for bad debts for control period of FY 2015-16 to FY 2017-18.

The Commission approves a provision of Rs 3.0 crore Per annum towards bad debts for control period of FY 2015-16 to FY 2017-18.

7.32 Non-Tariff Income

Petition's submission

As per Regulation 96.2 of MSERC (MYT Tariff) Regulations 2014 non tariff income shall be as follows.

Income from delayed payment surcharge

Income from meter rent

Income from various customer charges

Income from investments

Miscellaneous receipts from customers

Trading income

Prior period income interest in staff loans and advances

Recovery of theft and pilferage of energy

Any other income

The MePDCL has projected non tariff income at Rs. 26.78 Crore per annum for the control period as detailed in Table below

Name of the Distribution licensee: MePDCL NON TARIFF INCOME

S.No	Particulars	FY2012-13 (Provisional)	FY 2013-14 (Provisional)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	EY 2016-17 (Projected)	FY 2017-18 (Projected)
1	2	3	4	5	6	7	s
1	Meter/ Service rent	1.59	1.713	1.24	1.24	1.24	1.24
2	late payment surcharge	64.34	33.2	21.44	21.64	au	21.64
3	Theft f pilferage of energy charges	-				-	-
4	Misc.	0.18	0.06	24	0.24	0.24	0.24

S.No	Particulars	FY2012-13 (Provisional)	FY 2013-14 (Provisional)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	EY 2016-17 (Projected)	FY 2017-18 (Projected)
	receipts						
5	Misc. charges	9.79	5.98	3.66	166	3.66	166
6	Wheeling charges	-	-	-			
7	Interest on start loans& advance	-	-			-	
3	Income from trading	-	-	-	-	-	
9	Income from welfare activities	-		-	-		
10	Excess on verification	0.01	-			-	
11	Investments & bank balances	-	-	-	-	-	-
12	Total Income	76.00	46.02	245.78	26.73	26.73	26.78
13	Add Prior period income	0.41	-			-	
14	Total	76.41	46.02	26.72	26.73	26.78	26.78

Commission analysis

The MePDCL has projected Non-Tariff income of Rs. 26.78 Cr P.A. for the control period FY 2015-16 to FY 2017-18. During the year 2012-13 and FY 2013-14 actual non tariff income received is Rs.76.41 Cr and Rs. 46.02 Cr as furnished by the MePDCL in the above table. As the business is expanding year by year, the non Tariff income shall also be increased. In the last audited balance sheet of FY 2011-12, MePDCL informed that the non tariff income as against the audited figures of Rs.100.88 crores shall become Rs.59.83 crores after adjustment of implications of Hon’ble Supreme Court order. The Commission shall review the matter when the audited balance sheet of FY 2012-13 shall be placed before the Commission and till such time allows same amount as non tariff income @ Rs.58 crores per annum for the control period. The Commission shall make appropriate changes if audited

balance sheet is placed before the Commission at the time of mid term review of ARR of balance control period.

The Commission accordingly approves non-tariff income at Rs. 58 Cr per annum for FY 2015-16, FY 2016-17 and 2017-18 respectively.

7.33 Cross subsidy surcharge

The MePDCL has projected cross subsidy surcharge from the open Access consumer of the state as Rs.9.86 crore for each year of control period FY 2015-16, 2016-17 and 2017-18.

The Commission approves cross subsidy surcharge of Rs. 9.86 PA crore for control period FY 2015-16, FY 2016-17 and FY 2017-18 as projected by MePDCL.

7.34 State Government Subsidy

The MePDCL has stated the state Government has provided RE subsidy of Rs.14.57 crore during FY 2013-14 and the MEPDCL has kept a provision of Rs 17.50 crore during FY2014-15 and expects the same amount is, Rs.17.50 Cr during the control period FY 2015-16, 2016-17 and FY 2017-18 as projected by MePDCL.

7.35 Aggregate Revenue requirement

The ARR projected by the MePDCL for FY control period FY 2015-16, FY 2016-17 and FY 2017-18 is given in table below.

Table 7.54: Aggregate Revenue Requirement projected by MePDCL for control period

Sl. No	Item of expenditure	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Cost of Power Purchase	621.54	570.77	676.65	762.65
2	Inter-State Transmission Charge	57.45	72.41	78.98	90.26
3	MePTCL Transmission Charge	72.72	76.95	81.36	86.01
4	Employee costs	83.28	98.73	108.41	118.75

5	R&M expenses	7.24	7.89	8.61	9.38
6	A & G Expenses	62.31	71.34	79.58	81.78
7	Depreciation	18.73	27.44	39.44	50.35
8	Interest on Loan Capital	15.69	52.50	47.66	43.33
9	Interest on Working Capital	9.43	33.93	39.19	43.55
10	Return on equity	35.36	38.04	40.28	40.28
11	Income Tax	-	-	-	-
12	Provision for bad and doubtful debt	9.39	10.06	11.58	12.85
	Total revenue requirement	993.14	1,060.08	1,211.73	1,339.19
	Less: Non tariff income	26.78	26.78	26.78	26.78
	Less : Cross Subsidy Surcharge	9.86	9.86	9.86	9.86
	Less: RE Subsidy	17.50	17.50	17.50	17.50
	Net revenue requirement	939.00	1,005.93	1,157.58	1,285.05

(Source Table 40 of Petition)

Commission Analysis:

While determining the net revenue requirement of MePDCL for tariff purpose for FY 2015-16, the Commission has considered the present deficit in FY 2015-16 and deficit in true up ARR of FY 2011-12. The Commission has also considered the deficit/surpluses of previous financial years 2007-8, 2008-09, 2009-10 and 2010-11 as a result of true up orders issued by the Commission. The adjustment on account of Hon'ble Supreme court order shall be considered while trueing up of FY 2012-13 with the Audited Annual accounts and suitable adjustments shall be made. As discussed above the aggregate Revenue requirement for control period FY 2015-16 to FY 2017-18 with approved costs are furnished in the table below.

Table 7.55 Aggregate Revenue Requirement approved by the Commission for control period FY 2015-16 FY 2012-18.

Sl.No.	Item of expenditure	FY 2015-16 (Approved)	FY 2016-17 (Approved)	FY 2017-18 (Approved)
1	Cost of Power Purchase	539.78	605.57	657.22
2	Inter-State Transmission Charge	55	58	61
3	MePTCL	78.12	83.29	87.56
4	Employee Costs	83	90	98
5	R&M expenses	5.77	6.29	6.86
6	A&G Expenses	55	59	64
7	Depreciation	4.88	8.36	9.45
8	Interest on Loan Capital	12.44	15.81	19.17
9	Interest on Working Capital	17.35	17.9	18.35
10	Return on equity	9.43	9.43	9.43
11	Income Tax	-	-	-
12	Provision for bad and doubtful debt	3	3	3
13	Total Revenue requirement	863.77	956.65	1034.04
14	Less: Non tariff income	58	58	58
15	Less: Cross Subsidy Surcharge	9.86	9.86	9.86
16	Less: RE Subsidy	17.5	17.5	17.5
	Less : Sale of surplus power	186.5	247.7	289.5
	Net Revenue requirement for control period	591.9	623.5	659.2
17	Add True up to 2010-11	59.4		

Sl.No.	Item of expenditure	FY 2015-16	FY 2016-17	FY 2017-18
	(Surplus)			
18	Add True for 2011-12 (Deficit)	85.53		
19	Net revenue requirement for FY 2015-16	618.0		

7.36 Revenue from sale of surplus power

Petitioner's submission

6.25.1 It is submitted that as per the Energy Balance as submitted in **Table 6. 14**, in the FY 2015-16 MePDCL is expected to be having 391 MUs of surplus power after meeting the within the State Demand of Energy and Return Swap Obligation. As this surplus power is expected to be available only during the rainy season, MePDCL has to depend upon the Short Term market for sale of this surplus power. Over last 3-5 years, it is observed that there are huge fluctuations in the short term market rate especially during the rainy season. Therefore, it is extremely difficult to project a realistic per unit rate of power.

However, after analyzing the past trend and current market trend it is assumed that MePDCL will be receiving a per unit revenue of Rs. 3.00. The calculation of Revenue from sale of

Table 7.56: Revenue from Sale of Surplus Power

Particulars	FY 2015-16
Surplus Power (MU)	390.56
Per Unit Revenue (Rs./Unit)	3.00
Revenue from Surplus power (Rs. Cr)	117.17

MePDCL requested the Commission to kindly approve Rs. 117.17 Cr as revenue from sale of surplus power.

Commission analysis

As per approved energy balance vide Table 6.15 Supra the surplus power for FY 2015-16 works out to 573.9 MU after meeting swapping obligation of 80.96 MU. The Revenue from surplus power in FY 2015-16 shall be Rs. 186.5 crores @Rs 3.25 per unit as per the current market average rate and considering saving on account of power purchase cost. However, the licensee is directed to create a dedicated energy management cell that will be responsible for energy management on day to day basis and make sure that the consumers of the State get 24x7 supply throughout the year by managing the energy transfers/sale/purchase/swapping, etc at optimum level and at best price.

7.37 Revenue Gap for the 1st control period**7.37.1 Revenue from existing Tariff****Petitioner's submission**

MePDCL has projected revenue from existing tariff as Rs.564.12 crore for sale of 1030.10 MU for FY 2015-16. Based on the approved energy sales, the revenue from existing Tariff works out to Rs.572.48 crore as detailed in the Table below:

Table 7.57 Revenue from existing tariff for FY 2015-16 approved by the Commission

S.No	Category	Energy	Average Revenue	Total
		Sale	Rs /kWh	Revenue
		(MU)		(Rs. Crore)
A	LT Supply			
1	Kutir Jyoti	24	2.86	6.87
2	Domestic	378	4.06	153.31
3	Commercial	75	6.29	47.20
4	Industrial	6	6.83	4.10
5	Public lighting	1.50	5.62	0.84
6	Water supply	11	5.93	6.52

S.No	Category	Energy	Average Revenue	Total
		Sale	Rs /kWh	Revenue
		(MU)		(Rs. Crore)
7	General purpose	29	5.80	16.1
8	Agriculture	0.11	3.15	0.03
9	Crematorium	0.19	3.67	0.07
	Total LT	524.8	4.49	235.76
B	HT Category			
10	Domestic	24	6.17	14.81
11	Commercial	25	6.87	17.18
12	Industrial	230	6.40	147.10
13	Water Supply	30	6.12	18.35
14	Bulk Supply	55	6.18	33.99
15	Assam	19	5.28	10.03
	Total HT	383	6.30	241.50
C	EHT			
15	Industrial	160	5.95	95.27
	TOTAL	1068	5.36	572.48

7.37.2 Revenue Gap

After considering the revenue from existing tariff, the revenue gap in FY 2015-16 shall be as under:

SN	Particulars	Unit	Projected by MePDCL	Approved by MSERC
1.	Net ARR	Rs. Cr.	888.76	618.0
2.	Revenue from existing tariff	Rs. Cr.	564.12	572.48
3.	Gap	Rs. Cr.	324.65	45.52
4.	Energy Sale	MU	1030.10	1068
5.	Average Cost of Supply	Rs/Unit	8.28	5.78

7.38 Revenue from revised tariff

As seen from the above Table there is a gap of Rs. 45.52 crore between aggregate revenue requirement and revenue from sale of power at existing tariff which works

out to around 7.3% of ARR. To meet the gap the Commission has considered revision of Tariff for different categories of consumers in the manner given below. Tariff designing and fixation of tariffs are discussed in Chapter-7 of this order. Revenue with the revised tariff is shown in Table below:

Table 7.58 Revenue from Revised tariff for FY 2015-16 approved by the Commission

S.No	Category	Energy	Average Revenue	Total
		Sale	Rs /kWh	Revenue
		(MU)		(Rs. Crore)
A	LT Supply			
1	Kutir Jyoti	24	3.05	7.30
2	Domestic	378	4.45	168.06
3	Commercial	75	6.85	51.35
4	Industrial	6	7.00	4.20
5	Public lighting	1.50	6.15	0.92
6	Water supply	11	6.49	7.14
7	General purpose	29	6.35	18.41
8	Agriculture	0.11	3.53	0.04
9	Crematorium	0.19	3.92	0.07
B	HT Category			
10	Domestic	24	6.65	15.95
11	Commercial	25	7.05	17.65
12	Industrial	230	6.86	157.7
13	Water Supply	30	6.53	19.58
14	Bulk Supply	55	6.66	36.63
15	Assam	19	5.81	11.04
	EHT Category			
16	Industrial	160	6.37	101.88
	TOTAL	1068	5.78	618.00

The Commission accordingly approves revenue from revised tariffs at Rs.618 crore with the sale of 1068 MU. Accordingly, there will be no gap in the ARR of FY 2015-16. This compares with the revenue of Rs. 572.48 crore at the existing tariff rates,

the increase works out to Rs.45.5 crore. The Commission shall take a final view of adjustment of surplus/deficit in 2015-16 at the time of truing up after prudence check and efficiency improvement.

8. Tariff Principles and Design

8.1 Background

The Commission in determining the revenue requirement of MePDCL for the FY 2014- 15 and the retail supply tariff has been guided by the provisions of the Electricity Act, 2003, the National Tariff Policy (NTP), Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and Regulations on Terms and Conditions of Tariff notified by the MSERC. The Act mandates that the tariff determination shall be guided by the factors, which encourage competition, efficiency, economical use of resources, good performance and optimum investment.

The NTP notified by Government of India in January, 2006 provides comprehensive guidelines for determination of tariff and also in working out the revenue requirement of power utilities. The Commission has endeavored to follow these guidelines as far as possible.

NTP mandates that the Multi-Year-Tariff (MYT) framework be adopted for determination of tariff from 1st April 2006. The Commission has implemented MYT tariff in the State and fixed the ARR accordingly. The mandate of the NTP is that tariff should be within plus / minus 20% of the average cost of supply by FY 2015-16. 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 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 consumer category- wise cost of supply. However in this tariff order an element of performance target has been indicated by setting target for T&D loss reduction for the FY 2015-16 to FY 2018-19. This better performance by reduction of loss level will result in substantial reduction in

average cost of supply. With the revision the cross subsidy of consumers are made within (+-) 20% except the domestic consumers which is reduced from 24 to 23%..

8.2 Tariffs proposed by MePDCL and approved by the Commission

8.1.1 The MePDCL in its tariff petition for FY 2015-16 has proposed revision of existing retail tariffs to various categories of consumers to earn additional revenue to meet the expenses to some extent. MePDCL has proposed to double the existing fixed charges in all categories and revised the energy rate to meet their proposed revenue gap. MePDCL has also proposed to merge the slab rates in LT commercial.

8.1.2 The Category wise Tariffs proposed by the MePDCL are indicated in Table below:

Table 8.1: Category wise Tariffs existing and proposed by MePDCL for FY 2015-16

S.No.	Category	Existing		Proposed	
		Fixed Charges (Rs.conn/KW)	Energy cahrges (Ps./kWh)	Fixed charges (Rs. Conn)	Energy charges (Ps./kWh)
1	Kutir Jyoti- unmetered	90		180	
	Kutir Jyoti Metered		2.25		3.60
2	Domestic (DLT)	40		80	
	First 100 Units		2.90		4.93
	Next 100 Units		3.40		5.95
	Above 200 Units		4.40		7.44
3	Commercial (CLT)	80		160	
	First 100 units		5.00		6.90
	Above 100 units		5.80		6.90
4	Industrial (ILT)	80	4.75	160	6.18
6	Public Lighting	80	5.40	160	8.64
7	Public Lighting-				
	Fixed charges for Public lighting (Unmetered)				
	Types of lamps				
	Incandascnt lamp				
	40 w	98		264	
	60 w	155		264	
	100 w	247		264	
(i)	Fluracnt Lamp				

S.No.	Category	Existing		Proposed	
		Fixed Charges (Rs.conn/KW)	Energy charges (Ps./kWh)	Fixed charges (Rs. Conn)	Energy charges (Ps./kWh)
	Upto 40 w	155		264	
(ii)	Mercury Vapour Lamp				
(a)	80 W	185		362	
(b)	125 W	280		547	
(c)	250 W	585		1144	
(d)	500 W	1090		2132	
(iii)	Sodium vapour lamp				
(a)	150 W	425		831	
(b)	250 W	660		1290	
(c)	400 W	1100		2151	
(iv)	CFL Fittings				
(a)	Upto 45 W	135		242	
(b)	> 45 Upto 85 W	215		385	
(v)	LED Fittings (120 W)	415		743	
(vi)	Metal Halide (150W)	500		895	
8	Public Water supply/ sewage treatment plant	80	5.40	160	8.80
9	General Purpose (GP)	80	5.40	60	8.75
10	Agriculture (AP)	45	2.00	90	2.80
11	Crematorium	5800 (Conn)	3.35	11600 Conn)	5.86
12	High Tension				
(a)	Domestic (DHT)	150	5.10	300	7.40
(b)	Commercial (CHT)	150	5.25	300	6.06(KVAH)
(c)	Industrial (IHT)	150	5.24	300	7.60(KVAH)
(e)	Public Water Supply	150	5.10(KVAH)	300	8.42(KVAH)
(f)	General Purpose/ Bulk	150	5.10	300	8.42
(g)	Industrial EHT	150	5.10 (KVAH)	300	7.34 (KVAH)

Commission's Analysis

1. The Commission has not agreed with the licensee's proposal of merging slabs in LT commercial on the ground that the first slab in domestic and non domestic is kept for the benefit of consumers having very low consumption.
2. The present system of 3 slabs under LT Domestic (DLT) and 2 slabs under LT Commercial (CLT) are being continued.

With the above approvals and based on the approved Aggregate Revenue Requirement (ARR) the approved Tariffs for supply of Energy in respect of different categories of consumers for FY 2015-16 are as per Table below:

Table 8.2: Category of consumer wise tariffs approved by the Commission

S.No	Category	Approved	
		Fixed Charges(Rs. connection/KW)	Energy Charges (Rs/kWh)
1	Kutir Jyoti		
	Unmetered	100/connection	
	Metered		2.50
2	Domestic (DLT)	45	
3	First 100 Units		3.05
	Next 100 Units		3.60
	Above 200 Units		4.75
3	Commercial (CLT)	90	
	First 100 units		5.20
	Above 100 units		6.40
4	Industrial (ILT)	90	5.20
5	Low tension public service LT (PSLT)	90	5.90
6	Public Lighting (PL)	90	5.90
7	Fixed charges for Public Lighting (Unmetered)		
	Types of Lamps		
	Incandascnt lamp		
	40 w	110	
	60 w	170	
	100 w	270	
(i)	Fluracent Lamp		
	Upto 40 w	170	
(ii)	Mercury Vapour Lamp	250	
(a)	80 W	350	
(b)	125 W	740	
(c)	250 W	1370	
(d)	500 W		
(iii)	Sodium vapour lamp		
(a)	150 W	540	
(b)	250 W	830	

S.No	Category	Approved	
		Fixed Charges(Rs. connection/KW)	Energy Charges (Rs/kWh)
(c)	400 W	1380	
(iv)	CFL Fittings		
(a)	Upto 45 W	165	
(b)	> 45 Upto 85 W	265	
(v)	LED Fittings (120 W)	515	
(vi)	Metal Helide (150W)	625	
8	Public Water supply/ sewage treatment plant (WSLT)	90	5.90
9	General Purpose (GP)	90	5.90
10	Agriculture (AP)	50	2.25
11	Crematorium	6000	3.60
12	High Tension	Fixed charges (Rs/KVA/Mnt)	
(a)	Domestic (DHT)	175	5.40
(b)	Commercial (CHT)	175	5.80 (KVAH)
(c)	Industrial (IHT)	175	5.64 (KVAH)
(e)	Public Water Supply (WS)	175	5.40 (KVAH)
(f)	General Purpose/ Bulk Supply (BS)	175	5.40
(g)	Industrial EHT	175	5.40 (KVAH)

8.1.3 Tariffs for various categories of consumers are given in Tariff schedule annexed.

8.3 Cross Subsidy

The Commission would like to discuss about the provisions of MSERC (Terms and Conditions for Determination of Tariff) Regulations 2011 about the cross subsidy. The Regulation prescribes that cross subsidy for the consumer means the difference between the average realization per unit from that category and the combined average cost of supply per unit. It has also mentioned that in the first phase the Commission shall determine the Tariff so that it progressively reflects combined average unit cost of supply in accordance with the National Tariff Policy.

The Commission has tried to adhere with the Regulations of the Commission while determining the Tariff. The tariff has been set in accordance with the Act and Regulations keeping in view the ground realities in the State.

The level of cross subsidy in 2015-16 has been given in the table below:

Cross Subsidy in Meghalaya (%) in FY 2015-16

Cross subsidy in Meghalaya (%) in 2014-15 (+20%)

		2015-16
Sl. No.	Category	Approved Cross Subsidy
1	Domestic	23%
2	Non Domestic (Commercial)	18%
5	Public Lighting	13%
6	Water Supply	12%
7	General purpose	10%
9	Domestic-HT	15%
10	Water supply	7%
11	General purpose including bulk supply	15%
13	Industrial HT	18%
14	Industrial EHT	10%

9. Wheeling Charges and Cross subsidy for FY 2015-16

MePDCL submissions

MePDCL has submitted petition for approval of distribution open access charges for FY 2015-16. The petition was admitted by the Commission and response of the stakeholders was invited. In the petition MePDCL has proposed the following charges on wheeling, cross subsidy and losses as given in the tables below:

Table 9.1: MePDCL proposal for Wheeling Charges for FY 2015-16

Particulars (FY 2015-16)	Rs.Cr.
ARR of MePDCL (ARR)	1005.93
Total power purchase cost of MePDCL (PPC)	570.77
Total transmission charges (TC)	149.37
ARR – PPC – TC	285.79
Total sale	1501.62 MU
Less	
Outside sale	471.52 MU
Sale to EHT consumers	149.14
Net sale for wheeling charges computation	880.96
Average load	100.57 MW
Wheeling charges (Rs)	77857.79/MW/Day

Cross subsidy surcharge

The proposed cross subsidy surcharge is on per unit basis as per regulation 24 of MSERC (Terms and Conditions of Open Access) Regulations, 2012 and are as follows.

Table 9.2: MePDCL Proposal for Cross Subsidy Surcharges for FY 2015-16

SI No	Particulars	IEHT	IHT
1	Contract demand CD (KVA)	69440.00	97705.77
2.	Billing demand @75% of CD	52080.00	73279.33
3.	Demand charges (Rs./KVA)	300.00	300.00
4.	Total demand charges (Rs.Cr)	18.75	26.38
5.	Energy sale projected (MU in KVAH)	175.46	266.43
6.	Rate per KVAH (Rs.)	7.34	7.60
7.	Total energy charges (Rs.Cr)	128.86	202.43
8.	Total revenue from sale of power	147.61	228.81
9.	Average tariff (Rs./KWH)	9.90	10.10

SI No	Particulars	IEHT	IHT
10.	Average tariff (Rs./KWH)	8.63	8.63
11.	Cross subsidy surcharge	1.27	1.47

Additional surcharge for open access

MePDCL has not proposed any additional surcharge at present but has indicated that if requirement arises, the charges will be worked out and submitted to the Commission.

Objections

On the open access charges proposed by MePDCL, Byrnihat Industries Association has submitted their objections on the following grounds:

- a) BIA objected that the proposal lacks details and that the charges are proposed only for industrial consumers and not for others.
- b) Approach towards the cross subsidy surcharge need to be as per the NTP formula i.e. $S=T-(C(1+L)/100)+D$.

BIA further submitted that the wheeling charges need to be determined separately for 33 KV distributions and 11 KV distributions. BIA contended that the surcharge should not be applied because MePDCL is unable to provide supply on continuous basis during hours of operation of industries. It also submitted that the cross subsidy surcharge needs to be calculated on top 5% of power purchase cost and should be reduced each year.

MePDCL response

MePDCL submitted that while proposing the open access charges they have considered the requirements as per the ARR petition for FY 2015-16. It has followed the regulations and methodology adopted by the Commission in its order dated 29.04.2014. MePDCL further submitted that the cross subsidy surcharge is determined as per regulation 24 of open access regulation 2012. MePDCL submitted that it is not regulating the power flow and imposing cuts and maintained the supply on continuous basis to all consumers including industries. MePDCL asserted that the cross subsidy surcharge is a legitimate claim of the licensee and should be continued.

c) BIA objected that the percentage of losses to be applied should be the actuals and at par with national figures for different voltages separately.

MePDCL response

MePDCL submitted that since it is the second year of operation as an independent corporation it is yet to segregate network on each voltage separately. Therefore, it is not able to charge different wheeling charges at different voltages level and therefore it is difficult to apply different percentage of losses at different voltage levels.

d) Wheeling charges should be BIA based on per unit basis they purchase from different sources instead of per megawatt. They have also quoted the CERC regulations regarding transmission charges on per unit basis.

MePDCL response

MePDCL submitted that the wheeling charges are determined strictly in accordance with regulation issued by the Commission and refute the objection as irrelevant.

Hearing

The Commission held a hearing on 10.03.2015 on the licensee's proposal for distribution charges and open access. This hearing was attended by MePDCL, industries and BIA representatives. BIA objected and repeated the written pleas submitted earlier that the subsidy surcharge and wheeling charges be based on capacity and reduced and that the cross subsidy surcharge in 2015-16 be according to the formula of National Tariff Policy for determination of such surcharges.

Commission's analysis

Commission has considered the submission of the parties and taken a view in this order In this tariff order the Commission has fixed the ARR of MePDCL for FY 2015-16 and in the control period. The ARR petition of MePDCL for 2015-16 has been examined as per Regulations and taken as the base for determining the wheeling charges in accordance with

MSERC (Terms and Conditions of Open Access) Regulations, 2012. The average demand for FY 2015-16 is assessed as 99 MW.

The Wheeling charges will be Rs. 36770 /MW/Day.

The wheeling charges for all consumers is fixed at Rs. 1.24 per unit. However the charges from open access consumers shall be recovered as per the Commission's regulation 23 of Open Access Regulations.

Cross Subsidy Surcharge:

Under the law and also the OA Regulations (regulation 24) an open access consumer shall, in addition to transmission and wheeling charges, also pay cross subsidy surcharges on per unit basis for actual energy through open access. The amount of surcharge so calculated to meet the current level of cross subsidy from that category of consumer and shall be paid to the distribution licensee. The intent of the EA 2003 is also that the licensee is compensated for the requirement of cross subsidy in its ARR. It is necessary to subsidize the other category of consumer of the distribution licensee as there is no other mean to do so. The State Government in its letter dated 31.03.2015 addressed to the Commission has made it clear that it does not contemplate to extent any tariff subsidy to any class of consumers. The control period in the ARR has overall surplus in availability of power due to new allotments of power stations from central as well as new generation projects within the State. In this scenario it is essential to charge open access consumers the cross subsidy so as to meet the current requirement of the cross subsidy for majority of consumers of the State i.e. domestic, lifeline, crematorium and agriculture. In past 2 years the consumption by industries has gone down substantially. In this situation there is a need to recover cross subsidy from open access consumers. In the past it has been experienced that the open access has facilitated open access consumers to get round the clock power supply. The Commission cannot ignore the present scenario where the major category is in the subsidized domestic category, BPL and the agriculture sector. In the event of no subsidy from the State Government as stated above in 2015-16, the need and interest of common man cannot be overlooked. Even at present IHT and IEHT consumers of the distribution

licensee are subsidizing large number of consumers of the State by paying cross subsidy in their tariff. The Commission has given serious thought and is convinced that it is essential that cross subsidy is charged from open access consumers and if further required to levy additional surcharge too. At different occasions and in written submissions industry association demanded that cross subsidy surcharge should be decided as per NTP follow formula. Ideally the cost of supply should be determined at weighted average cost of power purchase instead top 5% most expensive power as the licensee has to meet its long term commitments as per PPA. However, the Commission is following NTP formula for FY2015-16.

The formula for assessing the cross subsidy surcharge as per the Tariff Policy issued by Government of India is given below:

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

Where S is the cross subsidy surcharge;

T is the tariff payable by the relevant category of consumers;

C is the weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power;

D is the wheeling charge;

and L is the system losses for the applicable voltage level, expressed as a percentage.

By using this formula, the cross subsidy surcharge for EHT category of consumers shall be Rs. 1.51 per unit for EHT category and Rs. 1.41 per unit for HT category.

The losses for EHT category is allowed @ 4% and for HT category at @ 6% for 33 KV and @9% for 11 KV.

These rates shall be applied w.e.f 1.4.2015. All conditions for open access shall be as per MSERC (terms and condition of open access) Regulations 2012 and its amendments. It is further directed the SLDC in association with MNREDA shall apply RPO compliances for meeting purchase of energy/ REC from solar and non solar sources as per MSERC (Renewable purchase obligations and compliance) Regulations 2015.

10. Directives

10.1 Compliance of earlier Directives

The Commission in its earlier orders had given certain directives to MePDCL. Some of them are complied with and some are still to be completed. The Commission shall take up the matter separately. This year the fresh directives are being issued which are given below:

10.2 Directive-1

The Commission has not allowed any investments without proper scrutiny in the order and therefore the licensee need to submit investment plans to the commission if that are not central plan funded by majority of grant. As discussed in the order, MePDCL shall submit its investment plan proposed to be in the control period to the Commission for its approval by 30.08.2015. The plan should be accompanied with agreement of financing, approval from appropriate authority and details of the project with cost benefit analysis, etc.

10.3 Directive-2

MePDCL is directed to create a dedicated energy management cell that will be responsible for energy management on day to day basis and make sure that the consumers of the State get 24x7 supply throughout the year by managing the energy transfers/sale/purchase/swapping, etc at optimum level and at best price. Report of compliance should be sent by 30.8.2015.

10.4 Directive-3

While allowing open access, the MePDCL shall ensure that the availability capacity of the line on which open access shall take place is sufficient. In no case it should hinder the power flow to the consumers. It is further directed that MePDCL shall make

techno commercial impact study before releasing the OA. The MePDCL in consultation with the Energy Management unit and Commercial unit shall examine the process of open access in the State on month to month basis and study the liabilities of the Corporation with respect to meeting its fixed charges during the season of surplus power or otherwise in situation of open access (FY 2014-15) and submit the proposal of additional charges to the Commission by 30.4.2015.

10.5 Directive-4

Progress report of replacement of defective meters and electromechanical meters on revenue yielding consumers should be sent by 30.8.15.

10.6 Directive-5

The present status of implementation of computerized billing shall be reported by 30th August, 2015.

10.7 Directive-6

The results of the energy audit in the Byrnihat Industrial area shall be reported by 30th September, 2015.

10.8 Directive-7

The audited financial statement has not been furnished by MePDCL for the financial year 2012-13 and 2013-14 which are mandatory under MYT Regulations.

It may be mentioned that as per section 210 of the Companies Act, 1956 read with section 166, a company has to place the audited accounts within six months of the end of the financial year. MePDCL shall submit the audited result by 30.9.2015 without which no investment plan shall be admitted.

10.9 Directive-8

MePDCL should conduct a man power study for optimum utilization of its resources, their training, placement of suitable person at each position etc. Report of compliance should be sent by 30.8.2015.

APPROVED TARIFF FOR 2015-16

A. LOW TENSION TARIFF:

1 Domestic (Low Tension).

This category shall be applicable to domestic consumption, which includes consumption

- a. For lighting, heating, cooling, fans and other household appliances in a private dwelling house;
- b. In temples, churches, mosques, gurudwaras and other places of religious worship;
- c. In hospitals, dispensaries, health centres run by Government or by charitable, religious or social organizations on a no-profit or non-commercial basis.
- d. In schools, colleges, hostels boarding houses for students run by Government or by charitable, religious or social organizations on a no-profit or non commercial basis; and
- e. In ashrams, dharamsalas, community halls and institutions run by recognized welfare organizations.
- f. MeECL officers and its employee's residences.

(1.1) Kutir Jyoti/BPL.

Kutir Jyoti connections have been covered under Domestic category with metered and unmetered sub categories.

(1.1.1) Unmetered Kutir Jyoti

The existing Tariff for this category of consumers is Rs.90 per connection per month. The MeECL has proposed a rate of Rs.180 per connection per month for this category. The Commission has approved Rs.100 per connection per month for all existing unmetered consumers.

Tariff for BPL (unmetered) for FY 2015-16			
Category	Existing Tariff (Rs./ connection /month)	Proposed Tariff (Rs./connection/ month)	Approved Tariff (Rs./connection/ month)
Kutir Jyoti (KJ-U)/BPLU	90	180	100

This Tariff is applicable for existing unmetered consumer under Kutir Jyoti unmetered category until they are metered. No new connection should be given without meter.

(1.1.2) Metered Kutir Jyoti

The MeECL has proposed tariff of metered Kutir Jyoti consumers at Rs.3.60 per unit for monthly consumption within 0-30 units. They have also proposed that if the monthly consumption in any month exceeds the limits of 30 units then their excess consumption over and above 30 units shall be done on the Tariff as prescribed for normal domestic consumers. The Commission has allowed Rs.2.50 per unit for BPL metered category up to a consumption of 30 units. In case, they consumes more than 30 Units then the billing of excess unit shall be done on the Tariff prescribed for normal domestic consumers for appropriate slab rates.

Tariff for BPL (metered) for FY 2015-16			
Category	Existing Tariff (Rs./ kWh)	Proposed Tariff (Rs./ kWh)	Approved Tariff (Rs./ kWh)
Kutir Jyoti (KJ-M)/BPLM	2.25	3.60	2.50

(1.1) Domestic Consumers

The existing Tariff is 2 part Tariff. The fixed charge is levied on the basis of KW load per month and energy charges are applicable in 3 slabs with different rates for each slab. The Commission has not made any changes in the structure and approved the same. However, the Commission has revised rates for each slab and fixed charges per KW which are given below in the Tariff.

Fixed Charges

Fixed Charges for Domestic consumers for FY 2015-16			
Category	Existing Tariff (Rs./KW/Month)	Proposed Tariff (Rs./KW/Month)	Approved Tariff (Rs./KW/Month)
Domestic (DLT)	40	80	45

Energy Charges

Energy charges for Domestic consumer for 2015-16				
Category	Slabs	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)	Approved Tariff (Rs/KWH)
Domestic (DLT)	First 100 units	2.90	4.93	3.05
	Next 100 units	3.40	5.95	3.60
	Above 200 units	4.40	7.44	4.75

2 Non-Domestic (Low Tension)

The existing Tariff has a structure of 2 part Tariff. The fixed charges are levied on the basis of KW load per month and energy charges are applicable for two slabs with different rates for each slab. The Commission has not made any changes in the structure and approved the same. However, the Commission has approved different rate for each slab and fixed charges per KW which are given below in the Tariff.

Fixed charges

Fixed charges for Non domestic consumer for 2015-16			
Category	Existing Tariff (Rs/KW/Month)	Proposed Tariff (Rs/KW/Month)	Approved Tariff (Rs/KW/Month)
Non Domestic (CLT)	80	160	90

Energy charges

Energy charges for Non domestic consumer for 2015-16					
Category	Slabs	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)	Slabs	Approved Tariff (Rs/KWH)
Non Domestic (CLT)	First 100 Units	5.00	6.90	First 100 Units	5.20
	Above 100 Units	5.80	6.90	Above 100 Units	6.40

1. Industrial Low Tension

This category is applicable for small and medium industrial consumer who is given supply on low tension wires. The Commission has approved the following two parts without changing the structure of the current tariff keeping in view the present cross subsidy adjustment.

Fixed charges

Fixed charges for Industrial (LT) consumer for 2015-16			
Category	Existing Tariff (Rs/KW/Month)	Proposed Tariff (Rs/KW/Month)	Approved Tariff (Rs/KW/Month)
Industrial (ILT)	80	160	90

Energy charges

Energy charges for Industrial (LT) consumer for 2015-16			
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)	Approved Tariff (Rs/KWH)
Industrial (ILT)	4.75	6.18	5.20

2. Public Service Low Tension

This category comes under Public Service connections given supply through LT lines. The public lamps are generally unmetered and their Tariff is based on the fixed charges per KW per month. However, since no connection under the Act can be given without meters, the Licensee is required to install meters on all new

connections and progressively shall place meters on the existing connections. The approved Tariff for metered connections and unmetered connections is decided in a way to encourage metering at public lamps. The rates are given below:

3. Public Lighting (Metered)

Fixed charges

Fixed charges for Public Lighting (metered) for 2015-16			
Category	Existing Tariff (Rs/KW/Month)	Proposed Tariff (Rs/KW/Month)	Approved Tariff (Rs/KW/Month)
Public Lighting (PL)	80	160	90

Energy Charges

Energy charges for Public Lighting (metered) for 2015-16			
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)	Approved Tariff (Rs/KWH)
Public Lighting (PL)	5.40	8.64	5.90

4. Public Lighting (Unmetered)

Fixed charges for Public Lighting (unmetered) for 2015-16			
Type of lamp	Existing Tariff (Rs/Lamp/Point/Month)	Proposed Tariff (Rs/Lamp/Point/Month)	Approved Tariff (Rs/Lamp/Point/Month)
Incandescent lamps			
40 Watts	98		110
60 Watts	155		170
100 Watts	247		270
Florescent lamps			
Up to 40 Watts	155	264	170
Mercury vapour lamp			
80 Watts	213	362	250
125 Watts	322	547	350
250 Watts	673	1144	740
500 Watts	1254	2132	1370

Sodium vapour lamp		831	
Up to 150 Watts	489	1290	540
250 Watts	759	2151	830
400 watts	1265		1380
CFL fittings			
Up to 45 Watts	155	264	165
Above 45 Watts & Up to 85 Watts	247	420	265
LED fittings	477	811	515
Metal halide	575	978	625

5. Public Water Supply /Sewage Treatment Plants

This category is related to Public Water Supply and Sewage Treatment plants and comes under public consumption. The following rates are approved for water supply and sewage treatment plants. These rates are decided keeping their nature of use and cross subsidy level,

Fixed charges

Fixed charges for Public Water Supply for 2015-16			
Category	Existing Tariff (Rs/KW/ Month)	Proposed Tariff (Rs/KW/Month)	Approved Tariff (Rs/KW/Month)
Public Water Supply (WSLT) / Sewage Treatment Plants	80	160	90

Energy Charges

Energy charges for Public Water Supply for 2015-16			
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)	Approved Tariff (Rs/KWH)
Public Water Supply (WSLT) / Sewage Treatment Plants	5.40	8.80	5.90

6. General Purpose

This Tariff is made for Government connections which are not covered under any other category of Public connections. The approved Tariff for this category is as follows:

Fixed charges

Fixed charges for General purpose for 2015-16			
Category	Existing Tariff (Rs/KW/Month)	Proposed Tariff (Rs/KW/Month)	Approved Tariff (Rs/KW/Month)
General purpose (GP)	80	160	90

Energy Charges

Energy charges for General purpose for 2015-16			
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)	Approved Tariff (Rs/KWH)
General Purpose (GP)	5.40	8.75	5.90

7. Agriculture

This category is meant for agriculture where there are only few consumers in the State.

Fixed charges

Fixed charges for Agriculture for 2015-16			
Category	Existing Tariff (Rs/KW/Month)	Proposed Tariff (Rs/KW/Month)	Approved Tariff (Rs/KW/Month)
Agriculture (AP)	45	90	50

Energy Charges

Energy charges for Agriculture for 2014-15			
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)	Approved Tariff (Rs/KWH)
Agriculture (AP)	2.00	2.80	2.25

8. Crematorium

This category is meant for crematorium using electricity for their day to day operation. As per the proposal there is only one consumer in this category. In the last Tariff Order the Commission has considered the nature and purpose of this crematorium which is meant for service to the society and operating on no profit no loss basis. The commission has held that on the basis of their nature of job their rates are considered equivalent to domestic consumers. The similar treatment has been given this year to this category with fixed charges on per connection basis and energy charges on metered consumption.

Fixed charges

Fixed charges for Crematorium for 2015-16			
Category	Existing Tariff (Rs/Connection/ Month)	Proposed Tariff (Rs/KW/Month)	Approved Tariff (Rs/Connection/ Month)
Crematorium (CRM)	5800	11600	6000

Energy Charges

Energy charges for Crematorium for 2015-16			
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)	Approved Tariff (Rs/KWH)
Crematorium (CRM)	3.35	5.86	3.60

B High Tension Supply

As per the supply code this category is meant for those consumers who get supply from HT wires. The billing of this type of consumers is being done on the basis of provision of supply code.

9. Domestic High Tension

This tariff is applicable to domestic consumer having supply from HT system of the licensee. Their tariff is approved as follows.

Fixed charges

Fixed charges for Domestic (HT) for 2015-16
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Category	Existing Tariff (Rs/KVA/Month)	Proposed Tariff (Rs/KVA/Month)	Approved Tariff (Rs/KVA/Month)
Domestic HT (DHT)	150	300	175

Energy Charges

Energy charges for Domestic (HT) for 2015-16					
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KVAH)	Approved Tariff (Rs/KWH)		
Domestic HT (DHT)	5.10	7.40	5.40		

10. Non Domestic High Tension

This tariff is applicable to Commercial consumer having supply from HT system of the licensee. Their tariff is revised keeping in view of their present level of cross subsidy and its suitable correction. The Commission has approved their tariff as follows

Fixed charges

Fixed charges for Non Domestic (HT) for 2015-16					
Category	Existing Tariff (Rs/KVA/Month)	Proposed Tariff (Rs/KVA/Month)	Approved Tariff (Rs/KVA/Month)		
Non Domestic HT (CHT)	150	300	175		

Energy Charges

Energy charges for Non Domestic (HT) for 2014-15					
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KVAH)	Approved Tariff (Rs/KVAH)		
Non Domestic HT (CHT)	5.25	6.06	5.80		

11. Industrial High Tension

These are industrial consumers taking supply on HT. These consumers are charged on KVAh basis. This tariff was introduced so as to improve the power factor in the system. This tariff cares for the power factor of the industries and reward those performs efficiently. However in case of leading power factor suitable correction

should be made. This matter shall be dealt with separately after a proper hearing.
The tariff is revised as follows.

Fixed charges

Fixed charges for Industrial (HT) for 2015-16			
Category	Existing Tariff (Rs/KVA/Month)	Proposed Tariff (Rs/KVA/Month)	Approved Tariff (Rs/KVA/Month)
Industrial High Tension	150	300	175

Energy Charges

Energy charges for Industrial (HT) for 2015-16			
Category	Existing Tariff (Rs/KVAH)	Proposed Tariff (Rs/KVAH)	Approved Tariff (Rs/KVAH)
Industrial High Tension (IHT)	5.24	7.60	5.64

12. General Purpose Bulk Supply (BS)

Fixed charges

Fixed charges for General Purpose Bulk (HT) for 2015-16			
Category	Existing Tariff (Rs/KVA/Month)	Proposed Tariff (Rs/KVA/Month)	Approved Tariff (Rs/KVA/Month)
General Purpose Bulk Supply (BS)	150	300	175

Energy Charges

Energy charges for General Purpose Bulk (HT) for 2015-16			
Category	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KVAH)	Approved Tariff (Rs/KWH)
General Purpose Bulk Supply (BS)	5.10	8.42	5.40

13. Public Water Supply/Sewage Treatment Plant

Fixed charges

Fixed charges for Public Water Supply (HT) for 2015-16			
Category	Existing Tariff (Rs/KVA/Month)	Proposed Tariff (Rs/KVA/Month)	Approved Tariff (Rs/KVA/Month)
Public Water Supply (WSHT)	150	300	175

Energy Charges

Energy charges for Public Water Supply (HT) for 2015-16					
Category	Existing Tariff (Rs/KVAH)	Proposed Tariff (Rs/KVAH)	Tariff	Approved Tariff (Rs/KVAH)	Tariff
Public Water Supply	5.10	8.42		5.40	

C Extra High Tension Supply**14. Industrial Extra High Tension****Fixed charges**

Fixed charges for Industrial (EHT) for 2015-16			
Category	Existing Tariff (Rs/KVA/Month)	Proposed Tariff (Rs/KVA/Month)	Approved Tariff (Rs/KVA/Month)
Industrial (IEHT)	150	300	175

Energy Charges

Energy charges for Industrial (EHT) for 2015-16			
Category	Existing Tariff (Rs/KVAH)	Proposed Tariff (Rs/KVAH)	Approved Tariff (Rs/KVAH)
Industrial (IEHT)	5.10	7.34	5.40

D Others**15. Temporary supply (HT & LT)**

MeECL has proposed to continue their existing arrangement where the fixed and energy charges shall continue to be double of the normal applicable rates for all categories. The Commission has agreed to their proposal. Remaining terms and conditions of the tariff rate schedule shall be same as approved last year.