Aggregate Revenue Requirement &
Tariff Revision Petition
for FY 2014-15

Main Text & Formats

Submitted to:

Joint Electricity Regulatory Commission
for Manipur and Mizoram

By:

Electricity Department, Government of Manipur
(Imphal)

November 13

BEFORE THE HONOURABLE JOINT ELECTRICITY REGULATORY COMMISSION FOR MANIPUR AND MIZORAM

FILING NO __________

CASE NO __________

IN THE MATTER OF:	Petition for Approval of filing of Aggregate Revenue Requirement ("ARR") for the FY 2014-15 and Tariff Proposal for FY 2014-15 of Electricity Department, Manipur under Sections 61, 62 and 64 of The Electricity Act 2003

AND

IN THE MATTER OF:	Electricity Department, Government of Manipur
THE PETITIONER	Keisampat, Imphal

................PETITIONER

PETITIONER, UNDER SECTIONS 61, 62 AND 64 OF THE ELECTRICITY ACT 2003 FILES FOR INITIATIONS OF PROCEEDINGS BY THE HONORABLE COMMISSION FOR DECIDING ON THE MATTERS CONCERNING THE APPROVAL OF THE ANNUAL REVENUE REQUIREMENT AND TARIFF PETITION OF ELECTRICITY DEPARTMENT GOVERNMENT OF MANIPUR (herein after referred to as "EDM") FOR FY 2014-15

THE ELECTRICITY DEPARTMENT, GOVERNMENT OF MANIPUR RESPECTFULLY SUBMITS:

1. The petitioner, The Electricity Department, Government of Manipur has been allowed to function as Integrated Utility for the State of Manipur.
2. Pursuant to the enactment of the Electricity Act, 2003 EDM is required to submit its Annual Revenue Requirement (ARR) and Tariff Petition as per procedures outlined in Sections 61, 62 and 64 of the Electricity Act, 2003 and the governing regulations thereof.
3. EDM has submitted its ARR and Tariff Petition for determination of tariff for the

FY 2014-15 on the basis of the principles outlined in tariff regulations notified by the Joint Electricity Regulatory Commission.

4. EDM prays to the Honourable Commission to admit the enclosed petition for Annual Revenue Requirement and tariff proposal for FY 2014-15.

The Electricity Department,
Government of Manipur

Petitioner
Place: Imphal
Dated:___November, 2013

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION 8

1 HISTORICAL BACKGROUND 8
2 POWER PROFILE OF EDM 9
3 BACKGROUND OF REGULATORY SETUP 10
4 CONTENTS OF THIS PETITION 12

CHAPTER 2: OVERALL APPROACH FOR PRESENT FILING 13

1 ANNUAL REVENUE REQUIREMENT AND TARIFF PETITION FOR FY 2014-15 13
2 APPROACH FOR FILING 13

CHAPTER 3: AGGREGATE REVENUE REQUIREMENT FOR FY 2014-15 14

1 ENERGY SALES 14

2 T&D LOSS REDUCTION 20

3 ENERGY REQUIREMENT OF THE SYSTEM 20

2. POWER PURCHASE QUANTUM AND COST 21

A. POWER PURCHASE QUANTUM 23
B. ENERGY REQUIREMENT & AVAILABILITY 26
C. COST OF POWER PURCHASE 27
D. TRANSMISSION AND OTHER CHARGES 33

3. FUEL COST 34

4. OPERATION & MAINTENANCE COSTS 34

A. EMPLOYEE EXPENSE 35
B. REPAIRS & MAINTENANCE EXPENSE 36
C. ADMINISTRATION & GENERAL EXPENSE 37

5. CAPITAL EXPENDITURE PLAN 38

6. GROSS FIXED ASSETS (GFA) 40

7. DEPRECIATION 41

8. INTEREST & FINANCE COSTS 42

A. INTEREST ON LONG-TERM / CAPITAL LOANS 42
B. INTEREST ON WORKING CAPITAL BORROWINGS 43

9. RETURN ON EQUITY 43

10. PROVISION FOR BAD & DOUBTFUL DEBTS 43

11. NON-TARIFF & OTHER INCOME 44

12. AGGREGATE REVENUE REQUIREMENT 44

13. REVENUE AT EXISTING TARIFF 45

14. COVERAGE OF REVENUE GAP 46

15. AVERAGE COST OF SUPPLY 48

16. TARIFF PROPOSAL FOR FY 14-15 48

CHAPTER 4: COMPLIANCE ON DIRECTIVES 55

TARIFF SCHEDULE 61
PRAYER 79

LIST OF TABLES

TABLE 1: NUMBER OF CONSUMERS AS ON SEPTEMBER 2013 15
TABLE 2: CONSUMER CATEGORY WISE ENERGY SALES FROM FY 09-10 TO FY 13-14 (HY) ... 15
TABLE 3 CATEGORY WISE TREND OF UNITS BILLED 17
TABLE 4: CONSUMER CATEGORY WISE ENERGY SALES 19
TABLE 5: T&D LOSSES 20
TABLE 6: ENERGY REQUIREMENT OF THE SYSTEM 21
TABLE 7: OWN GENERATION (MUS) 21
TABLE 8: ENERGY ALLOCATION FROM CENTRAL GENERATING STATIONS 23
TABLE 9: POWER PURCHASE QUANTUM 25
TABLE 10: ENERGY BALANCE 27
TABLE 11: POWER PURCHASE RATE FOR FY 14-15 30
TABLE 12: POWER PURCHASE COST FOR FY 14-15 (RS. CRORES) 31
TABLE 13: TRANSMISSION CHARGES 33
TABLE 14: FUEL COST 34
TABLE 15: OPERATION & MAINTENANCE EXPENSE (RS. CRORE) 34
TABLE 16: EMPLOYEE COST 36
TABLE 17: REPAIRS & MAINTENANCE EXPENSE 37
TABLE 18: ADMINISTRATIVE & GENERAL EXPENSES 37
TABLE 19: PROPOSED CAPITAL EXPENDITURE 39
TABLE 20: CAPITAL EXPENDITURE & PROPOSED CAPITALIZATION 40
TABLE 21: DEPRECIATION 42
TABLE 22: TOTAL INTEREST ON LONG-TERM LOANS 42
TABLE 23: PROVISION FOR BAD & DOUBTFUL DEBTS 43
TABLE 24: NON-TARIFF INCOME 44
TABLE 25: AGGREGATE REVENUE REQUIREMENT 44
TABLE 26: REVENUE FROM SALE OF POWER AT EXISTING TARIFF 46
TABLE 27: REVENUE GAP & PROPOSED REVENUE 47
TABLE 28: AVERAGE COST OF SUPPLY & REVENUE REALIZATION 48
TABLE 29: EXISTING TARIFF STRUCTURE 52
TABLE 30: PROPOSED TARIFF STRUCTURE FOR FY 2014-15 53
TABLE 31: TOTAL REVENUE FROM PROPOSED TARIFF AFTER INTERNAL EFFICIENCY IMPROVEMENT 54

Notes:

In this Petition:

Previous Year is defined as Financial Year 2012-13
(referred to as FY-'13 or FY 12-13)

Current Year is defined as Financial Year 2013-14
(referred to as FY-'14 or FY 13-14)

Ensuing Year is defined as Financial Year 2014-15
(referred to as FY-'15 or FY 14-15)

All currency figures used in this Petition, unless specifically stated otherwise, are in Rs. Crore (Crs) and Million Units (MUs)

This petition contains the Main Text of the Petition and Format (Volume I) and Annexure (Volume II).

Chapter 1: Introduction

1 Historical Background

The commissioning of the two micro hydel sets having capacities of 100 KW and 56 KW at Leimakhong in 1930 by the then Manipur State HE Board marked the beginning of the use of electricity in Manipur. The Royal palace and main areas of Imphal Town enjoyed Electricity generated from this captive hydel station. During the World War-II, two more DG sets of 62 KW and 46 KW capacities were installed at the old Imphal Power House by the Armed Forces for electrification of Imphal town and its suburbs. The above installed capacity remained the same till the end of the first Five Year plan (1951-56) of the post independence period. The second Five Year Plan (1956-61) however saw a significant change in the demand of power in the state. The demand had been growing rapidly envisaging more social acceptance and the gradual promotion of awareness of the people towards the use of electricity for different purposes. This had necessitated further addition in the generation capacity and it was accomplished with the installation of a few more DG sets of various capacities in and around Imphal.

To evacuate the power generated from the captive micro hydel power station (100 + 56) KW at Leimakhong to specific load centres of Palace Compound and main bazar area of Imphal, the 20 Km. long, 11 KV line between Imphal & Leimakhong was constructed for the first time in Manipur in 1930. The state was then having 26 Kms. of 11 KV lines and 45 Kms. of domestic lines to serve very few consumers in 7 villages/Leikais. Both the line and generating stations were owned by the then Manipur State HE Board, constituted under the ex-officio Chairmanship of the Political Agent. Subsequently Electricity was kept under the administrative control of the Public Works Department, Government of Manipur. It was separated from state PWD and started functioning as an independent Department since February 1970.

The peak load demand of Manipur in 1971 was 3.6 MW only. The demand was met from the State's own generating stations and power purchased from the neighbouring states/Electricity Board at the low voltage. The per capita consumption of energy was 4.84 KWh. The demand was kept suppressed due to lack of generation till the year 1980. The scenario was abruptly changed after the purchase of bulk power from Assam with the commissioning of 132 KV inter-state transmission line from Imphal to Dimapur and 6.3 MVA, 132/33 KV sub-station at Yurembam in December 1981. The situation was further alleviated with the commissioning of Loktak Hydro Electric Project having a capacity of 3x35 MW on 4th of August 1984.

During the years from 1984 to 1996, a number of Central Sector Power Projects, mostly hydel projects in the North Eastern Region were commissioned. Every project has a share of about 7-8% for Manipur. Because of the availability from such projects, the peak demand of the state has increased gradually and in the previous financial year, it has increased to more than 200 MW.

After the enactment of Electricity Act 2003, various reforms have been initiated in the power sector. The Electricity Department of Manipur has also initiated the process of reforms and restructuring and has engaged M/s SBI Caps to advise the Department on process of corporatization and restructuring of the Electricity Department. The draft report has been submitted by the consultants and is in advanced stage of finalization.

2 Power Profile of EDM

Manipur, like other States of the North-Eastern Region has been gifted with a fairly high hydro power potential. However, the major portion is still remaining untapped due to financial and environmental bottlenecks. Currently, the State is having one furnace oil based generating station at Leimakhong (6x6 MW) in standby mode, a few diesel generating stations along with one micro hydro electric generating plants with an installed capacity of 0.60 MW. Therefore, the State is dependent upon outside sources for meeting majority of its energy requirement. It gets power from NHPC, NEEPCO and Baramura gas turbine power project. The scheduled allocated firm share from the Central sector generating stations of NEEPCO and NHPC and Baramura gas turbine power project of Tripura State Electric Corporation Limited is 132 MW approximately when PLF is 1. EDM is also expected to start getting power from OTPC, Pallatana-Unit I & II and NTPC Bongaigaon Unit I from FY 2014-15. The total allocation from Pallatana-Unit I & II to EDM is 42 MW while the allocation from NTPC Bongaigaon Unit I is 13.33 MW.

For the purpose of evacuating power from the Inter State Generating Stations and other sources in the North-Eastern Region, the transmission network is owned and maintained by PGCIL as well as the Electricity Department of Manipur. Currently, the transformation capacity of 132 kV Substations is 317.5 MVA and the total length of the 132 kV lines is around 406 Kms.

3 Background of Regulatory Setup

The State Governments of Manipur and Mizoram, in an aspiration to create an independent Electricity Regulatory Commission to regulate the affairs of power sector, authorized Government of India to constitute a Joint Commission as per Memorandum of Agreement dated 23rd July, 2004 among the Government of India and the States of Manipur and Mizoram. Accordingly, under provisions of Section 83(5) the Electricity Act, 2003, a quasi-judicial independent body as the Joint Electricity Regulatory Commission for the States of Manipur & Mizoram (JERC) was constituted by the Central Government vide Govt. of India F. No. 23/3/2002-R&R dt. 18thJanuary, 2005 notified in the Gazette of India, Extraordinary dated 18th January, 2005. The functioning of the Commission started on January 2008. The Joint Electricity Regulatory Commission issued its first Tariff Order for FY 10-11 for the state of Manipur on 15th March, 2011. The second tariff order was issued by JERC for FY 2012-13 on 14th August'2012.

EDM had filed the tariff petition for FY 2013-14 to JERC in April'2013 but the same was not admitted by the petition because of the delay in filing of the petition and since the order had to be issued before the start of the year. The petition for FY 2013-14 was kept by JERC for reference and record purpose. As such, EDM is filing the present petition for FY 2014-15 by the required timeline of 30th November'2013 to enable the issue of the tariff order before the start of FY 2014-15.

EDM being an integrated utility undertaking generation, transmission, distribution and retail supply functions. EDM is discharging its duties in the matters of;

- Arranging, in-coordination with the Generating plant(s) operating in or outside the State, for the supply of electricity required within the State and for the transmission and distribution of the same in the most economical and efficient manner;
- Supplying electricity, as soon as practicable to any person requiring such supply, within its competency to do so under the said Act;
- Preparing and carrying out schemes for transmission, distribution and generally for promoting the use of electricity within the State; and
- Operating the Generating Stations under its control in coordination with the Generating Company(ies), operating outside the State

Chapter 2 (clause 4) of the Joint Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2010 requires the licensees to submit the details of expected Aggregate Revenue Requirement for the ensuing financial year before 30th November every year. To fulfill this statutory requirement, the EDM is submitting this Application for approval of the aggregate revenue requirement for the ensuing Financial Year 2014-15.

EDM being an integrated utility undertaking generation, transmission, distribution and retail supply functions. However, the cost and expenses of all the functions are being compiled together and it has been decided to file tariff petition only for Retail Distribution and Supply of Electricity. It is pertinent to note that the segregated details for various functions like generation, transmission and distribution are still not available with the department and the segregated financial statements for these functions are still in the process of finalization. As such, EDM is unable to calculate the details of transmission charges and wheeling charges for distribution separately. As soon as the segregated financial statements are finalized, EDM would file the petition for determination of transmission and wheeling charges, as per the directive of the Commission. For consideration of the present petition, EDM prays the leave of the Commission in this regard.

In view of above EDM hereby submits its Petition for determination of ARR for FY 14-15 along with Tariff Proposal for FY 14-15.

4 Contents of this Petition

This Petition covers the actuals for FY 12-13, revised estimates for FY 13-14 and the basis, assumptions and projections of individual elements constituting the determination of ARR for FY 14-15. The Joint Electricity Regulatory Commission for the states of Manipur and Mizoram had issued the first Tariff Order for Electricity Department-Manipur on 15th March, 2011 for FY 2010-11. Further the Second Tariff Order for Electricity Department-Manipur was issued on 14th August, 2012 for FY 2012-13.

Chapter 2: Overall Approach for Present Filing

1 Annual Revenue Requirement and Tariff Petition for FY 2014-15

EDM is filing the petition for the determination of Annual Revenue Requirement Petition for the year FY 2014-15 based on the past performance and expected changes in each element of cost and revenue for the ensuing year. EDM has studied the previous trends and taken cognizance of other internal and external developments to estimate the likely performance for FY 2014-15.

2 Approach for Filing

The present filing for the Annual Revenue Requirement for the FY 2014-15 is based on the principles enumerated by the Joint Electricity Regulatory Commission's (JERC) in the Terms and Conditions for determining of Tariff, Regulations 2010 notified on 17th June 2010 as well as the present CERC regulations for the control period FY 2009-14, wherever applicable. The subsequent sections provide projection for various expenses, the proposed investment plan for the year and the expected revenue projections with existing tariff for FY 2014-15 based on the tariff notifications in force in the area of supply of EDM.

Projections of various cost components required for determination of Aggregate Revenue Requirement for FY 2014-15 along with the rationale for estimation of such cost and the philosophy adopted by EDM for projecting sales, number of consumers and power purchase cost for FY 2014-15 has been covered in this section.

For the purpose of projecting the financial & technical parameters for FY 2014-15, EDM has considered its actual performance during FY 2010-11, FY 2011-12, FY 2012-13 and FY 2013-14 (First half) as base and has projected the figures for FY 2014-15 with supporting rationales.

Chapter 3: Aggregate Revenue Requirement for FY 2014-15

EDM is submitting its ARR and Tariff petition for the determination of tariff for FY 14-15 broadly on the basis of the principles outlined in Tariff Regulations notified by JERC. EDM has considered the past trends and taken cognizance of other internal and external developments to estimate the likely performance for FY 14-15.

The following sections explain in detail the basis and forecasts of the following elements for FY 14-15:

b. Category wise Energy Sales & Revenues at existing tariffs

c. T&D Losses and Energy Requirement

d. Determination of Aggregate Revenue Requirement by forecasting the following costs, other income & returns:

   i. Power Purchase Cost
   ii. Fuel Cost
   iii. Employee Cost
   iv. Repairs & Maintenance Cost
   v. Admin & General Cost
   vi. Capital Investment Plan
   vii. Interest Cost
   viii. Depreciation
   ix. Provision for bad & doubtful debts
   x. Return on Equity
   xi. Non-Tariff Income

e. Determination of Gap between Revenue & Costs and the arrangements to cover the revenue gap.

f. Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap.

1 Energy Sales

1. Electricity Department, Government of Manipur caters to a diverse consumer mix constituting of domestic, commercial, HT Industry, LT Industry and agriculture consumers. The number of consumers in various categories as on September 2013 is summarized in table below:

Table 1: Number of Consumers as on September 2013

Consumer Category	No. of Consumers
Kutir Jyoti	17096
Domestic	188951
Commercial	11721
Small Industry	2202
Medium Industry	148
Large Industry	19
Bulk	608
Public Lighting	520
Irrigation & Water Works	63
Public Water Works	170
Temporary	14
Total Number of Consumers	**221512**

2. Table 2 summarizes category wise actual energy sales from FY 09-10 to FY 13-14 (First Half from April'13-September'13) for all categories.

Table 2: Consumer category wise energy sales from FY 09-10 to FY 13-14 (HY)

Energy Sales (MU)	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14 (HY)
	Actuals	Actuals	Actuals	Actuals	Actuals
Kutir Jyoti				7.94	6.39
Domestic	127.49	152.00	173.72	195.81	100.23
Commercial	16.01	22.75	27.20	30.82	16.90
Small Industry	4.96	8.40	14.48	17.24	8.00
Medium Industry	2.42	3.03	2.92	2.36	1.25

Energy Sales (MU)	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14 (HY)
	Actuals	Actuals	Actuals	Actuals	Actuals
Large Industry	1.42	2.05	11.86	13.93	7.04
Bulk	44.60	58.79	68.48	80.45	45.99
Public Lighting	4.23	5.39	4.08	4.78	2.88
Irrigation & Water Works	0.71	0.49	0.83	1.59	1.62
Public Water Works	18.20	17.62	20.17	23.60	13.81
Temporary	0.61	0.58	1.10	0.54	0.04
Total Energy Sales	**220.64**	**271.10**	**324.83**	**379.04**	**204.13**

1. As can be seen, EDM's overall energy sales are significantly dependent on the domestic consumers to the extent of around 50%. Energy sold to various consumer categories over the past 3 years has grown at around 17% per annum on cumulative average basis. The EDM is of the view that the factors affecting the actual consumption of electricity are numerous and often beyond the control of the utility including factors such as Government Policy, economic climate, weather conditions and force majeure events like natural disasters, etc. EDM therefore, for projecting the category-wise consumption for the FY 13-14 and FY 14-15 has considered the past growth trends in each of the consumer category sales and the availability of supply. The analysis of the growth rate lends insight into the behaviour of each category and hence formed the basis of forecasting the sales for each category. On the other hand, it is important to note that the past trend of supply shows the trend of the restricted demand which can increase or decrease based on the new projected availability.

2. It is to be noted that the energy availability for Manipur in FY 2013-14 will almost be same as that of the previous 3 years since no new generation capacity is expected to be added except Unit I of Pallatana which is expected towards the end of the year. As such, for projecting the sales for FY 2013-14, the past year trend of increase in sales is considered which is based on the similar restricted demand scenario. However, for FY 2014-15 the availability is going to increase because of the new generation capacities

expected to be available from Pallatana Unit I which is expected to be operational throughout the year, Pallatana Unit II which is expected to be operational from January'2015 as well as NTPC Bongaigaon Unit I from January' 2015. Because of new generation capacity, the restriction in demand would be relaxed and the sales is expected to be increased roughly by additional 1.2% for the year besides the nominal growth in restricted demand as observed for past few years and considered for the growth trajectory of FY 2013-14.

3. For estimating the growth in restricted sales due to increase in number of registered consumers, increase in billing efficiency and increase in load factor of consumers, previous years Compounded Annual Growth Rate (CAGR) trends have been considered for each category of consumer for the past three years (FY 2009-10 to FY 2012-13) i.e. 3 year CAGR, 2 year CAGR or 1 year CAGR. For FY 2014-15, additional growth is assumed on account of increased availability which is to the tune of 1.2% for various selected categories. The growth rate assumed for the two years and the past three year CAGR is tabulated below for reference.

Table 3 Category wise Trend of Units Billed

Consumer Categories (Trend in units Sold)	3 yr CAGR	2 yr CAGR	1 yr CAGR	Growth Rate assumed for increase in restricted demand	Growth rate assumed for FY 13-14	Growth rate assumed for FY 14-15
Domestic and Kutir Jyoti	16.92%	15.78%	17.28%	3 yr CAGR	16.92%	18.12%
Commercial	24.39%	16.39%	13.30%	2 yr CAGR	16.39%	17.59%
Small Industry	51.51%	43.30%	19.05%	1 yr CAGR	19.05%	20.28%
Medium Industry	-0.83%	-11.84%	-19.24%	2 yr CAGR	-11.84%	-11.84%
Large Industry	113.96%	160.73%	17.46%	1 yr CAGR	17.46%	18.67%
Bulk	21.73%	16.98%	17.49%	2 yr CAGR	16.98%	18.19%
Public Lighting	4.15%	-5.81%	17.14%	3 yr CAGR	4.15%	4.15%
Irrigation & Water Works	31.00%	79.67%	91.66%	2 yr CAGR	79.67%	79.67%
Public Water Works	9.04%	15.72%	16.98%	2 yr CAGR	15.72%	15.72%

Consumer Categories (Trend in units Sold)	3 yr CAGR	2 yr CAGR	1 yr CAGR	Growth Rate assumed for increase in restricted demand	Growth rate assumed for FY 13-14	Growth rate assumed for FY 14-15
Temporary	-4.01%	-3.57%	-50.41%	3 yr CAGR	-4.01%	-4.01%
Total Energy Sales	**19.77%**	**18.24%**	**16.69%**		**17.03%**	**18.14%**

4. Domestic Category (including Kutir Jyoti) is the main consumption category in Manipur, contributing to approx. 50% of the total sale of energy in the State. For the domestic consumers, the EDM has projected the energy sales for FY 13-14 by applying a Growth Rate of 16.92% i.e. 3 year CAGR on actual sales of FY 2012-13. For FY 14-15, a growth rate of 18.12% (additional increase of around 1.2% due to increased availability) is assumed on the projected sales of FY 13-14.

5. For the commercial category, a two-year (FY 11 to FY 13) CAGR i.e. 16.39% has been applied over the actual sales of FY 12-13 for projecting sales for FY 13-14. For FY 14-15, a growth rate of 17.59% (additional increase of around 1.2% due to increased availability) is assumed on the projected sales of FY 13-14.

6. In the small industry a one year CAGR (19.05%) and in the medium industry a two year CAGR (-11.84%) has been applied over the actual sales of FY 12-13 for projecting sales for FY 13-14. . For FY 14-15, a growth rate of 20.28% (additional increase of around 1.2% due to increased availability) is assumed on the projected sales of FY 13-14 for small industries. However, for medium industries, it is assumed that the increased availability would not increase the sales and the growth rate in FY 14-15 will be the same as that assumed in FY 12-13, which is -11.84%.

7. For the large industries, one year CAGR of 17.46% has been applied over the actual sales of FY 12-13 to project the sale for FY 13-14 looking at the growth in sales in both these categories in recent years. . For FY 14-15, a growth rate of 18.67% (additional increase of around 1.2% due to increased availability) is assumed on the projected sales of FY 13-14 for large industries.

8. For Bulk consumer categories, 2 year CAGR of 16.98% has been applied over the actual sales of FY 12-13 to project the sale for FY 13-14 looking at the growth in sales in both these categories in recent years. . For FY 14-15, a growth rate of 18.19% (additional increase of around 1.2% due to increased availability) is assumed on the projected sales of FY 13-14 for bulk consumers.

9. For other categories like Agriculture & Irrigation, Public water works, Public Lighting and temporary connections, the increased availability in FY 14-15 is not expected to affect the sales to these categories. As such the growth rate assumed for these categories in FY 13-14 and FY 14-15 is same. These growth rates are 4.15% (3 yr CAGR), 15.72% (2 yr CAGR), 79.67% (2 yr CAGR) and -4.01% (3 yr CAGR) for public lightning, public water works, agriculture & irrigation and temporary categories respectively.

10. Table 4 summarizes category wise revised energy sales for FY 13-14 and projected energy sales for FY 14-15 for EDM along with the actual sales for FY 2012-13. EDM submits to the Hon'ble Commission to approve the energy sales forecasted herein.

Table 4: Consumer Category wise Energy Sales

Energy Sales (MU)	FY 12-13	FY 13-14	FY 14-15
	Actual	Estimates	Projected
Kutir Jyoti	7.94	9.28	10.96
Domestic	195.81	228.93	270.42
Commercial	30.82	35.86	42.17
Small Industry	17.24	20.53	24.69
Medium Industry	2.36	2.08	1.83
Large Industry	13.93	16.36	19.41
Bulk	80.45	94.12	111.24
Street Lighting	4.78	4.98	5.18
Irrigation & Water Works	1.59	2.85	5.12
Public Water Works	23.60	27.31	31.60
Temporary	0.54	0.52	0.50

Energy Sales (MU)	FY 12-13	FY 13-14	FY 14-15
	Actual	Estimates	Projected
Total Energy Sales	**379.04**	**442.81**	**523.13**

2 T&D Loss Reduction

1. Being a hilly terrain and characterized by population spread out throughout the State, the system network of the State consist of long length of distribution and LT lines, with aging components which are being upgraded through various schemes. The EDM has achieved a significant reduction in transmission & distribution losses. The T&D losses for FY 09-10 and FY 10-11 were 50.49% and 46.28% respectively. For FY 11-12 the EDM has achieved more than 11% reduction in losses and achieved T&D loss of 34.75%. The actual T&D losses for FY 2012-13 were 30.09%.

2. EDM has considered the T&D loss of 25% for FY 14-15 assuming more than 5% loss reduction from the actual of FY 2012-13. As the base figure for losses have been reducing, it is now becoming much more difficult to further reduce the losses by a substantial margin in one year. As such, reduction of 5% is a challenging target for EDM to achieve in FY 214-15.

3. The T&D loss trajectory is summarized in the table given below

Table 5: T&D Losses

Particulars	FY 11-12	FY 12-13	FY 13-14
	Actual	Estimates	Projected
T&D Losses	30.09%	27.00%	25.00%

4. The EDM submits to the Commission to approve the T&D losses submitted herein.

3 Energy Requirement of the System

1. Based on the projected sales for FY 2014-15 and the T&D loss target as shown above, the overall energy requirement at the state periphery of Manipur is projected to be 697.5 MUs in FY 14-15.

Table 6: Energy Requirement of the System

Energy Balance	FY 12-13	FY 13-14	FY 14-15
	Actual	Estimates	Projected
Sales	379.04	442.81	523.13
T&D losses	**30.09%**	**27.00%**	**25.00%**
Add: Losses	163.17	163.78	174.38
Energy Required at Periphery	542.22	606.59	697.50
Energy Available at State Bus	623.07	686.59	824.54
Surplus/ (Deficit) Power(UI)	80.87	80.00	127.07

2. Power Purchase Quantum and Cost

1. The energy requirement for the EDM is met by supply of power from Central Generating Stations, Tripura and a small amount from own generation. The own generation of Manipur is very less therefore it mainly relies on the allocations of power from Central Generating Stations like NHPC, NEEPCO, Tripura based Baramura power plant to meet its energy requirement. Further, EDM will also start getting power from OTPC, Pallatana-Unit I & II and NTPC Bongaigaon Unit I from FY 2014-15. The total allocation from Pallatana-Unit I & II to EDM is 42 MW while the allocation from NTOC Bongaigaon Unit I is 13.33 MW.

2. The net own generation of EDM for FY 11-12 was 1.30 MUs and has been estimated to be 1.01 MUs for FY 14-15 since the own generating plants are operated only in emergency situations at peak load due to high cost of power.

3. Currently, the State is having one furnace oil based generating station at Leimakhong (6x6 MW), few diesel generating stations having installed capacity of 8.51 MW along with one micro hydro electric generating plants with an installed capacity of 0.60 MW. The diesel generating sets cater to the emergent requirement of Imphal Power House and District Hospitals. The heavy fuel plant of 36.00 MW (6x6 MW) at Leimakhong is kept on standby mode only for the purpose of meeting the peak load requirements due to its high cost of generation.

Table 7: Own Generation (MUs)

Type of Plant	FY 11-12	FY 12-13	FY 13-14	FY 14-15
	Actual	Actual	Estimated	Projected
Hydel	0.43	0.33	0.55	0.33
Diesel	0.88	0.68	0.95	0.68
Total	1.30	1.01	1.50	1.01

4. The EDM for the purpose of estimation of the power availability during FY 14-15 has considered the following sources of power:

   - NHPC (Loktak HEP) Central Public Sector Generating Stations, (NE Region);
   - NEEPCO (Hydro) Central Public Sector Eastern Region Generating Stations, (NE Region);
   - NEEPCO (Gas) Central Public Sector Eastern Region Generating Stations, (NE Region);
   - Baramura(Gas turbine), Unit IV & V; Tripura State Electricity Corporation Ltd.
   - OTPC, Pallatana-Unit I for the full financial year as it is expected to be commissioned in December'2013 & Unit II for last quarter from January'2015 to March'15
   - NTPC Bongaigaon Unit I for three months from January'2015 to March'2015
   - Over-drawl under unscheduled interchange during peak hours at lean period
   - Own generation during peak and emergency conditions

5. EDM has power allocation from the Central Public Sector Generating Stations including hydro and gas based power stations. Since FY 11-12 unit V of Baramura gas turbine power project of TSECL is also giving power to Manipur. The allocation from unit V to EDM is around 5.25 MW out of the installed capacity of 21 MW. However, for meeting the supply-demand gap during the peak hours, the Petitioner has to rely on over-drawl from the grid (UI).

6. For projection of FY 14-15 energy availability, allocation from various existing generating stations of NHPC, NEEPCO and TSECL has been considered.

Further, allocation of 42 MW from OTPC Pallatana unit 1&2 has been considered for projecting the power purchase for FY 2014-15, as per the timelines given above. Also, 13.33 MW is expected from NTPC Bongaigaon plant from January' 2013 onwards. Detailed methodology for projecting the power availability to the Electricity Department from various sources is summarized below.

a. Power Purchase Quantum

1. Manipur has allocations in Central Sector Generating Stations of NHPC, NEEPCO (Hydro), NEEPCO (Gas), Tripura Baramura gas based Power Plant, OTPC Pallatana unit 1&2 (Gas) and NTPC Bongaigaon plant.

2. Further the allocation from various power stations to Manipur has been listed in the table below:

Table 8: Energy Allocation from Central Generating Stations

Source		FY 12-13 (Actual)		FY 14-15 (Proj.)	
	Installed Capacity	Manipur Allocation (MW)	Avg . Allocation in %	Manipur Allocation (MW)	Avg . Allocation in %
NEEPCO(Hydro)					
Kopili I HEP	200	14.78	7.39%	14.78	7.39%
Kopili II HEP	25	1.74	6.95%	1.74	6.95%
Khandong HEP	50	3.28	6.56%	3.28	6.56%
Ranganadi HEP	405	33.91	8.37%	33.91	8.37%
Doyang HEP	75	5.90	7.87%	5.90	7.87%
Subtotal	**755**	**59.60**		**59.60**	
NEEPCO(Gas Based)					
Assam Gas based Power Project	291	23.59	8.11%	23.59	8.11%
Agartala Gas Turbine Power Project	84	6.98	8.31%	6.98	8.31%
Subtotal	**375**	**30.57**		**30.57**	
NHPC(Loktak HEP)					
Purchased (20.02 MW) and Free (12.60 MW)	105	32.62	30.12%	32.62	30.12%
Subtotal	**105**	**32.62**		**32.62**	

Source		FY 12-13 (Actual)		FY 14-15 (Proj.)	
	Installed Capacity	Manipur Allocation (MW)	Avg . Allocation in %	Manipur Allocation (MW)	Avg . Allocation in %
TRIPURA					
Baramura(Gas Based)(Unit IV)	21	5.25	25%	5.25	25%
Baramura(Gas Based)(Unit V)	21	5.25	25%	5.25	25%
New Projects					
OTPC-(Pallatana-Unit I)	**363**	**0.00**	**0.00%**	**21.00**	**5.79%**
OTPC-(Pallatana-Unit II)	**363**	**0.00**	**0.00%**	**21.00**	**5.79%**
NTPC Bongaigaon Unit I	**250**	**0.00**	**0.00%**	**13.33**	**5.33%**
Subtotal	**768**	**10.50**		**65.83**	
Total	**2003**	**132.29**		**188.62**	

3. Energy availability from hydro generating plants of NHPC Loktak and NEEPCO for Kopili–I, Kopili-II, Khandong HEP, Ranganadi HEP and Doyang HEP has been taken at the average energy scheduled from the respective Generating Plants during the last three years i.e. FY 10-11 to FY 12-13.

4. Average energy scheduled during the last year i.e. FY 2012-13 has been taken respectively for Assam Gas based Power Project, Agartala Gas Turbine Power Project and TSECL Baramura plant to arrive at the energy availability for FY 14-15.

5. For estimating the energy availability from OTPC Pallatana plant, normative annual plant availability factor of 85% and normative auxiliary consumption of 1% has been estimated based on the norms provided in CERC tariff regulations for FY 2009-14. Further, Unit I is expected to be operational for full year of FY 2014-15 as it is expected to be commissioned in December'2013 and the second unit is expected to be commissioned in December'2014 and expected to be operational for the last quarter of FY 2014-15. It may be noted here that the commissioning of Pallatana has been delayed in the past due to delay in commissioning of evacuation network

as well as delay in completion of construction and testing of generation plant. As such, the assumption of commissioning date of these units have been taken based on the latest status of the plant and the expected timeline for finishing of the balance work.

6. Similarly, for estimating the energy availability from NTPC Bongaigaon Unit I, normative annual plant availability factor of 85% and normative auxiliary consumption of 8.5% has been estimated based on the norms provided in CERC tariff regulations for FY 2009-14. Further, Unit I is expected to be operational for the last quarter of FY 2014-15 as it is expected to be operational commercially from January'2015.

7. Actual % allocation of power to EDM from central generating stations has been taken from the latest monthly report of Energy Accounting of North Eastern Regional Power Committee. Energy availability from OTPC Pallatana unit 1&2(Gas) has been considered for FY 2014-15. Out of the total installed capacity of 726 MW of two units, 21 MW from each of the two units has been allocated to EDM. Similarly, for NTPC Bongaigaon plant Unit I, the allocated schedule is 13.33 MW out of 250 MW which is around 5.33% .

8. Inter State Transmission Losses @ 3.60% for all Power purchased from central generating stations has been considered to arrive at the energy available at the state bus of Manipur. Table 9 below depicts the station wise power purchase for FY 10-11, FY 11-12, FY 12-13 and those projected for FY 14-15:

Table 9: Power Purchase Quantum

Source (MUs)	FY 10-11 Actuals	FY 11-12 Actuals	FY 12-13 Actuals	FY 13-14 Estimate	FY 14-15 Projected
NEEPCO(Hydro)					
Kopili I HEP	51.27	66.61	48.42	55.54	55.44
Kopili II HEP	5.77	6.38	6.40	6.40	6.18
Khandong HEP	10.32	11.61	10.62	10.85	10.85
Ranganadi HEP	117.21	81.22	102.74	102.74	100.39

Source (MUs)	FY 10-11 Actuals	FY 11-12 Actuals	FY 12-13 Actuals	FY 13-14 Estimate	FY 14-15 Projected
Doyang HEP	19.33	17.21	15.56	17.37	17.37
Subtotal	**203.91**	**183.03**	**183.74**	**192.90**	**190.23**
NEEPCO(Gas Based)					
Assam Gas based Power Project	146.09	140.40	131.88	131.88	131.88
Agartala Gas Turbine Power Project	51.14	53.91	51.23	51.23	51.23
Subtotal	**197.23**	**194.31**	**183.11**	**183.11**	**183.11**
NHPC(Loktak HEP)					
Purchased	107.04	92.16	101.00	101.00	100.07
Free Power	70.91	61.04	66.90	66.90	66.28
Subtotal	**177.95**	**153.20**	**167.90**	**167.90**	**166.35**
TRIPURA					
Baramura(Gas Based)(Unit IV and Unit V)	40.40	76.58	80.56	80.56	80.56
OTPC-(Pallatana-Unit I)	0.00	0.00	0.00	54.18	154.80
OTPC-(Pallatana-Unit II)	0.00	0.00	0.00	0.00	38.17
NTPC Bongaigaon Unit I	0.00	0.00	0.00	0.00	22.40
Subtotal	**40.40**	**76.58**	**80.56**	**134.74**	**295.93**
Gross Power Purchase	**619.49**	**607.12**	**615.31**	**678.65**	**835.62**
Less Inter State Transmission Loss@3.6%	**22.30**	**21.86**	**23.16**	**24.43**	**30.08**
Net Power Purchase	**597.19**	**585.26**	**592.15**	**654.22**	**805.54**
Power purchase from Other Sources					
UI	18.64	17.28	29.93	30.87	18.00
Total Power Purchase	**615.83**	**602.54**	**622.08**	**685.09**	**823.53**
Own generation	**1.02**	**1.30**	**1.01**	**1.50**	**1.01**
Total power available at state bus	**616.85**	**603.84**	**623.09**	**686.59**	**824.54**

9. EDM submits to the Commission to approve the Power Purchase level estimated in table above.

b. Energy Requirement & Availability

1. Based on the data on estimated & projected sales and power purchase, an Energy Balance has been prepared to assess the T&D losses in FY 14-15.

Table 10: Energy Balance

Energy Balance	FY 12-13	FY 13-14	FY 14-15
	Actual	Estimates	Projected
Sales	379.04	442.81	523.13
T&D losses	**30.09%**	**27.00%**	**25.00%**
Add: Losses	163.17	163.78	174.38
Energy Required at Periphery	542.21	606.59	697.50
Energy Available at State Bus	623.09	686.59	824.54
Surplus/ (Deficit) Power(UI)	80.89	80.00	127.07

c. Cost of Power Purchase

1. The cost of purchase from the central generating stations for FY 14-15 is estimated based on the following method:

   - The per unit power purchase rate for various stations was calculated for FY 10-11, FY 11-12, FY 12-13 and FY 13-14 (half year up to September'13).

   - The latest invoices for each of the station of NHPC and NEEPCO were analyzed for the month of September'2013 and the latest applicable normative fixed charges and variable charges is tabulated for each station. Based on the latest applicable normative fixed and variable charges, a normative per unit tariff is calculated and tabulated. It may be noted that the actual power purchase rate of the stations were different from the normative rate calculated based on the normative fixed and variable charge per unit because the actual billing done by the generating stations were based on the actual performance achieved in terms of actual availability factor and actual units generated as against the normative availability factor and normative units generation. The latest invoices for the various generating stations for the month of September'2013 are attached as Annexure-A for reference.

- As such, for estimating the per unit power purchase rate in FY 2014-15 of NHPC and NEEPCO, the per unit average rate has been selected based on the latest actual average power purchase rate of FY 12-13 or FY 13-14 (for half year) based on the projected performance in terms of units generated.

- For estimating the per unit rate of TSECL, the approved tariff of Rs. 3.01 has been escalated by 3% for expected escalation of gas price to arrive at Rs. 3.10.

- The tariff of the new generating plants of OTPC Pallatana and NTPC Bongaigaon has not been approved by CERC. As such, the provisional tariff of OTPC Pallatana has been taken as Rs. 3.60 per unit (as expected based on the current power purchase rate of gas based stations) and the provisional tariff of NTPC Bongaigaon has been assumed as Rs. 3.00 per unit (as expected based on the current power purchase rate of coal based stations).

2. The power purchase cost has been calculated by multiplying the per unit average power purchase rate as estimated above and projected units from each of the stations for FY 14-15.

3. Besides the current power purchase bills for FY 14-15, EDM shall also be required to clear the pending arrears of the power purchase invoices. As on 30.09.2013, EDM has arrears of around Rs.78 crores of power purchase invoices. The reason for these arrears is the large number of supplementary bills issued by the central generating stations based on the new tariff orders and other supplementary orders issued by CERC post the implementation of control period of FY 2009-14. It is pertinent to note that EDM had claimed around Rs. 80 crores under power purchase arrears in the ARR petition of FY 12-13 which was also approved by the Commission but in the same order, the Commission had kept uncovered regulatory assets of Rs. 70

crores. As such, the arrears of power purchase bills could not be cleared completely and new supplementary bills of generating stations have also been received in due course of time.

4. However, EDM is planning to liquidate around Rs.48 crores of arrears in balance half of FY 13-14 with the support of State Government and available budget. The balance of around Rs. 30 crores is proposed to be liquidated in the next two ensuing years with around Rs.15 crores in FY 14-15. As such, the same is being claimed in the present ARR petition. It may be noted that EDM is not claiming the regulatory asset of Rs. 70 crores as per the order of FY 12-13 by JERC since a part of it has been covered by State Government support and only the proposed arrears of Rs. 15 crores is being claimed in FY 14-15. EDM plans to claim the balance Rs. 15 crores in the petition of FY 2015-16, as required.

5. The method of estimating average power purchase rate for each of the stations and the per unit rates for FY 14-15 is summarized in the table below:

Table 11: Power Purchase Rate for FY 14-15

Sr. No.	Source	Average Tariff in Rs/unit				Latest Applicable Fixed Charges	Latest applicable variable Charge	Normative Tariff	Average Tariff Assumed	Remarks
		FY 10-11	FY 11-12	FY 12-13	FY 13-14					
A	**CGS - NEEPCO**									
1	Kopili -I HE	0.69	0.72	0.99	0.94	3.95	0.46	1.17	0.94	Tariff of FY 13-14
2	Kopili-II HE	1.67	1.73	1.88	1.59	0.56	0.94	1.84	1.88	Tariff of FY 12-13
3	Khandong HE	1.03	1.37	2.77	2.45	2.00	1.11	2.96	2.77	Tariff of FY 12-13
4	Ranganadi HE Project	1.65	3.03	2.74	2.73	15.25	1.22	2.74	2.74	Tariff of FY 12-13/ Normative Tariff
5	Doyang HE Project	2.84	3.01	3.31	3.31	3.68	2.08	4.19	3.31	Tariff of FY 12-13 and FY 13-14
6	Assam GBPP	2.71	2.82	3.21	3.38	21.15	2.07	3.67	3.38	Tariff of FY 13-14
7	Agartala GTPP	2.62	3.10	3.46	3.62	6.26	2.61	3.83	3.62	Tariff of FY 13-14
B	**CGS - NHPC**									
8	Loktak HE	1.10	2.10	2.37	2.23	11.30	1.30	2.42	2.37	Tariff of FY 12-13
9	Loktak Free Power	0.00	0.00	0.00	0.00					
C	**TSECL**									
10	Baramura GBPP Unit IV and V	2.84	3.13	3.00	3.01				3.10	3% growth on tariff of FY 13-14
D	**New Plants**									
11	OTPC Pallatana Unit I								3.60	
12	OTPC Pallatana Unit								3.60	

Sr. No.	Source	Average Tariff in Rs/unit				Latest Applicable Fixed Charges	Latest applicable variable Charge	Normative Tariff	Average Tariff Assumed	Remarks
		FY 10-11	FY 11-12	FY 12-13	FY 13-14					
	II									
13	NTPC Bongaigaon Unit I								3.00	
	Power Purchased under UI			2.65	3.62				3.00	

6. Based on the above estimated power purchase rates, the total power purchase cost has been calculated. The power purchase cost including the arrears proposed to be cleared during FY 13-14 is tabulated below:

Table 12: Power Purchase Cost for FY 14-15 (Rs. crores)

Sr. No.	Source	FY 2012-13 Actual	FY 2013-14 Estimated	FY 2014-15 Projected
A	**CGS - NEEPCO**			
1	Kopili -I HE	4.80	5.21	5.21
2	Kopili-II HE	1.20	1.20	1.16
3	Khandong HE	3.00	3.01	3.01
4	Ranganadi HE Project	28.13	28.13	27.51
5	Doyang HE Project	5.15	5.75	5.75
6	Assam GBPP	42.36	44.59	44.59
7	Agartala GTPP	17.71	18.53	18.53
B	**CGS - NHPC**			
8	Loktak HE	23.91	23.91	23.72

Sr. No.	Source	FY 2012-13 Actual	FY 2013-14 Estimated	FY 2014-15 Projected
9	Loktak Free Power			
C	**TSECL**			
10	Baramura GBPP Unit IV and V	24.20	24.99	24.99
D	**New Plants**			
11	OTPC Pallatana Unit I		19.50	55.73
12	OTPC Pallatana Unit II			13.74
13	NTPC Bongaigaon Unit I			6.72
	Arrears of power purchase bills	19.78	48.00	15.00
	Power Purchased under UI	7.94	11.18	5.40
	Total Power Purchase Cost	**178.18**	**234.00**	**251.05**

d. Transmission and Other Charges

1. Transmission charges payable to PGCIL are based on the point of connection charges per MW per month as notified by CERC and the scheduled generation and drawl by the applicable entity. EDM has allocations from various Central Generating Stations and other generating stations located outside state which determines the transmission charges payable by EDM. Therefore, considering the increased capacity allocation of EDM in FY 13-14 (due to Pallatana Unit I from December'2013) and in FY 2014-15 (due to commissioning of Pallatana Unit I & II and NTPC Bongaigaon Unit I), the transmission charges payable by EDM would increase proportionally based on the average allocation available to EDM for the year FY 14-15 and FY 13-14 as compared to the actual allocation in FY 12-13. The current PoC rate applicable for Manipur is around Rs.80,000 per MW per month which is expected to almost remain constant for ensuing year.

2. As such, for projecting the PGCIL transmission charges for FY 13-14, an escalation of around 9% over the actual FY 12-13 transmission charges has been considered. Further, in FY 14-15, the actual transmission charges have been escalated by around 25% over the estimated transmission expenses of FY 13-14 due to the anticipated increase in scheduled allocation of EDM in these years, as given above.

3. The transmission and the SLDC charges payable to NERLDC as per the actual of FY 12-13 and the projected figures of FY 13-14 and FY 14-15 is tabulated below

Table 13: Transmission Charges

Particulars	FY 12-13 (Actual)	FY 13-14 (Estimated)	FY 13-14 (Projected)
	Total Cost (Rs. Cr)	Total Cost (Rs. Cr)	Total Cost (Rs. Cr)
PGCIL charges	23.92	26.14	32.89
SLDC charges	0.84	0.90	1.00
Total Transmission Charges	**24.76**	**27.04**	**33.89**

3. Fuel Cost

As given in the earlier section, the own diesel generations of Electricity Department of Manipur are operated only during emergency peak situations due to high cost of power. As such, based on the past trend, the projected energy from diesel generating plants is around 0.68 MUs for FY 14-15. The per unit average cost of generation from these plants comes to around Rs. 17 per unit. As such, the fuel cost is projected as given below:

Table 14: Fuel Cost

Particulars	FY 12-13 (Actual)	FY 13-14 (Estimated)	FY 13-14 (Projected)
	Total Cost (Rs. Cr)	Total Cost (Rs. Cr)	Total Cost (Rs. Cr)
Fuel Cost	**1.23**	**1.54**	**1.18**

4. Operation & Maintenance Costs

1. Operation and Maintenance expenses comprise of the following heads:
   - **Employees Expenses** which includes the basic pay, dearness pay, dearness allowances, house rent allowances, and other allowances paid to the staff;
   - **Repair and Maintenance (R&M) Expenses**, which include all expenditure incurred on the maintenance and upkeep of transmission and distribution assets; and
   - **Administrative and General Expenses**, which include all expenditure incurred in operating a business such as telephone charges, consultancy and regulatory fee etc.

2. Summary of the past three year operation and maintenance expense is summarized in table below:

Table 15: Operation & Maintenance Expense (Rs. Crore)

Year	O&M Expense
	Actual
FY 10-11	100.16
FY 11-12	114.70
FY 12-13	109.97

3. Over the past three years shown above, the arrears for implementation of VI Pay Commission has been paid amounting Rs. 7 crores. Rs. 6 crores and Rs. 3.2 crores in FY 10-11, FY 11-12 and FY 12-13 respectively. For FY 2014-15, no such arrears are expected to be paid for implementation of VI Pay Commission. As such, the arrear figures have been removed from the actual data of employee expenses for considering the base of projections for FY 13-14 and FY 14-15 respectively.

4. The methodology adopted by EDM for projecting the values of each component of the O&M expense for FY 13-14 & FY 14-15 has been explained in the following section.

a. Employee Expense

1. The Employee expense estimated by EDM comprise of all costs related to employees like basic salary, dearness allowances, house rent allowances, honorarium, etc. But EDM does not maintain cost related to leave salary contribution, pension and terminal benefits of the employee in the employee cost. Therefore, EDM will claim these expenses relating to the employee cost at an appropriate time when the respective cost items become payable.

2. The employee cost has increased in the past 3 years due to implementation of VI Pay Commission. Also, the provision of DA component is in line with the recommendations made by the Sixth Central Pay Commission, which is to be increased at the rate of 5% every six months. The basic pay is increased at the rate of 3% every year. As such, the total average pay of the employees increase by around 5% every year.

3. Further, the total staff strength of the Electricity Department of Manipur is gradually reducing as no recruitments have taken place in the past few years and no new recruitments are proposed in FY 13-14 and FY 14-15 also. The number of retirements is assumed as 150 each year in FY 13-14 and FY 14-15 from the total staff strength of 3312 as on 31st March'2013. As such, the employee cost has reduced to the extent of reduction in staff strength based on around net 150 retirements each year.

4. The EDM would like to bring into the notice of Hon'ble Commission that certain components of employee cost increase should be considered as

uncontrollable factors, especially factors like DA/Basic hike through Government, revision through 6th Pay Commission etc. The EDM would not be in a position to not allow these increases as any deviation will be against law/policy. The revision in salaries and other incentives are kept at par with the other departments of Government of Manipur and is a legal binding on the department to follow the same. Therefore, EDM requests the Commission to adopt a relaxed and realistic approach for employee expenditure, keeping in view the obligation of the organization towards the employees.

Table 16: Employee Cost

Employees Cost (Rs Cr)	FY 12-13	FY 13-14	FY 14-15
	Actuals	Estimates	Projected
Total payouts for current year	102.79	105.37	107.89
Arrears due to VI Pay Commission	3.20	0.00	0.00
Grand Total	**105.99**	**105.37**	**107.89**

5. EDM submits to the Hon'ble Commission to approve the employee costs as projected by the Petitioner.

b. Repairs & Maintenance Expense

6. These expenses include expenses on repairs and maintenance of Plant and Machinery, Transformers, Lines, cable network etc., Vehicles, Office equipment, etc.

7. EDM incurred Rs. 7.87 Crores in repair and maintenance during FY 2011-12 and Rs.3.96 crores in FY 12-13. The R&M cost during FY 12-13 was less due to less funds available with the State Government. However, for the ensuing years, the R&M cost in expected to increase to around Rs.9.82 crores in FY 13-14 and Rs. 9.92 crores in FY 14-15.

8. EDM submits to the Commission that it is important for EDM to incur the R&M expenses as mentioned above in order to maintain and strengthen the system and quality of supply.

9. The R&M cost for FY 11-12, FY 12-13, FY 13-14 and FY 2014-15 is summarized in table below:

Table 17: Repairs & Maintenance Expense

R&M Cost (Rs Cr)	FY 11-12	FY 12-13	FY 13-14	FY 14-15
	Actuals	Actual	Estimate	Proj
Grand Total	**7.87**	**3.96**	**9.82**	**9.92**

10. EDM requests the Commission to approve the R&M expense without any disallowances as the same is necessary for proper maintenance and strengthening of the system and quality of supply in the region in order to ensure consumer satisfaction.

c. Administration & General Expense

1. Administrative and General (A&G) expense comprise of various sub-heads including the following:
   - Travel and conveyance expenses
   - Consultancy and regulatory fees
   - Office expenses
   - Publication expenses
   - Other administration expenses

2. The actual A&G expense for FY 11-12 is Rs. 0.66 Crs. EDM has considered the A&G expense of Rs. 0.71 Crore for FY 12-13. EDM has projected an 8% annual increase in the A&G expense for FY 13-14 and FY 14-15 over the estimated A&G expenses for FY 12-13 on account of inflation and increase in the administrative functions of the department.

3. For FY 14-15 total A&G expenses have been projected at Rs. 0.83 Crore on account of A&G expenses.

Table 18: Administrative & General Expenses

A&G Cost (Rs Cr)	FY 14-15
	Proj
Regulatory Fees	0.17

A&G Cost (Rs Cr)	FY 14-15
	Proj
Publication	0.06
Legal & Consultancy Charges	0.30
Office Expenses	0.20
Domestic Travel expenses	0.08
Other Expenses	0.02
Grand Total	**0.83**

4. Considering the above aspects, EDM submits to the Commission to approve the A&G costs in full without any disallowance, as these costs are essentially required to administer EDM's operation.

5. Capital Expenditure Plan

1. Considering the increase in demand from HT & LT consumers, EDM would be required to undertake significant capital expenditure for system augmentation and strengthening. System augmentation would not only help EDM in handling increased load but would also ensure better quality of supply and network reliability to the consumers. Since, the current T&D loss levels are high, the capital expenditure would help in reduction in the T&D loss level.

2. Each year, EDM prepares an Annual Plan for the capital investment for new schemes and continuing schemes which it plans to incur in the ensuing year. The EDM has to undertake various capital projects for generation, transmission/sub-transmission and distribution functions mainly focusing on the increasing generation capacity, augmenting existing generating plants, strengthening electricity network and augment new networks for ensuring reliable power to its consumers.

Major Capital Expenditure Schemes planned to be undertaken by EDM:

- Loktak Down Stream Hydro Electric Project – (2 x 33 MW),
- New 132 kV Sub-Stations - 6 nos planned at Kongba, Hundung, Chandel, Thanlon, Moreh and Thoubal and associated lines,
- R&M of existing 6 no.132 kV substations and augmentation of 2 no. existing 132 kV Stations,
- 132 kV S/C line from Yurembam to Yaingangpokpi, Stringing of 132 kV line from Ningthoukhong to Churachandpur

- 16 Nos of new 33 kV Substations and augmentation of 7 no. existing 33 kV substations.
- Up-gradation of the installed capacities of 33/11 kV and Distribution Sub-Stations and new 33 kV lines
- Improvement of Distribution system in Greater Imphal and other Towns
- Providing prepaid energy meters in Imphal and replacement of old electromechanical meters with electronic meters

3. Apart from the above schemes, EDM has also undertaken large scale rural electrification and development, augmentation and improvement of electricity infrastructure under Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY) and Restructured Accelerated Power Development Reforms Programme (APDRP) respectively. Following Table depicts the ongoing capital schemes being undertaken by EDM and the plan for current and ensuing year:

Table 19: Proposed Capital Expenditure

Capital Expenditure Rs. Crs	FY 12-13		FY 13-14		FY 14-15	
	Actuals		Estimates		Proj	
	Plan	Outside Plan	Plan	Outside Plan	Plan	Outside Plan
Generation Schemes	1.30		5.01		20.00	
Transmissions Schemes	25.95	12.33	41.10		75.00	
Distributions Schemes	46.04	8.92	72.51	119.66	139.90	129.11
Rural Electrification Schemes	13.37	44.39	25.68		12.00	
Miscellaneous Schemes	2.38		13.69		20.00	
Total	**89.04**	**65.64**	**157.99**	**119.66**	**266.90**	**129.11**

4. For FY 14-15, the EDM has proposed a plan capital expenditure of Rs. 266.90 Crore under various existing and new schemes. Also, a non plan expenditure of Rs.129.11 crores under Non Plan schemes has been projected.

5. It may be noted that funding for most of the schemes except that of RGGVY and other non plan schemes (for FY 14-15), are covered by grants from State Government and there are no loans or equity for funding of such schemes. Only for RGGVY, the department is furnishing loans from REC, as per the directions of Ministry of Power, Government of India, in this regard. For RGGVY, the Central Government is providing 90% grant and 10% is covered through loan.

6. The capitalization of new schemes from FY 12-13 onwards has been considered at 30% of the planned capital expenditure in the same year, 40% in the second year and the balance 30% has been capitalized during third year. A summary of the capital expenditure and capitalization for FY 12-13 and FY 13-14 is summarized in Table below:

Table 20: Capital Expenditure & Proposed Capitalization

Particulars (Rs. Crs)	FY 12-13	FY 13-14	FY 14-15
	Actuals	Estimates	Projected
Capital Expenditure	154.68	277.65	396.01
Capitalization during the year for old & New Schemes			**276.27**

6. Gross Fixed Assets (GFA)

1. Since, EDM is not maintaining account statements as per the relevant schedules of Companies Act, the exact value of gross fixed assets is not available with the department. The work of asset evaluation and preparation of asset registers along with segregated account statements for the various functions of the department, has been given to M/s SBI Caps. The draft report is this regard has been submitted by them which is under the process of review and finalization as of now. As and when, the report gets finalized, the department would be able to report the figures of GFA and also able to submit opening financial statements for the restructured companies of the department.

2. As mentioned earlier, since the segregated financial statements for the functions of generation, transmission and distribution are yet to be finalized,

the Electricity Department is unable to determine transmission and wheeling charges separately.

7. Depreciation

1. Depreciation is charged on the basis of straight-line method, on the GFA in use at the beginning of the year and addition in assets during the financial year. The depreciation is based on the original cost of the Gross Fixed Assets.

2. Since, the exact value of gross fixed assets is yet to be ascertained and finalized, EDM is unable to calculate depreciation accurately based on the SLM method mentioned earlier as per the regulations of JERC as well as the relevant provisions of Companies Act.

3. Further, as per the guidelines of Institute of Chartered Accountant of India (ICAI), depreciation should not be claimed as net expenditure for assets funded through government grants. In EDM, as mentioned earlier, most of the funding is through government grants, depreciation shall not be included under ARR on the assets funded through government grants. This is because the Electricity Department is not required to repay or recover the amount received as grants from the Government.

4. It may be noted here that the State of Manipur has been granted a special status similar to that of other North-Eastern States. Government of India provides special assistance for the development of infrastructure facilities in these States. Accordingly, the infrastructure projects of the State of Manipur, including those of EDM are being supported by issue of Grants through various Central Government Ministries and Agencies like Ministry of Power (MoP) through schemes of APDRP and RGGVY, Ministry of New and Renewable Energy (MNRE), Ministry of Development of North Eastern Region (DONER) and North Eastern Council (NEC).

5. Out of the existing capital investment schemes, only for RGGVY and some other schemes, the Electricity Department is taking loans from REC to the extent of 10% of the total cost of the scheme. And as such the repayment or recovery obligation of the capital amount invested by EDM is only to the extent of loan taken from REC. As such, depreciation is being claimed as the amount of loan required to be repaid to REC for the applicable year. This methodology was also adopted by JERC in the tariff order of FY 12-13.

6. The table below indicates the methodology adopted by the EDM for projecting Depreciation for the various years. The Hon'ble Commission is requested to approve the depreciation as computed below:

Table 21: Depreciation

Particulars (Rs. Crs)	FY 12-13	FY 13-14	FY 14-15
	Actuals	Estimates	Projected
Repayment of loans for REC	7.54	8.79	10.28
Depreciation Claimed	**7.54**	**8.79**	**10.28**

8. **Interest & Finance Costs**

   a. **Interest on Long-term / Capital Loans**

1. The entire capital expenditure of EDM since its inception has been funded by the State Government through grants and loans from Central Government Ministries and Agencies like Ministry of Power (MoP) through schemes of APDRP, RGGVY, etc. Therefore, the department does not have significant amount of loan liabilities.

2. The EDM is availing various loans through the State Govt. from REC in order to fund its Capital Projects, as mentioned earlier. Table below summarizes the total amount of loans from the REC as well as the annual interest payments in respect of these loans.

3. Further, EDM would like to submit that EDM is in the process of engaging a specialized CA firm for preparing the Accounts and Asset Depreciation Register and will also maintain proper accounts for any long term loans availed during the ensuing years.

4. Interest rate of 13.10% has been considered for computation of interest cost for long-term loans for FY 14-15 which in line with the actual interest rate paid by the EDM during FY 12-13. Details of the loan amounts and interest cost computed for FY 14-15 is summarized in Table below:

Table 22: Total Interest on Long-term Loans

Particulars (Rs. Crs)	FY 12-13	FY 13-14	FY 14-15
	Actual	Estimates	Projected
Opening Loans	81.38	79.12	81.64

Particulars (Rs. Crs)	FY 12-13	FY 13-14	FY 14-15
	Actual	Estimates	Projected
Addition during the year	5.28	11.31	11.58
Repayments	7.54	8.79	10.28
Closing Loans	79.12	81.64	82.94
Interest Paid during the year	**10.51**	**10.53**	**10.78**
Other financial charges	1.85	1.85	1.85
Total Interest and Financial Charges	**12.36**	**12.38**	**12.63**

b. Interest on Working Capital Borrowings

1. As per the JERC (Terms and Conditions for Determination of Tariff) Regulations, EDM is entitled to claim interest on working capital as per the norms provided. However, EDM is not taking any loans for working capital purpose. As such, EDM is not claiming interest on working capital borrowings.

9. Return on Equity

1. As per the JERC (Terms and Conditions for Determination of Tariff) Regulations, EDM is entitled for a Return on Equity (RoE). However, in the current scenario EDM is dependent on the budgetary support from the Government of Manipur and therefore EDM is not claiming any RoE for the FY 2013-14 from the Hon'ble Commission.

10. Provision for Bad & Doubtful Debts

1. EDM has considered provision for Bad and Doubtful Debts as 1% of the receivables for FY 14-15. The EDM has considered provision for bad debts as 1.00% of receivables as provided in the Regulation 98 (e) of the Terms and Condition of Determination of Tariff Regulations, 2010 issued by the Hon'ble Commission.

2. EDM requests the Hon'ble Commission to approve the provision for bad & doubtful debts as summarized in the Table below:

Table 23: Provision for Bad & Doubtful debts

Provision for Bad & Doubtful Debts (Rs. Crs)	FY 14-15
	Estimated

Total arrears outstanding from consumers as on 31.03.2013	351.00
Provision for Bad &Doubtful Debts as % of Receivables	1.00%
Provision for Bad & Doubtful Debts (rounded off)	**3.00**

11. Non-Tariff & Other Income

1. Non-tariff income includes rebate on power purchase on account of timely payment through Letter of Credit being given by NEEPCO and NHPC, Manipur tax on Loktak, departmental charges, miscellaneous charges from consumers and meter rent.

2. For projecting the non-tariff income for FY 14-15, the average income under this head for the past three years has been assumed. Details of the year wise non-tariff income is provided in table below:

Table 24: Non-tariff Income

Particulars (Rs. Crs)	FY 12-13	FY 13-14	FY 14-15
	Actuals	Estimates	Projected
Total	**0.10**	**0.11**	**0.25**

12. Aggregate Revenue Requirement

1. Table 25 summarizes EDM's Aggregate Revenue Requirement for FY 2014-15

2. Aggregate Revenue Requirement for FY 14-15 is estimated to be Rs 430.43 Crores.

Table 25: Aggregate Revenue Requirement

Annual Revenue Requirement (Rs Cr)	FY 14-15
	Projected
Costs	
Power Purchase Cost (Including Arrears)	251.05
Transmission Charges	33.89

Annual Revenue Requirement (Rs Cr)	FY 14-15
	Projected
Fuel Cost	1.18
Employee Cost	107.89
Repairs & Maintenance Cost	9.92
Admin & General Cost	0.83
Depreciation	10.28
Interest Cost	12.63
Provision for Bad Debts	3.00
Total Costs	**430.68**
Add: Return on Equity	0.00
Less: Non-Tariff Income	0.25
Annual Revenue Requirement	**430.43**

13. Revenue at Existing Tariff

1. Revenue from sale of power for FY 13-14 & FY 14-15 is determined based on the energy sales estimated in Table 4 and category wise tariff prevalent in the State of Manipur, based on the average per unit revenue billed during FY 2013-14 (For Half year). It may be noted that the existing tariff was prevalent in FY 13-14 from the starting and as such, the per unit revenue billed in current year is the most appropriate reference for the existing tariff. It may be considered that the department is not maintaining the records of consumption in various slabs of domestic and commercial consumers as well as the break-up of revenue through fixed and variable charges are not available. Under such a scenario, the per unit actual rate in FY 13-14 has been used for projecting revenue from existing tariff.

2. Revenue from sale of power at existing tariff is estimated to be Rs. 166.42 Crore in FY 14-15, as shown in Table 26. Further, EDM has computed the revenue for the full year of FY 14-15 based on the tariff notified by the Hon'ble Commission in the Tariff Order for FY 12-13 dated 14th August, 2012.

3. During FY 14-15, EDM has estimated a surplus of 127.04 MUs based on the energy available and sale to various consumer categories, as mentioned earlier. Revenue from surplus power available from unscheduled interchange during FY 14-15 has been computed at an average price of Rs. 2.50/unit, based on the historical per unit price obtained from UI in the past years. The average per unit revenue from surplus power through UI was Rs.2.46, Rs. 2.44 and Rs. 2.36 in FY 10-11, FY 11-12 and FY 12-13 respectively.

4. The table below summarizes the revenue from sale of power at existing tariff for FY 14-15:

Table 26: Revenue from Sale of Power at Existing Tariff

Revenue (Rs. Crore)	**FY 12-13**	**FY 13-14**	**FY 14-15**	**Average Per Unit Existing Tariff**
	Actuals	**Estimates**	**Projected**	
Kutir Jyoti	1.44	1.66	1.96	1.79
Domestic	52.19	64.80	76.54	2.83
Commercial	10.26	12.81	15.06	3.57
Small Industry	2.35	2.96	3.55	1.44
Medium Industry	0.78	1.25	1.10	6.00
Large Industry	5.34	6.14	7.28	3.75
Bulk	31.55	37.29	44.07	3.96
Street Lighting	2.26	2.19	2.29	4.41
Irrigation & Water Works	0.25	1.18	2.13	4.16
Public Water Works	9.13	10.54	12.19	3.86
Temporary	0.22	0.25	0.24	4.72
Total	**115.77**	**141.06**	**166.42**	
UI Receivable	19.09	20.00	31.76	2.50
Total	**134.86**	**161.06**	**198.18**	

14. Coverage of Revenue Gap

1. Table 27 summarizes the revenue gap at existing tariff which works out to be Rs. 219.07 Crores for FY 2014-15.

2. As depicted in Table 27, Revenue Gap of FY 14-15 is proposed to be covered through the budgetary support of Rs. 181.29 Crores for which the EDM has approached the State Government to provide its commitment as per the directions of the Hon'ble Commission vide. its Tariff Order dated 14th August, 2012.

3. Also, EDM is proposing to recover additional revenue of Rs. 25 crores from various internal efficiency improvement measures being taken like complete metering of consumers, replacement of old electromechanical meters with electronic meters, regularization of unauthorized connections, survey and investigation of consumers for unauthorized use of load and other purposes.

4. The balance amount of Rs. 25.96 crores is proposed to be covered from proposed tariff revision of 15% (which works out to be 7.5% each year for 2 years) across all major categories (except Kutir Jyoti consumers).

Table 27: Revenue Gap & Proposed Revenue

ARR, Revenue @ Existing Tariff, Revenue Gap	FY 14-15
	Proj
Annual Revenue Requirement	**430.43**
Covered by	
Revenue @ Existing Tariff	166.42
UI Receivable	31.76
Total Revenue from sale of energy	**198.18**
Revenue Gap/(Surplus)	**232.25**
Covered by	
Additional Revenue from Internal Efficiency Improvement	25.00
Budgetary Support From Govt.	181.29
Additional Revenue @ Proposed Tariff	25.96
Total	**232.25**
Net Gap/(Surplus) to be addressed	**0.00**

15. Average Cost of Supply

1. Table 28 summarizes Average Cost of supply and total average realization at the existing tariff approved by the Hon'ble Commission.

Table 28: Average Cost of Supply & Revenue Realization

Average Realization & Cost of Supply	FY 14-15
(Rs. Per Unit)	
Average Cost of Supply of EDM	7.62
Average realization from sale of power	3.18
Revenue Gap at existing Tariff	4.44
Covered By:	
Budgetary Support	3.46
Additional Revenue through Internal Efficiency Improvement	0.48
Additional Revenue through Proposed Tariff	0.50
NET (GAP)/SURPLUS	**0.00**

16. Tariff Proposal for FY 14-15

1. The total revenue gap for the FY 14-15 to be covered is Rs. 232.25 Crs, which is approx. 54% of the Aggregate Revenue Requirement for FY 14-15. The above ARR gap of Rs. 232.25 Crores can be sought to be filled by:
   a. Tariff Increase
   b. Budgetary support from the Govt. of Manipur
   c. Internal Efficiency Improvement
   d. Regulatory Asset with interest thereon funded
   e. Combination of the above

2. In case the entire gap was to be met from Tariff Increase, the average increase in tariff would work out to more than 100%. It is presumed that this is an unacceptable level of tariff hike, and the realistic tariff in the region needs to form the basis for the proposed maximum increase in tariff, with the balance gap being addressed by one of the other means.

3. The Electricity Department of Manipur has been receiving budgetary support from the Government of Manipur for Plan and Non –Plan Funds. The same support will also be provided during ensuing year. Accordingly, out of the gap of Rs. 232.25 Crore, Rs. 181.29 Crore will be covered by budgetary support from Government of Manipur and Rs. 25 crores shall be recovered from additional revenue generated by EDM due to efficiency improvement measures. **Therefore, the balance revenue gap for the FY 14-15 will have to be met from tariff increase and other recovery mechanism.**

4. The provisions of the Section 61 (g) of the Electricity Act, 2003 state that the Appropriate Commission should be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity. In line with the above provision, the National Tariff Policy also states that the tariffs should be within ± 20 % of the average cost of supply. However, in the present scenario it shall neither be feasible nor in the larger interest of the population of the State of Manipur to burden them with tariff anyway near to average cost of supply. Considering these limitations, the Tariff proposal has been formulated by EDM with an endeavor to progressively approach to reduce the burden (budgetary support) on the Government of Manipur, without giving any tariff shock to the consumers. Furthermore, attempt has been made to evenly distribute the impact of increase in tariff required to fill the revenue gap left after the subsidy committed by the Government of Manipur within the given constraint of consumer mix in the State.

5. EDM proposed an average hike of 15% (i.e. 7.5% each year for 2 years) across all the major consumer categories in order to address the revenue gap. No tariff hike has been proposed for the Kutir Jyoti category. EDM has made its best effort to reasonably propose the range of tariff hike to different categories of consumers considering the overall economic conditions within the limited scope due to the prevalent consumer mix which is dominated by the domestic consumption.

6. Further, the EDM would like to bring into the notice of Hon'ble Commission that the department is facing practical problems in implementing the non telescopic tariff. The consumers with prepaid meters which had earlier been programmed for the old slab-tariff system (telescopic) cannot be changed easily to the new non telescopic tariff as directed by the Commission. The petitioner has discussed the matter with the manufacturer of the meters i.e. M/s Secure Meters Ltd., Kolkata, to take necessary step to modify the current software program to facilitate the new block type (non telescopic) tariff. M/s Secure in its reply has confirmed that the

development of new tariff system software would take huge effort and time period of 6 to 8 months.

7. The EDM would like to submit that the block-type tariff system has not been adopted by most of the State Electricity Regulatory Commissions (SERCs) in India mainly because of sudden hike in tariff of the consumers with mere one unit addition in the total consumption in the month.

8. It is submitted that the introduction of the non-telescopic tariff by the JERC will have huge financial impact on the consumers in lower slab categories like domestic category where the JERC has approved the first slab of 0 to 100 kWh and the second slab is 0 to 200 kWh. The moment the domestic consumer will consume 101 units in a month, the consumer will be billed a higher rate. With addition in one additional unit in the energy consumption there will be huge increase in the monthly electricity bill.

9. The EDM would also like to bring into the notice of Hon'ble Commission that the department has not requested for the implementation of non-telescopic tariff in the ARR petition filed for FY 2012-13, as the EDM is aware that it is not in a position to implement the non-telescopic tariff in the state of Manipur because of aforesaid reasons.

10. In the proposed tariff schedule, EDM is also requesting to introduce a new additional slab of consumers in domestic and commercial with consumption of more than 300 units monthly. These consumers have higher capacity to pay and as such the introduction of this slab shall enable the department to collect additional revenue by keeping a higher tariff in this slab. On the other hand, with the introduction of new slab, the consumers shall also be more keen to restrict their consumption to below 300 units in case they are interested in minimizing the electricity bills. After the introduction of new slab, the old slab of above 200 units shall be accordingly revised as 101-200 units. This proposal is made based on the observation of the actual consumption by domestic consumers with higher capacity to pay.

11. The Hon'ble JERC vide Order No. H. 20011/2/10-JERC dated 30th May, 2011 had approved the meter rent for pre-paid meters at Rs. 20/- for single phase meters and Rs. 40/- for three phase meters separately. In the last order for FY 2012-13 dated 14th August'2012, there was no separate provision for meter rent in case of pre-paid meters. EDM would like to submit that it is still continuing the levy of meter rent as per the previous order dated 30th May'2011. As such, the Hon'ble

Commission is requested to approve the levy of the meter rent as per the order of 30th May'2011 till the issue of next tariff order. Also, JERC may also approve to continue the same in the next tariff order of FY 14-15.

12. Also, the Hon'ble JERC vide. Review Order No. H. 20011/2/10-JERC dated 30thMay, 2011 had separately approved the rebate for advance payment for consumers with pre-paid meters at 5% of the total charges (Fixed charges + Energy charges). As per the Tariff Order dated 14th August, 2012 the Hon'ble JERC has fixed the rebate for advance payment @ 2% for all category of consumers including consumers provided with pre – paid energy meters which is contradictory to the Review Order dated 30th May, 2011. EDM would like to submit that it is still continuing with the rebate provision of 5% as per the previous order dated 30th May'2011 since the pre-paid consumers should have additional incentive for advance payment. As such, the Hon'ble Commission is requested to approve the provision of rebate of 5% for prepaid meters as per the order of 30th May'2011 till the issue of next tariff order.

13. Currently, it has come to the notice of EDM that it is paying the vend transaction charges for pre-paid meters which are supposed to be borne by the consumers. The vend transaction charges work out to be around 2% of the total charges on an average basis. As such, for future, EDM requests the Commission to revise the rebate of pre-paid consumers as 3% of the total charges. Under this scenario, the consumers would ultimately bear the vend transaction charges which work out to be 2% (i.e. 5% -3%) of the total charges and which is actually payable by the consumers.

14. The department also proposes to launch a portal for facilitating online payment of electricity dues using credit card, debit card, net banking etc. by the consumers. The bills of the consumers are also proposed to be made available online in a phased manner. In the interim also, the consumers will be able to pay online once the portal is launched using the unique consumer id. For online payment, a transaction charge is levied by the payment gateway service provider. In this case, the service provider is NSDL, with which DIT, GoM has a MoU for providing services towards all citizen centric activities. The transaction charges, which are part of the MoU range from Rs.5 per transaction to a maximum of 1% of the value of transaction. In order to encourage consumers to use this facility, it is proposed that 2% discount on current billing charge can be provided to consumers for making online payment. This will also compensate them fully for the transaction charges which they will be required to pay and also incentivize use of this facility.

15. Accordingly, the EDM requests the Hon'ble Commission to revise the tariff structure from non-telescopic to telescopic as summarized in Table 30:

Table 29: Existing Tariff Structure

Particulars	Existing Charges	
	Fixed Charges	Energy Charges
	Rs./kW	Rs./kWH
LT SUPPLY		
Kutir Jyoti		
0-15 kWh	20	1.00
0-Above 15 kWh	20	1.50
Domestic Light & Power		
0-100 kWh	60	2.40
0-200 kWh	60	3.00
0-Above 200 kWh	60	3.60
Commercial		
0-100 kWh	80	3.30
0-200 kWh	80	3.90
0-Above 200 kWh	80	4.40
Public Lighting	60	4.30
Public Water Works	100	4.30
Irrigation & Agriculture	60	2.50
Cottage & Small Industry	60	2.50
Temporary Supply	80	4.30
HT SUPPLY		
Commercial	100	4.00
Public Water Works	100	4.00
Irrigation & Agriculture	100	2.50
Medium Industry	100	3.30
Large Industry	100	3.80
Bulk Supply	100	3.40

Note: The EDM would like to bring to the notice of the Hon'ble Commission that due to system constraints it was not able to implement the non-telescopic tariff structure to the pre-paid consumers. However, the revised tariff rates have been implemented uniformly across all the consumer categories.

Table 30: Proposed Tariff Structure for FY 2014-15

Particulars	Proposed Charges	
	Fixed Charges	Energy Charges
	Rs./kW	Rs./kWH
LT SUPPLY		
Kutir Jyoti		
1-15 kWh	20	1.00
Above 15 kWh	20	1.50
Domestic Light & Power		
1-100 kWh	70	2.80
101-200 kWh	70	3.40
201-300 kWh	70	4.10
Above 300 kWh	70	4.60
Commercial		
1-100 kWh	90	3.80
101-200 kWh	90	4.50
201- 300 kWh	90	5.10
Above 300 kWh	90	5.60
Public Lighting	70	4.90
Public Water Works	120	4.90
Irrigation & Agriculture	70	2.90
Cottage & Small Industry	70	2.90
Temporary Supply	90	4.90
HT SUPPLY		
Commercial	120	4.60
Public Water Works	120	4.60
Irrigation & Agriculture	120	2.90
Medium Industry	120	3.80
Large Industry	120	4.40
Bulk Supply	120	3.90

Note: *The above Table depicts comparison of fixed charges and energy charges only. The detailed Tariffs including Rates for un-metered categories of consumers and miscellaneous charges are being given in the Tariff Schedule detailed in subsequent section.*

16. Based on the tariff proposed above and the internal efficiency measures being undertaken, following is the summary of the revenue from various consumer categories at the proposed tariff rates:

Table 31: Total Revenue from Proposed Tariff After Internal Efficiency Improvement

Particulars	FY 14-15	Per unit Rate
	Rs. Crs	Rs/Kwh
	AT PROPOSED TARIFF	
Kutir Jyoti	2.16	1.97
Domestic	100.12	3.70
Commercial	19.82	4.70
Small Industry	7.42	3.01
Medium Industry	0.83	4.53
Large Industry	9.77	5.03
Bulk	56.34	5.06
Public Lighting	2.72	5.26
Irrigation & Water Works	1.77	3.45
Public Water Works	16.16	5.12
Temporary	0.26	5.14
Total	**217.38**	**4.16**

Chapter 4: Compliance on Directives

The Hon'ble Commission vide Tariff Order dated 14th August, 2012 had issued a set of directives to be followed by EDM to comply with the JERC (Terms and Conditions of Determination of Tariff) Regulations, 2010.

In line with the directives, EDM has been taken several steps to comply with the directives. The purpose of this section is to appraise the Hon'ble Commission on progress made by EDM on this matter since the issuance of the aforesaid tariff order.

Sr. No.	Directive	Compliance Status
1	EDM was directed to prepare separate annual accounts such as balance sheet, profit and loss account and relevant schedules and statements, every year for regulatory purpose and submit to the Commission duly got them audited	The EDM would like to submit that the power reform system of the department has been under active consideration of the State Government. The State Cabinet on 14/2/2013 agreed to unbundle the Department into two Companies (viz TRANSCO/HOLDCO and DISCOM. Accordingly two Companies MSPCL and MSPDCL have been incorporated on 15/7/2013. SBICAPs, the consultant, who is providing the Advisory Services to the Department on the Corporatization process has been working on finalization of Financial Re-Structuring Plan, Delegation of Power and Adminstrative Plan of the Department/the New Entities.They are submitting the final reports to the Government of Manipur very shortly, which will be placed before the State Cabinet for its approval. On the approval of the State Cabinet, the transfer scheme would be notified and Electricity Department would be unbundled into two Entities. On finalisation of above the reports will be submitted to the Hon'ble Commission.
2	Maintenance of asset and depreciation registers	On finalisation of the Corporatization activities which is expected very shortly the maintenance of asset and depreciation registers will be addressed.
3	EDM was directed to take appropriate steps to build up credible and accurate database and management information system (MIS) and regularly update the same for future record and	EDM has tied up with NIC vide letter no.1/2/CMTR/2K 11-12 ED (COMM) 1395-01 dated 04.04.12 for implementation of MIS system. Online submission of CMTR-3 in two Divisions have been implemented; other Divisions in progress. Online payment and payment through Bank of the electric bill is under process in consultation with TCS, NSDL and

Sr. No.	Directive	Compliance Status
	reference. Arrangement may also be made for "on-line payment" and "payment through bank" of the electricity bills	SBI officials.
4	EDM was directed to assess year wise revenue arrears from due consumers and submit a report by 30 Sept'11 to the Commission. EDM was also further directed to initiate action to collect the arrears	The revenue arrears for the last four years are as given below: 1. As on 31.03.2010 – Rs. 256.91 Crore 2. As on 31.03.2011 – Rs. 279.09 Crore 3. As on 31.03.2012 – Rs. 317.69 Crore 4. As on 31.03.2013- Rs. 351.165 Crore 5. As on 30.09. 2013- Rs. 396.420 Crore The EDM will submit the quarterly progress report to the Hon'ble Commission shortly.
5	Heavy fuel based power plant at Leimakhong which is stated to be made available for standby generation may be operated during peak hours to minimize load shedding. The department is therefore directed to generate 20 MU from the plant during peak hours	The ED-Manipur would like to submit that the approved budget for the purchase of heavy fuel for the LHFPP is very meagre, timely approval for purchase of furnace oil is not there and the operational cost is about Rs. 16 per unit. As such, in spite of the best effort of the department, the plant is operationalized only on special occasions.
6	De-commissioning of generating plants	As the ED-Manipur has engaged M/s SBI-Caps for evaluation and finalization of assets and liability of the department, the decommissioning of the generating plant which have been lying defunct for more than 15 years is under process. The report of M/s SBI-Caps is in the finalisation stage and as soon as it is finalised EDM will take necessary steps to de-commission the generating plant which have been lying defunct for more than 15 years.

Sr. No.	Directive	Compliance Status
7	EDM was directed to ensure that only surplus power be sold under UI sales after fully meeting the state	ED-Manipur would like to clarify that the UI mechanism is inherent in the inter-state transmission system and is required for grid stability as per CERC guidelines. The state power supply is wholly dependent upon the Central Generation Stations. There is a big gap between the supply and demand in the state and therefore the ED-Manipur has to resort to area wise alternate day load-shedding which depends upon the availability of power. Further the ED-Manipur has to buy surplus energy through UI mechanism during peak hours to supply reliable power as per its schedule whereas during midnight, demand is less and therefore the Department underdraws power from the system.
8	EDM was directed to ensure 100% metering of all feeders, DTs and consumer connections and conduct voltage wise energy audit. To achieve this, it was directed to chalk out an action plan for preliminary energy audit and submit the same to the Commission	For completion of 100% metering the following schemes are being undertaken :- i). Installation of 1,00,000 Optical Port 1-phase Electronic energy meter in Greater Imphal areas. Order has been issued and work is under progress by three Firms under Turnkey basis .The work is expected to be complete by the end of March' 2014. (ii). Providing of 60,336 Pre-paid energy meter under R-APDRP in 13 towns. Work order has been issued to two firms and the work is targeted to be completed by middle of 2014. (iii). The work of providing of feeder meters, boundary meters, DT meters, HT meters is in progress under R-APDRP/RGGVY/State Scheme, which is to completed by 2014-15. iv). Under APDRP Scheme 51,585 nos. of 1 phase static energy meter (5-40 Amp) are being provided through a firm and present progress as on October 2013 is 26,643 nos. in various area of Greater Imphal, Chandel and Thoubal. The target completion is by middle of 2014. Actual energy audit is only possible when there is 100% metering in the system from 132 KV level up to the consumers premises.

Sr. No.	Directive	Compliance Status
9	The Commission had directed to carryout detailed survey and investigation to: 1. Identify un authorized connections 2. Physical verification of the connected load of all connections 3. Physical verification of the categories under which the consumers are availing supply 4. Verification and updation of names of the consumers 5. Regularize 30000 unauthorized connections annually	The department had developed a scheme/plan for outsourcing 147 persons for engaging in Survey and Investigation of consumers but the same could not be materialized due to want of fund. The Department is now undertaking a scheme of expediting Survey and Investigation of consumers while carrying out the installation work of 1,00,000 nos. of 1-phase of Electronic Energy Meter through 3 (three) Turn Key contractors to whom work orders have already been issued. In this regard, the Department held a meeting on 29-8-2013 with the representatives of the 3 Turn Key Contractors and concerned officials of the Department for speedy and successful installation of the 1 lakh Energy meters by March 2014 in parts of Greater Imphal and the Town Areas of other Districts of the State. Further, it was also decided in the meeting that an advance team of the Department officials will carry out Survey and Investigation of consumers as per JERC (M&M) directives along with regularization of unauthorized connections. The Turn Key Contractors shall provide computerized data base for the consumers installed with Energy Meter and reports will be monitored by the Department. The Department officials will furnish the Survey and Investigation reports in the prescribed format. Work has already started with 70% material procurement as on date, and necessary reports will be submitted to the Hon'ble Commission at the earliest.
10	EDM was directed to provide meters to all unmetered consumers and replace the defective meters within the time frame given in the Commission order dated 7.1.2011	The EDM would like to submit to the Hon'ble Commission that it has targeted 100% metering of consumers by middle of 2014. A number of schemes are being implemented for the metering of consumer installations as stated in para 8.

Sr. No.	Directive	Compliance Status
11	EDM has to submit physical and financial progress of work done and the impact of the works on revenue performance and metering with details of work done, amount of revenue increase etc	The Physical and Financial Status of RAPDRP & RGGVY Schemes have been detailed in Annexure B.
12	EDM should ensure timely completion of projects and schemes	EDM endeavours to complete in time but got delayed due to force mejeure conditions like strikes , law and order , untimely monsoons, transportation bottlenecks etc. In spite of all this the Department has been trying hard to ensure timely completion of projects and schemes.
13	EDM was directed to furnish up to date position of interest on security deposit of consumers	EDM would like to submit that the process of preparation of segregated financial statements as per Companies Act is under advanced stage of finalization. After the financial statements are prepared, the amount of security deposit with the department will be finalized and reconciled. As such, after the finalization of financial statements, the Electricity Department shall pay the interest of the security deposit as per the guidelines of the Hon'ble Commission.
14	EDM was directed to procure power from renewables for a minimum of the RPO prescribed. EDM is directed to purchase it through REC mechanism	There is no grid connected renewable energy in NE region. Efforts were made to purchase through energy exchange or PTC but failed. Now the Department is tying up with MANIREDA for compliance of RPO.
15	Annual investment plan shall be submitted to the Commission and necessary approval of Commission shall be obtained for all major capital works costing Rs. 5 crores or more , before execution of the works	The annual investment plan is being submitted every year with the ARR and Tariff Petition to the Hon'ble Commission. In the present petition for FY 14-15, EDM is submitting the annual investment plan of FY 14-15 to the Commission. All the major capital investment schemes are being undertaken by the Department with the prior approval of State Government and as per the approved schemes of State Government and Central Government. Most of capital investment schemes are

Sr. No.	Directive	Compliance Status
		being funded entirely by grants from the State Government and as such are not recovered through tariff from consumers.
16	Maximum demand meters shall be provided for all bulk and HT consumers	The new meters being purchased by the department have the provision of maximum demand, which are being installed on bulk and HT consumers. Recently, the department has purchased 259 no. of such meters and more number of such meters are being planned for further purchase.
17	EDM is directed to file tariff petition for determination of transmision charges by Feb 2013	On finalisation of M/s SBI Cap's report for Corporatization/unbundling of the Electricity Department, Manipur, and the finalization of the segregated financial statements, the department shall be able to calculate the transmission charges separately. Currently, since the department is an integrated department with generation, transmission and distribution assets and the value of assets also being not know, it is not possible to determine the transmission and distribution wheeling charges.
18	EDM is directed to submit adequate data of 33 kV and 11 kV distribution system for determination of wheeling charges along with retail tariff of FY 13-14	EDM would like to submit to the Hon'ble Commission that M/s SBI Caps has been appointed for consultancy work of evaluation and finalization of assets and liability of the department. Further the segregation of the fixed assets into generation, transmission and distribution will also be completed simultaneously. The report is in the finalisation stage and as soon as it is finalised the EDM will file tariff petition for the determination of the wheeling charges
19	The Commission has observed that deployment of the existing staff is not rational. EDM is directed to prepare a restructuring plan by 31st December'2012 and submit a report	EDM would like to submit that the power sector reform of the department is under consideration of the government. As soon as the process is completed it will prepare the restructuring plan and submit the same to the Hon'ble Commission.

Tariff schedule

1. LT Supply

Category -1: Supply for Kutir Jyoti Scheme Connection Domestic Consumers

Applicability: Applicable to all households who have been given connection under Kutir Jyoti Scheme or similar connection under any scheme of the State Govt. or Central Govt. for the benefit of poorer section. As per existing norms unless supersedes by other new norms of KJS, if the total consumption in the last three months exceed 45 kWh, the connection should be converted to Category-2.

System of Supply:

AC 50 cycle, single phase, 230 V, initially single light point connection which can be extended by one or two light points or as per the norms specified by competent Authority from time to time.

A) **Metered Supply**: The total energy consumed shall be charged at the corresponding slab rate as given below –

Consumption Range	Energy/Variable Charge(Rs./kWh/month)	Fixed/Demand Charge(Rs./Month/Connection)
1-15 kwh	1.00	20.00
Above 15kwh	1.50	20.00

B) **Un-metered Supply**:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4, (j) of the Tariff order of FY 2012-13.
2) **Fixed Charges:** Rs.20/connection/month

Category-2: Supply for Domestic Light and Power

Applicability: The Tariff is applicable to all supplies for general domestic purposes such as Light, Fans, Heating devices, Television, VCR/VCP, Radio, Refrigerator, Air-conditioner, lift motors and all others appliances only for bona-fide residential used. This will also cover consumption of energy supplied for Government owned Educational and Research Institutions, Charitable Institutions, Government owned Hospital and

Dispensaries, Farm houses, Religious premises like Churches, Temples, Mosques, religious offices and any other institution or Offices not engaged in any commercial activity or private gain, excluding those consumers specially covered under other Categories of this Tariff.

System of Supply:

(a) AC 50 cycles, single phase, 230 V upto 8 kW connected load.

(b) AC 50 cycles, three phases, 400 V above 8 kW and below 20 kW of connected load.

A) Metered Supply: The total energy consumed shall be charged at the corresponding slab rate as given below:

Consumption Range	Energy/Variable Charge(Rs./Kwh/month)	Fixed/Demand Charge(Rs./kw/month of contract demand)
1-100 kwh	2.80	70.00
101-200 kwh	3.40	70.00
201-300 kwh	4.10	70.00
Above 300 kWh	4.60	70.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs. 70/kW/month of Contract Demand

Note: *Mixed domestic and commercial establishment shall be treated as commercial establishment if the load on commercial side is more than 200 W or 10% of the total connected load, whichever is less.*

Category-3: **Supply for Commercial Purposes**

Applicability: This tariff is applicable to all lights, all types of fans, heating devices, Television, VCR/VCP, Radio, Refrigerator, Air Conditioner, lift motors, pump and all other appliances for the purpose of private gain including other small power. This category includes supply of power to all establishment and installations of commercial offices, Government undertakings, Public Sector undertakings, Commercial houses, Markets, Optical houses, Restaurants, Bars, Tailoring shops not using motive power, Refreshment and Tea Stalls, Show-Cases of advertisement, Theatres, Cinemas, Hotels, Lodging and Boarding, Private Nursing Homes and Hospitals, Religious Hospitals, Private run Schools and Hostels and Boarding facilities, any other educational institutions demanding fees, Photographic studio, Battery charging units, Repair Workshops, and Newspaper Press (Newspaper Printing press only), Petrol pump, telecom service providers etc. and other purposes which are not covered by any of the categories of this tariff order the connected load of which is upto 20 kW.

Note: *Mixed domestic and commercial establishment shall be treated as commercial establishments if the load on commercial side is more than 200W or 10% of the total connected load, whichever is less.*

System of Supply:

(a) AC 50 cycle, single phase, 230 V upto 5kW of connected load.

(b) AC 50 cycle, three phases, 400 V above 5kW and upto 20 kW of connected load.

A) **Metered Supply**: The total energy consumed shall be charged at the corresponding slab rate as given below:-

Consumption Range	Energy/Variable Charge(Rs./Kwh/month)	Fixed/DemandCharge(Rs./ kw/month of contract demand)
1-100 kwh	3.80	90.00
101-200 kwh	4.50	90.00
201-300 kwh	5.10	90.00
Above 300 kWh	5.60	90.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.90/kW/month of Contract Demand

Category-4: Supply for Public Lighting

Applicability: Applicable to Public Street Lighting System in municipality, Town, Committee, Sub-Town/Village, etc. including Signal system and Road & Park lighting in areas of Municipality Town/Committee, Sub-Town/Village, etc.

System of Supply:

(a) AC 50 cycles, single phase, 230 V,

(b) AC 50 cycles, three phases 400 V.

A) Metered Supply:

Consumption Range	Energy/Variable Charge(Rs./Kwh/month)	Fixed/Demand Charge(Rs./kw/month of contract demand)
All units	4.90	70.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.70/kW/month of Contract Demand

Category-5: Supply for Public Water Works

Applicability: Applicable to all public water supply system**.**

System of Supply:

(a) AC 50 cycles, single phase, 230 V upto 5kW of Connected load.

(b) AC 50 cycles, three phases, 400 V above 5 kW and upto 20 kW of connected load.

A) Metered Supply:

Consumption Range	Energy/Variable Charge(Rs./Kwh/month)	Fixed/Demand Charge(Rs./Month/Connection)
All units	4.90	120.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.120/kW/month of Contract Demand

Category-6: Supply for Agricultural & Irrigational Purpose

Applicability: This tariff is applicable to irrigation/pumping for agricultural purpose only.

System of Supply:

(a) AC 50 cycles, single phase, 230 V upto 5kW of Connected Load.

(b) AC 50 cycles, three phases, 400 V above 5kW and upto 20 kW of Connected Load.

A) Metered Supply:

Consumption Range	Energy/Variable Charge(Rs./Kwh/month)	Fixed/Demand Charge(Rs./kw/month of contract demand)
All units	2.90	70.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.70/kW/month of Contract Demand

Category-7: Supply to Small Industry

Applicability: Applicable to all Industrial power consumers with demand of power upto 20 kW which are not covered by Category No. 3 (Supply of Commercial Purposes), such as steel fabrications, motor body builders, power handloom industry, poultry farming, pisciculture, prawn culture, floriculture in green houses, mushroom production, cold storage unit of pisciculture, agriculture based industries, horticulture and any other type of industry where raw material is converted into finished products with the help of electrical motive power, printing press, etc. This will include domestic or commercial within the industrial complex.

System of Supply:

(a) AC 50 cycles, single phase, 230 V upto 5kW of connected load.
(b) AC 50 cycles, three phases, 400 V above 5kW and upto 20 kW of connected load.

A) Metered Supply: The total energy consumed shall be charged at the corresponding slab rate as given below –

Consumption Range	Energy/Variable Charge(Rs./Kwh/month)	Fixed/Demand Charge(Rs./kw/month of contract demand)
All units	2.90	70.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order of 2012-13.
2) **Fixed Charges:** Rs.70/kW/month of Contract Demand

Category-8: Temporary Power Supply

Applicability:

(a) For marriage, puja, religious/public function/gathering and all others domestics, festivals/ ceremony purposes which are of temporary nature upto 20 kW of connected load for a period not exceeding 180 days.

(b) For commercial and Industrial purposes like cinemas, theatres, circus, carnivals, exhibition, concerts, etc. which are of temporary nature for private gain upto 20 kW, of connected load for a period not exceeding 180 days.

System of Supply: As may be decided by the Electricity Department, Government of Manipur.

Consumption Range	Energy/Variable Charge(Rs./Kwh/month)	Fixed/Demand Charge(Rs./kw/month of contract demand)
All units	4.90	90.00

A) Metered Supply:

Consumer shall be supplied with energy meter by the Department after receiving in advance from consumer, the full cost of energy meter as security, which shall be released to the consumer after period of connection is over provided energy meter is not defective/damage during the connection; otherwise security shall be forfeited. Connection and disconnection charges will be extra.

Materials for service connection shall be arranged by the Department on advance payment by consumer or the same may be arranged by the consumer as per the specifications required by the Department, which will be the property of the consumer after the connection period is over. In addition to this, usual Departmental charges for connection and disconnection should be paid in advance.

B) Terms & Conditions:

Temporary power supply may be provided in accordance with the delegation of powers as furnished below:

(i) E.E. concerned - upto 120 days.

(ii) S.E. concerned - upto 180 days.

(a) The energy cost as per tariff above along with connection & disconnection charge will be realized in advance from the applicant before making the supply available to him.

(b) The complete wiring for which temporary supply of power is required shall be arranged by applicant at his own expense. It will also be the responsibility of the applicant to ensure that the wiring conforms to the technical requirements as specified by the Electricity Department, Government of Manipur.

(c) Supply will be given only after obtaining proper security for meters and prepayment of Rs. 100 per kW of connected load or part thereof, in advance, which will finally be adjusted against consumption bill.

C) Payment: Charges for temporary connection shall be paid in advance against bill to be served.

Bill based on actual consumption and daily fixed charge shall be served to the consumer at reasonable intervals. The amount of each bill shall be adjusted from the amount of advance.

(a) In the event that the total amount of advance paid is found short of the amount of the bills served as above, the Department shall be at liberty to request the consumer to pay additional payment in advance as required based on this tariff.

(b) If the consumer fails to pay the additional payment, the Department shall be at liberty to discontinue the temporary power supply.

(c) The advance amount paid and the consumption bill shall be adjusted in full immediately after the termination of the temporary power supply.

2. HT Supply Tariffs

General Conditions of HT Supply

(a) The tariffs are applicable for supply of Electricity to HT Consumers with a Contract demand of above 25 kVA or connected load of above 20 kW.

(b) **Maximum Demand**

Maximum demand shall be the highest value of average load measured in kVA or kW as the case may be, delivered at the point of commencement of supply of the consumer during any consecutive 30/15 minutes period of maximum used (depending upon a type of the meter being used) in the said Month.

(c) **Billing Demand**

The billing demand shall be the maximum demand recorded during the Month or 80% of the Contract demand whichever is higher.

Category – 1: Commercial

Applicability: This Tariff is applicable to similar purposes defined in LT Supply Category-3 Supply for Commercial Purposes**.**

System of Supply: AC, 50 cycles, 11000V and above**.**

A) Metered Supply

Consumption Range	Energy/Variable Charge(Rs./kWH/month)	Fixed/Demand Charge(Rs./kVA/month of contract demand)
All units	4.60	120.00

B) Un-Metered Supply

1) **Energy Charges:** Energy bill shall be computed as per Appendix, No.4 (j) of this Tariff Order 2012-13.

2) **Fixed Charges:** ` 120/kVA/Month of Contract demand.

Category-2: Public Water Works (HT-PWW)

This tariff is applicable to similar purposes defined in LT Category-5 – Supply for Public Water Works(PWW).

System of supply: AC 50 Cycles 11000 V and above

Consumption Range	Energy/Variable Charge(Rs./kWH/month)	Fixed/Demand Charge(Rs./kVA/month of billing demand)
All units	4.60	120.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.120/kVA/month of Contract Demand

Category-3: Irrigation & Agriculture

Applicability: This Tariff is applicable to irrigation / pumping for agricultural purpose only.

System of supply: AC 50 cycles 11000 V and above

A) Metered Supply

Consumption Range	Energy/Variable Charge(Rs./kWH/month)	Fixed/Demand Charge(Rs./kVA/month of billing demand)
All units	2.90	120.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.120/kVA/month of Contract Demand

Category-4: Medium Industry

Applicability: This Tariff is applicable to similar purpose defined in LT Category-7 Supply to with Contract Demand/Connected Load upto 125 kVA/100kW.

System of supply: AC, 50 cycles, 11000 V and above

A) Metered Supply

Consumption Range	Energy/Variable Charge(Rs./kWH/month)	Fixed/Demand Charge(Rs./kVA/month of billing demand)
All units	3.80	120.00

B) Un-metered Supply:

1) **Energy Charges:** Energy bill shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.120/kVA/month of Contract Demand

Category-5: Large Industry

Applicability: This Tariff is applicable for supply of power to industrial consumers having license from designated authority of appropriate government and not covered under any other category, at a single point for industrial purposes with Contract Demand/Connected Load above 125 kVA/100 kW.

System of supply: AC, 50 cycles, 11000 V and above

A) Metered Supply

Consumption Range	Energy/Variable Charge(Rs./kWH/month)	Fixed/Demand Charge(Rs./kVA/month of billing demand)
All units	4.40	120.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.120/kVA/month of Contract Demand

Category 6: Bulk Supply within the State

Applicability: This tariff is applicable for all installations, including mixed loads similar to LT category 2 & 3 such as private sector installation, educational institution, defence installation, government & public sector offices & complexes and Hospital etc… that arrange their own distributions system of power within the premises with the approval of competent authority. This will not include industrial complexes consisting mixed load of LT category 2 & 3.

System of supply: AC 50 cycles 11000 V and above

A) Metered Supply:

Consumption Range	Energy/Variable Charge(Rs./kWH/month)	Fixed/Demand Charge(Rs./kVA/month of billing demand)
All units	3.90	120.00

B) Un-metered Supply:

1) **Energy Charges:** Energy consumed shall be computed as per Appendix, No.4 (j) of this Tariff order 2012-13.
2) **Fixed Charges:** Rs.120/kVA/month of Contract Demand

3. Miscellaneous Charges

(a) Meter Rent: Monthly charges for hiring of the meter and indicators where they are the property of Electricity Department, Government of Manipur payable by the consumers shall be as follows:

(i) Energy meter for AC single phase LT Supply: Rs. 10.00 per meter per Month.

(ii) Energy meter for AC three phases LT Supply 400 V between phases (without CT): Rs. 20.00 per meter per Month.

(iii) Energy meter for AC three phase LT Supply 400 V between phases (with CT): Rs. 50.00 per meter per Month

(iv) Energy meter for AC three phase HT supply: Rs. 500.00 per meter per Month.

(b) Meter Rent for Pre-Paid Meters: Monthly charges for hiring of the meter and indicator where they are the property of Electricity Department, Government of Manipur, payable by the consumers shall be as follows:

(i) Pre-Paid energy meter for AC single phase LT supply:
Rs. 20 per meter per month

(ii) Pre-Paid energy meter for AC three phase LT supply:
Rs. 40 per meter per month

(c) Other charges for meter:

(i) Meter shifting charge:

(1) Rs. 100.00 per shifting if resulted from reconstruction/modification of building and at consumer's request.

(2) Free of cost if shifting is done in the interest of work.

(ii) The Cost of Replacement: Cost of the energy meter after initial installation shall normally be borne by the consumers at the following rates:

(1) Re-installation/Replacement charge by new meter: (exclusive of re-installation of existing meter sent for calibration/test). Rs. 75.00 each and material cost, if any will be charged extra.

(2) Cost of Energy Meters supplied by Department:

As per the Department's purchase rate plus 15% Departmental charge if supplied from the Department (energy meters approved / tested by the Department only shall be used).

Generally, the cost of energy meter for subsequent replacement will be borne by the consumer. However, when the cause leading to subsequent replacement is either manufacturing defect or Department's fault then, it shall be free of cost.

(d) Charges for testing of Meters at the request of consumers:

(i) For AC single phase LT energy meter: Rs. 50.00 per meter per testing.

(ii) For AC three phase LT energy meter without CT: Rs. 75.00 per meter per testing.

(iii) For AC three phase LT energy meter with CT: Rs. 100.00 per meter per testing.

(iv)For energy meter AC three phase HT supply: Rs. 150.00 per meter per testing. In case the meter installed at the consumer premises is found to be defective from initial installation, testing and replacement of meter will be done free of cost.

(e) Testing of Consumer's Installation:

The first test and inspection will be carried out free of cost. Should any further test or inspection is necessitated due to fault in the installation or due to non-compliance with the condition of supply by the consumer an extra charge of Rs. 100.00 per test, payable in advance, shall be levied. In the event of the consumer failing to pay the testing charge in advance within stipulated time, the Department will be at liberty to disconnect the consumer's premise from the supplier's main.

(f) Disconnection and Reconnection:

Disconnection: Disconnection of an installation in all cases will be free of charges.

Reconnection:

(i) For AC single phase LT supply: Rs.80.00

(ii) For AC three phase LT supply: Rs. 150.00

(iii) For AC HT supply: Rs. 400.00

(g) Charges for change of category:

Charges for change of category will be done as stipulated in Joint Electricity Regulatory Commission for Manipur & Mizoram (Electricity supply Code) Regulations 2010, chapter-6 clause-6.1

(h) Charges for Replacement of Connection Wire, Cut-out, Fuse, etc.:

Cost of replacement after initial fixation of connection wire, cut-out, fuses, etc. will be borne by the consumers and shall be payable by the consumer in advance as per purchase rate of the Department plus 15% Departmental charges if the Department supplies the materials or the consumer may arrange the required materials as per the required specifications of the Department.

The execution charge shall be as given below:

i) Single phase connection: Rs.400.00 per connection.

ii) LT three phase connection: Rs.600.00 per connection.

iii) HT three phase connection: Rs.900.00 per 100 meters of the HT line

(i) Re-rating of Installation:

Fees for re-rating of the consumer's installation at the request of the consumer shall be Rs. 100.00 per connection.

The aforesaid charges do not include the charges payable by the consumer for other works that may be needed due to change of connected load.

(j) Security Deposit:

Security Deposit against safe custody of supplier's apparatus for new service connection shall be cost of energy meter and other apparatus of the supplier installed at the premises of the consumer. The cost of energy meter shall not be included in the Security Deposit in case the meter is supplied by the consumer at his own cost. The amount of

Security deposit shall normally be the price of the meter and other appliances as fixed by the licensee from time to time.

(k) Load Security:

The amount of Load security for new service connection will be calculated as per the procedure prescribed in the Clause 6.10 of the Joint Electricity Regulatory Commission for Manipur & Mizoram (Electricity Supply Code) Regulations, 2010.

(l) Charges for Replacement of tamper proof Meter Box:

For AC single phase LT or three phases LT without CT or with CT, the charge will be as per Department purchase rate plus 15% towards Departmental charge in case the energy meter box is replaced from the Department Store.

(m) Service Lines & Service Connection:

(i) Type of Service Connection: Type of service connection and line length for service connection will be as per Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations 2010 chapter-3

(ii) Cost of Service Connection: As stipulated in the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations 2010 chapter 3 clause 3.5, Appendix, cost of material is to be assessed based on the department purchase rate. If the consumer desires to arrange service connection materials, the Department (not below rank of Junior Engineer concerned) will check all the materials.

(n) Mutation Fee: Mutation fee i.e. fee for change of name shall be Rs.50.00.

(o) Cost of Application Form: Application and Agreement for supply i.e. Energy Requisition form for supply of energy shall be obtainable on payment of Rs.20.00 at any one of the Divisional Offices of the Department on any working day during Office hours.

4. Important Conditions of Supply

(For all Categories of Consumers)

(a) Rebate for advance payment: For payment of energy bill in advance, a rebate of 5 p.c. shall be allowed. The consumers provided with pre-paid energy meters shall be offered a discount of 3 p.c. of the Electricity charges (Fixed charge + Energy charge).

(b) Rebate for payment within due date: For payment of energy bill made within due date, Rebate of @ Re 0.05 per unit (will be allowed).

(c) Payment: Payment against bills in full shall be made by Cash/Treasury Challan/DD/Local Cheque only unless otherwise accepted by the competent authority within the last date for payment. Bank commission/charges, if any should be borne by the consumers.

(d) Surcharge for late Payment of Bills: If payment is not received within due date surcharge @ 2% at simple interest on the outstanding principle amount for each 30 days successive period or part thereof will be charged, until the amount is paid in full.

(e) Single Point Delivery: This tariff is based on the supply being given through a single point of delivery and metering at one voltage. Supply at other points at other voltage shall be separately metered and billed for and shall be considered as separate connection.

(f) Voltages and Frequency: All voltages mentioned in this tariff are only nominal voltages and alternating current (AC) with nominal frequency of 50 Hertz (i.e. 50 cycles per second) and may not be 100 % correct in practical.

(g) Surcharge for Low Power Factor: Power factor for the Month shall be the ratio of (kWh and kVAh) supplied to the consumer during the Month. The power factor of consumer's installation shall not be less than 90%. If the power factor falls below 90% during any Month, the consumer shall pay surcharge as detailed below:

Power factor range	Surcharge
For every 1% fall below 90%	Surcharge at 0.5% on energy charge and demand charges will be levied subject to a maximum of 2.5%.

Should the power factor drop below 70% and to remain for a period of 2 consecutive Months it must be brought up to 90% within a period of 6 Months by methods approved by the licensee failing which without prejudice to the right of the licensee to collect surcharge and without prejudice to such other rights as having accused to the licensee or any other right of the licensee consumer may be discontinued. All LT consumers whose connected load include Welding Transformers or induction meters of 3HP and above shall be required to have suitable shunt capacitors installed as per Chapter 4 clause 4.6(1) & (2) of JERC(Electricity Supply Code) Regulations 2010 to ensure power factor is not less than 85%. Failure to install required rated capacitors as indicated in the above regulations or the capacitors installed became defective, surcharge at 25% on the bill amount shall be levied till sound and adequate capacitors are installed. LT consumers who are provided with electronic meters, which can record power factor, will however become under the preview of clause 6 above and power factor surcharge will be levied accordingly.

(h) Transformation Loss: The consumers getting their supply at HT and metered on the LT side shall be charged an additional 3% over the metered consumption as transformation loss.

(i) Determination of Un-metered Energy, Fixed/Demand Charges: For the purpose of determination of Un-metered Energy, Fixed/Demand Charges in the monthly billing, the Contract Demand/Connected load shall be rounded to the next higher kVA/kW if the decimal is higher than 0.5 and to the nearest lower kVA/kW if the decimal is lower than 0.5. For consumers having connected load below 0.5 kW except KJ category, the connected shall be rounded off to 0.5 kW.

(j) Billing for un-metered supply: Billing for un-metered supply shall be computed as per the procedure prescribed in the JERC for (M&M) (Electricity Supply Code) Regulations, 2010 as below:

(i) For Regular consumers without Energy meters, Annexure-8, Para-A(1) of JERC for M&M(Electricity Supply Code) Regulations, 2010 and billed at corresponding rate of metered tariff.

(ii) For defective Energy meters, energy consumed shall be computed as per Regulation No. 9.6 of JERC for M&M (Electricity Supply Code) Regulations, 2010 and billed at corresponding rate of metered tariff.

(iii) For Un-authorised consumer/theft/pilferage, Annexure-8 (A), (B) & (C) of JERC for M&M (Electricity Supply Code) Regulations, 2010.

Prayer

2. EDM requests the Hon'ble Commission to:

- Admit the Aggregate Revenue Requirement of FY 14-15 and the Tariff Revision Proposal for FY 14-15 as submitted herewith.

- Condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.

- Permit submission of any additional information required by the Commission during the processing of this petition.

- And pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case