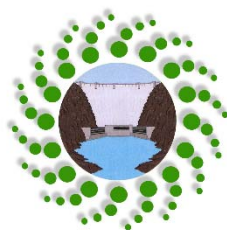


BEFORE  
MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION,  
SHILLONG

**PETITION**  
**FOR**  
**TRUING UP OF FY 2014-15**  
**AND**  
**PROVISIONAL TRUING UP OF FY 2015-16**  
**AND**  
**MID-TERM REVIEW OF MYT CONTROL PERIOD**  
**FY 2015-16 TO FY 2017-18**  
**AND**  
**DETERMINATION OF GENERATION TARIFF**  
**FOR FY 2017-18**  
**FOR OLD STATIONS & SONAPANI**

**FILED BY**



**MePGCL**

Generating Clean And Green Energy

**MEGHALAYA POWER GENERATION CORPORATION LTD.**  
**LumJingshai, Short Round Road, Shillong - 793 001**

**BEFORE THE HON'BLE MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION**

FILE / PETITION NO.....

IN THE MATTER OF

TRUING-UP OF THE ANNUAL FIXED CHARGES (AFC) FOR THE FY 2014-15, PROVISIONAL TRIING-UP OF FY 2015-16, MID-TERM REVIEW OF THE MYT CONTROL PERIOD FY 2015-16 TO FY 2017-18 AND DETERMINATION OF TARIFF OF OLD POWER STATIONS AND SONAPANI FOR FY 2017-18 OF THE MEGHALAYA POWER GENERATION CORPORATION LIMITED (MePGCL) UNDER THE MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS FOR DETERMINATION OF TARIFF) REGULATIONS, 2011 AND MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION (MULTI YEAR TARIFF) REGULATIONS, 2014 AND UNDER SECTION-62 READ WITH SECTION 86 OF THE ELECTRICITY ACT 2003.

AND IN THE MATTER OF

MEGHALAYA POWER GENERATION CORPORATION LIMITED, LUMJINGSHAI, SHILLONG – 793001, MEGHALAYA

**PETITIONER**

The Petitioner respectfully submits as under:

1. In exercising its powers conferred under the section 131 and 133 of the Electricity Act 2003, the State Government of Meghalaya notified "The Meghalaya Power Sector Reforms Transfer Scheme 2010" on 31st March 2010 leading to restructuring and unbundling of erstwhile Meghalaya State Electricity Board (MeSEB) into four entities namely (i) Meghalaya Energy Corporation Limited (MeECL), the Holding Company; (ii) Meghalaya Power Distribution Corporation Limited (MePDCL), the Distribution Utility; (iii) Meghalaya Power Generation Corporation Limited (MePGCL), the Generation Utility; & (iv) Meghalaya Power Transmission Corporation Limited (MePTCL), the Transmission Utility.
2. However, the holding company - MeECL carried out the functions of distribution, generation and transmission utilities from 1st April 2010 to 31st March 2012. Subsequently, through notification dated 31st March 2012, State Government notified an amendment to The Power Sector Reforms Transfer Scheme leading to effective unbundling of MeECL into MeECL (Holding Company), MePDCL (Distribution Utility), MePGCL (Generation utility) and MePTCL (Transmission Utility) from 1st April 2012 onwards.

3. Further, the Government of Meghalaya vide its Power Sector Reforms Transfer Scheme 2010, transferred the assets, properties, rights, liabilities, obligations and personnel of the erstwhile MeSEB into four successor companies, as provided above.
4. The Meghalaya State Electricity Regulatory Commission (hereinafter referred to as “MSERC” or “the Hon’ble Commission”) is an independent statutory body constituted under the provisions of the Electricity Act (EA), 2003. The Hon’ble Commission is vested with the authority of regulating the power sector in the State inter alia including determination of tariff for electricity consumers.
5. Under Section 61 & 62 of the Electricity Act 2003 and under The Meghalaya State Electricity Regulatory Commission (Terms and conditions for determination of tariff) Regulations, 2011 and The Meghalaya State Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2014 (hereinafter referred to as “MYT Regulations, 2014”) , MSERC had passed the ;
  - a. Generation tariff order of old plants for FY 2014-15 on 10th April 2014;
  - b. Annual Fixed Cost (hereinafter referred to as “AFC”) for MePGCL Old Power Stations namely for six plants: Umiam Stage I, Umiam Stage II, Umiam Stage III, Umiam Stage IV, Umtru and Sonapani for the control period FY 2015-16 to FY 2017-18 and tariff for FY 2015-16 on 30th March 2015.
6. Based on the provisions 15 of the Tariff Regulations, 2011, along with provisions of regulations 4.2(a), 4.2(c) and 6.2 (c) of the MYT Regulations, 2014, MePGCL files this petition for approving true-up of FY 2014-15, provisional true-up of FY 2015-16, Mid-term review of AFC for control period FY 2015-16 to FY 2017-18 and determining the generation tariff for FY 2017-18 of MePGCL old stations.
7. As such, for Leshka HEP, MePGCL has already filed a separate petition before MSERC for determining AFC for the MYT control period FY 2015-16 to FY 2017-18 including true up of FY 2013-14 & provisional true up of FY 2014-15.
8. MePGCL in the present petition, has determined the AFC of old plants after deducting the AFC for Leshka HEP as per the filing in the Leskha petition from the total AFC of MePGCL stations as a whole for True up of FY 2104-15, Provisional True Up of FY 2015-16 and determining generation tariff for FY 2017-18.
9. The expenses of the holding company, MeECL is apportioned equally among the generation, transmission and distribution utilities since the MeECL is an administrative setup for all the three subsidiaries and undertakes common corporate functions of the three companies.
10. Now that since the Audited Statement of Accounts for FY 2014-15 and Provisional Statement of Accounts for FY 2015-16 are available, MePGCL is filing the present petition based on the same.

11. The Board of Directors of MePGCL has accorded approval for filing of this petition and authorized the undersigned to file the petition accordingly.
12. As such, MePGCL requests the Hon'ble Commission to allow it to file the truing up of FY 2014-15, provisional truing up of 2015-16 along with the mid-term review of FY 2015-16 to FY 2017-18 and the tariff petition of FY 2017-18.
13. The applicant, therefore, humbly prays before the Hon'ble Commission to pass appropriate order on the following:
  - a. Truing-up of FY 2014-15;
  - b. Provisional Truing-up of FY 2015-16;
  - c. Mid-term review of FY 2015-16 to FY 2017-18;
  - d. Tariff of FY 2017-18;
  - e. To pass such orders, as Hon'ble Commission may deem fit and proper and necessary in view of the facts and circumstances of the case;
  - f. To condone any inadvertent omissions, errors & shortcomings and permit the applicant to add/ change/ modify/ alter this filing and make further submissions as required.

(A Lyngdoh)  
Superintending Engineer (Project Monitoring),  
For and on behalf of  
Meghalaya Power Generation Corporation Ltd

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# 1. Introduction

## 1.1. Provision for truing up

The Hon'ble Commission had notified the Meghalaya State Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2014 on 15th September 2014 (hereinafter referred as "Tariff Regulations, 2014"). These Regulations provide the framework under which the licensees shall determine the tariff for different functions of power sector. Accordingly, the key provisions of the said Regulations are reproduced below for reference.

### ***"11. Truing Up***

*11.1 Where the Aggregate Revenue Requirement and expected revenue from tariff and charges of a Generating Company or Transmission Licensee or Distribution Licensee is covered under a Multi-Year Tariff framework, then such Generating Company or Transmission Licensee or Distribution Licensee, as the case may be, shall be subject to truing up of expenses and revenue during the Control Period in accordance with these Regulations.*

*11.2 The Generating Company or Transmission Licensee or Distribution Licensee shall file an Application for Truing up of the previous year and determination of tariff*

*11.3 Provided that the Generating Company or Transmission Licensee or Distribution Licensee, as the case may be, shall submit to the Commission information in such form as may be prescribed by the Commission, together with the Audited Accounts including audit report by CA&G, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges:*

*11.4 Provided further that once the Commission notifies the Regulations for submission of Regulatory Accounts applications for tariff determination and truing up shall be based on the Regulatory Accounts.*

*11.5 The scope of the truing up shall be a comparison of the performance of the Generating Company or Transmission Licensee or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise of the following:*

*a) a comparison of the audited performance of the applicant for the previous financial*

*year with the approved forecast for such previous financial year, subject to the prudence check including pass-through of impact of uncontrollable factors;*

*b) Review of compliance with directives issued by the Commission from time to time;*

*c) Other relevant details, if any.*

*11.6 In respect of the expenses incurred by the Generating Company, Transmission Licensee and Distribution Licensee during the year for controllable and uncontrollable parameters, the Commission shall carry out a detailed review of performance of an applicant vis-a-vis the approved forecast as part of the truing up.*

*11.7 Upon completion of the truing up under Regulation 11.4 above, the Commission shall attribute any variations or expected variations in performance for variables specified under Regulation 12 below, to factors within the control of the applicant (controllable factors) or to factors beyond the control of the applicant (uncontrollable factors):*

*Provided that any variations or expected variations in performance, for variables other than those specified under Regulation 12.1 below shall be attributed entirely to controllable factors.*

*11.8 Upon completion of the Truing Up, the Commission shall pass an order recording:*

*a) The approved aggregate gain or loss to the Generating Company or Transmission Licensee or Distribution Licensee on account of controllable factors, and the amount of such gains or such losses that may be shared in accordance with Regulation 14 of these Regulations;*

*b) Components of approved cost pertaining to the uncontrollable factors, which were not recovered during the previous year, shall be pass through as per Regulation 13 of these Regulations;*

*c) Tariff determined for the ensuing year.”*

Section 61 & Section 62(1)(a) of Electricity Act 2003 empower the Hon'ble Commission to determine tariff for generation for the generating company.

The Power Sector Reforms Transfer Scheme lead to effective unbundling of MeECL into MeECL (Holding Company), MePDCL (Distribution Utility), MePGCL (Generation utility) and MePTCL (Transmission Utility) from 1st April 2012 onwards.

It is submitted that as per Regulation 15 (3) of the Meghalaya State Electricity Regulatory

Commission (Terms and Condition for determination of tariff) Regulations, 2011, the licensee shall get their accounts audited either by C&AG of India or by a statutory auditor drawn from the panel of statutory auditors approved by the C&AG.

It is submitted that as per Regulation 11.3 of the MYT Regulations, 2014, the licensee shall submit their audited accounts to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges.

It is further submitted that, M/s Kiron Joshi & Associates has been appointed as Statutory Auditor of MePGCL, and M/s Amit O P Sharma & Associates has been appointed as Statutory Auditor of MeECL for the FY 2014-15 as well as FY 2015-16. The firms are chartered Accountancy firms, appointed as empaneled statutory Auditors by Comptroller & Auditor General of India (C&AG). M/s Kiron Joshi & Associates and M/s Amit O P Sharma & Associates have audited the Annual Accounts of MePGCL and MeECL, respectively for FY 2014-15 under the Companies Act, 1956.

The audited statement of accounts for MePGCL and MeECL for FY 2014-15 are appended as **Annexure-A &B**.

The provisional statement of accounts for MePGCL and MeECL for FY 2015-16 have been approved by Board of Directors and the same are appended as **Annexure-C&D**.

## **1.2. Provision for Mid-Term review**

“Mid-term Review” means a review to be undertaken in accordance with provisions of regulations 4.2(a) and 6.2 (c) of the MYT Regulations, 2014.

Accordingly, the key provisions of the said Regulations are reproduced below for reference.

### ***“4. Multi-Year Tariff framework***

*4.1 The Commission shall determine the tariff for matters covered under clauses (i), (ii), (iii) and (iv) of regulation 3 above under Multi- Year Tariff framework with effect from April 01, 2015.*

.....

.....

*4.2 The Multi-Year Tariff framework shall be based on the following elements, for determination of Aggregate Revenue Requirement and expected revenue from tariff and charges for Generating Company, Transmission Licensee, and Distribution Business:*

a) A detailed Business Plan based on the principles specified in these Regulations, for each year of the Control Period, shall be submitted by the applicant for the Commission's approval:

Provided that the performance parameters, whose trajectories have been specified in the Regulations, shall form the basis of projection of these performance parameters in the Business Plan.

Provided further that a Mid-term Review of the Business Plan may be sought by the Generating Company, Transmission Licensee and Distribution Licensee through an application filed three (3) months prior to the filing of Petition for truing-up for the second year of the Control Period and the tariff determination for the third year of the control period.

**6. Accounting statement and filing under MYT**

6.1 The filing under MYT by the Generating Company, Transmission Licensee, and Distribution Licensee, shall be done on or before 30th November each year to the Commission and in compliance with the principles for determination of ARR as specified in these Regulations, in such formats and at such time as may be prescribed by the Commission from time to time. The filing of truing up of petitions prior to MYT period shall be done in the manner and at such time as may be decided by the Commission.

6.2 The filing of MYT Petition for the Control Period under these Regulation shall be as under:

.....  
.....

c) In case of Mid-term Review of Business Plan, the Petition shall comprise of:

- i. Truing Up for the previous year;
- ii. Modification of the ARR for the remaining years of the Control Period, if any, with adequate justification for the same;
- iii. Revenue from the sale of power at existing tariffs and charges for the ensuing year;
- iv. Revenue gap for the ensuing year calculated based on ARR approved in the MYT order and truing up for the previous year;
- v. Application for revision of tariff for the ensuing year.

### 1.3. Submission before the Hon'ble Commission

As such, MePGCL hereby submits the petition under section 61, 62 (1) (a) of the Electricity Act, 2003, MSERC Tariff Regulations, 2011 and MSERC (Multi Year Tariff) Regulations, 2014 for approval of final true-up of FY 2014-15 , approval of provisional true-up of FY 2015-16, review of AFC for remaining MYT control period FY 2016-17 & FY 2017-18 and to pass the Gaps/Surplus of FY 2014-15 , FY 2015-16 through appropriate determination of generation tariff in FY 2017-18.

## 2. True Up of FY 2014-15

### 2.1. Performance

#### 2.1.1. Existing Generation Capacity:

The initial installed capacity when the erstwhile Meghalaya State Electricity Board (MeSEB) was bifurcated from the Assam State Electricity Board (ASEB) in 1975 was 65.2 MW. With the commissioning of Stage-III HEP (1979), Stage IV HEP (1992) & Sonapani Mini Hydrel and uprating of Umiam Stage-II (from 18MW to 20MW in 2012), MLHEP 3x42 MW in 2014, the installed capacity increased to 314.7 MW

All the Generating Stations except Sonapani Mini Hydrel Project, as indicated in the Table below are hydrel power stations with the main reservoir at Umiam for all the stages. Therefore, all these stages depend mainly on water availability at the Umiam reservoir. The total installed capacity of MePGCL projects at the start as on April 2014, was as under:

Table 1 Existing Generation Capacity FY 2014-15

S. No.	Name of Station	No. of	Capacity	Total	Year of
		Units	(MW)	Capacity	Commissioning
1	Umiam Stage I	I	9	36	21.02.1965
		II	9		16.03.1965
		III	9		06.09.1965
		IV	9		09.11.1965
2	Umiam Stage II	I	10	20*	22.07.1970
		II	10		24.07.1970
3	Umiam Stage III	I	30	60	6.01.1979
		II	30		30.03.1979
4	Umiam Stage IV	I	30	60	16.09.1992
		II	30		11.08.1992
5	Umtru Power Station	I	2.8	11.2	01.04.1957
		II	2.8		01.04.1957
		III	2.8		01.04.1957
		IV	2.8		12.07.1968

S. No.	Name of Station	No. of	Capacity	Total	Year of
		Units	(MW)	Capacity	Commissioning
6	Mini Hydel (Sonapani)	I	1.5	1.5	27.10.2009
7	MLHEP (Leshka)**	I	42	126	01.04.2012
		II	42		01.04.2012
		III	42		01.04.2013
<b>Total</b>				<b>314.7</b>	

\*Operated from 18 Mw to 20 MW in 2012

\*\* A separate petition has been filed for tariff determination of Leshka along with true up of past years

### 2.1.2. Computation of Generation Energy:

The following sections outline details of operational norms for computation of energy generation for FY 2014-15 based on Tariff Regulations, 2011 or past trend as the case may be.

### 2.1.3. Operation Norms

The following sections provide the extract of the Tariff Regulations, 2011 with respect to computation of generation energy.

#### 2.1.3.1. Normative Annual Plant Availability Factor

Table 2 Normative Annual Plant Availability Factor

No.	Station Particular	Norm
1	Storage and pondage type plants: where plant availability is not affected by silt and	
a	with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of upto 8 %	90 %
b	with head variation between FRL and MDDL of more than 8%	$(\text{Head at MDDL} / \text{Rated Head}) \times 0.5 + 0.2$

2	Pondage type plant	where plant availability is significantly affected by silt - 85%
---	--------------------	--

**Note:**

- (i) A further allowance may be made by the Hon'ble Commission under special

circumstances, eg. Abnormal silt problem or other operating conditions, and known plant limitations.

- (ii) A further allowance of 5 % may be allowed for difficulties in the North East Region.
- (iii) In case of new hydroelectric project the developer shall have the option of approaching the Hon'ble Commission in advance for further above norms.

In the Tariff order for FY 2014-15, the Hon'ble Commission has not provided specific norms of normative annual plant availability factor (NAPAF) of all generating stations without knowing the actual and verified technical details of each plant. For the purpose of capacity charges, the Hon'ble Commission has approved recovery of fixed charges on the basis of plant availability each month.

The NAPAF for all generating station, for FY 2014-15 as per the MSERC Tariff Regulations, 2011 are summarized below,

Table 3 Normative Plant Availability Factor FY 2014-15

<b>Station</b>	<b>As per actual</b>	<b>NAPAF with 5% allowance</b>
Umiam Stage-I	64.83	59.83
Umiam Stage-II	90.00	85.00
Umiam Stage-III	68.67	63.67
Umiam Stage-IV	66.79	61.79
Umtru	85.00	80.00
Sonapani	50.00	45.00

### 2.1.3.2. Auxiliary Consumption and Transformation Loss

Table 4 Auxiliary Consumption and Transformation Loss FY 2014-15

<b>Sl. No.</b>	<b>Station Particular</b>	<b>Norm</b>
1	Surface hydroelectric power generating stations with rotating exciters mounted on the generator shaft	0.7% of energy generated
2	Surface hydroelectric power generating stations with static excitation system	1.0% of energy generated
3	Underground hydroelectric power generating stations with rotating exciters mounted on the generator shaft	0.9% of energy generated
4	Underground hydroelectric power generating stations with static excitation system	1.2% of energy generated

The Hon'ble Commission in the Tariff Order for FY 2014-15 have approved auxiliary consumption and transformation losses as per the following table:

Table 5 Auxiliary Consumption and Transformation Loss approved by the Hon'ble Commission FY 2014-15

<b>Name of the Plant</b>	<b>Auxiliary consumption (%)</b>	<b>Transformation losses (%)</b>	<b>Total Loss (%)</b>
Umiam Stage I	0.7	0.5	1.2
Umiam Stage II	0.7	0.5	1.2
Umiam Stage III	0.7	0.5	1.2
Umiam Stage IV	1.0	0.5	1.5
Umtru	0.7	0.5	1.2
Sonapani	0.7	0.5	1.2

However, the Auxiliary consumption and Transformation losses, as actual for MePGCL for FY 2014-15 are furnished below:

Table 6 Auxiliary Consumption and Transformation Loss actual FY 2014-15

<b>Name of the Plant</b>	<b>Auxiliary consumption + Transformation losses (%)</b>
Umiam Stage I	1.30%
Umiam Stage II	0.70%
Umiam Stage III	0.72%
Umiam Stage IV	0.69%
Umtru	0.89%
Sonapani	0.82%

Thus, MePGCL has operated its plants efficiently, on an overall basis, and under the norms specified by the Hon'ble Commission and was able to limit auxiliary consumption for plants below the limit set by the Hon'ble Commission in the tariff order for FY 2014-15.



### 2.1.3.3. Design Energy – Existing Generating Stations

The design energy as approved by Hon'ble Commission for MePGCL power stations in FY 2014-15 is provided in the table below:

Table 7 Design Energy as approved by MSERC in Tariff Order FY 2014-15

Name of Power Station	Design Energy (MU)
Umiam Stage I	116.29
Umiam Stage II	45.51
Umiam Stage III	139.4
Umiam Stage IV	207.5
Umtru	39.01
Mini Hydel (Sonapani)	5.5
<b>Total</b>	<b>553.21</b>

### 2.1.4. Computation of Net Energy Generation - Existing Stations:

The computation of hydro power generation requires Design Energy, Capacity Index, Details of Reservoir levels, Head details, Past Availability details, features of the hydro power plants in terms of type of plant, type of excitation etc. which are provided in the table below, for reference:

Table 8 MePGCL Plant Technical Details FY 2014-15

Sl. No	Particulars	Umtru	Umiam I	Umiam II	Umiam III	Umiam IV	Mini Hydel Sonapani	Leshka HEP
1	Type of Station							
1.a	Surface/ Under Ground	Surface	Surface	Surface	Surface	Surface	Surface	Surface
1.b	Purely RoR/ Pondage/ Storage	RoR	Storage	Power Channel (Pondage)	Pondage	Pondage	RoR	RoR
1.c	Peaking/ Non Peaking	Non Peaking	Non Peaking	Non Peaking	Non Peaking	Non Peaking	Non Peaking	Non Peaking
1.d	No of Hours Peaking	NA	NA	NA	NA	NA	NA	NA

<b>Sl. No</b>	<b>Particulars</b>	<b>Umtru</b>	<b>Umiam I</b>	<b>Umiam II</b>	<b>Umiam III</b>	<b>Umiam IV</b>	<b>Mini Hydrel Sonapani</b>	<b>Leshka HEP</b>
1.e	Overload Capacity (MW) and Peaking	NIL	NIL	NIL	NIL	NIL	NIL	NIL
2	<b>Type of Excitation</b>							
2.a	Rotating exciters on Generator	Rotating exciters on Generator	Rotating exciters on Generator	Rotating exciters on Generator	Rotating exciters on Generator	NA	Rotating exciters on Generator	NA
2.b	Static Excitation	NA	NA	NA	NA	Static Excitation	NA	Static Excitation

The station-wise Net Generation Approved for FY 2014-15 and actual of MePGCL for FY 2014-15 are provided in the table below:

Table 9 Net Generation as per approved T.O Vis a Vis Actual generation in FY 2014-15

Approved by the Hon'ble Commission in Tariff Order for FY 2014-15								Actual MePGCL FY 2014-15			
Sl. No	Name of the Power Station	Gross Generation (MU)	Aux Cons (%)	Transformation Loss (%)	Total Loss (Aux + Transformation) (%)	Aux Cons & Transformation Loss (MU)	Net Generation (MU)	Gross Generation (MU)	Total Loss (Aux + Transformation) (%)	Aux Cons & Transformation Loss (MU)	Net Generation (MU)
1.	Umiam I	116.29	0.70%	0.50%	1.20%	1.40	114.89	90.40	1.30%	1.17	89.23
2.	Umiam II	45.51	0.70%	0.50%	1.20%	0.55	44.96	46.00	0.70%	0.32	45.68
3.	Umiam III	139.4	0.70%	0.50%	1.20%	1.67	137.73	113.11	0.72%	0.81	112.29
4.	Umiam IV	207.5	1.00%	0.50%	1.50%	3.11	204.39	162.64	0.69%	1.13	161.51
5.	Umtru Power Station	39.01	0.70%	0.50%	1.20%	0.47	38.54	15.27	0.89%	0.14	15.13
6.	Mini Hydel (Sonapani)	5.5	0.70%	0.50%	1.20%	0.07	5.43	5.75	0.82%	0.05	5.70
	<b>Total</b>	<b>553.21</b>				<b>7.26</b>	<b>545.95</b>	<b>433.16</b>		<b>3.62</b>	<b>429.54</b>

## **2.2. Determination of Annual Fixed charges**

### **2.2.1. Calculation Methodology**

MePGCL has finalized its Audited Statement of Accounts for FY 2014-15. Based on the figures of the Audited Statement of Account, MePGCL has computed the Annual fixed Charges of MePGCL old plants excluding Leshka HEP for FY 2014-15 and arrived at net Gap/ Surplus of the AFC components.

In the previous tariff order for FY 2013-14 and 2014-15, the Hon'ble Commission had approved provisional AFC for the new plants i.e. Leshka HEP. Further the Hon'ble Commission had directed MePGCL for final determination of tariff & truing up of the same when Audited Statement of Accounts for MePGCL and Audited capital cost of Leshka HEP is available, vide the Directive 7.1 of the generation tariff order dated 30.03.2016. MePGCL in compliance with the above directive, has already filed a separate petition for determination of tariff and truing up of FY 2014-15 for Leshka HEP. However, since Lakroh HEP and New Umtru HEP have not yet started commercial operation, they have not been included in the actual ARR figures proposed in this Truing up petition.

As such, in this exercise, to arrive at actual AFC of old plants only for FY 2014-15, MePGCL have calculated the AFC components (old plants including Leskha) as a whole based on Audited Statement of Accounts for FY 2014-15 and have then subtracted (-) the AFC components of MLHEP as per the true up petition filed for Leshka HEP for the year 2014-15.

Further, as per the approach adopted in the provisional true up of FY 2014-15 by the Hon'ble Commission vide generation Tariff Order for FY 2016-17, MePGCL has considered equal proportion of AFC components of the holding company MeECL among the three successor companies i.e. 1/3<sup>rd</sup> each in MePGCL, MePTCL and MePDCL.

### **2.2.2. Components of Tariff**

In accordance with the MSERC Tariff Regulations, 2011, the Tariff for supply of electricity from Hydro Power Generating Station shall comprise of two parts namely, Annual Capacity Charges and Energy Charges. Fixed charges shall be comprised of

following components:

- (1) Operation and Maintenance Expenses
- (2) Interest on Loan Capital
- (3) Interest on Working Capital
- (4) Depreciation as may be allowed by the Hon'ble Commission
- (5) Return on Equity as may be allowed by the Hon'ble Commission
- (6) Taxes on Income.

### 2.2.2.1. Operation and Maintenance Expense

The Commission had approved Rs. 55.17 Crore towards O&M Expenses for Provisional true up of FY 2014-15 for MePGCL including one-third expense of MeECL.

As per the Audited Statement of accounts of MePGCL & MeECL, MePGCL requests Hon'ble Commission to allow Rs 52.27 Crores towards O&M expenses for FY 2014-15. This is less than the provisionally approved figures of the Commission in its order dated 30<sup>th</sup> March 2016.

Table 10 O&M Expense FY 2014-15

<b>Particulars</b>	<b>For MePGCL</b>	<b>MeECL</b>	<b>Total (Incl. 1/3rd of MeECL)</b>	<b>Leshka HEP</b>	<b>Claimed Amount to be tried up for old plants</b>
Employee Cost	58.08	12.66	62.30	27.21	52.27
R&M Expenses	12.86	0.20	12.93		
A&G Expenses	2.09	6.46	4.25		
<b>Total</b>	<b>73.04</b>	<b>19.32</b>	<b>79.48</b>	<b>27.21</b>	<b>52.27</b>

### 2.2.2.2. Interest & Finance Charges on loan capital

The Commission had considered Rs. 0.33 Crore as Interest on Loan Capital for Provisional True up for FY 2014-15.

However based on the Audited Statement of Accounts, the Interest on loan pertaining to

the Old plants (Umiam I, II, III & IV, Sonapani, Umtru) and MLHEP is Rs 0.27 Cr & Rs. 88.96 Crs respectively. The finance charges for MePGCL is 7.21 Crs.

The details of total interest and finance charges for Old plants and Leshka HEP is given in the table below.

Table 11 Interest & Finance Charges on Loan Capital for FY 2014-15

<b>Particulars</b>	<b>(INR Crore)</b>
<b>Interest on Loans for Leshka HEP</b>	
Interest on Bonds (NCD)	17.64
Interest on REC Loans for Leshka	27.19
Interest on PFC	30.59
Interest on CBI	7.55
Interest on Federal Bank	4.79
Interest on State Govt. Loans for MLHEP	1.21
<b>Sub Total (a)</b>	<b>88.96</b>
<b>Interest on State Govt. Loans for Umiam I,II,III,IV, Umtru &amp; Sonapani</b>	
Umiam Lake Reno., Resto.	0.17
Re-Engnee. Work StgIV Nong	0.02
Re-Eng St-IV P/S, Nongkhy	-
Re-Engineering works of Umiam Stage-I Power Station, Sumer.	0.05
Sanction for Repair, Reno, & Resto. of Umiam Lake	0.03
Total	-
<b>Sub Total (b)</b>	<b>0.27</b>
<b>Finance Charges</b>	
Other Bank Charges	0.04
Guarantee Charges	4.07
Prepayment Charges for Final Settlement of Loans & Interest	3.09
<b>Sub Total (c)</b>	<b>7.21</b>
<b>Total Interest &amp; Finance charges (IFC) (a+b+c)</b>	<b>96.44</b>

Therefore the total interest & finance charges on loan for old plants including Leskha is Rs. 96.44 Crs.

It is submitted that these expenses are required to meet the interest on old State Government Loans and other financial charges like guarantee charges, bank transaction charges etc. It is requested that the Hon'ble Commission takes due consideration of the

actual interest charges as well as the other actual financial charges for truing up purpose of interest and financial charges.

Particulars	As per Audited SoA for FY 2014-15				
	True Up of MePGCL for FY 2014-15 (Old+New Plants)	MeECL Expense for FY 2014-15	Total (Incl. 1/3rd of MeECL)	Leshka HEP FY 2014-15	Total Claimed amount to be trued up
	b	c	d=b+c/3	E	f=d-e
Interest & Finance charges on Loan capital	96.44	0.00	96.44	88.85	7.59

MePGCL requests Hon'ble Commission to allow Rs 7.59 Crores towards Interest & Finance charges on Loan capital for true up of FY 2014-15.

### 2.2.2.3. Interest on Working Capital

The Commission had allowed Rs. 2.92 Crore for MePGCL towards Working Capital for Provisional True up for FY 2014-15.

However, as per MSERC Tariff Regulations 2011, MePGCL humbly requests Hon'ble Commission to allow Rs 3.60 Crores as Interest on Working Capital for true up of FY 2014-15.

Table 12 Interest on Working Capital FY 2014-15

Particulars	MePGCL	MeECL	Total (Incl. 1/3rd of MeECL)
Operation and Maintenance Expense for One Month	6.09	19.32	12.53
Maintenance Spare at 15% O&M	0.91	2.90	1.88
Two Months Receivable of AFC	53.56	3.95	54.87
<b>Working capital required</b>	<b>60.56</b>	<b>26.16</b>	<b>69.28</b>
Rate of interest (%)	14.75%	14.75%	14.75%
<b>Amount of interest on working capital</b>	<b>8.93</b>	<b>3.86</b>	<b>10.22</b>
<b>Less: Interest on Working Capital Claimed for Leshka</b>			<b>6.52</b>
<b>Interest on WC claimed for true-up of old plants</b>			<b>3.60</b>

#### 2.2.2.4. Depreciation

The Commission has considered Rs. 2.35 Crore towards Depreciation for provisional True up of FY 2014-15.

Now based on the actuals as per the Audited Statement of Accounts of MePGCL and MeECL, MePGCL humbly requests Hon'ble Commission to allow Rs 6.46 Crores for true up of FY 2014-15 for old plants.

Table 13 Depreciation Charges FY 2014-15

<b>Particulars</b>	<b>MePGCL</b>	<b>MeECL</b>	<b>Total (Incl. 1/3rd of MeECL)</b>	<b>Leshka HEP</b>	<b>Claimed Amount to be trued up for old plants</b>
Depreciation	67.35	0.67	67.58	61.12	6.46

#### 2.2.2.5. Return on Equity:

The Hon'ble Commission has approved Rs. 9.43 Crore as Return on Equity for provisional True up of FY 2014-15.

As per Audited Statement of Accounts for MePGCL for FY 2014-15, the average equity base has been considered as INR 734.86 Crores including equity capital pending allotment\* of INR 779.12 Crore. Based on this, MePGCL has calculated Rs 102.88 Crores as return on Equity for FY 2014-15. After subtracting RoE for Leshka, the claimed amount for RoE for true-up of old plants is Rs. 57.58 crores.

Table 14 Return on Equity FY 2014-15

<b>Particulars</b>	<b>MePGCL (INR Cr)</b>
Opening Balance (paid up capital + equity capital pending allotment**)	690.55
Closing Balance	779.17**
Average Equity	734.86
Return on Equity (%)	14%
Return on Equity (Rs. Crs) for MePGCL	102.88
RoE for Leshka	45.30
RoE claimed for old plants	57.58



\*Equity capital pending allotment represents the amount of equity capital to be allotted to the MeECL in accordance with notification issued on dated April 29, 2015 by Government of Meghalaya and consequent cash transactions after that.

\*\* Total 61,02,85,189 no. of Equity Shares have been issued to MeECL amounting to Rs.6,10,28,51,890/- on May 27, 2015 @10/- per share. For balance amount shares will be allotted on completion of due procedure.

#### 2.2.2.6. SLDC and Connectivity Charges

The Commission had considered Rs. 1.17 Crore towards SLDC Charges for Provisional True up of FY 2014-15 which is also reflected as per the Audited Statement of Accounts of MePGCL for FY 2014-15. However, after subtracting the SLDC charges applicable for Leshka (which are claimed as part of Leshka tariff), the net SLDC charges applicable for old plants is claimed as Rs. 0.70 crores for true-up of FY 2014-15.

#### 2.2.2.7. Prior Period Items

The Hon'ble Commission had not approved any amount for Prior Period Expense for MePGCL in the Provisional True Up for FY 2014-15. However, according to Audited Statement of Accounts, MePGCL and MeECL both has incurred some Prior period Items details of which have been summarized below,

Table 15 Prior Period Items (MePGCL) FY 2014-15

<b>Particulars</b>	<b>INR Crs</b>
<b><u>Expenses</u></b>	
Employee costs	0.10
Depreciation under provided in previous year	-
Interest & Other Finance Charges	3.10
Others	-
Excess Provision on Interest accrued	0.77
<b>Sub Total</b>	<b>3.97</b>
<b><u>Incomes</u></b>	
Sale of other stores items	0.00
Excess Provision For Depreciation	0.02
Other Income Related (Power Sale)	32.42

<b>Particulars</b>	<b>INR Crs</b>
Other excess provision	-
<b>Sub Total (INR Cr)</b>	<b>32.45</b>
<b>Net Prior period charges:Income(-)/Expense</b>	<b>(28.48)</b>

Table 16 Prior Period Items (MeECL) FY 2014-15

<b>Particulars</b>	<b>INR Crs</b>
<b>Prior Period Expenses/Losses</b>	
Purchase of Power	-
Employee costs	0.01
Depreciation under provided in previous year	-
Interest & Other Finance Charges	-
Administrative Expenses	-
Excess Provision on Interest Accrued	0.09
Others	0.06
<b>Sub Total</b>	<b>0.16</b>
<b>Income Relating to Previous Years</b>	
Oil related gains of prior period	-
Excess provision for finance charges	-
Other excess provision & Other Income	0.34
<b>Sub Total</b>	<b>0.34</b>
<b>Net Prior period charges: Income (-)/ Expense</b>	<b>(0.18)</b>

Table 17 Net Prior Period Charges for FY 2014-15

<b>Particulars</b>	<b>MePGCL</b>	<b>MeECL</b>	<b>Total (Incl. 1/3rd of MeECL)</b>
<b>Net Prior period charges Income(-)/Expense</b>	(28.48)	(0.18)	(28.53)

Based on the Audited SoA and proportionate components for MeECL, MePGCL humbly requests Hon'ble Commission to approve the total prior period charges at Rs -28.53 Crores for FY 2014-15.

### **2.2.2.8. Non-Tariff Income**

The Commission had approved Rs. 7.51 Crore as Non-Tariff Income in the Provisional True up of FY 2014-15.

However, based on the Audited SoA for MePGCL & MeECL, MePGCL humbly requests Hon'ble Commission to approve Rs 3.53 Crores as total non-tariff income for true up of FY 2014-15.

Table 18 Non-Tariff Income FY 2014-15

<b>Particulars</b>	<b>MePGCL</b>	<b>MeECL</b>	<b>Total (Incl. 1/3rd of MeECL)</b>
Non-Tariff Income	1.83	5.09	3.53

### **2.2.2.9. Revenue from Operations**

As per the Audited Statement of Accounts (Note 16), MePGCL has received Revenue of Rs. 191.10 Crore from MePDCL towards sale of power for FY 2014-15. Out of this, Rs. 114.12 is revenue accrued from sale of power from Leshka plant based on the provisional tariff approved by the Commission for FY 2014-15. As such, the revenue of old plants claimed for true-up of FY 2014-15 is Rs. 76.98 crores which is more than the approved revenue.

### **2.2.2.10. Summary Of Annual Fixed Charges**

The summary of Annual fixed charges approved by the Hon'ble Commission for existing generating stations in the Provisional Tariff vis a vis actuals as per the Audited Statement of Accounts for FY 2014-15 for MePGCL and proportionate expense of MeECL is given below.

Table 19 Summary of Annual Fixed Charges (Provisionally Approved vis a vis Actual) FY 2014-15

Particulars	Approved by MSERC	As per Audited SoA for FY 2014-15				Total Proposed amount to be trued up	Loss/(Gain)
	Provisional True Up FY 2014-15 (Excl.Leshka)	True Up of MePGCL for FY 2014-15 (Old+New Plants)	MeECL Expense for FY 2014-15	Total (Incl. 1/3rd of MeECL)	Leshka HEP FY 2014-15		
	a	b	c	d=b+c/3	e	f=d-e	g=f-a
O&M Expenses	55.17	73.04	19.32	79.48	27.21	52.27	(2.90)
Depreciation	2.35	67.35	0.67	67.58	61.12	6.46	4.11
Interest on Loan	0.33	96.44	0.00	96.44	88.85	7.59	7.26
Interest on working capital	2.92	8.93	3.86	10.22	6.62	3.60	0.68
Return on Equity	9.43	102.88	-	102.88	45.30	57.58	48.15
SLDC Charges	1.17	1.17	-	1.17	0.47	0.70	(0.47)
Income tax Expense	-	-	-	-	-	-	-
Misc. Expense & Bad Debts	-	-	-	-	-	-	-
Net Prior Period Items: Income(-) / Expense	-	(28.48)	(0.18)	(28.53)	-	(28.53)	(28.53)
<b>Total Annual Fixed Cost (AFC)</b>	<b>71.37</b>	<b>321.34</b>	<b>23.68</b>	<b>329.23</b>	<b>229.57</b>	<b>99.66</b>	<b>28.29</b>
Less: Non-Tariff Income	7.51	1.83	5.09	3.53	-	3.53	(3.98)
<b>Net AFC</b>	<b>63.86</b>	<b>319.51</b>	<b>18.59</b>	<b>325.70</b>	<b>229.57</b>		<b>32.27</b>
Revenue from operations	74.22	191.10	-	191.10	114.12	76.98	2.76
<b>Gap/(Surplus)</b>	<b>(10.36)</b>	<b>128.41</b>	<b>18.59</b>	<b>134.60</b>	<b>115.45</b>	<b>(76.98)</b>	<b>29.51</b>

### 2.2.2.11. Net Gap/Surplus

For the purpose of determining the Net gap or Surplus in the true up for MePGCL old plants, MePGCL have deducted the AFC of old plants as per the figures in the Provisional True Up of FY 2014-15 along with AFC determined for Leshka HEP as per Audited SoA of FY 2014-15 from the actual AFC determined for MePGCL i.e (MePGCL + 1/3<sup>rd</sup> of MeECL) based on the Audited SoA for FY 2014-15.

As per the provisional tariff approved by Hon'ble Commission for Leshka HEP, MePGCL submits that the revenue calculated for Leshka through sale of power at Rs 2.83/kWh is Rs 114.12 Crores. The gross & net generation from sale of power and corresponding revenue realized at provisional tariff for the FY 2014-15 is computed below:

Table 20 Revenue from sale of power\_MLHEP FY 2014-15

Year	Gross Generation (MU)	Normative Aux Cons @ 1% of Energy Generated (MU)	Normative Transformation Loss @ 0.50% of Energy Generated (MU)	Net Generation (MU)	Revenue From Sale of Power (INR Crs)
FY 2014-15	409.38	4.09	2.05	403.24	114.12

For calculating the revenue from operations for MePGCL old plants, the revenue realized through sale of power from Leskha HEP i.e. Rs 114.12 Crores is deducted from the total revenue of MePGCL i.e. Rs 191.10 Crores as per the Audited SoA.

Hence based on the above approach and calculations of Annual Fixed Cost components as per the Table 18, MePGCL now humbly requests Hon'ble Commission to admit a gap of Rs 29.51 Crores in the true up of MePGCL (excluding Leshka) for the FY 2014-15 and allow MePGCL to recover to recover the gap through generation tariff of FY 2017-18.

### **3. Provisional True Up of FY 2015-16**

#### **3.1. Operational Performance**

##### **3.1.1. Operational Norms**

The Regulation 58 of the MYT Regulations, 2014 provides the norms for operation for Hydro Generating stations. The regulation is reproduced below for ready reference:

##### **“58 Norms of operation**

The norms of operation shall be as under:

##### **58.1 Normative annual plant availability factor (NAPAF)**

(a) Storage and pondage type plants where plant availability is not affected by silt and

(i) with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of upto 8 % ..... 90 %

(ii) with head variation between FRL and MDDL of more than 8%= (Head at MDDL/Rated Head) x 0.5+0.2

(b) Pondage type plant where plant availability is significantly affected by silt.. ..85%

(c) Run –of- River type plants: NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past experience where available /relevant.

Note:

(i) A further allowance may be made by the Commission under special circumstances, eg. Abnormal silt problem or other operating conditions, and known plant limitations.

(ii) A further allowance of 5 % may be allowed for difficulties in the North East Region.

(iii) In case of new hydroelectric project the developer shall have the option of approaching the Commission in advance for further above norms.

##### **58.2 Auxiliary energy consumption:**

(a) Surface hydroelectric power generating stations with rotating exciters mounted on the generator shaft .....0.7% of energy generated.

(b) Surface hydroelectric power generating stations with static excitation system.....1.0% of energy generated.

(c) Underground hydroelectric power generating stations with rotating exciters mounted on the generator shaft ....0.9% of energy generated.

(d) Underground hydroelectric power generating stations with static excitation system .....1.2% of energy generated.

### 58.3 Transformation losses

From generation voltage to transmission voltage .....0.5% of energy generated.”

The computation of hydro power generation requires Design Energy, Capacity Index, Details of Reservoir levels, Head details, Past Availability details, features of the hydro power plants in terms of type of plant, type of excitation etc. which are provided in the table below, for reference:

Sl. No	Particulars	Umtru	Umiam I	Umiam II	Umiam III	Umiam IV	Mini Hydel Sonapani	Leshka HEP
1	Type of Station							
1.a	Surface/ Under Ground	Surface	Surface	Surface	Surface	Surface	Surface	Surface
1.b	Purely RoR/ Pondage/ Storage	RoR	Storage	Power Channel (Pondage)	Pondage	Pondage	RoR	RoR
1.c	Peaking/ Non Peaking	Non Peaking	Non Peaking	Non Peaking	Non Peaking	Non Peaking	Non Peaking	Non Peaking
1.d	No of Hours Peaking	NA	NA	NA	NA	NA	NA	NA
1.e	Overload Capacity (MW) and Peaking	NIL	NIL	NIL	NIL	NIL	NIL	NIL

Sl. No	Particulars	Umtru	Umiam I	Umiam II	Umiam III	Umiam IV	Mini Hydel Sonapani	Leshka HEP
2	Type of Excitation							
2.a	Rotating exciters on Generator	Rotating exciters on Generator	Rotating exciters on Generator	Rotating exciters on Generator	Rotating exciters on Generator	NA	Rotating exciters on Generator	NA
2.b	Static Excitation	NA	NA	NA	NA	Static Excitation	NA	Static Excitation

### 3.1.2. Design Energy of MePGCL old stations

The design energy for MePGCL power stations as approved in the MYT Tariff Order for FY 2015-16 is shown in the table below:

Table 21 Approved Generation for FY 2015-16

Name of Power Station	Design Energy (MU)
Umiam Stage I	116.29
Umiam Stage II	45.51
Umiam Stage III	139.4
Umiam Stage IV	207.5
Umtru	39.01
Mini Hydel (Sonapani)	5.5
<b>Total</b>	<b>553.21</b>

### 3.1.3. Net Energy Generation

The actual energy generated from MePGCL old stations varied from that of the approved energy in the MYT tariff order on account of low rainfall despite running plants at maximum efficiency.

The comparison of actuals vis-à-vis approved generation energy is given in the table below.



Table 22 Net Generation as per approved Design Energy Vis- a -Vis Actual generation in FY 2015-16

		<b>Approved by the Hon'ble Commission in Tariff Order for FY 2015-16</b>						<b>Actual MePGCL FY 2015-16</b>			
Sl. No	Name of the Power Station	Gross Generation (MU)	Aux Cons (%)	Transformation (%)	Total Loss (Aux +Transformation) (%)	Aux Cons & Transformation Loss (MU)	Net Generation (MU)	Gross Generation (MU)	Total Loss (Aux + Transformation) (%)	Aux Cons & Transformation Loss (MU)	Net Generation (MU)
1.	Umiam I	116.29	0.70%	0.50%	1.20%	1.40	114.89	114.10	1.08%	1.23	112.87
2.	Umiam II	45.51	0.70%	0.50%	1.20%	0.55	44.96	58.23	0.60%	0.35	57.88
3.	Umiam III	139.4	0.70%	0.50%	1.20%	1.67	137.73	117.37	0.60%	0.71	116.66
4.	Umiam IV	207.5	1.00%	0.50%	1.50%	3.11	204.39	185.42	0.88%	1.63	183.79
5.	Umtru Power Station	39.01	0.70%	0.50%	1.20%	0.47	38.54	1.40	3.57%	0.05	1.35
6.	Mini Hydel (Sonapani)	5.5	0.70%	0.50%	1.20%	0.07	5.43	6.23	0.16%	0.01	6.22
	<b>Total</b>	<b>553.21</b>				<b>7.26</b>	<b>545.95</b>	<b>482.75</b>		<b>3.98</b>	<b>478.77</b>

### **3.2. Components of Tariff**

In accordance with the Regulation 54 of MSERC MYT Regulations, 2014, the Tariff for supply of electricity from Hydro Power Generating Station shall comprise of two parts namely, Annual Capacity Charges and Energy charges to be in the manner provided hereinafter.

The relevant regulation is reproduced below for ready reference.

*“54.2 The fixed cost of a generating station eligible for recovery through annual capacity charges shall consist of:*

*(a) Return on equity as may be allowed*

*(b) Interest on Loan Capital;*

*(c) Operation and maintenance expenses;*

*(d) Interest on Working Capital;*

*(e) Depreciation as may be allowed by the Commission;*

*(f) Taxes on Income*

*54.3 The annual capacity charges recoverable shall be worked out by deducting other income from the total expenses.”*

### **3.3. Return on Equity**

The Hon'ble Commission has approved Rs. 9.43 Crore as Return on Equity in the tariff order for FY 2015-16.

As per Provisional Statement of Accounts for MePGCL for FY 2015-16, the average equity base has been considered as INR 780.98 Crores including equity capital pending allotment\* of INR 172.45 Crore. Based on this, MePGCL has calculated Rs 109.34 Crores as return on Equity for FY 2015-16. After subtracting RoE for Leshka, the claimed amount for RoE for true-up of old plants is Rs. 64.04 crores.

Table 23 Return on Equity FY 2015-16

<b>Particulars</b>	<b>MePGCL (INR Cr)</b>
Opening Balance (paid up capital + equity capital pending allotment**)	779.17
Closing Balance	782.79
Average Equity	780.98
Return on Equity (%)	14%
Return on Equity (Rs. Crs) for MePGCL	109.34
RoE for Leshka	45.30
RoE claimed for old plants	64.04

\*\*Equity capital pending allotment represents the amount of equity capital to be allotted to the MeECL in accordance with notification issued on dated April 29,2015 by Government of Meghalaya and consequent cash transactions after that.

The 61,02,85,189 no. of Equity Shares have been issued to MeECL amounting to Rs.6,10,28,51,890/- on May 27, 2015 @10/- per share. For balance amount shares will be allotted on completion of due procedure.

### **3.4. Interest on Loan**

The Hon'ble Commission had allowed Rs 0.46 Crore as Interest on loan for FY 2015-16.

However based on the Provisional Statement of Accounts, the Interest & Finance charges on loan of MePGCL is Rs 91.42 Crores. This excludes Rs 33.80 Crores Interest capitalized on funds during construction.

For the interest on loan pertaining to the Old plants (Umiam I, II, III & IV, Sonapani, Umtru) , the interest accrued on loan for MLHEP i.e. Rs 82.69 Crs is deducted from Rs 91.42 Crores to arrive at Rs 8.73 crores .

The details of total interest and finance charges for Old plants and Leshka HEP is given in the table below.

Table 24 Interest and Finance Charges FY 2015-16

<b>Particulars</b>	<b>INR Crores</b>
Interest on State Govt Loans	7.77
Interest on Bonds (NCD))	17.64

Prepayment Charges for Final Setlmnt of Loans & Int)	-
Interest on REC Loans for Leshka)	26.47
GEL) (Interest on PFC (GEL))	0.20
Interest on PFC)	28.55
NUHEP (Interest on PFC (NUHEP))	33.61
(GEL) (Interest on PFC (GEL))	-
(Interest on CBI)	6.03
(OD) (Interest on CBI (OD))	0.32
(MLHEP-L/C) (Interest on L/C MLHEP (VB))	0.26
(Interest on HUDCO Loan)	-
Interest on Federal Bank	3.48
(OD) (Interest on Federal Bank (OD))	0.66
L/C NUHEP (Interest on Federal Bank (L/C NUHEP))	-
(Penal Interest on Capital Liabilities)	0.25
(Other Bank Charges)	0.00
Guarantee Charges	3.22
Less: Capitalization Interest On (Funds Used During Construction)	(33.81)
<b>Total Interest &amp; Finance Charges</b>	<b>94.64</b>

It is submitted that these expenses are required to meet the interest on old State Government Loans and other financial charges like guarantee charges, bank transaction charges etc. It is requested that the Hon'ble Commission takes due consideration of the actual interest charges as well as the other actual financial charges for truing up purpose of interest and financial charges.

Particulars	As per Provisional SoA for FY 2015-16				
	True Up of MePGCL for FY 2015-16 (Old+New Plants)	MeECL Expense for FY 2015-16	Total (Incl. 1/3rd of MeECL)	Leshka HEP FY 2015-16	Total Claimed amount to be trued up
a	b	c	d=b+c/3	e	f=d-e
Interest & Finance charges on Loan capital	94.64	0.00	94.64	82.69	11.95

MePGCL requests Hon'ble Commission to allow Rs 11.95 Crores towards Interest & Finance charges on Loan capital for true up of FY 2015-16.

### 3.5. Operation and Maintenance Expenses

The Commission had approved Rs. 55.00 Crore towards O&M Expenses for FY 2015-16. As per the Provisional Statement of accounts of MePGCL & MeECL, MePGCL requests Hon'ble Commission to allow Rs 75.37 Crores towards O&M expenses for FY 2015-16. This is after deducting O&M Expenses of MLHEP of Rs 28.76 Crores from the MePGCL including 1/3<sup>rd</sup> MeECL's proportionate expense since the expenses of MLHEP is being taken care of through separate petition .

Table 25 O&M Expenses FY 2015-16

Particulars	For MePGCL	1/3rd of MeECL	Total (Incl. 1/3rd of MeECL)	Leshka HEP	Claimed Amount to be trued up for old plants
Employee Cost	62.19	7.30	69.49	28.76	75.37
R&M Expenses	29.06	0.05	29.11		
A&G Expenses	5.56	0.85	6.41		
Less: Int. Capitalized	0.88	-	-		
<b>Total</b>	<b>95.93</b>	<b>8.20</b>	<b>104.13</b>		

### 3.6. Interest on Working Capital

The Commission had allowed Rs. 3.79 Crores for MePGCL towards Working Capital for FY 2015-16.

Based on the Provisional Statement of Accounts, MePGCL requests Hon'ble Commission to allow Rs 7.43 Crores towards Interest on Working Capital for old plants excluding Leskha.

Table 26 Interest on Working Capital FY 2015-16

Particulars	MePGCL	1/3 <sup>rd</sup> MeECL	Total (Incl. 1/3rd of MeECL)
Operation and Maintenance Expense for One Month	7.99	0.68	8.68
Maintenance Spare at 15% O&M	14.39	1.23	15.62
Two Months Receivable of AFC	68.84	1.49	70.33
<b>Working capital required</b>	<b>91.23</b>	<b>3.40</b>	<b>94.63</b>
Rate of interest (%)	14.75%	14.75%	14.75%
<b>Amount of interest on working capital</b>	<b>13.46</b>	<b>0.50</b>	<b>13.96</b>

<b>Particulars</b>	<b>MePGCL</b>	<b>1/3<sup>rd</sup> MeECL</b>	<b>Total (Incl. 1/3<sup>rd</sup> of MeECL)</b>
<b>Less: Interest on Working Capital Claimed for Leshka</b>			<b>6.52</b>
<b>Interest on WC claimed for true-up of old plants</b>			<b>7.43</b>

### **3.7. Depreciation**

The Commission have considered Rs. 10.64 Crore towards Depreciation for FY 2015-16.

Now based on the actuals as per the Provisional Statement of Accounts of MePGCL and MeECL, MePGCL humbly requests Hon'ble Commission to allow Rs 6.31 Crores for true up of FY 2015-16 for old plants.

Table 27 Depreciation of old plants FY 2015-16

<b>Particulars</b>	<b>MePGCL</b>	<b>MeECL</b>	<b>Total (Incl. 1/3<sup>rd</sup> of MeECL)</b>	<b>Leshka HEP</b>	<b>Claimed Amount to be trued up for old plants</b>
Depreciation	67.09	0.23	67.32	61.00	6.31

### **3.8. Taxes on Income**

The actual Income Tax for FY 2015-16 is NIL.

### **3.9. SLDC and Connectivity Charges**

The Commission had considered Rs. 1.05 Crore towards SLDC Charges for FY 2015-16 which is also reflected as per the Provisional Statement of Accounts of MePGCL for FY 2015-16. However, after subtracting the SLDC charges applicable for Leshka i.e. Rs 0.40 crores claimed under Leshka tariff petition for FY 2015-16, the net SLDC charges applicable for MePGCL old plants is claimed as Rs. 0.65 crores for true-up of FY 2015-16.

### **3.10. Prior Period Items**

The Hon'ble Commission had not approved any amount for Prior Period Expense for

MePGCL in the tariff order for FY 2015-16. However, according to provisional Statement of Accounts, MePGCL and MeECL both has incurred some Prior period Items, the details of which has been summarized below.

Table 28 Prior Period Items of MePGCL FY 2015-16

<b>Particulars</b>	<b>INR Crs</b>
<b><u>Expenses</u></b>	
Employee costs	0.25
Depreciation under provided in previous year	-
Interest & Other Finance Charges	0.03
Others	0.02
Excess provision on Interest accrued	-
<b>Sub Total</b>	<b>0.30</b>
<b><u>Incomes</u></b>	-
Sale of other stores items	-
Excess Provision For Depreciation	0.16
	-
Other Income Related (Power Sale)	-
Excess Provision For Interest & Finance Charges In Prior Periods	0.36
Other excess provision	-
<b>Sub Total</b>	<b>0.53</b>
<b>Net Prior period charges: Income(-)/Expense</b>	<b>(0.23)</b>

Table 29 Prior Period Items of MeECL FY 2015-16

<b>Particulars</b>	<b>INR Crs</b>
<b><u>Income Relating to Previous Years</u></b>	
Oil related gains of prior period	-
Excess provision for finance charges	-
Other excess provision & Other Income	0.04
<b>Sub Total</b>	<b>0.04</b>
<b><u>Prior Period Expenses/Losses</u></b>	
Purchase of Power	-
Employee costs	0.04
Depreciation under provided in previous year	-
Interest & Other Finance Charges	-
Administrative Expenses	0.01
Excess Provision on Interest Accrued	-
Others	-
<b>Sub Total</b>	<b>0.05</b>
<b>Net Prior period charges: Income(-)/Expense</b>	<b>0.01</b>

Table 30 Net Prior Period Items (MePGCL old plants) FY 2015-16

<b>Particulars</b>	<b>MePGCL</b>	<b>MeECL</b>	<b>Total (Incl. 1/3rd of MeECL)</b>
<b>Net Prior period charges Income(-)/Expense</b>	(0.23)	0.005	(0.22)

Based on the provisional statement of accounts and proportionate components for MeECL, MePGCL humbly requests Hon'ble Commission to approve the total prior period charges at Rs -0.22 Crores for FY 2015-16.

### **3.11. Provision for Doubtful Debts**

As per provisional SoA, a provision for doubtful debts of Rs 31.79 crores has been made on account of receivables from beneficiaries i.e. MePDCL.

### **3.12. Non-Tariff Income**

The Commission had approved Rs. 0.31 Crore as Non-Tariff Income for FY 2015-16.

However, based on the Provision SoA for MePGCL & MeECL, MePGCL humbly requests Hon'ble Commission to approve Rs 7.54 Crores as non-tariff income for true up of FY 2015-16.

Table 31 Non-Tariff Income FY 2015-16

<b>Particulars</b>	<b>MePGCL</b>	<b>1/3<sup>rd</sup> MeECL</b>	<b>Total (Incl. 1/3rd of MeECL)</b>
Non-Tariff Income	6.68	0.86	7.54

### **3.13. Revenue from Sales**

As per the provisional Statement of Accounts FY 2015-16 (Note 16), MePGCL has received Revenue of Rs. 205.74 Crore from MePDCL towards sell of power. Out of this, Rs. 130.46 Crores is revenue accrued from sale of power from Leshka plant based on the provisional tariff approved by the Commission for FY 2014-15. As such, the revenue of old plants claimed after deducting revenue of MLHEP in the true-up of FY 2015-16 is Rs. 75.29 crores which is less than the approved revenue of Rs 80.06 Crores for MePGCL old plants. The low revenue is on account of low Gross generation at 482.75



MU against approved at 553 MU s for MePGCL given in the Table 22 above.

### **3.14. Summary Of Annual Fixed Charges**

The summary of Annual fixed charges approved by the Hon'ble Commission for old generating stations in the tariff order vis a vis actuals as per the Provisional Statement of Accounts for FY 2015-16 along with 1/3<sup>rd</sup> proportionate expense of MeECL is given in the table below.

Table 32 Summary of Annual Fixed Charges (Approved vis a vis Actual) FY 2015-16

Sl. no	Particulars	Approved in T.O FY 2015-16			True up of MePGCL old plants as per Prov. SoA FY 2015-16				
		Old Plants	Sonapani	Total MePGCL (Excl. Leshka)	MePGCL as whole	1/3 of MeECL Expense	Prov. True Up of Leshka FY 2015-16	Proposed true up of MePGCL Old plants (Excl. Leshka)	Gap/Surplu s (-)
	a	b	c	d=b+c	e	f	g	h=e+f-g	i=h-d
1	O&M Expenses	54.70	0.30	55.00	95.93	8.20	28.76	75.37	20.37
2	Depreciation	10.33	0.31	10.64	67.09	0.23	61.00	6.31	(4.33)
3	Interest on Loan Capital	0.46	-	0.46	94.64	0.00	82.69	11.95	11.49
4	Interest on Working Capital	3.75	0.04	3.79	13.46	0.50	6.52	7.43	3.64
5	Return on Equit	9.18	0.25	9.43	109.34	-	45.30	64.04	54.61
6	SLDC Charges	1.04	0.01	1.05	1.05	-	0.40	0.65	(0.40)
7	Income Tax	-	-	-	-	-	-	-	-
8	Prov. for Doubtful Debts	-	-	-	31.79	-	-	31.79	31.79
9	Net Prior Period Items: Income(-)/Expense	-	-	-	(0.23)	0.0046	-	(0.22)	(0.22)
10	<b>Total Annual Fixed Cost</b>	<b>79.46</b>	<b>0.91</b>	<b>80.37</b>	<b>413.07</b>	<b>8.93</b>	<b>224.68</b>	<b>197.32</b>	<b>116.95</b>
11	Less: Non-Tariff Income	0.31	-	0.31	6.68	0.86	-	7.54	(7.23)
12	Revenue from Sales	79.15	0.91	80.06	205.75	-	130.46	75.29	4.77
13	<b>Net Gap/Surplus (-)</b>								<b>114.50</b>

### **3.15. Net Gap/Surplus**

The Annual Fixed Cost for old plants is calculated by deducting the AFC approved in the tariff order from the actual AFC incurred as per the provisional SoA FY 2015-16.

The revenue from operations for MePGCL old plants is determined by deducting the revenue realized through sale of power from Leskha HEP i.e. Rs 130.46 Crores is deducted from the total revenue of MePGCL i.e. Rs 205.75 Crores as per the provisional SoA.

Further to deduce the net gap/surplus in generation business, the revenue is deducted from the net AFC calculated for old plants as given in the Table 32 above.

Hence based on the above approach and calculations of Annual Fixed Cost components as per the Table 32, MePGCL now humbly requests Hon'ble Commission to admit a gap of Rs. 114.50 Crores in the provisional true up of MePGCL old plants (excluding Leshka) for the FY 2015-16 and allow MePGCL to recover to recover the gap through generation tariff of FY 2017-18.

## 4. Mid-Term Review of Control Period for the FY 2016-17 & Tariff Determination for FY 2017-18

### 4.1. Background

- a. The Honorable MSERC, on 30.03.2015 had passed the Orders for determining Annual Fixed Charges (AFC) for the 1<sup>st</sup> MYT Control Period FY 2015-16 to FY 2017-18 for old generating stations including Sonapani of MePGCL.
- b. Subsequently, the Honorable MSERC had passed the Tariff Orders for FY 2016-17 on 30.03.2016 based on the AFC approved in the MYT Order and True up of the previous years. The AFC for the Control Period as approved by the Honorable Commission in the said Orders is as shown below:

Sl.NO	Particulars	Capacity (MW)	Approved AFC (INR Crs)		
			FY 2015-16	FY 2016-17	FY 2017-18
1	Umiam Stage I	36	15.22	15.97	16.87
2	Umiam Stage II	20	8.46	8.87	9.37
3	Umiam Stage III	60	25.37	26.62	28.11
4	Umiam Stage IV	60	25.37	26.62	28.11
5	Umtru Power Station	11.2	4.74	4.97	5.25
6	Sonapani	1.5	0.91	0.93	0.95
	<b>Total</b>	<b>188.7</b>	<b>80.06</b>	<b>83.98</b>	<b>88.66</b>

- c. Now, MePGCL files the present petition for the mid-term Review of the Control Period along and revision of AFC and determination of Capacity charges and Energy Charges for FY 2017-18 based on the actual data of FY 2014-15 and FY 2015-16 as mentioned in the previous sections for MePGCL old plants (excluding MLHEP which taken care through separate tariff petition).

### 4.2. Performance

#### 4.2.1. Existing Generation Capacity:

The initial installed capacity when the erstwhile Meghalaya State Electricity Board (MeSEB) was bifurcated from the Assam State Electricity Board (ASEB) in 1975 was 65.2 MW. With the commissioning of Stage-III HEP (1979), Stage IV HEP (1992) &

Sonapani Mini Hydel and uprating of Umiam Stage-II(from 18MW to 20MW in 2012), MLHEP 3x42 MW in 2014 the installed capacity increased by 314.7 MW

All the Generating Stations except Sonapani Mini Hydel Project, as indicated in the Table below are hydel power stations with the main reservoir at Umiam for all the stages. Therefore, all these stages depend mainly on water availability at the Umiam reservoir. The total installed capacity of MePGCL projects at the start as on April 2015, was as under:

Table 33 Existing Generation Capacity FY 2015-16

S. No.	Name of Station	No. of	Capacity	Total	Year of
		Units	(MW)	Capacity	Commissioning
1	Umiam Stage I	I	9	36	21.02.1965
		II	9		16.03.1965
		III	9		06.09.1965
		IV	9		09.11.1965
2	Umiam Stage II	I	10	20*	22.07.1970
		II	10		24.07.1970
3	Umiam Stage III	I	30	60	6.01.1979
		II	30		30.03.1979
4	Umiam Stage IV	I	30	60	16.09.1992
		II	30		11.08.1992
5	Umtru Power Station	I	2.8	11.2	01.04.1957
		II	2.8		01.04.1957
		III	2.8		01.04.1957
		IV	2.8		12.07.1968
6	Mini Hydel (Sonapani)	I	1.5	1.5	27.10.2009
7	MLHEP (Leshka)**	I	42	126	01.04.2012
		II	42		01.04.2012
		III	42		01.04.2013
<b>Total</b>				<b>314.7</b>	

\*uprated from 18 Mw to 20 MW in 2012

\*\* A separate petition has been filed for tariff determination of Leshka along with true up of past years

#### 4.2.2. Operational Performance of the Generating Stations- MePGCL

All the Generating stations being hydro, the annual generation depends on the rainfall

for the year. The yearly generation for last 6 years for the generating stations is shown in the table below:

**Table 34 MePGCL Net Generation for past 6 Years  
Generation Data for Last 6 Years (MU's)**

Name of the Power Station	MW	Approved MYT Period (MU)	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Avg. of last 6 Years
Umiam I	36	116	103.80	108.80	103.90	78.12	89.23	112.87	99.45
Umiam II	20	46	47.52	12.90	50.93	41.03	45.68	57.88	42.66
Umiam III	60	139	132.20	127.50	131.10	132.55	112.29	116.66	125.38
Umiam IV	60	208	205.00	204.00	190.00	173.64	161.51	183.79	186.32
Umtru Power Station	11.2	39	15.51	38.04	30.64	20.80	15.13	1.35	20.25
Mini Hydel (Sonapani)	1.5	6	4.90	6.03	7.28	5.23	5.70	6.22	5.89
<b>Total</b>	<b>188.7</b>	<b>553</b>	<b>508.93</b>	<b>497.27</b>	<b>513.85</b>	<b>451.37</b>	<b>429.54</b>	<b>478.77</b>	<b>479.96</b>

### 4.2.3. Operation Norms

4.2.3.1. The Regulation 58 of the MYT Regulations, 2014 provides the norms for operation for Hydro Generating stations. The regulation is reproduced below for ready reference:

**“58 Norms of operation**

*The norms of operation shall be as under:*

**58.1 Normative annual plant availability factor (NAPAF)**

*(a) Storage and pondage type plants where plant availability is not affected by silt and*

*(i) with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of upto 8 % ..... 90 %*

*(ii) with head variation between FRL and MDDL of more than 8%= (Head at MDDL/Rated Head) x 0.5+0.2*

*(b) Pondage type plant where plant availability is significantly affected by silt.. ..85%*

*(c) Run –of- River type plants: NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past experience where available /relevant.*

*Note:*

- (i) A further allowance may be made by the Commission under special circumstances, eg. Abnormal silt problem or other operating conditions, and known plant limitations.
- (ii) A further allowance of 5 % may be allowed for difficulties in the North East Region.
- (iii) In case of new hydro electric project the developer shall have the option of approaching the Commission in advance for further above norms.

**58.2 Auxiliary energy consumption:**

- (a) Surface hydro electric power generating stations with rotating exciters mounted on the generator shaft .....0.7% of energy generated.
- (b) Surface hydro electric power generating stations with static excitation system.....1.0% of energy generated.
- (c) Underground hydro electric power generating stations with rotating exciters mounted on the generator shaft ....0.9% of energy generated.
- (d) Underground hydro electric power generating stations with static excitation system .....1.2% of energy generated.

**58.3 Transformation losses**

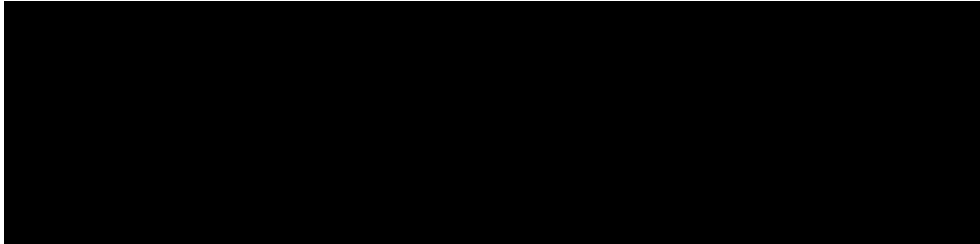
*From generation voltage to transmission voltage .....0.5% of energy generated.”*

The features of the hydro power plants of MePGCL in terms of type of plant, type of excitation etc. are provided in the table below:

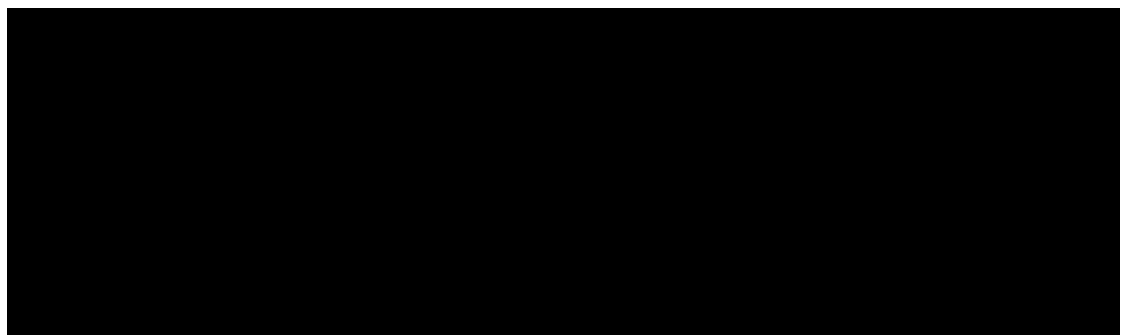
Sl. No.	Particulars	Umtru	Umiam-I	Umiam-II	Umiam-III	Umiam-IV	Sonapani
<b>1</b>	<b>Type of Station</b>						
<b>a</b>	<i>Surface/ Undergroun</i>	SURFACE	SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
<b>b</b>	<i>Purely ROR/ Pondage/ Storage</i>	PONDAGE	STORAGE	POWER CHANNEL (Pondage)	PONDAGE	PONDAGE	ROR
<b>c</b>	<i>Peaking/Non Peaking</i>	NON PEAKING	NON PEAKING	NON PEAKING	NON PEAKING	NON PEAKING	NON PEAKING
<b>d</b>	<i>No. of hours Peaking</i>	NA	NA	NA	NA	NA	NA
<b>e</b>	<i>Overload Capacity (MW) &amp; Period</i>	NIL	NIL	NIL	NIL	NIL	NA
<b>2</b>	<b>Type of Excitation</b>						
<b>a</b>	<i>Rotating exciters on Generator</i>	Rotating exciters	Rotating exciters	Rotating exciters	Rotating exciters	NA	Rotating exciters
<b>b</b>	<i>Static excitation</i>	NA	NA	NA	NA	Static Excitation	NA

#### 4.2.3.2. Computation of NAPAF for Storage and Pondage type plants:

Based on the above details and the norms specified by Regulation 58 (1) (a) of the MYT Regulations, 2014, the computation of NAPAF for Storage and Pondage type hydro generating stations is carried out as under:



As submitted in the above table other than Umiam Stage-II, for all power stations, the head variation between FRL and MDDL is more than 8%. Hence, an allowance is to be provided in NAPAF as indicated in the table below:



#### 4.2.3.3. Computation of NAPAF for Pondage type plants:

As per Regulation 58 (1) (b) of the MYT Regulations, 2014 for pondage type plants where plant availability is significantly affected by silt is NAPAF is 85%. Umtru being the only plant under this category and accordingly, NAPAF for Umtru is **85.00%** as per regulations. Further as per Regulation 58 of the MYT Regulations, 2014, after considering further allowance of 5% for difficulties in north east region, the NAPAF for Umtru is **80.00%**.

#### 4.2.3.4. Computation of NAPAF for Run of River type plants

As per Regulation 58 (1) (c) of the MYT Regulations, 2014, the NAPAF for Run of River type plants is to be determined based on 10-day design energy data, moderated by past



experience wherever relevant. Therefore, based on the past records and as per norm given in regulation, the NAPAF for Sonapani works out to be **50%**. Further as per Regulation 58 of the MYT Regulations, 2014, after considering further allowance of 5% for difficulties in north east region, the NAPAF for Sonapani is **45%**.

4.2.3.5. As per Regulation 58 of the MYT Regulations, 2014, the computed NAPAF is shown below:

Table 35 NAPAF of old plants

<b>Station</b>	<b>As per actual workings</b>	<b>NAPAF with 5% allowance</b>
Umiam Stage-I	64.83	59.83
Umiam Stage-II	90.00	85.00
Umiam Stage-III	68.67	63.67
Umiam Stage-IV	66.79	61.79
Umtru	85.00	80.00
Sonapani	50.00	45.00

It is submitted before the Hon'ble Commission to kindly approve the NAPAF for existing stations as submitted in the above table.

#### 4.2.4. Design Energy – Existing Generating Stations

The design energy for MePGCL power stations as approved in the earlier Tariff Orders is proposed for the Mid-term review of the Control Period as well. The station wise design energy is shown in the table below:

Table 36 Design Energy as per approved in MYT order

<b>Name of Power Station</b>	<b>Design Energy (MU)</b>
Umiam Stage I	116.29
Umiam Stage II	45.51
Umiam Stage III	139.4
Umiam Stage IV	207.5
Umtru	39.01
Mini Hydel (Sonapani)	5.5
<b>Total</b>	<b>553.21</b>

### 4.3. Capital Expenditure

In the investment plan, MePGCL had submitted Rs 59.69 crores for Capital expenditure for Umiam I,II,III,IV , Sonapani and Umtru HEP during the control period FY 2015-16 to FY 2017-18.

Table 37 Capital Expenditure for MYT period

Sl. No	Station	INR Crs		
		Capex	Debt	Equity
1	Umiam Stage-I	12.42	1.51	10.91
2	Umiam Stage-II	1.46	0.25	1.21
3	Umiam Stage-III	12.18	9.77	2.41
4	Umiam Stage-IV	31.75	4.06	27.7
5	Umtru Power Station	1.5	0.1	1.4
6	Sonapani HEP	0.38	0.04	0.34
	Total	59.69	15.73	43.97

However due to shortage of funds, no capital works could be carried out in the year FY 2015-16. MePGCL therefore proposed to incur the Capital Investment in the remaining years of the control period in the following manner.

Table 38 Additional Capitalization for FY 2016-17, FY 2017-18

Capex for Old Plants (Excl. Leshka)	Total Investment Plan in MYT (INR Crs )	FY 2015-16	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Additional Capitalization for old Plants	59.69	-	5.97	53.72

### 4.4. Annual Fixed Cost (AFC) for remaining control period

The Regulation 54 of the MYT Regulations, 2014, provides the Components of tariff for MePGCL. The relevant regulation is reproduced below for ready reference:

***“54 Components of tariff***

*54.1 Tariff for supply of electricity from a hydro power generating station shall comprise of two parts, namely, annual capacity charges and energy charges to be in the manner provided hereinafter.*

54.2 The fixed cost of a generating station eligible for recovery through annual

capacity charges shall consist of:

(a) Return on equity as may be allowed

(b) Interest on Loan Capital;

(c) Operation and maintenance expenses;

(d) Interest on Working Capital;

(e) Depreciation as may be allowed by the Commission;

(f) Taxes on Income.

54.3 The annual capacity charges recoverable shall be worked out by deducting other income from the total expenses”

#### 4.4.1. Gross Fixed Assets

The opening balance of GFA of MePGCL (all plants) as on 1.4.2015 is Rs.**1690.8r** Cr (including MLHEP project cost). The closing GFA for each year of the control period is worked out considering actual capitalization during FY 2015-16, estimated capitalization during FY 2015-16 and projected capitalization during control period of FY 2017-18.

For arriving at the GFA for MePGCL old plants only, the GFA of MLHEP as per the tariff petition for MLHEP is excluded from the GFA of total MePGCL as a whole.

The capital expenditure as per the revised investment schedule for FY 17 & FY 18 have been duly incorporated.

The GFA calculated for old plants year- wise is given below.

Table 39 Gross Fixed Assets for MePGCL as a whole

Particulars	FY 2014-15	FY 2015-16	FY 2016-17 (Projected)	FY 2017-18 (Projected)
<b>Opening Value of Gross Fixed Assets (Rs. Cr)</b>	1,689.46	1,690.83	1,695.99	1,695.99
Addition during the year (Rs. Cr)	1.37	14.49	-	-
Retirements during the year (Rs. Cr)	-	9.32	-	-
<b>Closing Value of Gross Fixed Assets (Rs. Cr)</b>	<b>1,690.83</b>	<b>1,695.99</b>	<b>1,695.99</b>	<b>1,695.99</b>

Table 40 Gross Fixed Assets for MLHEP

<b>Particulars</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>	<b>FY 2016-17 (Projected)</b>	<b>FY 2017-18 (Projected)</b>
<b>Opening Value of Gross Fixed Assets (Rs. Cr)</b>	1,285.78	1,286.13	1,286.74	1,286.74
Addition during the year (Rs. Cr)	0.36	9.93	-	-
Retirements during the year (Rs. Cr)	-	9.32	-	-
<b>Closing Value of Gross Fixed Assets (Rs. Cr)</b>	<b>1,286.13</b>	<b>1,286.74</b>	<b>1,286.74</b>	<b>1,286.74</b>

Table 41 Gross Fixed Assets for MePGCL old plants (Excl. Leshka)

<b>Particulars</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>	<b>FY 2016-17 (Projected)</b>	<b>FY 2017-18 (Projected)</b>
<b>Opening Value of Gross Fixed Assets (Rs. Cr)</b>	403.68	404.69	409.25	409.25
Addition during the year (Rs. Cr)	1.01	4.56	5.97	53.72
Retirements during the year (Rs. Cr)	-	-	-	-
<b>Closing Value of Gross Fixed Assets (Rs. Cr)</b>	<b>404.69</b>	<b>409.25</b>	<b>415.22</b>	<b>462.97</b>

MePGCL submits before the Hon'ble Commission to kindly approve the GFA of MePGCL's old plants as submitted in the table above.

#### 4.4.2. Return on Equity for MePGCL's Old Stations

Based on the above submissions and the actual equity infusion till FY 2015-16 and proposed equity infusion pertaining to Investment Plan, the Return on Equity computation for MePGCL old stations is shown in the table below:

Table 42 RoE for MePGCL old Stations (FY 2017 and FY 2018)

<b>RoE -MePGCL</b>			
<b>Particulars</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 (Est)</b>	<b>FY 2017-18 (Projected)</b>
Opening Equity (Rs. Cr)	779.17	782.79	782.79
Additions during the year (Rs. Cr)	3.62	-	-
Closing Equity (Rs. Cr)	782.79	782.79	782.79
Equity Considered for RoE (Rs. Cr)	780.98	782.79	782.79
RoE % (Rs. Cr)	14%	14%	14%
<b>RoE (Rs. Crore)</b>	<b>109.34</b>	<b>109.59</b>	<b>109.59</b>

<b>RoE-MLHEP</b>			
<b>Particulars</b>	<b>FY 2015-16</b>	<b>FY 2016-17 (Est)</b>	<b>FY 2017-18 (Projected)</b>
Opening Equity (Rs. Cr)	323.57	323.57	323.57
Additions during the year (Rs. Cr)	-	-	62.45
Closing Equity (Rs. Cr)	323.57	323.57	386.02
Equity Considered for RoE (Rs. Cr)	323.57	323.57	354.80
RoE % (Rs. Cr)	14%	14%	14%
<b>RoE (Rs. Crore)</b>	<b>45.30</b>	<b>45.30</b>	<b>49.67</b>
<b>RoE-MePGCL Old Plants (Excluding MLHEP)</b>			
<b>Particulars</b>	<b>FY 2015-16</b>	<b>FY 2016-17 (Est)</b>	<b>FY 2017-18 (Projected)</b>
Opening Equity (Rs. Cr)	455.60	459.22	459.22
Additions during the year (Rs. Cr)	3.62	-	(62.45)
Closing Equity (Rs. Cr)	459.22	459.22	396.77
Equity Considered for RoE (Rs. Cr)	457.41	459.22	428.00
RoE % (Rs. Cr)	14%	14%	14%
<b>RoE (Rs. Crore)</b>	<b>64.04</b>	<b>64.29</b>	<b>59.92</b>

MePGCL submits before the Hon'ble Commission to kindly approve Rs. 64.29 Cr and Rs. 59.92 Cr as RoE for FY 2016-17 and FY 2017-18 respectively for MePGCL old plants.

#### **4.4.3. Interest and Finance Charges on Loan capital**

As per Regulation 32 of the MYT Regulations, 2014, Interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the schedule of loan repayment, terms and conditions of loan agreements, bond or debenture and the prevailing lending rate of bank and financial institution.

The Interest on Loan for the control period has been computed by considering Interest obligation for present and upcoming project loans. The detailed statement of Interest and Finance charge is enclosed as Format-7. The summarized statement of Interest and Finance charge for the Control Period is shown below:

Table 43 Interest & Finance Charges for FY 2017, FY 2018

Sl. No	Particulars	FY 2015-16 Actual	FY 2016-17 (Estimated)	FY 2017-18 (Projected)
<b>1</b>	<b>Int on Loan for old Plants (Excl Leshka):</b>			
1.a	Int on loan for MePGCL (old+new plants)	125.22	130.74	124.74
1.b	Less: Int on loan for MLHEP	82.69	76.06	74.48
1.c	Less: Int Capitalized (As per SoA FY 2015-16)	33.81	33.81	33.81
1.d	Add: Finance charges (As per SoA FY 2015-16)	3.23	3.23	3.23
	<b>Sub Total</b>	<b>11.95</b>	<b>24.10</b>	<b>19.68</b>
<b>2</b>	<b>Interest on Loan for CAPEX</b>			
2.a	Loan proposed as per Capex (Rs 15.73 Crs Debt)	-	1.57	14.16
2.b	Int. on addn. loan for Capex (12.5% assume.)	-	0.20	1.77
	<b>Total</b>	<b>11.95</b>	<b>24.29</b>	<b>21.45</b>

MePGCL submits before the Hon'ble Commission to kindly approve Rs. **24.29** Cr and Rs. **21.45** Cr as Interest and Finance Charges for FY 2016-17 and FY 2017-18 respectively for MePGCL-Old stations.

#### 4.4.4. Operation and Maintenance Expense

As per Regulation 56 of the MYT Regulations, 2014, the Operation and Maintenance Expenses (O&M) is a sum of Employee Cost, Repairs and Maintenance (R & M) Expense and Administrative and General (A & G) Expenses. The extract of the regulations is reproduced:

#### ***"56 Operation and maintenance expenses***

56.1 Operation and Maintenance Expenses (O & M Expenses) shall mean the total of all expenditure under the following heads: -

- (a) Employee Cost
- (b) Repairs and Maintenance
- (c) Administration and General Expenses

##### 4.4.4.1. O&M Expenses projection based on actuals

The O&M expenses for MePGCL plants (Old + New) have been made due revision based on the actual expenditure incurred in FY 2015-16 as per provisional statement of

accounts. All factors including present market inflation, revision of pay have been duly accounted for while projecting the expenses head wise till FY 2017-18.

**Employee Cost:**

It is submitted that before corporatization, Meghalaya State Electricity Board (MeSEB) used to revise pay scale of employees every 5 years. Further at the time corporatization in the year 2010, the Management and Employees' Association had mutually decided that the earlier trend of revision of pay will continue in future i.e. Management will revise pay scale of all the employees every 5 years. The last pay revision was made effective in the year 2010. Therefore, from January 2015 onwards, Revision of Pay will be made effective. The provisional SoA reflects Rs 4.64 Crs for provision for Revision of Pay and Capitalization to CWIP of Rs 10.09 Crs in FY 2015-16.

For projections in FY 2016-17 and FY 2017-18, the following assumptions have been made:

- a. **Basic Pay:** As per the decision of working committee on pay revision, it was recently decided to revise the Basic pay by 1.73 times of Basic pay effective from 1<sup>st</sup> Jan 2015. However as on 1<sup>st</sup> Jan 2015, the DA accounted to 57 % of Basic Pay. So for estimating the Basic Pay in FY 2016-17, the Basis Pay & DA as a component of employee cost in SoA FY 2015-16 is merged together with effective increase by 16 % ( $1.73-1.57=0.16$ ) to form the New Basic Pay in FY 2016-17. For FY 2017-18, the Basic Pay arrived in FY 2016-17 is hiked by 3% for projection.
- b. **Dearness Allowance (DA):** The Dearness Allowance is paid to Employees as depicted :

Year	FY 2016-17	FY 2017-18
DA	- (As DA is merged with Basic Pay with 16 % hike)	10% of Basic Pay in FY 2017-18

- c. **Housing Rent Allowance (HRA):** The HRA is paid as a percentage of Basic Pay and is computed at 12 % of Basic Pay for FY 2016-17 & FY 2017-18.
- d. **Other Allowances:** The other allowances which include Medical Allowance, Overtime Allowance, etc. have been taken at the existing level as on FY 2015-16.

- e. Terminal benefit provision for future years is not considered at present. The same will be claimed at the time of true-up as per the actual provisioning.
- f. The Employee Expense capitalized for the remaining control period FY 2016-7 & FY 2017-18 has been taken at the same levels as reflected in SoA FY 2015-16 at Rs. 10.10 Crs.

Table 44 Employee expense projection FY 2017, FY 2018

<b>S.N</b>	<b>Particulars</b>	<b>FY 2015-16 Actuals</b>	<b>FY 2016-17 (Estimated)</b>	<b>FY 2017-18 (Projected)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<b>SALARIES &amp; ALLOWANCES</b>			
1	Basic Pay	22.21	38.13	39.28
2	Dearness Pay	-	-	-
3	Dearness Allowance	10.66	-	3.93
4	House rent Allowance	3.90	4.58	4.71
5	Fixed medical allowance	-	-	-
6	Medical reimbursement charges	0.27	0.27	0.27
7	Over time payment	0.08	0.08	0.08
8	ROP-2015	-	-	-
9	Generation incentive	0.00	0.00	0.00
10	Leave Travel Concession	-	-	-
11	Apportionment of Holding Exp	29.35	29.35	29.35
<b>12</b>	<b>Sub-Total</b>	<b>66.48</b>	<b>72.41</b>	<b>77.62</b>
	<b>Terminal Benefits</b>			
13	Leave encashment	-	-	-
14	Gratuity	-	-	-
15	Commutation of Pension	-	-	-
16	Staff Welfare expenses	0.00	0.00	0.00
17	CPS	0.39	0.39	0.39
18	Workman compensation	-	-	-
19	Ex- gratia	0.01	0.01	0.01
<b>20</b>	<b>Sub-Total</b>	<b>0.40</b>	<b>0.40</b>	<b>0.40</b>
	<b>Pension Payment</b>			
21	Basic Pension	-	-	-
22	Dearness Pension	-	-	-
23	Dearness allowance	-	-	-
24	Any other expenses	-	-	-
<b>25</b>	<b>Sub-Total</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>26</b>	<b>Total (12+20+25)</b>	<b>66.88</b>	<b>72.82</b>	<b>78.02</b>



<b>S.N</b>	<b>Particulars</b>	<b>FY 2015-16 Actuals</b>	<b>FY 2016-17 (Estimated)</b>	<b>FY 2017-18 (Projected)</b>
27	Amount capitalized	10.10	10.10	10.10
<b>28</b>	<b>Net amount (26-27)</b>	<b>56.78</b>	<b>62.72</b>	<b>67.93</b>
29	Add prior period expenses *	0.77	-	-
30	Prov For RoP 2015	4.64	-	-
<b>31</b>	<b>Grand Total (28-29-30)</b>	<b>62.19</b>	<b>62.72</b>	<b>67.93</b>

### **Administrative & General (A & G) Expense Projection**

The increase in A & G expenses mainly depend upon the market inflation and the increase in business volume. As the A & G Expense is being projected for the remaining control period as a whole, therefore A & G expense for the remaining control period is projected by considering the present average inflation rate of 5% over R&M expenses as per provisional SoA FY 2015-16 in FY 2016-17 & FY 2017-18. Furthermore, at the time of unbundling, MeECL and its subsidiaries i.e. MePGCL, MePTCL & MePDCL have mutually agreed to reimburse the expense of MeECL on the ratio of cost of respective corporations. The apportionment of MeECL expense has been added as part of A & G expense of MePGCL.

### **Repair and Maintenance (R & M) Expense Projection**

Most of the stations of MePGCL being old, there is need to regularly take up R & M activities for the stations as well as reservoir. However due to revenue deficit faced by MeECL & its subsidiaries, MePGCL has not been able to take up R&M works in planned manner. Therefore, MePGCL has considered present year's average inflation rate of 5% for projection of R&M cost over R&M expenses as per provisional SoA FY 2015-16 for the remaining control period FY 2016-17 to FY 2017-18.

For O&M projections of MePGCL old plants, after 1/3rd of MeECL expense apportionment and deduction of MLEHP Expense as per the MLHEP MYT Petition has been summarized below.

Table 45 O&amp;M expense for FY 2016-17 old plants

**FY 2016-17**

Particulars	Actual	Estimated FY 2016-17				
	MePGCL FY 2015-16	For MePGCL	1/3rd of MeECL	Total (Incl. 1/3rd of MeECL)	Leshka HEP	MePGCL Old Plants
-	-	<b>a</b>	<b>b</b>	<b>c=a+b</b>	<b>d</b>	<b>e =c-d</b>
Employee Cost	62.19	62.72	7.52	70.23	30.41	77.12
R&M Expenses	29.06	30.52	0.05	30.57		
A&G Expenses	5.56	5.84	0.89	6.73		
<b>Total</b>	<b>96.81</b>	<b>99.07</b>	<b>8.46</b>	<b>107.53</b>	<b>30.41</b>	<b>77.12</b>

Table 46 O&amp;M expenses for FY 2017-18

**FY 2017-18**

Particulars	Estimated FY 2017-18				
	For MePGCL	1/3rd of MeECL	Total (Incl. 1/3rd of MeECL)	Leshka HEP	MePGCL Old Plants
	<b>a</b>	<b>B</b>	<b>c=a+b</b>	<b>d</b>	<b>e =c-d</b>
Employee Cost	67.93	7.74	72.34	32.15	79.36
R&M Expenses	32.04	0.06	32.10		
A&G Expenses	6.13	0.94	7.07		
<b>Total</b>	<b>106.10</b>	<b>8.74</b>	<b>111.51</b>	<b>32.15</b>	<b>79.36</b>

Therefore MePGCL requests Hon'ble Commission to approve Rs 77.12 Crs and Rs 79.36 Crs towards O&M expenses projection for FY 2016-17 and FY 2017-18 respectively for MePGCL old plants.

**4.4.5. Interest on Working Capital**

As per Regulation 34.1 (iii) of the MYT Regulations, 2014, the components of working capital will be:

***"34 Interest on Working Capital*****34.1 Generation**

- (iii) In case of hydro power generating stations, working capital shall cover:
- Operation and maintenance expenses for one (1) month;
  - Maintenance spares at the rate of 15% of O & M expenses escalated at 6% from the date of commercial operation; and
  - Receivables equivalent to two (2) month of fixed cost: Provided that in case of own generating stations, no amount shall be allowed towards receivables, to the extent of supply of power by the Generation Business to the Retail Supply Business, in the computation of working capital in accordance with these Regulations.”

As per the Regulations 34.1 (iii), MePGCL requests Hon'ble commission to approve the computation of Interest on Working Capital for MePGCL Old stations for remaining control period FY 2016-17 and FY 2017-18 as shown below:

Table 47 Interest on Working Capital for FY 2016-17 and FY 2017-18

<b>Particulars</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 (Estimated)</b>	<b>FY 2017-18 (Projected)</b>
O & M Expenses for 1 month	6.35	6.43	6.61
Maintenance Spares @15% of O&M plus escalated by 6%	11.44	11.57	11.90
Receivables @ 2 months of Fixed Cost	27.68	32.05	31.21
<b>Total Working Capital requirement (Rs. Cr)</b>	<b>45.47</b>	<b>50.04</b>	<b>49.72</b>
SBI Advance Bank rate as on 1.4.2014 (%)*	14.75%	14.75%	14.75%
<b>Interest on Working Capital</b>	<b>6.71</b>	<b>7.38</b>	<b>7.33</b>

#### 4.4.6. Depreciation

Depreciation is computed as per Regulation 33 of the MYT Regulations, 2014. The depreciation is projected based on the estimated completion of ongoing and upcoming projects during the control period.

For projection of depreciation of MePGCL old plants for the remaining control period FY 2016-17 and FY 2017-18, the Depreciation of MLHEP has been deducted from depreciation of MePGCL as whole as per the Format 6 below.

Table 48 Assets and Depreciation for MePGCL FY 2016-17

MePGCL _VALUE ASSETS AND DEPRECIATION 2016-17							(INR Crs)
S. No	Name of the Asset	Value of Assets at the beginning of the year 01-04-15	Addition during the year	Withdrawn during the year	Value of Assets at the end of the year	Rate of Depreciation (%)	Depreciation charges for the year
1	2	3	4	5	6	7	8
1	Land & Land Rights	35.99	0.86	5.74	31.11		-
2	Buildings	159.36	0.30	0.03	159.63	3.34	5.17
3	Hydraulic Works	751.68	1.40	0.79	752.28	5.28	38.89
4	Other Civil Works	141.25	8.69	1.50	148.45	3.34	4.68
5	Plant & Machinery	589.06	2.84	1.26	590.64	5.28&6.33	29.75
6	Lines & Cable Network	7.60	0.00	-	7.60	5.28	0.30
7	Vehicles	1.85	0.22	-	2.08	9.50	0.13
8	Furniture & Fixtures	2.40	0.04	-	2.43	6.33	0.13
9	Office Equipment	1.64	0.15	-	1.78	6.33	0.10
10	Asset not in use	0.16	-	-	0.16		-
	<b>Total</b>	<b>1,690.98</b>	<b>14.49</b>	<b>9.32</b>	<b>1,696.15</b>		<b>79.14</b>

Table 49 Assets and Depreciation for MLHEP FY 2016-17

Name of the Licensee: MLHEP							2016-17
VALUE ASSETS AND DEPRECIATION							(INR Crs)
S. No	Name of the Asset	Value of Assets at the beginning of the year	Addition during the year	Withdrawn during the year	Value of Assets at the end of year	Rate of Depreciation (%)	Depreciation charges for the year
1	2	3	4	5	6	7	8
1	Land & Land rights	23.90	-	-	23.90		-
2	Buildings	146.68	-	-	146.68	3.34	4.89
3	Hydraulic Works	623.60	-	-	623.60	5.28	32.71
4	Other Civil Works	122.70	-	-	122.70	3.34	3.90
5	Plant & Machinery	364.57	-	-	364.57	5.28	19.22
6	Lines & Cable Network	4.57	-	-	4.57	5.28	0.24
7	Vehicles	0.46	-	-	0.46	9.50	0.02
8	Furniture & Fixtures	0.08	-	-	0.08	6.33	0.00
9	Office Equipment	0.18	-	-	0.18	6.33	0.01
10	<b>Total</b>	<b>1,286.74</b>	-	-	<b>1,286.74</b>	<b>44.68</b>	<b>61.00</b>

Table 50 Assets and Depreciation for MePGCL FY 2017-18

MePGCL _VALUE ASSETS AND DEPRECIATION 2017-18							(INR Crs)
S. No	Name of the Asset	Value of Assets at the beginning of the year 01-04-15	Addition during the year	Withdrawn during the year	Value of Assets at the end of the year	Rate of Depreciation (%)	Depreciation charges for the year
1	2	3	4	5	6	7	8
1	Land & Land Rights	35.99	0.86	5.74	31.11		-
2	Buildings	159.36	0.30	0.03	159.63	3.34	5.17
3	Hydraulic Works	751.68	1.40	0.79	752.28	5.28	38.89
4	Other Civil Works	141.25	8.69	1.50	148.45	3.34	4.68
5	Plant & Machinery	589.06	2.84	1.26	590.64	5.28&6.33	29.75
6	Lines & Cable Network	7.60	0.00	-	7.60	5.28	0.30
7	Vehicles	1.85	0.22	-	2.08	9.50	0.13
8	Furniture & Fixtures	2.40	0.04	-	2.43	6.33	0.13
9	Office Equipment	1.64	0.15	-	1.78	6.33	0.10
10	Asset not in use	0.16	-	-	0.16		-
	<b>Total</b>	<b>1,690.98</b>	<b>14.49</b>	<b>9.32</b>	<b>1,696.15</b>		<b>79.14</b>

Table 51 Assets and Depreciation for MLHEP FY 2017-18

Name of the Licensee: MLHEP						2017-18	
VALUE ASSETS AND DEPRECIATION							(INR Crs)
S. No	Name of the Asset	Value of Assets at the beginning of the year	Addition during the year	Withdrawn during the year	Value of Assets at the end of year	Rate of Depreciation (%)	Depreciation charges for the year
1	2	3	4	5	6	7	8
1	Land & Land rights	23.90	-	-	23.90		-
2	Buildings	146.68	-	-	146.68	3.34	4.89
3	Hydraulic Works	623.60	-	-	623.60	5.28	32.71
4	Other Civil Works	122.70	-	-	122.70	3.34	3.90
5	Plant & Machinery	364.57	-	-	364.57	5.28	19.22
6	Lines & Cable Network	4.57	-	-	4.57	5.28	0.24
7	Vehicles	0.46	-	-	0.46	9.50	0.02
8	Furniture & Fixtures	0.08	-	-	0.08	6.33	0.00
9	Office Equipment	0.18	-	-	0.18	6.33	0.01
10	<b>Total</b>	<b>1,286.74</b>	-	-	<b>1,286.74</b>	<b>44.68</b>	<b>61.00</b>

Therefore MePGCL requests Hon'ble Commission to approve Rs 18.13 Crs (79.14-61.00) towards depreciation of old plants for both FY 2016-17 and FY 2017-18 .

#### 4.4.7. Taxes on Income

As per Regulation 35 of the MYT Regulations, 2014, provide for claim of Income Tax as expenses. However MePGCL submits nil income tax shall for remaining control period as of now. The actuals incurred if any shall be taken up during true up of subsequent years.

#### 4.4.8. SLDC Charges

MePGCL proposes no change to the figure of Rs 1.05 Crs approved by the Hon'ble Commission in the MYT tariff order for the remaining years in the control period.

#### 4.4.9. Non-Tariff Income

MePGCL submits that as per provisional SoA, MePGCL has received Rs 6.68 Crs towards non-tariff income and MeECL has received Rs 2.56 Crs in FY 2015-16. Apportioning 1/3<sup>rd</sup> of MeECL expense to MePGCL, the total non-tariff income for MePGCL is Rs 7.54 Crs (2.56+0.86) in FY 2015-16. MePGCL proposes the same amount as non-tariff income for FY 2016-7 and FY 2017-18 as well.

#### 4.4.10. Summary of Annual Fixed Cost – MePGCL Old Stations

The summary of the Annual Fixed Cost for MePGCL old stations is provided in the table below:

Table 52 Summary of AFC for FY 2016-17 and FY 2017-18 for MePGCL old plants

Sl. No	Particulars	FY 2015-16 Actual	FY 2016-17 (Estimated)	FY 2017-18 (Projected)
1	Interest on Loan capital	11.95	24.29	21.45
2	Depreciation	6.09	18.13	18.13
3	O&M Expenses	76.25	77.12	79.36
4	Interest on working capital	7.51	7.38	7.33
5	Return on Equity	64.04	64.29	59.92
6	Income Tax	-	-	-
7	SLDC Charge	1.05	1.05	1.05
8	Net Prior Period Items	-	-	-
9	Provision for Bad debts	31.79	-	-
<b>10</b>	<b>Total Annual Fixed Cost</b>	<b>198.68</b>	<b>192.28</b>	<b>187.24</b>
11	<i>Less: Non-Tariff Income</i>	<i>7.54</i>	<i>7.54</i>	<i>7.54</i>
<b>12</b>	<b>Net Annual Fixed Cost</b>	<b>191.14</b>	<b>184.74</b>	<b>179.71</b>

MePGCL submits before the Hon'ble Commission to kindly approve the Annual Fixed Cost of Rs. **184.74** Cr and Rs. **179.71** for FY 2016-17 and FY 2017-18 respectively for MePGCL Old stations.

#### 4.4.11. Computation of Capacity Charge and Energy Charge for FY 2017-18

Following the same approach followed in the MYT tariff order, MePGCL proposes to recover the annual fixed charges for each station based on the capacity of each station for determining energy charges and fixed charges in FY 2017-18.

Further, MePGCL in this petition requests Hon'ble commission to allow it to recover the revenue gap due to approved tariff of previous years through generation tariff to be determined for the coming year in FY 2017-18. The net revenue for MePGCL old plants including gap of previous years to be passed on is summarized below.

Table 53 Net Gap to be passed on for tariff in FY 2017-18

Particulars		FY 2017-18
Revised Annual Fixed Cost (AFC) Proposed for FY 2017-18 (INR Crs)	a	179.71
Add: Revenue Gap from True Up of FY 2014-15 (INR Crs)	b	29.51
Add: Revenue Gap from Provisional True Up of FY 2015-16 (INR Crs)	c	114.50
<b>Total AFC for FY 2017-18 (INR Crs)</b>	<b>d=a+b+c</b>	<b>323.72</b>

The revenue gap/surplus for FY 2016-17 (estimated) has not been considered for passing on since we are already at the fag end of the fiscal year and the same shall be taken up during true up filing in future.

The station- wise allotted Net Annual Fixed Cost proposed for recovery in FY 2017-18 is shown in the table below:

Table 54 AFC, Capacity charges and Energy charges for FY 2017-18

Sl. No	Name of the Power Station	MW	Projected Generation (Average of last 6 years) (MU)	Annual Fixed Charges (INR Crs)	Capacity Charges (INR Crs)	Energy Charges (Rs/Unit)
1.	Umiam I	36	99.45	61.76	30.88	3.10
2.	Umiam II	20	42.66	34.31	17.16	4.02
3.	Umiam III	60	125.38	102.93	51.47	4.10
4.	Umiam IV	60	186.32	102.93	51.47	2.76

Sl.	Name of the	MW	Projected	Annual	Capacity	Energy
5.	Umtru Power Station	11.2	20.25	19.21	9.61	4.75
6.	Mini Hydel (Sonapani)	1.5	5.89	2.57	1.29	2.18
	<b>Total</b>	<b>188.7</b>	<b>479.96</b>	<b>323.72</b>	<b>161.86</b>	<b>3.37</b>

MePGCL requests the Hon'ble Commission to approve the total AFC for the remaining control period for FY 2017-18 for six plants namely: Umiam Stage I, Umiam Stage II, Umiam Stage III, Umiam Stage IV, Umtru and Sonapani. The total installed capacity of the plant is 188.7 MW and the average net generation from these plants is 479.96 MU after allowing auxiliary consumption. Following the similar approach adopted in the MYT tariff order, MePGCL proposes to recover the total annual fixed charges from the beneficiary in the Financial Year 2017-18 on these plants on the basis of their capacity and designed energy.

## FORMAT 7

DETAILS OF LOANS FOR THE YEAR							
MePGCL : 2016-17 (1st Quarter Actuals)							
SL. No.	Particulars	Opening Balance	Rate of Interest	Addition during the year	Repayment during the year	(Rs. In Lakhs)	
						Closing Balance	Amount of Interest paid
1	2	3	4	5	6	7	8
1	REC (MLHEP)	24039.03	11.07%		632.61	23406.42	1327.78
2	PFC (MLHEP)	20533.40	12.75%		805.23	19728.17	1355.22
3	FEDERAL (ML)	2261.90	12.98%		178.57	2083.33	82.58
4	CBI (ML)	4192.45	12.75%		208.33	3984.12	94.06
5	BSE Bonds (ML)	17000.00	10.37%			17000.00	881.81
6	PFC (NUHEP)	32500.51	12.75%	1837.68		34338.19	1024.97
7	PFC GEL (Lakroh)	291.67	11.25%	7.29		298.96	7.29
	<b>Total</b>	<b>100818.96</b>		<b>1844.97</b>	<b>1824.75</b>	<b>100839.19</b>	<b>4773.70</b>
8	State Govt. Loan	12321.56	9.31%	11.11		12332.67	
	<b>Grand Total</b>	<b>113140.52</b>		<b>1856.08</b>	<b>1824.75</b>	<b>113171.86</b>	<b>4773.70</b>



<b>MePGCL : 2016-17 (2nd,3rd &amp; 4th quarter Quarter Projections)</b>							
<b>DETAILS OF LOANS FOR THE YEAR</b>							
						<b>(Rs. In Lakhs)</b>	
<b>SL. No.</b>	<b>Particulars</b>	<b>Opening Balance</b>	<b>Rate of Interest</b>	<b>Addition during the year</b>	<b>Repayment during the year</b>	<b>Closing Balance</b>	<b>Amount of Interest Due</b>
1	2	3	4	5	6	7	8
1	REC (MLHEP)	23406.42	11.07%		2530.42	20876.00	1843.79
2	PFC (MLHEP)	19728.17	12.75%		1207.86	18520.31	1229.19
3	FEDERAL (ML)	2083.33	12.98%		714.24	1369.09	270.42
4	CBI (ML)	3984.12	12.75%		833.32	3150.80	486.06
5	BSE Bonds (ML)	17000.00	10.37%			17000.00	881.81
6	PFC (NUHEP)	34338.19	12.75%	7591.81		41930.00	3555.37
7	PFC GEL (Lakroh)	298.96	11.25%	33.92		332.88	33.92
	<b>Total</b>	<b>100839.19</b>		<b>7625.73</b>	<b>5285.84</b>	<b>103179.07</b>	<b>8300.56</b>
8	State Govt. Loan	12332.67	9.31%	949.13		13281.80	
	<b>Grand Total</b>	<b>113171.86</b>		<b>8574.86</b>	<b>5285.84</b>	<b>116460.87</b>	<b>8300.56</b>

## FORMAT 7

<b>MePGCL : 2017-18 ( Projected)</b>							
<b>DETAILS OF LOANS FOR THE YEAR</b>							
						<b>(Rs. In Lakhs)</b>	
<b>SL. No.</b>	<b>Particulars</b>	<b>Opening Balance</b>	<b>Rate of Interest</b>	<b>Addition during the year</b>	<b>Repayment during the year</b>	<b>Closing Balance</b>	<b>Amount of Interest paid</b>
1	2	3	4	5	6	7	8
1	REC (MLHEP)	20876.00	11.07%		2530.44	18345.56	2310.97
2	PFC (MLHEP)	18520.31	13.25%		1610.48	16909.83	2453.94
3	FEDERAL (ML)	1369.09	12.98%		714.28	654.81	177.71
4	CBI (ML)	3150.80	12.75%		833.32	2317.48	384.40
5	BSE Bonds (ML)	17000.00	10.37%		12000.00	5000.00	1763.63
6	PFC (NUHEP)	41930.00	12.75%			41930.00	5346.08
7	PFC GEL (Lakroh)	332.88	11.25%	37.64		370.52	37.64
	<b>Total</b>	<b>103179.07</b>		<b>37.64</b>	<b>17688.52</b>	<b>85528.19</b>	<b>12474.37</b>
8	State Govt. Loan	13281.80	9.31%	1056.27		14338.07	
	<b>Grand Total</b>	<b>116460.87</b>		<b>1093.91</b>	<b>17688.52</b>	<b>99866.26</b>	<b>12474.37</b>

<b>MLHEP : 2016-17 (Estimated)</b>							
<b>DETAILS OF LOANS FOR THE YEAR</b>							
						<b>(Rs. In Lakhs)</b>	
<b>SL. No.</b>	<b>Particulars</b>	<b>Opening Balance</b>	<b>Rate of Interest</b>	<b>Addition during the year</b>	<b>Repayment during the year</b>	<b>Closing Balance</b>	<b>Interest Accrued During the Year</b>
1	2	3	4	5	6	7	
1	REC (MLHEP)	24039.03	11.07%		3163.03	20876.00	2409.32
2	PFC (MLHEP)	20533.40	12.75%		2013.09	18520.31	2574.23
3	FEDERAL (ML)	2261.90	12.98%		892.81	1369.09	246.99
4	CBI (ML)	4192.45	12.75%		1041.65	3150.80	491.10
5	BSE Bonds (ML)	17000.00	10.37%			17000.00	1763.63
	<b>Total</b>	<b>68026.78</b>		<b>0.00</b>	<b>7110.59</b>	<b>60916.19</b>	<b>7485.26</b>
6	State Govt. Loan	1300.00	9.31%			1300.00	121.03
	<b>Grand Total</b>	<b>69326.78</b>		<b>0.00</b>	<b>7110.59</b>	<b>62216.19</b>	<b>7606.29</b>

## FORMAT 7

<b>MLHEP : 2017-18 ( Projected)</b>							
<b>DETAILS OF LOANS FOR THE YEAR</b>							
						<b>(Rs. In Lakhs)</b>	
<b>SL. No.</b>	<b>Particulars</b>	<b>Opening Balance</b>	<b>Rate of Interest</b>	<b>Addition during the year</b>	<b>Repayment during the year</b>	<b>Closing Balance</b>	<b>Interest Accrued During the Year</b>
1	2	3	4	5	6	7	
1	REC (MLHEP)	20876.00	11.07%		2530.44	18345.56	2103.91
2	PFC (MLHEP)	18520.31	13.25%		1610.48	16909.83	2335.38
3	FEDERAL (ML)	1369.09	12.98%		714.28	654.81	137.67
4	CBI (ML)	3150.80	12.75%		833.32	2317.48	365.71
5	BSE Bonds (ML)	17000.00	10.37%		12000.00	5000.00	1141.17
6	REC (New Loan)		12.50%	9948.00		9948.00	1243.50
	<b>Total</b>	<b>60916.19</b>	<b>0.00</b>	<b>9948.00</b>	<b>17688.52</b>	<b>53175.67</b>	<b>7327.34</b>
6	State Govt. Loan	1300.00	9.31%			1300.00	121.03
	<b>Grand Total</b>	<b>62216.19</b>		<b>9948.00</b>	<b>17688.52</b>	<b>54475.67</b>	<b>7448.37</b>