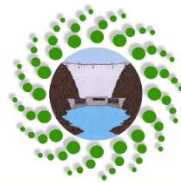


**BEFORE**  
**MEGHALAYA STATE ELECTRICITY REGULATORY**  
**COMMISSION**  
**SHILLONG**

**PETITION**  
**FOR**  
**MYT OF GENERATION**  
**BUSINESS FY 2018-19 TO FY 2020-21 &**  
**DETERMINATION OF GENERATION**  
**TARIFF FOR FY 2018-19**

FILED BY



**MEGHALAYA POWER GENERATION CORPORATION LIMITED**

**Lum Jingshai, Short Round Road, Shillong - 793 001**

**BEFORE THE HONOURABLE MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION**

At its office at Lower Lachumiere, Shillong – 793001

File/Petition No.: \_\_\_\_\_

IN THE MATTER OF

MYT OF GENERATION BUSINESS FOR FY 2018-19 TO FY 2020-21 & DETERMINATION OF GENERATION TARIFF FOR FY 2018-19 UNDER THE MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION (MULTI YEAR TARIFF) REGULATIONS, 2014 AND UNDER SECTIONS 62 & 64 READ WITH SECTION 86 OF THE ELECTRICITY ACT 2003.

AND IN THE MATTER OF

MEGHALAYA POWER GENERATION CORPORATION LIMITED, LUMJINGSHAI, SHORT ROUND ROAD, SHILLONG – 793001, MEGHALAYA

**PETITIONER**

The Petitioner respectfully submits as under:

1. In exercising its powers conferred under 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,
  - a. **Meghalaya Energy Corporation Limited (MeECL)**: the Holding Company;
  - b. **Meghalaya Power Distribution Corporation Limited (MePDCL)**: the Distribution Utility;
  - c. **Meghalaya Power Generation Corporation Limited (MePGCL)**: the Generation Utility;
  - d. **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 onwards, even after restructuring. Therefore, through notification dated 31st March, 2012, the 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.
3. On 23rd December 2013, the Government of Meghalaya issued the latest transfer scheme notification thereby notifying the Assets and Liabilities as on 1st April 2010 to be vested in MeECL. Subsequently, the Government of Meghalaya notified the 4<sup>th</sup> Amendment to the Notified Transfer Scheme dated 31st March, 2010 on 29th April, 2015, wherein the opening

balances of all the four entities, namely, MePGCL, MePTCL, MePDCL and MeECL as on 1st April 2012 were notified.

4. MePGCL began segregated commercial operations as an independent entity from 1st April 2013.
5. The expenses of the holding company, MeECL, is apportioned equally among the generation, transmission and distribution utilities since MeECL is an administrative setup for all the three subsidiaries.
6. 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 Part – X (Sections 76 to 109) 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 generating companies.
7. In accordance with the directives of the Hon’ble Commission and MSERC Multi Year Tariff Regulations 2014 (hereinafter referred to as “MYT Regulations, 2014”), MePGCL has calculated separate ARR and tariff for 1) Old Plants including Sonapani 2) Myntdu Leshka Power Plant.
8. In exercise of its powers, MSERC had determined the segregated Aggregate Revenue Requirement (ARR) for MePGCL and tariff for Old plants including Sonapani for FY 2015-16 in its tariff order dated 30<sup>th</sup> March 2015 and Annual Fixed Charges for FY 2015-16 to FY 2017-18 for Leshka in its tariff order dated 30th March, 2017, in accordance with the MSERC MYT Regulations, 2014.
9. The audited Statement of Accounts for MePGCL for FY 2015-16 has been attached as **Annexure B**. However the audit report for MeECL for FY 2015-16 is under process. As such, the petition for true up of FY 2015-16 is not included in this petition.
10. The provisional accounts of FY 2016-17 are finalized. However, the audited accounts of FY 2016-17 are currently not available. The utility prays for leave of submission of audited accounts of FY 2016-17 for the purpose of tariff petition of FY 2018-19. Provisional Statements of Accounts have been attached as **Annexure F1 (MePGCL) & F2 (MeECL)**
11. The petition also includes the determination of ARR separately for 1) Old Plants & Sonapani 2) Myntdu Leshka Power Plant for the Second Control Period (FY 2018-19 to FY 2020-21) which have been prepared in accordance with The Meghalaya State Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2014 and the tariff determination for generation business for FY 2018-19.
12. MePGCL is not filing final tariff petition at present for the New Umtru Hydro Electric station. Therefore **it is submitted till the time final tariff petition for New Umtru is filed, MePGCL be allowed to raise monthly bills of New Umtru as per provisional average tariff of Rs. 4.36 per unit approved by the Hon’ble Commission in its order dated 6th November, 2017.**

13. Based on the Audited Statement of Accounts for FY 2015-16 and Provisional Statement of Accounts for FY 2016-17 & Business Plan for FY 2018 - 2021 which has been approved by the Hon'ble Commission in its order dated 15th November, 2017, estimates for the FY 2017-18 and ARR projections for FY 2018-19 to FY 2020-21 are prepared..
14. The Board of Directors of MePGCL have accorded approval for filing of this petition and authorized the undersigned to file the petition accordingly. The copy of the Board's resolution is enclosed as **Annexure-D**.
15. The applicant, therefore, humbly prays before the Hon'ble Commission to pass appropriate orders on the following:
  - a. Approval of ARR for Old Plants including Sonapani and Myntdu Leshka Power Plant & Net ARR for FY 2018-19, FY 2019-20 and FY 2020-21 as proposed in this petition.
  - b. Approval of tariff for FY 2018-19 for Old plants including Sonapani & Myntdu Leshka Power Plant as proposed in this petition
  - c. To pass such orders, as the Hon'ble Commission may deem fit and proper and necessary in view of the facts and circumstances of the case.
  - d. 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  
Meghalaya Power Generation Corporation Ltd

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## **Introduction**

### **1.1 Provisions for Multi Year Tariff**

- 1.1.1** The Hon'ble Commission notified the MYT Regulations, 2014 on 25th September, 2014. As per Regulation 3, 4 & 7 of the MYT Regulations, 2014, the Hon'ble Commission will determine ARR & Tariff for the Generation Utility under Multi Year Tariff framework from 1st April, 2015. The relevant regulations are reproduced below for reference.

#### ***“3 Scope of Regulation***

*3.1 The Commission shall determine tariff within the Multi-Year Tariff framework, for all matters for which the Commission has jurisdiction under the Act, including in the following cases:*

*i) Supply of electricity by a Generating Company to a Distribution Licensee:*

*Provided that where the Commission believes that a shortage of supply of electricity exists, it may fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in pursuance of an agreement, entered into between a generating Company and a Distribution Licensee or between distribution licensees, for a period not exceeding one year to ensure reasonable prices of electricity;*

*ii) Intra-State transmission of electricity and SLDC charges;*

*iii) Intra-State Wheeling of electricity;*

*iv) Retail supply of electricity:*

*Provided that in case of distribution of electricity in the same area by two or more Distribution Licensees, the Commission may, for promoting competition among Distribution Licensees, fix only maximum ceiling of tariff for retail sale of electricity:*

*Provided further that where the Commission has allowed open access to certain consumers under sub-section (2) of Section 42 of the Act, the Commission shall determine the wheeling charges, cross subsidy surcharge, additional surcharges and other open access related charges in accordance with these regulations and MSERC (Terms and Conditions of Open Access) Regulations 2012 as applicable and as amended through Orders issued by the Commission from time to time*

.....

#### ***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.*

*Provided that the Commission may, either on suo-moto basis or upon application made to it by an applicant, exempt the determination of tariff of a Generating Company or Transmission Licensee or Distribution Licensee under the Multi-Year Tariff framework for such period as may be contained in the Order granting such an exemption.*

*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:*

.....

.....

**7 Applicability**

*7.1 The Multi-Year Tariff framework shall apply to applications made for determination of tariff for a Generating Company, Transmission Licensee, and Distribution Licensee for Distribution Business.”*

**1.1.2** Regulation 6 of the MYT Regulations, 2014, provides the guidelines for filing of Multi Year Tariff. The relevant sections are reproduced below:

***“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 30<sup>th</sup> 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 Regulations shall be as under:*

*a) MYT Petition shall comprise of:*

*i. Multi-year Aggregate Revenue Requirement for the entire Control Period with year-wise details;*

*ii. Revenue from the sale of power at existing tariffs and charges and projected revenue gap, for the first year of the Control Period under these Regulations.*

*iii. Application for determination of tariff for first year of the Control Period.*

.....

**1.1.3** There was an amendment to Regulation 1.4 of MSERC Regulations 2014 as per the order of the Hon’ble Commission dated 28th August, 2017 which states that the same regulations which were applicable for the 1<sup>st</sup> control period of MYT FY 2015-16 to FY 2017-18 will be applicable for the 2<sup>nd</sup> control period of MYT FY 2018-19 to FY 2020-21 for the power utilities of Meghalaya.

**1.2 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 (Multi Year Tariff) Regulations, 2014 for Determination of ARR under MYT for the Second Control Period (FY 2018-19 to FY 2020-21) & determination of generation tariff in FY 2018-19 for Old Plants (including Sonapani) and Myntdu Leshka Power Plant.



## **2. Company Profile and Performance Overview**

### **2.1 Company Profile**

**2.1.1** The Company is a Generating Company within the meaning of Section 2 (28) of the Electricity Act 2003. Further, Section 7 and 10 of the Electricity Act 2003 prescribes the following major duties of the Generating Company:

- To establish, operate and maintain generating stations, tie-lines, sub-stations and dedicated transmission lines connected therewith in accordance with the provisions of this Act or the rules or regulations made there under
- To supply electricity to any licensee in accordance with this Act and the rules and regulations made there under
- To submit technical details regarding its generating stations to the Appropriate Commission and the Authority.
- To co-ordinate with the Central Transmission Utility or the State Transmission Utility, as the case may be, for transmission of the electricity generated by it.

**2.1.2** As per Meghalaya Power Sector Transfer Scheme, MePGCL has been vested with the function of generation of power by the State Government of Meghalaya. The Business Scope of the Company falls within the legal framework as specified in the Act and includes:

- To supply electricity to any licensee in accordance with this Act and the rules and regulations made there under,
- To initiate accelerated power development by planning and implementing new power projects,
- To operate the existing generating stations efficiently & effectively,
- To implement Renovation and Modernisation for existing plants to improve performance through constant R & M activities, regular maintenance etc.,
- Achieve high reliability and safety levels in all operational areas,
- Taking appropriate steps towards ensuring safety and adhering to environmental norms
- Adopt best industry practices to become the best and efficient generating company
- Other associated businesses like providing Training, Research and Development activities, Technical consultancy services and O&M related services

### **2.2 Performance and operational Norms**

**2.2.1** MePGCL started functioning as an independent commercial entity from 1<sup>st</sup> April, 2013. The power generated by the MePGCL stations is sold to MePDCL as per the signed power purchase agreements and transmitted to MePDCL at MePTCL interface points. At

present, MePGCL is having 8 Hydropower Generating stations. The details of existing stations are mentioned below:

**Table 2.1 : Details of Existing Stations**

Sl. No	Station	Type	No of Units/ Capacity	COD	Capacity (MW)
1	Umiam Stage-I	Storage/ Pondage	4*9 MW	FY 1966	36
2	Umiam Stage-II		2*10 MW	FY 1971	20
3	Umiam Stage-III		2*30 MW	Unit 1: FY 1979 Unit 2: FY 1979	60
4	Umiam Stage-IV		2*30 MW	FY 1993	60
5	Umtru Power Station	ROR	4*2.8 MW	Unit 1-3: FY 1958 Unit 4: FY 1969	11.2
6	Sonapani HEP		1.5 MW	FY 2010	1.5
7	Leshka HEP		3*42 MW	Unit 1& 2:FY 2013 Unit 3: FY 2014	126
8	New Umtru	Pondage	2*20	Units 1& 2 : FY 2018	40
	<b>Total</b>				<b>354.7</b>

**2.2.2 Historical energy Generation:** All the generating stations being hydro, the annual generation depends on the rainfall for the year. It is submitted that the target energy for the old plants needs to be determined based on the actual historical generation achieved in the last 5 or 6 years since the plants are very old and some have even crossed their useful life of 35 years and the design energy of these old plants cannot be taken as an accurate base for determination of target generation. The yearly generation for the last 5 years for the generating stations is shown in the table below:

**Table 2,2 : Historical Energy Generation (MU)**

Sl. No	Station	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1	Umiam Stage-I	102.87	79.10	90.4	114.06	96.627
2	Umiam Stage -II	50.40	41.35	46.00	58.26	50.229
3	Umiam Stage -III	132.00	133.57	113.11	117.50	65.296
4	Umiam Stage-IV	185.25	174.86	162.72	185.01	166.116
5	Umtru Power Station	30.40	20.99	15.27	1.41	0.00
6	Sonapani HEP	7.20	5.40	5.75	6.29	7.633
7	Leshka HEP	198.37	413.22	409.38	445.93	443.852
	<b>Total</b>	<b>706.53</b>	<b>868.49</b>	<b>842.62</b>	<b>928.46</b>	<b>829.75</b>

### 3.0 Performance and Operational Norms

#### 3.1 Performance and Operational Norms

##### 3.1.1 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 Hydel 1.5 MW(2009), uprating of Umiam Stage-II (from 18MW to 20MW in 2012) and commissioning of MLHEP 3x42 MW in 2013, the installed capacity increased to 314.7 MW

All the Generating Stations except Sonapani Mini Hydel Project and Leshka, 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 as on 31st March 2016, was as shown below:

**Table: Existing Generation Capacity FY 2015-16**

S.No.	Name of Station	No. of Units	Capacity (MW)	Total Capacity (MW)	Year of 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	Sonapani Mini Hydel	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

S.No.	Name of Station	No. of Units	Capacity (MW)	Total Capacity (MW)	Year of Commissioning
	<b>Total</b>			<b>314.7</b>	

By FY 2015-16, MePGCL had a total installed capacity of 314.7 MW with all the units generating in FY 2015-16, except for 1 (one) unit in Umiam Stage III and all units in Umtru Power Station.

There was burning of stator, 11 KV UAT, damage of PRV and overhauling works which prevented one unit of Umiam Stage III from generating. The units of Umtru suffered due to construction of New Umtru HEP and siltation of hydraulic works which necessitated the cleaning of the water conductor system and draining of penstock.

### 3.1.2 New Generation Capacity:

In addition to the existing capacity, MePGCL is also currently executing works of Lakroh & Ganol Mini Hydel projects which are proposed for commissioning in FY 2018-19.

**Table: Details of Upcoming Stations**

Sl No.	New Station	Design Energy (MU)	Capex Outlay (Rs. Crs.)	Debt (Rs.Crs)	Equity (Rs.Crs)	Grant (Rs.Crs)	Year of Commissioning (MM/YY)
1	<b>Ganol SHP</b>	67.09	356.42	146.90	62.96	146.57	2018
2	<b>Lakroh MHP</b>	11.01	20.48	6.46	2.77	11.25	Sept. 2018

### 3.1.3 Operational Norms:

The following sections outline details of operational norms for computation of energy generation for FY 2015-16 based on MYT Regulations, 2014 or past trend as the case may be.

#### 1) Normative Annual Plant Availability Factor

**Table: Normative Annual Plant Availability Factor**

No.	Station Particular	Norm
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 %

No.	Station Particular	Norm
ii)	with head variation between FRL and MDDL of more than 8%	$(\text{Head at MDDL}/\text{Rated Head}) \times 0.5 + 0.2$
b)	Pondage type plant	where plant availability is significantly affected by silt - 85%
c)	Run-of River type plant	NAPAF to be determined plant wise based on 10-daily design energy data

**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 2015-16, the Hon'ble Commission has not taken any view on the computation of normative annual plant availability factor (NAPAF) of all generating stations without knowing the technical details of each plant duly verified. For the purpose of capacity charges, the Hon'ble Commission has approved recovery of fixed charges in 12 equal monthly instalments. The NAPAF's for all generating stations computed as per the MYT Regulations, 2014 are summarized below:

**Table: Normative Plant Availability Factor FY 2015-16**

Station	As per actual (%)
Umiam Stage-I	59.83
Umiam Stage-II	85.00
Umiam Stage-III	63.67
Umiam Stage-IV	61.79
Umtru	80.00
Sonapani	45.00
MLHEP	39.00

**2) Auxiliary Consumption and Transformation Loss:****Table: Auxiliary Consumption**

Sl. No	Station Particular	Norm
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

Sl. No	Station Particular	Norm
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

Transformation loss as per norm is 0.5% of energy generated.

The Hon'ble Commission in the Tariff Order for FY 2015-16 have approved auxiliary consumption and transformation losses as per the following table:

**Table: Auxiliary Consumption and Transformation Loss approved by the Hon'ble Commission**

Name of the Plant	Auxiliary consumption (%)	Transformation losses (%)	Total Loss (%)
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

The Auxiliary consumption and Transformation losses, as actual for MePGCL for FY 2015-16 are furnished below:

**Table: Auxiliary Consumption and Transformation Loss actual FY 2015-16**

Name of the Plant	Auxiliary consumption + Transformation losses (%)
Umiam Stage I	1.04%
Umiam Stage II	0.65%
Umiam Stage III	0.71%
Umiam Stage IV	0.66%
Umtru	4.15%
Sonapani	0.74%
Leshka	0.68%

Thus, MePGCL has operated its plants efficiently and under the norms specified by the Hon'ble Commission and has been able to limit auxiliary consumption for plants below the limit set by the Hon'ble Commission in the tariff order for FY 2015-16.

### 3) Design Energy – Existing Generating Stations

The design energy as approved by the Hon'ble Commission for MePGCL's power stations in FY 2015-16 is provided in the table below:

**Table: Design Energy as approved by MSERC in Tariff Order 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>

**3.1.4 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: MePGL Plant Technical Details**

Sl. No	Particulars	Umtru	Umiam I	Umiam II	Umiam III	Umiam IV	Mini Hydel Sonapani	Leshka HEP
1	<b>Type of Station</b>							
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
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

Sl. No	Particulars	Umtru	Umiam I	Umiam II	Umiam III	Umiam IV	Mini Hydel Sonapani	Leshka HEP
2.b	Static Excitation	NA	NA	NA	NA	Static Excitation	NA	Static Excitation

The station-wise Net Generation approved for FY 2015-16 and actual of MePGCL for FY 2015-16 are provided in the table below:

**Table: Approved and Actual Generation Source Wise**

Sl. No	Name of the Power Station	Approved by the Hon'ble Commission in Tariff Order for FY 2015-16						Actual MePGCL FY 2015-16			
		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	114.06	1.04%	1.19	112.87
2	Umiam II	45.51	0.70%	0.50%	1.20%	0.55	44.96	58.26	0.65%	0.38	57.88
3	Umiam III	139.4	0.70%	0.50%	1.20%	1.67	137.73	117.5	0.71%	0.84	116.66
4	Umiam IV	207.5	1.00%	0.50%	1.50%	3.11	204.39	185.01	0.66%	1.22	183.79
5	Umtru Power Station	39.01	0.70%	0.50%	1.20%	0.47	38.54	1.41	4.15%	0.06	1.35
6	Mini Hydel (Sonapani)	5.5	0.70%	0.50%	1.20%	0.07	5.43	6.29	0.74%	0.05	6.24
7	Leshka							445.93	0.68%	3.04	442.89
	<b>Total</b>	<b>553.21</b>				<b>7.26</b>	<b>545.95</b>	<b>928.46</b>		<b>6.77</b>	<b>921.69</b>

### 3.2 Separate Petition for MePGCL's Generating Plants

As per the recent tariff orders as well as applicable regulations, MePGCL needs to file separate petitions for the different generating plants. In accordance with the directives of the Hon'ble Commission and MSERC MYT Regulations 2014, the utility is filing a separate petition for:

- 1) Old Plants including Sonapani.
- 2) Myntdu Leshka Power Plant.

Due to unavailability of segregated accounts for Old Plants and Sonapani, MePGCL is filing a combined petition for all the Old Plants & Sonapani



## **4. ARR for MLHEP for 2nd Control Period of FY 2018-19 to FY 2020-21**

### **4.1 Preamble**

In accordance with the provisions of the MYT Regulations, 2014, MePGCL hereby submits segregated ARR for FY 2018-19, FY 2019-20 and FY 2020-21 for MLHEP based on the audited financials of FY 2015-16 (except MeECL), pre-audited financials of FY 2016-17 and Business Plan for FY 2018 – 2021 which has been approved by the Hon'ble Commission in its order dated 15th November, 2017.

### **4.2 Components of Tariff**

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”*

Based on above provisions, MePGCL computes and provides herewith various cost elements for determination of tariff for MLHEP

### **4.3 Gross Fixed Asset**

The closing GFA for each year of the control period is worked out considering actual capitalization during FY 2015-16, FY 2016-17 and projected capitalization during control period of FY 2018-19 to FY 2020-21.

**Table: Gross Fixed Assets (GFA) of MLHEP**

<b>Particulars</b>	<b>FY 2016-17 (Provisional)</b>	<b>FY 2017-18 (Estimated)</b>	<b>FY 2018-19 (Projected)</b>	<b>FY 2019-20 (Projected)</b>	<b>FY 2020-21 (Projected)</b>
Opening GFA	1279.19	1279.13	1279.13	1283.64	1283.64
Additions during the year	-	-	4.55	-	-
Retirements during the year	0.06	-	-	-	-
<b>Closing GFA</b>	<b>1,279.13</b>	<b>1,279.13</b>	<b>1,283.64</b>	<b>1,283.64</b>	<b>1,283.64</b>

MePGCL submits before the Hon'ble Commission to kindly approve Gross Fixed Assets for MLHEP as submitted in the above table.

#### **4.4 Operations and Maintenance**

As per Regulation 56 of the MYT Regulations, 2014, the Operation and Maintenance Expenses 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*

*56.2 Operation and maintenance expenses (O&M Expenses) for the existing generating stations, which have been in operation for 5 years or more in the base year 2007-08 shall be derived on the basis of actual operation and maintenance expenses for the year 2003-04 to 2007-08, based on the audited accounts, excluding abnormal operation and maintenance expenses, if any, after prudent check by the Commission.*

*56.3 The normalized operation and maintenance expenses after prudent check, for the years 2003-04 to 2007-08, shall be escalated at the rate of 5.17% to arrive at the normalized operation and maintenance expenses at the 2007-08 price level and then averaged to arrive at normalized O&M expenses for 2003-04 to 2007-08 price level. The average normal O&M expenses at 2007-08 price level shall be escalated at the rate of 5.72% to arrive at the same expenses for the year 2009-10.*

*56.4 The O&M expenses for the year 2009-10 shall be further rationalized considering 50% increase in employee cost on account of pay revision of employees to arrive at the permissible O&M expenses for the year 2009-10.*

*56.5 The O&M expenses for 2009-10 shall be escalated further at the rate of 5.72% per annum as arrive at the operation and maintenance expenses for the subsequent years of the tariff period.*

56.6 In case of the hydro generating stations, which have not been in commercial operation for a period of five years as on 1.4.2009, operation and maintenance expenses shall be fixed at 2% of the original project cost (excluding cost of rehabilitation & resettlement works). Further, in such case, operation and maintenance expenses in first year of commercial operation shall be escalated @5.17% per annum up to the year 2007-08 and then averaged to arrive at the O&M expenses at 2007-08 price level. It shall be thereafter escalated @ 5.72% per annum to arrive at operation and maintenance expenses in respective year of the tariff period. (The impact of pay revision on employee cost for arriving at the operation and maintenance expenses for the year 2009-10 shall be considered in accordance with the procedure given in proviso to sub-clause (ii) of clause (f) of this regulation).

56.7 In case of hydro generating stations declared under commercial operation on or after 01/04/2009, O&M expenses shall be fixed at 2% of the original project cost (excluding cost of rehabilitation and resettlement works) and shall be subject to annual escalation at 5.72% for the subsequent years”

Since MLHEP has achieved COD after 1.04.2009, its O & M expenses have been fixed as per Regulation 56 (7) at 2% of capital cost and further escalated at 5.72% to arrive at O & M expenses for FY 2018-19, FY 2019-20 & FY 2020-21.

**Table: O & M Expenditure**

<b>Particulars</b>	<b>Amount (INR Crore)</b>
Project Cost	1279.19
O&M Expenses for FY 2013-14 (2% of Project Cost)	25.58
O&M Expenses for FY 2014-15 (5.72% escalation over previous Year)	27.05
O&M Expenses for FY 2015-16 (5.72% escalation over previous Year)	28.59
O&M Expenses for FY 2016-17 (5.72% escalation over previous Year)	30.23
O&M Expenses for FY 2017-18 (5.72% escalation over previous Year)	31.96
<b>O&amp;M Expenses for FY 2018-19 (5.72% escalation over previous Year)</b>	<b>33.79</b>
<b>O&amp;M Expenses for FY 2019-20 (5.72% escalation over previous Year)</b>	<b>35.72</b>
<b>O&amp;M Expenses for FY 2020-21 (5.72% escalation over previous Year)</b>	<b>37.76</b>

MePGCL submits before the Hon'ble Commission to kindly approve the O&M expenses as computed above on normative basis for the control period , i.e., FY 2018-19, FY 2019-20 & FY 2020-21.

#### **4.5 Return on Equity**

The Return on Equity computation for MLHEP for the control period of FY 2018-19 to FY 2020-21 has been computed by considering the actual equity infused and future plans

of infusion in the project. The Return on Equity (RoE) for MLHEP for the 2nd MYT control period is shown in the table below:

**Table: Return on Equity (RoE) of MLHEP**

Particulars	FY 2016-17 (Provisional)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
Opening Equity Base	383.76	383.76	383.76	383.95	383.95
Equity added for Capex (a)		0.00	0.20	0.25	0.00
Equity as 30% GFA (b)		-	1.37	-	-
Addition of Equity (Lower of a and b)	-	0.00	0.20	0.00	0.00
Closing Equity Base	383.76	383.76	383.95	383.95	383.95
<b>Average Equity Base</b>	383.76	383.76	383.86	383.95	383.95
RoE (%)	14%	14%	14%	14%	14%
<b>Return on Equity (in Rs. Cr.)</b>	<b>53.73</b>	<b>53.73</b>	<b>53.74</b>	<b>53.75</b>	<b>53.75</b>

MePGCL submits before the Hon'ble Commission to kindly approve the Return on Equity as computed in the above table for MLHEP for the 2nd MYT Control Period.

#### 4.6 Depreciation

Depreciation is computed as per Regulation 33 of the MYT Regulations, 2014. The depreciation is computed on the final gross value of the assets by straight line method using depreciation rates as prescribed in Appendix – III of the CERC Tariff Regulations, 2009. The depreciation of various classes of assets is shown in the table below and the detailed calculations is attached as Format-6.

**Table: Depreciation (in INR Crore)**

S. No	Name of the Asset	FY 2016-17 (Provisional)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
1	Land	-	-	-	-	-
2	Buildings	4.87	4.87	4.88	4.89	4.89
3	Plant and Equipment	19.14	21.04	21.08	21.11	21.11
4	Furniture and Fixtures	0.00	0.00	0.00	0.00	0.00
5	Vehicles	0.04	0.04	0.04	0.04	0.04
6	Office equipment	0.01	0.01	0.01	0.01	0.01
7	Bearer Plants	-	-	-	-	-
8	Others:	-	-	-	-	-
a)	Hydraulic Works	32.73	32.73	32.79	32.85	32.85
b)	Other Civil Works	4.06	4.07	4.08	4.09	4.09
c)	Lines and Cable Network	0.24	0.24	0.24	0.24	0.24
10	Assets under lease	-	-	-	-	-

S. No	Name of the Asset	FY 2016-17 (Provisional)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
	<b>Total</b>	<b>61.10</b>	<b>63.01</b>	<b>63.13</b>	<b>63.24</b>	<b>63.24</b>

MePGCL submits before the Hon'ble Commission to kindly approve Depreciation of **Rs 63.13 Cr, Rs 63.24 Cr & Rs 63.24** for FY 2018-19, FY 2019-20 & FY 2020-21 for MLHEP.

#### 4.7 Interest 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 rates of banks and financial institutions. The present loan capital of MLHEP as well as the plan for future loans has been detailed out in Format 7 of **Annexure A**.

The summary of Interest and Finance charges for the Control Period taking into consideration the repayment schedule of the existing loans and projections for loans to be taken in the future is shown below:

**Table: Interest and Finance Charges for the Control Period**

Particulars	FY 2016-17 (Actual)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
Opening Balance	704.62	641.41	465.65	362.88	316.08
Addition During the Year	-	1.13	4.11	4.13	4.14
Repayment during the year	63.21	176.89	106.89	50.93	49.74
Closing Balance	641.41	465.65	362.88	316.08	270.48
<i>Average Interest Rate</i>	11.63%	11.71%	11.89%	11.93%	11.87%
<b>Interest Accrued</b>	<b>78.29</b>	<b>64.81</b>	<b>49.27</b>	<b>40.50</b>	<b>34.81</b>
Interest Capitalized					
Add: Finance Charge and MeECL Apportioned					
<b>Interest and Finance Charges</b>	<b>78.29</b>	<b>64.81</b>	<b>49.27</b>	<b>40.50</b>	<b>34.81</b>

MePGCL prays before the Honourable Commission to approve the Interest and Finance Charges for MLHEP for the Control Period FY 2018-19 to FY 2020-21.

#### 4.8 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 above mentioned Regulations the computation of Interest on Working Capital for MLHEP is shown below:

**Table: Interest on Working Capital**

Particulars	FY 2016-17 (Provisional)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
Operation and Maintenance Expense for One Month	2.52	2.66	2.82	2.98	3.15
Maintenance Spare at 15% O&M	4.53	4.79	5.07	5.36	5.66
Two Months Receivable of AFC	38.28	36.61	34.30	33.17	32.56
<b>Working capital required</b>	<b>45.34</b>	<b>44.07</b>	<b>42.19</b>	<b>41.50</b>	<b>41.37</b>
SBI short term PLR	14.05%	14.05%	14.05%	14.05%	14.05%
<b>Amount of interest on working capital</b>	<b>6.37</b>	<b>6.19</b>	<b>5.93</b>	<b>5.83</b>	<b>5.81</b>

MePGCL submits before the Hon'ble Commission to kindly approve the Interest on Working Capital as computed above for MLHEP for the Control Period.

#### 4.9 Income Tax

Regulation 35 of the MYT Regulations, 2014, provides for claim of Income Tax as expenses. However, MePGCL submits that income tax shall be claimed in subsequent filings for true-up.

#### 4.10 Non-Tariff Income

Based on the non-tariff income projection for MLHEP, MePGCL is submitting before the Hon'ble Commission to approve non-tariff income of Rs 0.034 Cr, Rs 0.0375 & Rs 0.0412 for FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

#### 4.11 Summary of Annual Fixed Charges of Myndtu Leshka HEP for the Control Period

Based on the above submissions, the summary of the Annual Fixed Cost for MLHEP for the Control Period FY 2018-19 to FY 2020-21 is provided in the table below:

**Table: Annual Fixed Charges – Myndtu Leshka HEP (INR Crore)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>FY 2016-17 (Provisional)</b>	<b>FY 2017-18 (Estimated)</b>	<b>FY 2018-19 (Projected)</b>	<b>FY 2019-20 (Projected)</b>	<b>FY 2020-21 (Projected)</b>
1	Interest on Loan capital	78.29	64.81	49.27	40.50	34.81
2	Depreciation	61.10	63.01	63.13	63.24	63.24
3	O&M Expenses	30.23	31.96	33.79	35.72	37.76
4	Interest on working capital	6.37	6.19	5.93	5.83	5.81
5	Return on Equity	53.73	53.73	53.74	53.75	53.75
6	SLDC Charges					
7	Net Prior Period Items	0.01				
	<b>Total Annual Fixed Cost</b>	<b>229.72</b>	<b>219.70</b>	<b>205.85</b>	<b>199.04</b>	<b>195.37</b>
8	Less: Non-Tariff Income	0.03	0.0310	0.0341	0.0375	0.0412
	<b>Net Annual Fixed Cost</b>	<b>229.70</b>	<b>219.67</b>	<b>205.82</b>	<b>199.00</b>	<b>195.33</b>

MePGCL prays before the Hon'ble Commission to kindly approve the Annual Fixed Cost of MLHEP for the 2nd MYT Control Period FY 2018-19 to FY 2020-21 as submitted above.

## 5. ***ARR for Old Plants including Sonapani for 2nd Control Period of FY 2018-19 to FY 2020-21***

### 5.1 **Approach**

In accordance with the provisions of the MYT Regulations, 2014, MePGCL hereby submits ARR for FY 2018-19, FY 2019-20 and FY 2020-21 based on the audited financials of FY 2015-16, pre-audited financials of FY 2016-17 and Business Plan for FY 2018 - 2021 which has been approved by the Hon'ble Commission in its order dated 15th November, 2017.

The MYT Regulations, 2014 seek details of each hydro generating station and accordingly station-wise tariffs are to be computed. It is submitted that post transfer scheme, the segregated closing balances available as on 31<sup>st</sup> March 2012 for MePGCL provide for Gross Block details (Gross Fixed Assets) only, i.e., individual project cost details are unavailable. In the absence of these individual details, it is submitted that the ARR of MePGCL will be allocated to each generating station as per their installed capacity.

#### **Application for existing Small Hydro Projects**

Among the above mentioned stations Umiam Stage-II, Umtru HEP and Sonapani are small hydro stations and fall under category of Renewable Energy. Therefore as per Regulation 3.4 of the MYT Regulations, 2014, the Tariff for these stations won't be determined vide MYT Regulations, 2014. The relevant extract of the regulation is reproduced below:

*“3.4 These regulations shall not apply to renewable sources of energy which shall be governed by separate regulations of the Commission.”*

It is further submitted that as per Regulation 4(2) (a) of the Meghalaya State Electricity Regulatory Commission (Terms and Conditions for determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2014 (hereinafter referred as RE Regulations, 2014), tariff for the small hydro stations will only be determined vide the RE Regulations, 2014. The relevant extract is reproduced below:

#### ***“4. Eligibility Criteria***

*(1) For the purposes of these regulations, generation from all types of Renewable Energy Sources, as approved by Ministry of New and Renewable Energy (MNRE), Government of India shall be considered and such generating stations shall be collectively referred to as “RE based Generating Stations”.*

*(2) At present, generation from the following sources and technologies shall qualify to be covered under these regulations:*

*(a) Wind Power project – using new wind turbine generators*

*(b) Small hydro Project – located at the sites approved by State Nodal Agency /State Government **using new plant and machinery** and installed power plant capacity to be lower than or equal to 25 MW at single location.*



.....”

It is submitted that the existing small hydro projects of MePGCL are using old plant/machinery and therefore they do not qualify for determination of tariff under the RE Regulations, 2014 as well. Therefore, it is submitted before the Hon’ble Commission to kindly use its power of relaxation as per Regulation 108 of the MYT Regulations, 2014 and determine ARR of the existing small hydro projects as per the guidelines of MYT Regulations, 2014. In past orders also, the Hon’ble Commission had taken the approach for calculating combined ARR for all the old plants together and allocation of ARR for each station (including small hydro) based on installed capacity.

In the following chapter, MePGCL has proposed for computation of consolidated fixed charges for the following Old Stations and their tariff based on the fixed charges:

1. Umiam Stage-I
2. Umiam Stage- II
3. Umiam-Umtru Stage- III
4. Umiam-Umtru Stage- IV
5. Umtru
6. Sonapani HEP

It is pertinent to submit here that the present petition does not include ARR proposal for the Generating stations which are yet to be commissioned and whose tariff petitions shall be filed separately.

## 5.2 Components of Tariff

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”*

### 5.3 Gross Fixed Assets

The opening balance of GFA of MePGCL as on 1.4.2017 is Rs.1723.65 Cr (including MLHEP). The closing GFA for each year of the control period is worked out considering estimated (FY 2017-18) and projected capitalization (during the control period) of the proposed and ongoing projects.

For arriving at the GFA for MePGCL's old plants including Sonapani only, the GFA of MLHEP as mentioned in the previous chapter is excluded from the total GFA of MePGCL as a whole. The capital expenditure and capitalization schedule has been prepared in line with the Business Plan for FY 2018-19 to FY 2020 – 2021, which has been approved by the Hon'ble Commission in its order dated 15th November, 2017. The GFA calculated for old plants year-wise is given below:

**Table: Gross Fixed Assets for MePGCL as a whole**

Particulars	FY 2016-17 (Provisional)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
Opening GFA	1707.69	1723.65	1723.65	1756.59	1869.75
Additions during the year	16.13	-	32.94	113.16	468.57
Retirements during the year	0.16	-	-	-	-
<b>Closing GFA</b>	<b>1,723.65</b>	<b>1,723.65</b>	<b>1,756.59</b>	<b>1,869.75</b>	<b>2,338.32</b>

**Table: Gross Fixed Assets for MePGCL's Old Plants (Excluding MLHEP)**

Particulars	FY 2016-17 (Provisional)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
Opening GFA	428.50	444.52	444.52	472.94	586.11
Additions during the year	16.13	-	28.39	113.16	468.57
Retirements during the year	0.11	0.00	0.00	0.00	0.00
<b>Closing GFA</b>	<b>444.52</b>	<b>444.52</b>	<b>472.90</b>	<b>586.11</b>	<b>1,054.68</b>

Major asset addition during the control period is the completion of R&M of Stage-III Umiam-Umtru Power Station by March, 2021 which will cost around Rs 408 crore, details of which have already been submitted in the Business Plan for FY 2018-19 to FY 2020 - 2021 and approved by the Hon'ble Commission in its order dated 15 -11-2017.

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

## 5.4 Return on Equity

Based on the above submissions, the actual equity infusion till FY 2016-17 and proposed equity infusion as per approved Business Plan for FY 2018-19 to FY 2020 - 2021 approved by the Hon'ble Commission in its order dated 15th November, 2017, the Return on Equity computation for MePGCL's old stations including Sonapani is shown in the table below:

**Table: RoE for MePGCL's Old Stations**

Particulars	FY 2016-17 (Provisional)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
<b>RoE –MePGCL</b>					
Opening Equity Base	782.79	796.78	796.78	806.66	840.61
Addition of Equity	13.99	0.00	9.88	33.95	88.25
Closing Equity Base	796.78	796.78	806.66	840.61	928.87
<b>Average Equity Base</b>	<b>789.79</b>	<b>796.78</b>	<b>801.72</b>	<b>823.64</b>	<b>884.74</b>
RoE (%)	14%	14%	14%	14%	14%
<b>Return on Equity (in Rs. Cr.)</b>	<b>110.57</b>	<b>111.55</b>	<b>112.24</b>	<b>115.31</b>	<b>123.86</b>
<b>RoE-MLHEP</b>					
Opening Equity	383.76	383.76	383.76	383.95	383.95
Addition of Equity	-	0.00	0.20	0.00	0.00
Closing Equity	383.76	383.76	383.95	383.95	383.95
Equity Base	383.76	383.76	383.86	383.95	383.95
RoE (%)	14%	14%	14%	14%	14%
<b>Return on Equity (in Rs. Cr.)</b>	<b>53.73</b>	<b>53.73</b>	<b>53.74</b>	<b>53.75</b>	<b>53.75</b>
<b>RoE-MePGCL's Old Plants (Excluding MLHEP)</b>					
Opening Equity Base	399.04	413.03	413.03	422.71	456.66
Addition of Equity	13.99	0.00	9.68	33.95	88.25
Closing Equity Base	413.03	413.03	422.71	456.66	544.91
<b>Average Equity Base</b>	<b>406.03</b>	<b>413.03</b>	<b>417.87</b>	<b>439.68</b>	<b>500.78</b>
RoE (%)	14%	14%	14%	14%	14%
<b>Return on Equity (in Rs. Cr.)</b>	<b>56.84</b>	<b>57.82</b>	<b>58.50</b>	<b>61.56</b>	<b>70.11</b>

MePGCL submits before the Hon'ble Commission to kindly approve Rs 58.50 Cr, Rs 61.56 Cr & Rs 70.11 as Return on Equity for the control period ,i.e, FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

## 5.5 Interest and Finance Charges

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, bonds or debentures and the prevailing lending rates of banks and financial institutions.

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 loans is enclosed as Format-7. The summarized statement of Interest and Finance charges for the Control Period is shown below:

**Table: Interest & Finance Charges (Rs Cr)**

Particulars	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
Opening Balance	1,224.41	1,145.78	1,112.19	1,166.74
Addition During the Year	118.55	117.64	149.83	179.72
Repayment during the year	197.18	151.23	95.28	94.09
Closing Balance	1,145.78	1,112.19	1166.74	1252.37
<i>Average Interest Rate</i>	11.57%	11.40%	11.12%	10.80%
<b>Interest Accrued</b>	<b>137.07</b>	<b>128.74</b>	<b>126.70</b>	<b>130.64</b>
Less: Interest Capitalised	52.15	51.08	47.31	43.53
Add: Finance Charge and MeECL Apportioned	4.90	4.90	4.90	4.90
<b>Interest and Finance Charges for MePGCL</b>	<b>89.81</b>	<b>82.56</b>	<b>84.30</b>	<b>92.00</b>
Interest and Finance Charges for MLHEP	64.81	49.27	40.50	34.81
<b>Interest and Finance Charges for Old Plants Including Sonapani</b>	<b>25.01</b>	<b>33.28</b>	<b>43.80</b>	<b>57.20</b>

MePGCL submits before the Hon'ble Commission to kindly approve Rs **33.28** Cr, Rs **43.80** Cr & Rs **57.20** as Interest and Finance Charges for MePGCL's Old Plants including Sonapani for the control period i.e. FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

## 5.6 Operation and Maintenance Expenses

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 regulation is reproduced below:

### ***"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

**O&M Expenses projection based on actuals:**

The O&M expenses for MePGCL's plants have been projected with due revision based on the actual expenditure incurred in FY 2015-16 & FY 2016-17 as per the Statements of Accounts. All factors including present market inflation, revision of pay have been duly accounted for while projecting the expenses head - wise for the Control Period. For arriving at the O&M Expenses for MePGCL's Old Plants including Sonapani only, the O&M Expenses of MLHEP as mentioned in the previous chapter are excluded from O&M Expenses of total MePGCL as a whole

**Employee Cost:**

MeECL and its subsidiary companies have implemented a revised pay scale of employees effective from January, 2015. Supporting documents for Revision of Pay has been attached as **Annexure - E**. The employee cost for the control period is projected by considering the revised pay of Employees

For projections for the control period, the following assumptions have been made:

- a. **Basic Pay:** On a yearly basis, the permanent employees of MePGCL are given an increment of 3%.
- b. **Dearness Allowance (DA):** The DA increment is considered around 12% on yearly basis.
- c. **House Rent Allowance (HRA):** The HRA is paid as a percentage of Basic Pay.
- d. **Other Allowances:** The other allowances which include Medical Allowance, Overtime Allowance, etc. have been taken with a yearly increment of 6%.
- e. **Terminal benefits** provision for FY 2017-18 has been considered at an increment of 3%. However, the same will be claimed as per the actuals at the time of true-up.

**Table: Employee expense projection**

S.N	Particulars	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
	<b>SALARIES &amp; ALLOWANCES</b>				
1	Basic Pay	37.05	38.16	39.31	40.49
2	Dearness Allowance	15.63	17.50	19.60	21.96
3	House rent Allowance	4.84	5.33	5.86	6.45
4	Medical reimbursement charges	0.57	0.60	0.64	0.68
5	Over time payment	0.21	0.22	0.23	0.25
6	Apportionment of Holding Exp	13.96	14.80	15.69	16.63
7	<b>Sub-Total</b>	<b>72.26</b>	<b>76.62</b>	<b>81.34</b>	<b>86.45</b>
	<b>Terminal Benefits</b>				
8	Leave encashment	0.04	0.04	0.04	0.05

S.N	Particulars	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
9	CPS	0.55	0.58	0.62	0.65
10	Apportionment of Terminal Benefits	22.62	23.30	24.00	24.72
<b>11</b>	<b>Sub-Total</b>	<b>23.21</b>	<b>23.92</b>	<b>24.66</b>	<b>25.42</b>
	<b>Pension Payment</b>				
<b>12</b>	<b>Sub-Total</b>				
<b>13</b>	<b>Total (7+11+12)</b>	<b>95.47</b>	<b>100.54</b>	<b>106.00</b>	<b>111.87</b>

### Administrative & General (A & G) Expenses 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 5.50% over A&G expenses as per provisional Statement of Accounts (SoA) FY 2016-17 for the control period. 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 the hydraulic and other works. However, due to revenue deficit faced by MeECL & its subsidiaries, MePGCL has not been able to take up R&M works in a planned manner. Therefore, MePGCL has considered present year's average inflation rate of 5.50% for projection of R&M cost over R&M expenses as per provisional SoA FY 2016-17 for the control period.

After 1/3rd of MeECL's expense apportionment and deduction of MLHEP Expenses calculated in the above chapter, O&M Expenses of MePGCL's Old Plants including Sonapani has been summarized below.

**Table: O&M Expenditure in Rs Cr**

Sl. No.	Particulars	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
a)	Employee Expenses	95.47	100.54	106.00	111.87
b)	R&M Expenses	9.27	9.78	10.32	10.88
c)	A&G Expenses	6.48	6.83	7.21	7.60
	<b>O&amp;M Expenses for MePGCL</b>	<b>111.22</b>	<b>117.15</b>	<b>123.52</b>	<b>130.35</b>
	O&M Expenses for MLHEP	31.96	33.79	35.72	37.76
	<b>O&amp;M Expenses for Old Plants</b>	<b>79.26</b>	<b>83.37</b>	<b>87.80</b>	<b>92.59</b>

Therefore MePGCL requests Hon'ble Commission to approve Rs **83.37** Crs, Rs **87.80** Crs & Rs **92.59** Crs towards O&M expenses projection for FY 2018-19, FY 2019-20, FY 2020-21 respectively for MePGCL's old plants.

## 5.7 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:

1. Operation and maintenance expenses for one (1) month;
2. Maintenance spares at the rate of 15% of O & M expenses escalated at 6% from the date of commercial operation; and
3. 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.”

For projection of Interest on Working Capital of MePGCL's Old Plants for the control period, the Interest on Working Capital of MLHEP has been deducted from Interest on Working Capital of MePGCL as a whole ,as shown below:

**Table: Interest on Working Capital for Old Plants**

<b>Particulars</b>	<b>FY 2017-18 (Estimated)</b>	<b>FY 2018-19 (Projected)</b>	<b>FY 2019-20 (Projected)</b>	<b>FY 2020-21 (Projected)</b>
Operation and Maintenance Expense for One Month	9.27	9.76	10.29	10.86
Maintenance Spares at 15% O&M	16.68	17.57	18.53	19.55
Two Months Receivable of AFC	68.99	68.86	71.14	74.22
Working capital required	94.94	96.19	99.96	104.63
SBI short term PLR	14.05%	14.05%	14.05%	14.05%
Interest on working capital for MePGCL as a whole	13.34	13.52	14.04	14.70
Interest on working capital for MLHEP	6.19	5.93	5.83	5.81
<b>Interest on working capital for Old plants including Sonapani</b>	<b>7.15</b>	<b>7.59</b>	<b>8.21</b>	<b>8.89</b>

MePGCL submits before the Hon'ble Commission to kindly approve Rs **7.59** Cr, Rs **8.21** Cr & Rs **8.89** crs. as Interest on Working Capital for Old Plants including Sonapani for the control period i.e. FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

## 5.8 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's old plants, the Depreciation of MLHEP has been deducted from depreciation of MePGCL as a whole as shown below:

**Table: Depreciation for MLHEP (in INR Crore)**

S. No	Name of the Asset	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
1	Land	-	-	-	-
2	Buildings	4.87	4.88	4.89	4.89
3	Plant and Equipment	21.04	21.08	21.11	21.11
4	Furniture and Fixtures	0.00	0.00	0.00	0.00
5	Vehicles	0.04	0.04	0.04	0.04
6	Office equipment	0.01	0.01	0.01	0.01
7	Bearer Plants	-	-	-	-
8	Others:	-	-	-	-
a)	Hydraulic Works	32.73	32.79	32.85	32.85
b)	Other Civil Works	4.07	4.08	4.09	4.09
c)	Lines and Cable Network	0.24	0.24	0.24	0.24
10	Assets under lease	-	-	-	-
	<b>Total</b>	<b>63.01</b>	<b>63.13</b>	<b>63.24</b>	<b>63.24</b>

**Table: Depreciation for MePGCL (In INR Crore)**

S. No	Name of the Asset	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
1	Land		-	-	
2	Buildings	5.43	5.48	5.71	6.62
3	Plant and Equipment	35.30	35.64	37.14	43.09
4	Furniture and Fixtures	0.20	0.20	0.21	0.25
5	Vehicles	0.46	0.46	0.48	0.56
6	Office equipment	0.18	0.18	0.19	0.22
7	Bearer Plants	-	-	-	-
8	Others:	-	-	-	-
a)	Hydraulic Works	39.72	40.10	41.78	48.48
b)	Other Civil Works	4.98	5.03	5.24	6.08
c)	Lines and Cable Network	0.40	0.41	0.43	0.49



S. No	Name of the Asset	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
10	Assets under lease	-	-	-	-
	<b>Total</b>	<b>86.68</b>	<b>87.51</b>	<b>91.18</b>	<b>105.81</b>
11	Ammortization of Grants	12.04	12.04	12.45	30.95
	<b>Net Depreciation</b>	<b>74.64</b>	<b>75.46</b>	<b>78.73</b>	<b>74.85</b>

**Table: Depreciation for Old Plants& Sonapani (INR Cr)**

S. No	Name of the Asset	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
1	Depreciation for MePGCL	74.64	75.46	78.73	74.85
2	Depreciation for MLHEP	63.01	63.13	63.24	63.24
3	<b>Depreciation for Old Plants including Sonapani</b>	<b>11.62</b>	<b>12.34</b>	<b>15.49</b>	<b>11.62</b>

MePGCL submits before the Hon'ble Commission to kindly approve Rs **12.34 Cr**, Rs **15.49 Cr** & Rs **11.62 Cr** as Depreciation for Old Plants including Sonapani for the control period i.e. FY 2018-19, FY 2019-20 & FY 2020-21 respectively.

## 5.9 Provision for Bad Debts

MePGCL has huge receivables from the power generation charges billed to MePDCL as also provided in the audited statement of accounts for FY 2015-16. As per the accounting policies, MePGCL has projected a bad debt of Rs 25 Cr each for the control period. The same can be adjusted or revised during true up of subsequent years

Hence MePGCL submits before the Hon'ble Commission to approve the bad debt as mentioned above for the 2<sup>nd</sup> control period.

## 5.10 Taxes on Income

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

## 5.11 SLDC Charges

As per Regulation 1, 3(3), 3(6) of MSERC (Levy and Collection of State Load Despatch Centre Fees and Charges) Regulations, 2009, MePGCL will need to bear 50% of the Annual Revenue Requirement of SLDC. As per projections received from SLDC, the total ARR of SLDC for the FY 2018-19, FY 2019-20 & FY 2020-21 is Rs. 2.42 Cr, Rs 2.54 Cr and Rs 2.66 Cr respectively. Therefore it is submitted that Rs. 1.21, Rs 1.27 & Rs 1.33

(50% of the total SLDC ARR) may kindly be allowed to be passed through as SLDC charges for FY 2018-19 and FY 2019-20 & FY 2020-21 as a part of Generation annual fixed charges.

### 5.12 Non-Tariff Income

MePGCL submits that as per SoA for FY 2016-17, MePGCL has incurred Rs 10.88 Crs towards non-tariff income (inclusive of 1/3rd of MeECL apportionment). For arriving at the Non-Tariff Income for MePGCL's old plants including Sonapani only, the Non-Tariff Income of MLHEP as mentioned in the previous chapter is excluded from the Non-Tariff income of MePGCL as a whole and is shown below:

**Table: Non-Tariff Income**

Particulars	FY 2017-18 (Estimated)	FY 2018-19 (Projected)	FY 2019-20 (Projected)	FY 2020-21 (Projected)
Non-Tariff Income for MePGCL	11.96	13.16	14.48	15.92
Non-Tariff Income for MLHEP	0.0310	0.0341	0.0375	0.0412
<b>Non-Tariff Income for Old Plants&amp;Sonapani</b>	<b>11.93</b>	<b>13.13</b>	<b>14.45</b>	<b>15.88</b>

MePGCL submits before the Hon'ble Commission to kindly approve Rs **13.13** Cr, Rs **14.45** Cr & Rs **15.88** as Non-Tariff Income for Old Plants including Sonapani for the control period i.e. FY 2018-19, FY 2019-20 & FY 2020-21.

### 5.13 Summary of Annual Fixed Cost- MePGCL's Old Stations

The summary of the Annual Fixed Cost for MePGCL's Old Stations is provided in the table below:

**Table: Summary of AFC for MePGCL's Old Plants for the Control Period**

Particulars	FY 2017-18 (Estimated)			FY 2018-19 (Projected)			FY 2019-20 (Projected)			FY 2020-21 (Projected)		
	MePGCL 1	Leshka 2	Old Plants +Sonapani 1-2	MePGCL 1	Leshka 2	Old Plants +Sonapani 1-2	MePGCL 1	Leshka 2	Old Plants +Sonapani 1-2	MePGCL 1	Leshka 2	Old Plants +Sonapani 1-2
Interest & Finance Charges	89.81	64.81	25.01	82.56	49.27	33.28	84.30	40.50	43.80	92.00	34.81	57.20
Depreciation	74.64	63.01	11.62	75.46	63.13	12.34	78.73	63.24	15.49	74.85	63.24	11.62
O&M Expenses	111.22	31.96	79.26	117.15	33.79	83.37	123.52	35.72	87.80	130.35	37.76	92.59
Interest on working capital	13.34	6.19	7.15	13.52	5.93	7.59	14.04	5.83	8.21	14.70	5.81	8.89
Return on Equity	111.55	53.73	57.82	112.24	53.74	58.50	115.31	53.75	61.56	123.86	53.75	70.11
SLDC Charges	1.15		1.15	1.21		1.21	1.27		1.27	1.33		1.33
Net Prior Period Items/Provision for Bad Debt	25.00	0.00	25.00	25.00	0.00	25.00	25.00	0.00	25.00	25.00	0.00	25.00
<b>Total Annual Fixed Cost</b>	<b>426.71</b>	<b>219.70</b>	<b>207.01</b>	<b>427.14</b>	<b>205.85</b>	<b>221.29</b>	<b>442.17</b>	<b>199.04</b>	<b>243.13</b>	<b>462.11</b>	<b>195.37</b>	<b>266.73</b>
Less: Non-Tariff Income	11.96	0.03	11.93	13.16	0.03	13.13	14.48	0.04	14.44	15.92	0.04	15.88
<b>Net Annual Fixed Cost</b>	<b>414.74</b>	<b>219.67</b>	<b>195.08</b>	<b>413.98</b>	<b>205.82</b>	<b>208.16</b>	<b>427.69</b>	<b>199.00</b>	<b>228.69</b>	<b>446.18</b>	<b>195.33</b>	<b>250.85</b>

MePGCL submits before the Hon'ble Commission to kindly approve the Annual Fixed Cost of Rs. **208.16** Cr, Rs. **228.69** & Rs **250.85** Cr for FY 2018-19, FY 2019-20 and FY 2020-21 respectively for MePGCL's Old stations.

## 6. **Computation of Capacity Charge and Energy Charge for MLHEP & Old Plants including Sonapani for FY 2018-19**

### 6.1 **Regulatory Provisions**

MePGCL submits that based on the Annual Fixed Cost to be approved by the Hon'ble Commission, it will calculate the capacity charge and energy charge based on the following provisions of the MYT Regulations, 2014:

#### **“57 Computation and payment of capacity charge and energy charge for Hydro generating stations.**

##### *57.1 Capacity Charges:*

*(1) The fixed cost of a hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis under capacity charge (inclusive of incentive) and energy charge, which shall be payable by the beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, that is to say, in the capacity excluding the free power to the home State:*

*Provided that during the period between the date of commercial operation of the first unit of the generating station and the date of commercial operation of the generating station, the annual fixed cost shall provisionally be worked out based on the latest estimate of the completion cost for the generating station, for the purpose of determining the capacity charge and energy charge payment during such period.*

*(2) The capacity charge (inclusive of incentive) payable to a hydro generating station for a calendar month shall be*

$$= AFC \times 0.5 \times NDM / NDY \times (PAFM / NAPAF) \text{ (in Rupees)}$$

*Where,*

*AFC = Annual fixed cost specified for the year, in Rupees.*

*NAPAF= Normative plant availability factor in percentage*

*NDM = Number of days in the month*

*NDY = Number of days in the year*

*PAFM = Plant availability factor achieved during the month, in percentage*

*(3) The PAFM shall be computed in accordance with the following formula:*

$$PAFM = 10000 \times \sum_{i=1} DC_i / \{ N \times IC \times (100 - AUX) \} \%$$

*i=1*

*Where,*

*AUX = Normative auxiliary energy consumption in percentage*

$DC_i$  = Declared capacity (in ex-bus MW) for the  $i$ th day of the Month which the station can deliver for at least three (3) hours, as certified by the nodal load dispatch centre after the day is over.

$IC$  = Installed capacity (in MW) of the complete generating station

$N$  = Number of days in the month

### 57.2 Energy Charges:

(1) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary, excluding free energy, if any, during the calendar month, on ex power plant basis, at the computed energy charge rate. Total Energy charge payable to the generating company for a month shall be:

= (Energy charge rate in Rs. / kWh) x {Scheduled energy (ex-bus) for the month in kWh} x (100 – FEHS) / 100.

(2) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis, for a hydro generating station, shall be determined up to three decimal places based on the following formula, subject to the provisions of clause (4):

$$ECR = AFC \times 0.5 \times 10 / \{ DE \times (100 - AUX) \times (100 - FEHS) \}$$

Where,

$DE$  = Annual design energy specified for the hydro generating station, In MWh, subject to the provision in clause (6) below.

$FEHS$  = Free energy for home State as fixed from time to time, by competent authority.

(3) In case actual total energy generated by a hydro generating station during a year is less than the design energy for reasons beyond the control of the generating company, the following treatment shall be applied on a rolling basis:

(i) in case the energy shortfall occurs within ten years from the date of commercial operation of a generating station, the ECR for the year following the year of energy shortfall shall be computed based on the formula specified in clause (2) with the modification that the  $DE$  for the year shall be considered as equal to the actual energy generated during the year of the shortfall, till the energy charge shortfall of the previous year has been made up, after which normal ECR shall be applicable;

(ii) in case the energy shortfall occurs after ten years from the date of commercial operation of a generating station, the following shall apply:

Suppose the specified annual design energy for the station is  $DE$  MWh, and the actual energy generated during the concerned (first) and the following (second) financial years is  $A_1$  and  $A_2$  MWh respectively,  $A_1$  being less than  $DE$ . Then, the design energy to be considered in the formula in clause (5) of this Regulation for calculating the ECR for the third financial year shall be moderated as  $(A_1 + A_2 - DE)$  MWh, subject to a maximum of  $DE$  MWh and a minimum of  $A_1$  MWh.

(iii) Actual energy generated (e.g.  $A_1$ ,  $A_2$ ) shall be arrived at by multiplying the net metered energy sent out from the station by  $100 / (100 - AUX)$ .

(4) In case the energy charge rate (ECR) for a hydro generating station, as computed in clause (5) above, exceeds eighty paise per kWh, and the actual saleable energy in a year exceeds  $\{ DE \times ( 100 - AUX ) \times ( 100 - FEHS ) / 10000 \}$  MWh, the Energy charge for the energy in excess of the above shall be billed at eighty paise per kWh only:

Provided that in a year following a year in which total energy generated was less than the design energy for reasons beyond the control of the generating company, the energy charge rate shall be reduced to eighty paise per kWh after the energy charge shortfall of the previous year has been made up.

(6) The concerned Load Despatch Centre shall finalise the schedules for the hydro generating stations, in consultation with the beneficiaries, for optimal utilization of all the energy declared to be available, which shall be scheduled for all beneficiaries in proportion to their respective allocations in the generating station.”

## 6.2 Capacity Charge and Energy Charge for Leshka

As per the directives of the Hon'ble Commission in the order dated 30th March, 2017 for True Up of FY 2013-14 & FY 2014-15 for MLHEP, the MePGCL is passing on the gap of Rs 163 Cr spread over first 2 years of the control period to minimize consumers' shock.

As submitted in the previous sections, the net Annual Fixed Charges to be considered for the determination of final tariff of MLHEP is as shown below:

### Annual Fixed Charges for FY 2018-19 – Myndtu Leshka HEP (INR Crore)

Particulars	FY 2018-19
Annual Fixed Cost for FY 2018-19	205.82
Gap for True Up FY 2013-14 & True Up FY 2014-15	81.50
<b>Net AFC for Computation of Tariff</b>	<b>287.32</b>

Now, based on the Regulations, 50% of the Annual Fixed Charges is to be recovered as capacity charge and the balance is to be recovered as energy charge from the beneficiary. Therefore, the capacity charge and energy charge for MLHEP for FY 2018-19 is computed below:

**Table: Fixed and Energy Charges for Myndtu Leshka HEP FY 2018-19**

Particulars	FY 2018-19
<b>Net AFC for Computation of Tariff</b>	<b>287.32</b>
Design Energy (MU)	486.23
Less: Auxilliary Consumption @ 1%	4.86
Less: Transformation Loss @ 0.5%	2.43
<b>Net Energy (MU)</b>	<b>478.94</b>
<b>Capacity Charge (Rs. Cr.)</b>	<b>143.66</b>
<b>Variable Charge (Rs./kWh)</b>	<b>3.00</b>

Based on all above submissions, the petitioner humbly prays before the Hon'ble Commission to kindly approve the tariff of Myntdu Leshka Hydro Electric Project for FY 2018-19 as computed in the above table.

### 6.3 Capacity Charge and Energy Charge for Old Plants including Sonapani

Following the same approach followed in the previous MYT tariff orders, MePGCL proposes to recover the annual fixed charges for each station based on the capacity of each station for determining energy charges and capacity charges in FY 2018-19. The net revenue for MePGCL's Old Plants including gap of previous year to be passed on for FY 2018-19 on is summarized below:

#### Annual Fixed Charges for FY 2018-19: Old Plants Including Sonapani

Particulars		FY 2017-18
Annual Fixed Cost (AFC) Proposed for FY 2018-19 (INR Crs)	a	208.16

Since some of the old plants have crossed their useful life, MePGCL requests the Hon'ble Commission to consider the average of actual generation of last 6 years rather than design energy for computation of tariff in case of old plants to make it more realistic. The station-wise allotted Net Annual Fixed Cost proposed for recovery in FY 2018-19 is shown in the table below:

**Table: AFC, Capacity and Energy Charges for FY 2018-19**

Sl. No	Name of the Power Station	MW	Projected Generation (Avg of last 6 years) (MU)	Annual Fixed Charges (INR Crs)	Capacity Charges (INR Crs)	Energy Charges (Rs/Unit)
1.	Umiam I	36	98.65	39.71	19.86	2.01
2.	Umiam II	20	43.22	22.06	11.03	2.55
3.	Umiam III	60	114.51	66.19	33.09	2.89
4.	Umiam IV	60	180.25	66.19	33.09	1.84
5.	Umtru Power Station	11.2	17.69	12.36	6.18	3.49
6.	Mini Hydel (Sonapani)	1.5	6.37	1.65	0.83	1.30
	<b>Total</b>	<b>188.7</b>	<b>460.70</b>	<b>208.16</b>	<b>104.08</b>	<b>2.26</b>

The total installed capacity of the plants is 188.7 MW and the average generation from these plants is 460.70 MU. 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 2018-19 on these plants on the basis of their installed capacity and target energy as computed above.

Based on all the above submissions, the petitioner humbly prays before the Hon'ble Commission to kindly approve the tariff of Old Plants including Sonapani for FY 2018-19 as computed in the above table.