MSERC

MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION (MSERC)

Tariff Order

For

Annual Revenue Requirement &

Generation Tariff

For

FY 2015-16

List of Contents

List of Tables

ABBREVIATIONS

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

MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION

1st Floor (Front Block Left Wing), New Administrative Building

Lower Lachumiere, Shillong – 793001

East Kasi Hills District, Meghalaya

In the matter of

Approval of Annual Revenue Requirement for FY 2015-16, 2016-17 & 2017-18 of the Meghalaya Power Generation Corporation Limited (MePGCL) for old plants and Sonapani under the MSERC (Multiyear Tariff) Regulations, 2014.

AND

Meghalaya Power Generation Corporation Limited Petitioner
(herein after referred to as MePGCL)

Coram

Anand Kumar, Chairman

ORDER

(30.03.2015)

1. The Meghalaya Power Generation Corporation Limited (herein after referred to as MePGCL) is a generating company engaged in the business of generation of electricity in the state of Meghalaya.
2. MePGCL has filed the petition on 22.12.2014 under the MSERC (Multiyear Tariff) Regulations 2014 and under section 62 read with section 86 of the Electricity Act 2003. Section 64(1) read with Section 61 and 62 of the Electricity Act, 2003 (hereinafter referred to as "Act") requires Generation Company to file an application for determination of tariff before the Appropriate Commission in such manner and along with such fee as may be specified by the Appropriate Commission through Regulations.

3. In compliance with Electricity Act 2003 the Commission had notified MSERC (Conduct of Business) Regulations 2007 and MSERC (Multiyear Tariff) Regulations 2014. These regulations cover the procedure for filing the tariff application, methodology for determining the tariff and recovery of charges as approved by the Commission from the beneficiaries.
4. The Government of Meghalaya vide its power sector reforms transfer scheme 2010 transferred the assets, properties, rights, liabilities, obligations and personal of the erstwhile MeSEB into four corporations namely (i) Meghalaya Energy Corporation Limited (MeECL), the holding company, (ii) Meghalaya Power Generation Corporation Limited (MePGCL), the generation utility, (iii) Meghalaya Power Distribution Corporation Limited (MePDCL), the distribution license and (iv) Meghalaya Power Transmission Corporation Limited (MePTCL), the transmission licensee. This transfer scheme is effective from 01.04.2012 and from that date all companies/licensee had to start independent functioning. However, it is experienced that these Companies have not yet commenced commercial operation as independent entities and still is in the process of preparing their statement of accounts in accordance with the transfer scheme. The petitioner has informed that the Government of Meghalaya issued further notification on 16.09.2013 notifying the revised statement of assets and liabilities as on 01.04.2010 to be vested in MePGCL.
5. This petition has been filed by MePGCL for determining the ARR for the control period FY 2015-16, 2016-17 & 2017-18 and determination of tariff of their old power stations and Sonapani power station for FY 2015-16. Keeping in view the desirability for timely completion of the tariff process for the next year 2015-16, the Commission provisionally admitted the petition on 02.01.2015 for further processing subject to the condition that the petitioner shall furnish any further information/clarification as deemed necessary by the Commission during the processing of the petition.
6. The Commission further directed the petitioner to publish public notice in accordance with Tariff Regulations detailing their salient features of the ARR petition and proposals filed by it for financial year 2015-16 for comments by all stakeholders and public at large. The petitioner was also directed to place the petition on its

website and its Headquarter/other offices for inspection or making relevant extracts by the members of the public.

7. After having deliberations with the utilities staff, advisory committee meeting and public hearing, the Commission on the basis of records submitted by the licensee passes this order for determining annual fixed charges for FY 2015-15, 2016-17 & 2017-18 for old generating stations and Sonapani of MePGCL.

   For the sake of convenience and clarity, this Order has further been divided into following Chapters:

   Chapter 1 – Introduction and brief history

   Chapter 2 – Petitioner's Submissions and Proposals

   Chapter 3 – Stakeholders' Responses & Petitioner's Comments

   Chapter 4 – Commission's Approach

   Chapter 5 – Commission's Analysis, Scrutiny and Conclusion.

   Chapter 6 – Directives

8. The proceedings of the tariff are governed under the section 61 and 62 of the Electricity Act 2003 and the regulations made under section 181 of the Act. For renewable energy projects the Commission has made separate regulations and considered the same at appropriate places. The Commission required the MePGCL and its holding company to file the statement of accounts duly audited for FY 2011-12 & 2012-13 before admission. However, keeping in view the completion of the tariff proceedings within the time frame as allowed in the regulations and the act the Commission admitted the case and started the proceedings. MeECL the holding company requested the Commission to allow them some time to complete the audit of FY 2012-13 and submitted the accounts of FY 2011-12 duly audited by a statutory auditor appointed by C & AG.

9. The Commission received objections and sent it to MePGCL for their response. The Commission received the responses and considered the suggestions of consumers, members of the advisory committee and suggestions received during the public hearing. The Commission, to ensure transparency in the process of Tariff determination and for providing proper opportunity to all stake holders and general public for making suggestions/objections on the Tariff petition and for convenience of the consumers and general public across the state, decided to hold the public

hearing at the headquarters of the state accordingly the Commission held public hearing at Shillong on 09.03.2015.

10. The proposal of MePGCL was also placed before the state advisory committee in its meeting held on 26.2.15 and various aspects of the Petition were discussed by the committee. The Commission took the advice of the state advisory committee on the ARR and Tariff Petition of MePGCL for the control period FY 2015-16 to FY 2017-18 during the meeting of the committee.
11. The Commission took into consideration the facts presented by the MePGCL in its Petition and subsequent various filings, the suggestions/objections received from stakeholders, consumer organizations, general public and State Advisory Committee and response of the MePGCL to those suggestions/objections.
12. The Commission taking into consideration all the facts which came up during the public hearing and meeting of the State Advisory Committee, has determined the ARR for control period FY 2015-16 to FY 2017-18 and tariff for FY 2015-16.
13. The Commission has reviewed the directives issued earlier in the Tariff orders for FY 2010-11 to FY 2014-15 and noted that some of the directives are compiled and some are partially attended. The Commission has dropped the directives compiled with and the remaining directives are consolidated and fresh directives are added.
14. Accordingly, the Commission proceeded for determination of tariff for 2015-16 on the basis of available information and inputs received and in accordance with Commission's regulation for old projects and Sonapani. The Commission accepted the proposal of the Corporation to continue with the present tariff of Leshka project till the filing of petition for determination of final tariff..
15. The MePGCL should ensure implementation of the order from the effective date in the state within a week and compliance of the same shall be submitted to the Commission by the MePGCL.
16. This order shall be effective from 1st April, 2015 and shall remain in force till 31st March, 2016 or till the next Tariff Order of the Commission.

(Anand Kumar)

(Chairman) MSERC

1. Introduction

1.1 Background

This petition has been filed by Meghalaya Power Generation Corporation Limited (MePGCL). The power supply industry in Meghalaya had been under the control of erstwhile MeSEB w.e.f. 21.01.1975. On 31.03.2010, the Government of Meghalaya issued a Notification for the power sector reform and transferred the assets, liabilities, rights and obligations to four companies namely, Meghalaya Energy Corporation Limited (MeECL) the holding company to Meghalaya Power Distribution Corporation Limited (MePDCL), the Distribution Utility, Meghalaya Power Generation Corporation Limited (MePGCL), the Generation Utility and Meghalaya Power Transmission Corporation Limited (MePTCL), the Transmission Utility. In a subsequent amendment to the transfer scheme notified on 31.03.2012 has set the date of transfer w.e.f. 01.04.2012. Subsequently the Government issued further notification amending the structure of assets and liabilities as on 01.04.2010 to be vested in MePGCL. However, these Corporations have still not prepared their Statement of Accounts separately since its inception.

A power purchase agreement for supply of power to MePDCL has been signed between generating corporation and distribution licensee. The financial statement and the balance sheet for 2012-13 are yet to be audited and the details of the assets and liabilities are limited to the numbers given in the transfer scheme. MeECL has provided the audited accounts for 2011-12 and agreed to submit accounts for 2013-14 shortly. However, the audit certificate by the Comptroller of Audit and Accounts has not been done for accounts of 2011-12 and the audit of FY 2012-13 is still not done. The Commission has from time to time sent reminders to the utility for completing the accounts up to FY 2013-14 at the earliest so that the true up exercise of the independent corporations can also be undertaken.

The Commission has admitted the Petition on 02.01.2015.

1.2 Meghalaya Power Generation Corporation Limited

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

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

The Government of Meghalaya issued further notification on 16th September, 2013 notifying the revised statement of assets and liabilities as on 1st April, 2010 to be vested in Meghalaya Energy Corporation Limited. As per the said notification issued by the Government of Meghalaya a separate corporation "Meghalaya Power Generation Corporation Limited" (MePGCL) was incorporated for undertaking Distribution Business.

1.3 Meghalaya State Electricity Regulatory Commission

Meghalaya State Electricity Regulatory Commission (here in after referred to as "MSERC" or the Commission) is an independent statutory body constituted under the provisions of the Electricity Regulatory Commission (ERC) Act, 1998, which was superseded by Electricity Act (EA), 2003. The Commission is vested with the authority of regulating the power sector in the state inter alia including determination of tariff for electricity consumers. The MSERC has notified the terms and conditions for determination of tariff regulation on multiyear basis which gives the procedure and requirement of filing of the ARR for ensuing year. Similarly, the Commission has also notified regulations MSERC (Terms and Conditions for Determination of Tariff for Generation from Renewable Energy Sources) Regulations, 2014.

1.4 Multiyear Tariff Regulations

Regulation 11 of the Tariff Regulations, 2014 provides that the Commission shall undertake true up of previous year's expenses and revenues approved by the Commission with audited accounts made available the Commission subjected to prudence check including pass through of impact of uncontrollable factors.

Regulation 18 provides that each applicant shall file a tariff petition on or before 30th November each year with the Commission which includes statement containing business plan for the control period, calculation of the expected aggregate revenue from charges under it currently approved tariff and expected cost of providing service. The information should also contained business plan showing ongoing projects that will spilled over into the control period and new projects that will commence in the control period. However, the business plan needs to be submitted three months prior to the filing of the ARR and tariff application.

The investment plans must be provided with the relevant technical and commercial details, financing details and approval of the appropriate authorities with the justification for making investments. It should also include the cost benefit analysis for each investment. All the investments need to be approve by the Commission prior to commencement of the projects. The filing under MYT by the generating company shall be done as per the regulations and comprises of the truing up of the previous years for validation of the expenditures and revenue. There is a provision of midterm review of business plan which can be undertaken if filed with the truing up of the previous year. The regulations require generating company to file audited accounting statements with the application of tariff and truing up.

1.5 Admission of the Petition and Public hearing process

The MePGCL has submitted the current Petition for determination of Multi Year Aggregate Revenue Requirement (ARR) for control period FY 16 to FY 18 and determination of tariff for FY 2015-16. The Commission undertook the technical validation of the Petition and admitted the Petition on 02.01.2015.

Regulation 17 of the Tariff Regulations, 2014 provides for giving adequate opportunities to all stake holders and general public for making suggestions/objections on the Tariff Petition as mandated under section 64(3) of the Electricity Act 2003.In the admission order the Commission has directed the generating company to publish a notice in leading newspapers widely circulated in the State and seek comments from general public and other stakeholders. MePGCL has published the Notice in the following newspapers and sought comments within 30 days from the general public.

Table 1.1: Details of Public Notice

Name of the Newspapers	Date of Publication	Languages
The Shillong Times, Shillong and Tura	07.01.2015	English
U Mawphor	07.01.2015	Khasi
Salantini Janera	07.01.2015	Garo
Chitylli	07.01.2015	Jaintia

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

MePGCL/ Commission received some objections/suggestions from Consumers/consumer organisations. The Commission examined the objections/suggestions received and fixed the date for public hearing on MePGCL's petition to be held on 09.03.15. Communication was given to the objectors to take part in the public hearing process for presenting their views in person before the Commission. The Public hearing was conducted at Commission's office in Shillong as scheduled. The Commission also held meeting with state Advisory committee. Proceedings of the meeting are given in Annexure I

2. Summary of Multi Year ARR and Tariff Petition for for control period FY 16 to FY 18

2.1 Existing Stations

MePGCL started functioning as an independent commercial entity from 1st 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 7 Hydro Generating stations, 4 of these are storage type and 3 are run of the river stations. The details about 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
	Total				**314.7**

2.2 Yearly Generation for Last Five Years

All the Generating stations being hydro, the annual generation depends on the rainfall for the year. The yearly generation for last 5 years for the generating stations is shown in the table below:

Table 2.2: Historical Energy Generation (MU)

Sl. No	Station	FY 10	FY 11	FY 12	FY 13	FY 14
1	Umiam Stage-I	110.32	103.80	108.89	102.68	78.12
2	Umiam Stage-II	51.18	47.52	12.89	50.32	41.03
3	Umiam Stage-III	137.26	132.24	127.44	129.62	132.55
4	Umiam Stage-IV	187.03	204.93	203.82	187.23	173.64
5	Umtru Power Station	48.22	15.51	38.04	30.27	20.83
6	Sonapani HEP	2.15	4.81	6.03	7.19	5.37
7	Leshka HEP	NA	NA	NA	197.42	410.22
	Total	**536.15**	**508.81**	**497.11**	**704.74**	**861.76**

2.3 Operational norms and Design Energy

Norms of Operations

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:

Table 2.3: Features of Hydro Power Plants

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

2.4 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:

Table 2.4: Computation of Head Variation for Storage & Pondage plants

[redacted]

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:

Table 2.5: Computation of NAPAF for Storage & Pondage plants

[redacted]

2.5 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%.**

2.6 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%**.

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

Table 2.6: NAPAF as per Operation norms for MePGCL Power Stations

[redacted]

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

2.7 Design Energy – Existing Generating Stations

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

Table 2.7: Design Energy

[redacted]

2.8 Business plan for the control period

The MePGCL has submitted in the petition the investment plan for renovation and modernization, new projects and metering.

2.9 Summary of Capital Expenditure (CAPEX)

The station wise investment plan detail is attached as Investment Plan Format and Format-15. The station wise summarized capital expenditure is shown in the table below:

Table 2.8: CAPEX-Station wise summary

Sl No	Station	CAPEX (Rs. Cr)	Funding Pattern (Rs. Cr)		
			Debt	Equity	Grant
New Stations					
1	Lakroh HEP	17.51	5.75	-	11.76
2	Riangdon HEP	32.00	12.00	5.14	14.86
3	New Umtru	484.00	346.00	138.00	-
4	Leshka	1,293.67	970.10	323.57	
5	Power System Development Fund	48.50	-	-	48.50
	Sub-Total	**1,875.68**	**1,333.85**	**466.71**	**75.12**
Existing Stations					
1	Umiam Stage-I	12.42	1.51	10.91	-
2	Umiam Stage-II	1.46	0.25	1.21	-
3	Umaim Stage-III	12.18	9.77	2.41	-
4	Umaim Stage-IV	31.75	4.06	27.70	-
5	Umtru HEP	1.50	0.10	1.40	-
6	Sonapani	0.38	0.04	0.34	-
7	Leshka	1.66	0.62	1.05	-
	Sub-Total	**61.35**	**16.34**	**45.00**	**-**
Total		**1,937.03**	**1,350.19**	**511.71**	**75.12**

2.10 ARR for the 1st Control Period of FY 2015-16 to FY 2017-18

Approach

In accordance with the provisions of the MYT Regulations, 2014, MePGCL submitted ARR for FY 2015-16, FY 2016-17 and FY 2017-18 based on restructured segregated provisional financials of FY 2012-13 and the transfer scheme. MePGCL submits that Power Purchase Agreements (PPAs) for supply of power to MePDCL has been signed and as per the PPAs, power will be supplied on cost plus basis. Therefore, MePGCL submits that the tariff for hydro generating stations may be determined on cost plus basis.

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 31st March 2012 for generation provide for Gross Block details (Gross Fixed Assets) only i.e. individual project cost details are unavailable. In absence of the same it is submitted that the Net ARR of MePGCL will be allocated to each generating stations as per the installed capacity of the same. Further for projects commissioned after FY 2008-09 for which details are available Net ARR may be determined based on available individual project costs. The table below provides details about commissioning date and installed capacity:

Table 2.9: Classification of Hydro Projects as per Useful Life

Sl. No	Name of Station	No. of Units	Capacity (MW)	Total Capacity (MW)	COD	FY of R & M	Balance Useful Life (years)	Project Classification
1.	Umiam Stage I	I	9	36	21.02.1965	2004	~23 yrs	Old
		II	9		16.03.1965			Old
		III	9		06.09.1965			Old
		IV	9		09.11.1965			Old
2.	Umiam Stage II	I	10	20	22.07.1970	2013	~34 yrs	Old
		II	10		24.07.1970			Old
3.	Umiam Stage III	I	30	60	6.01.1975	NA	Nil	Old
		II	30		30.03.1979		Nil	Old
4.	Umiam Stage IV	I	30	60	16.09.1992	NA	~13 yrs	Old
		II	30		11.08.1992		~13 yrs	
5.	Umtru Power Station	I	2.8	11.2	01.04.1957	NA	Nil	Old
		II	2.8		01.04.1957		Nil	Old
		III	2.8		01.04.1957		Nil	Old

Sl. No	Name of Station	No. of Units	Capacity (MW)	Total Capacity (MW)	COD	FY of R & M	Balance Useful Life (years)	Project Classification
		IV	2.8		12.07.1968		Nil	Old
6.	Sonapani	I	1.5	1.5	27.10.2009	NA	~31 yrs	Separate tariff
7.	Myntdu Leshka HEP	I	42	126	01.04.2012	NA	~33 yrs	Separate Tariff
		II	42		01.04.2012		~33 yrs	
		III	42		08.03.2013		~34 yrs	
	Total			**314.7**				

2.11 Application for existing Small Hydro Projects

Among the above mentioned stations Umiam Stage-II, Umtru HEP and Sonapani are small hydro stations and falls 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:

> "*3.4These 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 and machinery and therefore the same 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 summary, MePGCL has proposed for computation of tariffs for:

- Old Stations:
    - Umiam Stage-I
    - Umiam Stage- II
    - Umiam Stage- III
    - Umiam Stage- IV
    - Umtru
- Sonapani HEP

It is submitted that on 10th April, 2014, the Hon'ble Commission passed as interim order and mentioned that final view on MLHEP tariff will be taken after expert committee report becomes available.

After the CEA refused to vet completion cost of Myndtu Leshka Hydro Electric Project (MLHEP), MePGCL has engaged IIT Roorkee for vetting of completion cost for MLHEP. The State Level Technical Expert Committee as appointed by Government of Meghalaya has been involved in scrutiny of works not under the purview of IIT Roorkee. IIT Roorkee is expected to submit the vetting report by end of December 2014.

It is submitted that after receipt of IIT Roorkee report and State technical report MePGCL will be filing final tariff petition of MLHEP. At present the final project cost and funding pattern of MLHEP is shown in the Investment Plan format.

The Hon'ble Commission is requested to allow MePGCL to file a final tariff petition for MLHEP after receipt of IIT Roorkee report and State technical report and the existing tariff may be allowed to be applicable till final tariff petition is filed.

It is pertinent to submit here that the present petition do not include ARR proposal for the Generating stations which are yet to be commission.

2.12 Segregation of Annual Accounts

Pursuant to Meghalaya Power Sector Reforms Transfer Scheme 2012, the Generation Assets and Liabilities including rights, obligations and contingencies is transferred to and vested in MePGCL from MeECL on and from 1.4.2012.

The provisional segregated annual accounts post restructuring and unbundling for FY 2012-13 are being audited. The accounts for the holding company and its subsidiaries have been segregated by appropriating the Assets, Properties, Liabilities, Expenditures, and Obligations etc. as attributable to the respective companies. The Assets and liabilities of individual functions i.e. Generation, Transmission and Distribution were maintained by erstwhile MeSEB and later MeECL, and appropriation of common items to respective companies is being done by taking relevant basis/ methodology.

2.13 Annual Expenditure of MePGCL

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"

2.14 Gross Fixed Asset (GFA)

Gross Fixed Asset for MePGCL old stations

The opening balance of GFA of MePGCL as on 1.4.2013 is Rs**.** Cr (excluding MLHEP project cost). The closing GFA for each year of the control period is worked out considering actual capitalization during FY 2013-14, estimated capitalization during FY 2014-15 and projected capitalization during control period of FY 2015-16 to FY 2017-18.

Table 2.10: Gross Fixed Asset Details – MePGCL Old Stations

(Rs. Cr)

Particulars	FY2012-13 (Provisional)	FY 2013-14 (Provisional)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Opening Value of Gross Fixed Assets (Rs. Cr)	292.78	399.12	399.81	399.81	414.71	421.75
Addition during the year (Rs. Cr)	106.67	0.69	-	14.90	7.04	37.36
Retirements during the year (Rs. Cr)	0.33	-	-	-	-	-
Closing Value of Gross Fixed Assets (Rs. Cr)	**399.12**	**399.81**	**399.81**	**414.71**	**421.75**	**459.11**

MePGCL submits before the Hon'ble Commission to kindly approve the GFA for MePGCL old stations (excluding Sonapani) as submitted in the above table.

Gross Fixed Asset (GFA)-Sonapani

It is submitted that the Opening GFA of Sonapani as on 1st April, 2014 is Rs. 10.86 Cr. The GFA of Sonapani for the Control Period of FY 2015-16 to FY 2017-18 is projected based on the following:

- ***Additional Capitalisation pertaining to Land:***

  The land for Sonapani MHP was leased way back in 1922 through the Syiem of Mylliem for a period of 99 years i.e upto 2021. In 1982, the Power Station was closed down due to aging of plant and machineries. In 2004, the project was revived, but one of the landowners obtained a court injunction against the then MeSEB since payment of the lease rent was not made from 2001 onwards. In 2010, the court ruled that there is no bar to acquire the land, if required for public purpose. The value of the land measuring about 4.71 acres was assessed at Rs. 4.02 crore by the Deputy Commissioner, East Khasi Hills District in 2010.

  However, since the process of land acquisition did not move forward, the office of the Deputy Commissioner informed that the process has lapsed since February, 2013.

  At present, negotiations are going on with the representative of the landowner to settle the issue of land acquisition.

- ***Additional Capitalisation pertaining to Investment Plan:*** As per the detail submitted in clause **Error! Reference source not found.** above.

Based on the above the GFA of Sonapani for FY 2014-15 and each year of control period is shown in the table below:

Table 2.11: Gross Fixed Assets - Sonapani

Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Opening Value of Gross Fixed Assets (Rs. Cr)	10.86	10.86	16.86	16.86
Addition during the year (Rs. Cr)	-	6.00	-	0.38
Retirements during the year (Rs. Cr)	-	-	-	-
Closing Value of Gross Fixed Assets (Rs. Cr)	**10.86**	**16.86**	**16.86**	**17.24**

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

2.15 Computation of Return of Equity

The relevant regulations for determination of debt-equity ratio are extracted for reference as below:

*"**27 Debt-Equity Ratio***

27.1 For a project declared under commercial operation on or after 1.4.2015, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan;

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.

Provided further that equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Provided any grant obtained for execution of the project shall not be considered as a part of capital structure for the purpose of debt-equity ratio.

Explanation:- The premium, if any, raised by the generating company or the transmission licensee or the distribution licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure.

27.2 In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2015, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2015shall be considered.

27.3 Any expenditure incurred or projected to be incurred on or after 1.4.2015as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in this regulations."

However, the MYT Regulations, 2014, is applicable from 1st April, 2015 onwards. Therefore, for arriving at Equity to be considered for computation of Return on Equity (RoE) till 1st April, 2015, the Meghalaya State Electricity Regulatory Commission (Terms and Conditions for determination of Tariff) Regulations, 2011 (hereinafter referred as Tariff Regulations, 2011) is applicable. Therefore for arriving at the Equity to be considered for computation of RoE from FY 2012-13 to FY 2014-15 the provisions of Tariff Regulations, 2011 is used. The relevant provision of Tariff Regulations, 2011 is reproduced below:

*"**51. Debt equity ratio***

1) For the purpose of determination of tariff, debt-equity ratio in the case of a new generating station commencing commercial operations after the notification of these regulations shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance shall be treated as normative loan. Where actual equity employed is less than 30%, the actual equity employed shall be considered.

2) In the case of existing generating stations the debt equity ratio as per the Balance Sheet on the date of the Transfer notification will be the debt equity ratio for the first year of operation, subject to such modification as may be *found necessary upon audit of the accounts if such Balance Sheet is not audited.*

…….

…..”

Therefore for arriving at the Equity to be considered for computation of RoE the provisions of Regulation 27 of the MYT Regulations, 2014 and Regulation 51 of the Tariff Regulations, 2011 are used.

The Regulation 31 of the MYT Regulations, 2014, provides for computation of Return on Equity. The extract is reproduced below:

“31 Return on Equity

31.1 Return on equity shall be computed on the equity base determined in accordance with regulation 27 and shall not exceed 14%.

Provided that in case of generation & transmission projects commissioned after notification of these regulations, an additional return of 0.5 % shall be allowed if such projects are completed within the time line as specified in CERC Tariff Regulations.

Provided that in case of generation & transmission projects commissioned after the notification of these regulations an additional return of 1.5 % shall be allowed if such projects are completed within the original sanctioned project cost without any time and cost overrun whatsoever.

Provided that equity invested in a foreign currency may be allowed a return up to the prescribed limit in the same currency and the payment on this account shall be made in Indian Rupees based on the exchange rate prevailing on the due date of billing.

- *The premium received while issuing share capital shall be treated as a part of equity provided the same is utilized for meeting capital expenditure.*

- *Internal resources created out of free reserves and utilized for meeting capital expenditure shall also be treated as a part of equity.*

…"

2.16 Return on Equity MePGCL Old Stations

Based on the above submissions and the actual equity infusion till FY 2014-15 and proposed equity infusion pertaining to Investment Plan, the Return on Equity computation for MePGCL old stations is shown in the table below:

Table 2.12: Return on Equity Computation – MePGCL Old Stations

[redacted]

MePGCL submits before the Hon'ble Commission to kindly approve Rs. **44.16** Cr, Rs. **44.45** Cr and Rs. **46.02** Cr as RoE for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for MePGCL Old Stations.

2.17 Return on Equity Sonapani

The funding pattern of the Sonapani project is shown in the table below:

Table 2.13: Funding Pattern - Sonapani

[redacted]

The Return on Equity computation for Sonapani for the control period of FY 2015-16 to FY 2017-18 is computed by considering the original Equity of Sonapani project and additional equity infusion pertaining to GFA addition as submitted in clause **5.7.2**. The Return on Equity (RoE) computation for Sonapani is shown in the table below:

Table 2.14: Return Equity Computation – Sonapani

[redacted]

MePGCL submits before the Hon'ble Commission to kindly approve Rs. **0.58** Cr, Rs. **0.58** Cr and Rs. **0.62** Cr as RoE for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for Sonapani.

2.18 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.

2.19 Interest and Finance Charges on Loan Capital MePGCL Old Stations

It is submitted that at present there is no outstanding loan for Old Projects except for R & M of Umiam Stage I & II.

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 2.15: Computation of Interest on Loan -MePGCL Old Stations (Rs. Cr)

[redacted]

MePGCL submits before the Hon'ble Commission to kindly approve Rs. **0.39** Cr, Rs. **0.92** Cr and Rs. **1.37** Cr as Interest and Finance Charges for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for MePGCL-Old stations.

It is further submitted that as per Regulation 27.1 of the MYT Regulations, 2014, on equity over and above 30% of GFA should be treated as normative loan. The Normative Loan has been computed as closing balance of Equity less Equity considered for RoE for every year. The Interest on Normative loan is calculated by considering the interest rate same as average interest for the respective year. The calculation of normative loan is shown in the table below:

Table 2.16: Computation of Interest on Normative Loan

Particulars	FY2015-16	FY2016-17	FY2017-18
Normative Loan (Rs. Cr)	116.39	118.66	138.08
Rate of Interest (%)	12.49%	12.04%	11.15%
Interest on Normative Loan (Rs. Cr)	**14.53**	**14.28**	**15.40**

After including the interest on normative loan as submitted in the above table the total interest on loan is shown in the table below:

Table 2.17: Total Interest on Loan – MePGCL Old Stations

Particulars	FY2015-16	FY2016-17	FY2017-18
Total Interest including Interest on Normative Loan (Rs. Cr)	**14.93**	**15.20**	**16.78**

Therefore, it is submitted before the Hon'ble Commission to kindly approve Total Interest on Loan after including the interest on normative as shown in the

Table 2.17: Total Interest on Loan – MePGCL Old Stations

table above.

2.20 Interest and Finance Charges on Loan Capital - Sonapani

At present there is no loan for the Sonapani project however for additional capitalization pertaining to Land and other investment loan is proposed to be taken. The projected interest on loan of Sonapani for the control period is shown in the table below and enclosed as Format-7:

Table 2.18: Interest on Loan Computation - Sonapani

[redacted]

MePGCL submits before the Hon'ble Commission to kindly approve Rs. **0.30** Cr, Rs. **0.60** Cr and Rs. **0.60** Cr as Interest and Finance Charges for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for Sonapani.

2.21 Operation and Maintenance Expenses

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 for2003-04 to 2007-08 price level. The average normal O&M expenses at2007-08 price level shall be escalated at the rate of 5.72% to arrive at theism 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 of5.72% per annum as arrive at the operation and maintenance expenses forth 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 2007-08and 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"

2.22 Operation and Maintenance Expense as per MYT Regulations, 2014

The above regulations classify operation and maintenance expenses in three categories:

- Hydro Generating Stations in operation for a period of **more than 5 years as on 1.4.2009; (say Category 'A')**
- Hydro Generating Stations in operation for a period of **less than 5 years as on 1.4.2009; (say Category 'B')**
- Hydro Generating Stations declared under commercial operation on or after 1.4.2009; **(say Category 'C')**

Accordingly, MePGCL has categorized its power station for computation of O&M expenses.

Table 2.19: Classification of Hydro Projects for O&M Purpose

Sl. No.	Name of Station	No. of Units	Capacity (MW)	Total Capacity (MW)	COD	Project Classification
1.	Umiam Stage I	I	9	36	21.02.1965	**A**
		II	9		16.03.1965	**A**
		III	9		06.09.1965	**A**
		IV	9		09.11.1965	**A**
2.	Umiam Stage II	I	10	20	22.07.1970	**A**
		II	10		24.07.1970	**A**

Sl. No.	Name of Station	No. of Units	Capacity (MW)	Total Capacity (MW)	COD	Project Classification
3.	Umiam Stage III	I	30	60	6.01.1979	**A**
		II	30		30.03.1979	**A**
4.	Umiam Stage IV	I	30	60	16.09.1992	**A**
		II	30		11.08.1992	
5.	Umtru Power Station	I	2.8	11.2	01.04.1957	**A**
		II	2.8		01.04.1957	**A**
		III	2.8		01.04.1957	**A**
		IV	2.8		12.07.1968	**A**
6.	Sonapani	I	1.5	1.5	27.10.2009	**C**
	Total			**188.7**		

As can be seen from the above table, MePGCL projects fall under category **'A'** and **'C'**. Accordingly, MePGCL has computed O&M expenses for the control period for these projects.

The O&M expenses for Category **'A'** needs to be computed based on past data for FY 2003-04 to FY 2007-08. The O&M expenditure for Category 'A' is computed as per Regulation 56(2), 56(3), 56(4) and 56(5) of MYT Regulations, 2014.

It is submitted that as per Audited Accounts Statement-6, the data for elements of O&M is extracted and average base value figures are derived at for FY 2007-08. The Statement-6 provides function wise analysis of O&M elements into Generation, Transmission, Distribution and Others (Stores organization & Management & Administration). Hence the O&M expenses classified/ related to Others are further allocated/ apportioned to Generation, Transmission & Distribution (GTD) in the ratio of GTD expenses. The table below provides the extract of O&M expenses from FY 2003-04 to FY 2007-08 for GTD and computation of GTD Ratio.

Table 2.20: Computation of GTD Ratio of O & M Expenses (FY 04 to FY 08)

[redacted]

[redacted]

[redacted]

[redacted]

The table below provides details of O&M expenses for Others i.e. Stores Organisation, Management & Administration.

Table 2.21: O & M Expenses – Others (FY 04 to FY 08)

[redacted]

The table below provides the allocation of Others O&M expenses to Generation function in the computed Generation, Transmission & Distribution (GTD) ratio.

Table 2.22: Allocation of Other O&M Expenses to Generation (FY 04 to FY 08)

[redacted]

The total of O&M expenses for Generation function after allocation of others cost for FY 2003-04 to FY 2007-08 is presented in table below:

Table 2.23: Total of O&M Expenses for Generation after Allocation (FY 04 to FY 08)

[redacted]

The computation of base value after escalating O & M expense from FY 04 to FY 08 by 5.17% and taking average of escalated O & M expense from FY 04 to FY 08 to arrive at normalized price level of FY 2007-08 is presented in the table below:

Table 2.24: O&M Expenses at FY 2007-08 Base Level

[redacted]

Further the computation of O&M expenses for the control period of FY 2015-16 to FY 2017-18 after considering 50% increase in employee cost for FY 2009-10 and escalating by 5.72% every year is computed as per Regulation 56(4) and 56(5) of MYT Regulations, 2014. The table below provides details of O&M expenses for the control period.

Table 2.25: O & M Expenses for MePGCL for the Control Period (Category A)

Particulars	R&M Expenses	Employee Costs	A&G Expenses	Total
Base Value of FY 08	5.45	17.21	1.14	23.80
FY 09 after 5.72% escalation	5.76	18.20	1.21	25.16
50% Increase in Employee Cost for FY 10	-	9.10	-	9.10
Revised FY 10 figures after increase	5.76	27.29	1.21	34.26
FY 10 after 5.72% escalation	6.09	28.85	1.28	36.22
FY 11 after 5.72% escalation	6.44	30.51	1.35	38.29
FY 12 after 5.72% escalation	6.80	32.25	1.43	40.48
FY 13 after 5.72% escalation	7.19	34.10	1.51	42.80
FY 14 after 5.72% escalation	7.60	36.05	1.60	45.25
FY 15 after 5.72% escalation	8.04	38.11	1.69	47.83
FY 16 after 5.72% escalation	8.50	40.29	1.78	50.57
FY 17 after 5.72% escalation	8.99	42.59	1.88	53.46
FY 18 after 5.72% escalation	9.50	45.03	1.99	56.52

The O&M expenses for **Category 'C'** of power stations i.e. Sonapani is to be computed as per Regulation 55 (7) of MYT Regulations, 2014.

"55(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.

The table below provides the computation of O&M expenses for Sonapani for the control period of FY 2015-16 to FY 2017-18.

Table 2.26: O & M Expense for Sonapani (Category C)

Particulars	Rs.Cr
Project Cost	10.86
O&M Expenses for FY 2009-10 (2% of Project Cost)	0.22
O&M Expenses for FY 2010-11 (5.72% escalation over prev. year)	0.23
O&M Expenses for FY 2011-12 (5.72% escalation over prev. year)	0.24
O&M Expenses for FY 2012-13 (5.72% escalation over prev. year)	0.26
O&M Expenses for FY 2013-14 (5.72% escalation over prev. year)	0.27
O&M Expenses for FY 2014-15 (5.72% escalation over prev. year)	0.29
O&M Expenses for FY 2015-16 (5.72% escalation over prev. year)	0.30
O&M Expenses for FY 2016-17 (5.72% escalation over prev. year)	0.32
O&M Expenses for FY 2017-18 (5.72% escalation over prev. year)	0.34

The table below summarises O&M expenses computed as per Regulation 56 of the MYT Regulations, 2014, for the control period of FY 2015-16 to FY 2017-18.

Table 2.27: Total O&M Expenses as per Regulation

[redacted]

2.23 Operation and Maintenance Expense based on actual

Employee Cost Projection

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 has mutually decided that the earlier trend of revision of pay will continue in future i.e. Management will revise pay scale of all the employees every 5 years. The last pay revision was made effective in the year 2010. Therefore, from January 2015 onwards Revision of Pay will be made effective. The employee cost for the FY 2015-16 is projected by considering the revised pay of Employees. The following assumptions were taken to arrive at the revised pay of Employees:

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

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

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

- **Dearness Allowance (DA):** The Dearness Allowance is paid to Employees as depicted in
- **Table** 2.28: DA Rates for the Control Period
- below

- **Housing Rent Allowance (HRA):** The HRA is paid as a percentage of Basic Pay and the percentage HRA remains same throughout the effective period of revision of pay. At present HRA is as follows:
  - *15% of Basic for Shillong area*
  - *12.5% of Basic for District Head Quarters*

- *10% of Basic for other areas*

The above rates are further capped at a fixed amount.

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

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

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

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

- Basic Pay is expected to grow at a nominal rate of 3% every year.
- Dearness Allowance is projected by taking the following assumptions:

Table 2.28: DA Rates for the Control Period

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

- The other allowance is estimated to remain at the same level as FY 2015-16
- Terminal benefit provision for future years is not considered at present. The same will be claimed at the time of true-up as per the actual provisioning.
- The yearly recruitment of technical and non-technical staff is also considered for projection of cost. The yearly increase in number of Employees is shown in Format-2.

Based on above assumptions, the employee cost details are shown in the table below and attached as Format 1.

Table 2.29: Employee Cost of MePGCL (Excluding MLHEP)

(Rs. Cr)

[redacted]

2.24 Administrative & General (A & G) Expense Projection

The increase in A & G expenses mainly depend upon the market inflation. As the A & G Expense is being projected for the control period as a whole, therefore A & G expense for the control period is projected by considering the average inflation rate of 9% over the last 3 year period (November 2011 to October 2014). 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. The summarized A & G expense for FY 2014-15 and the control period is shown in the table below and details from FY 2012-13 onwards is attached as Format-5.

Table 2.30: A & G Expense of MePGCL (Excluding MLHEP)

(Rs. Cr)

Sl. No.	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Rent, Rates & Taxes	0.06	0.06	0.07	0.07
2	Insurance	1.62	1.77	1.92	2.10
3	Telephone, Postage & Telegrams	0.04	0.05	0.05	0.06
4	Consultancy fees	0.00	0.00	0.00	0.00
5	Technical fees	-	-	-	-
6	Other professional charges	0.00	0.00	0.00	0.00
7	Conveyance & travel expenses	0.94	1.03	1.12	1.22
8	Electricity & water charges	0.01	0.01	0.01	0.01
9	Others	0.12	0.13	0.15	0.16
10	Freight	-	-	-	-
11	Other material related expenses	0.03	0.03	0.04	0.04
	Total Expenses	2.83	3.08	3.36	3.66
	Less Capitalized	-	-	-	-
	Net Expenses	**2.83**	**3.08**	**3.36**	**3.66**
	Add prior period	-	-	-	-
	Add Aportionment of Holding Expense	*11.00*	*12.70*	*11.20*	*15.02*
	Total expenses	**13.83**	**15.78**	**14.56**	**18.69**

2.25 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 last 3 year’s average inflation rate of 9% for projection of R&M cost for the control period of FY 2015-16 to FY 2017-18. The summarized A & G expense for FY 2014-15 and the control period is shown in the table below and details from FY 2012-13 onwards is attached as Format-4.

Table 2.31: R & M Expense of MePGCL (Excluding MLHEP) (Rs. Cr)

[redacted]

As submitted in the above sections, the summarized O & M expenditure of MePGCL (excluding MLHEP) is shown in the table below:

Table 2.32: O & M Expenditure based on Actuals

Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Employee Cost	31.65	37.50	41.51	46.05
R & M Cost	9.91	10.81	11.79	12.85
A & G Cost	13.83	15.78	14.56	18.69
Total	**55.40**	**64.10**	**67.85**	**77.59**

1.1.1.1 As submitted in the **Table 2.32** above the O & M Expenditure projected based on actual is much higher than the O & M Expenditure projected as per regulation as shown in **Table 2.27**: Total O&M Expenses as per Regulation

Therefore, it is submitted before the Hon'ble Commission to kindly approve the O & M Expenditure as submitted in the **Table 2.32** above.

2.26 Allotment of O & M Expenditure to MePGCL old stations and Sonapani

The O & M Expenditure arrived in clause **0** above is allotted to MePGCL-Old Stations and Sonapani based on the installed capacity. The detailed calculation is shown in the table below:

Table 2.33: Allotment of O & M expenditure

Station	Capacity	O & M Expense (Rs. Cr)			
		FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
MePGCL (Old Stations)	187.20	54.96	63.59	67.31	76.97
Sonapani	1.50	0.44	0.51	0.54	0.62
Total	**188.70**	**55.40**	**64.10**	**67.85**	**77.59**

MePGCL submits before the Hon'ble Commission to kindly approve the O & M Expenditure as submitted in the **Table** above.

2.27 Depreciation for the Control Period

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.

2.28 Depreciation computation MePGCL Old Stations

The computation of depreciation is shown in the table below and attached as Format-6.

Table 2.34: Depreciation-MePGCL Old stations (Rs. Cr)

Sl. No.	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Land	-	-	-
2	Buildings	0.39	0.40	0.41
3	Hydraulic works	6.35	6.70	7.19
4	Other Civil works	0.71	0.74	0.99
5	Plant & Machinery	12.16	12.28	12.28
6	Lines & Cables	0.14	0.14	0.14
7	Vehicles	0.14	0.14	0.14
8	Furniture	0.12	0.12	0.12
9	IT Equipment	-	-	0.45
10	Office equipment	0.08	0.08	0.08
	TOTAL:	**20.08**	**20.59**	**21.80**
	Less: Sonpanai Depreciation	*0.50*	*0.50*	*0.52*
	Total Depreciation-MePGCL (Old Assets)	**19.58**	**20.09**	**21.28**

MePGCL submits before the Hon'ble Commission to kindly approve Depreciation of Rs. **19.58** Cr, Rs. **20.09** Cr and Rs. **21.28** Cr for FY 2015-16, FY 2016-17 and FY 2017-18respectivelyfor MePGCL old stations.

2.29 Depreciation computation Sonapani

The computation of depreciation is shown in the table below:

Table 2.35: Depreciation-Sonapani

(Rs. Cr)

Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Opening Value of Gross Fixed Assets (Rs. Cr)	10.86	10.86	16.86	16.86
Addition during the year (Rs. Cr)	-	6.00	-	0.38
Retirements during the year (Rs. Cr)	-	-	-	-
Closing Value of Gross Fixed Assets (Rs. Cr)	**10.86**	**16.86**	**16.86**	**17.24**
Depreciation Rate as per MYT Regulations (%)	5.28%	5.28%	5.28%	5.28%
Depreciation for the year (Rs. Cr)	0.50	0.50	0.50	0.52

MePGCL submits before the Hon'ble Commission to kindly approve Depreciation of Rs **0.50** Cr, Rs. **0.50** Cr, Rs**.** **0.52** Cr for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for Sonapani.

2.30 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) the computation of Interest on Working Capital for MePGCL Old stations is shown below:

Table 2.36: Interest on Working Capital- MePGCL Old stations

Particulars	FY2015-16	FY2016-17	FY2017-18
O & M Expenses for 1 month	5.30	5.61	6.41
Maintenance Spares @15% of O&M plus escalated by 6%	9.54	10.10	11.55
Receivables @ 2 months of Fixed Cost	24.76	25.64	28.11
Total Working Capital requirement (Rs. Cr)	**39.60**	**41.35**	**46.07**
SBI Advance Bank rate as on 1.4.2014 (%)*	14.75%	14.75%	14.75%
Interest on Working Capital	**5.84**	**6.10**	**6.79**

** SBI Advance Bank rate (earlier SBI PLR) has not been revised since Nov'13. Therefore the SBI PLR as on 1.11.13 considered for Interest on Working Capital*

MePGCL submits before the Hon'ble Commission to kindly approve Rs. **5.84** Cr, Rs. 6.10 **6.10** Cr and Rs. **6.79** Cr as Interest on Working for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for MePGCL-old stations.

As per the Regulations 34.1 (iii) the computation of Interest on Working Capital for Sonapani is shown below:

Table 2.37: Interest on Working Capital-Sonapani

Particulars	FY2015-16	FY2016-17	FY2017-18
O & M Expenses for 1 month	0.04	0.04	0.05
Maintenance Spares @15% of O&M plus escalated by 6%	0.08	0.08	0.09
Receivables @ 2 months of Fixed Cost	0.33	0.38	0.41
Total Working Capital requirement (Rs. Cr)	**0.45**	**0.51**	**0.55**
SBI Advance Bank rate as on 1.4.2014 (%)*	14.75%	14.75%	14.75%
Interest on Working Capital	**0.07**	**0.08**	**0.08**

** SBI Advance Bank rate (earlier SBI PLR) has not been revised since Nov'13. Therefore the SBI PLR as on 1.11.13 considered for Interest on Working Capital*

MePGCL submits before the Hon'ble Commission to kindly approve Rs. **0.07** Cr, Rs. **0.08** Cr and Rs. **0.08** Cr as Interest on Working for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for Sonapani.

2.31 Income Tax

As per Regulation 35 of the MYT Regulations, 2014, provide for claim of Income Tax as expenses. However MePGCL submits that income tax shall be claimed in subsequent filings in annual performance review/ true-up.

2.32 Connectivity and SLDC Charges

The Regulation 59 of MYT Regulations, 2014 provides for claim of SLDC & Connectivity charges as expenses. MePGCL submits as per information received from SLDC the station wise SLDC charge for the control period of FY 2015-16 to FY 2017-18 is as mentioned below:

Table 2.38: SLDC Charges applicable to MePGCL

[redacted]

2.33 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 2.39: Annual Fixed Cost – MePGCL Old Stations (Rs. Cr)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
Interest on Loan capital	14.93	15.20	16.78
Depreciation	19.58	20.09	21.28
O&M Expenses	63.59	67.31	76.97
Interest on working capital	5.84	6.10	6.79
Return on Equity	44.16	44.45	46.02
Income Tax	-	-	-
SLDC Charge	0.78	0.99	1.11
Total Annual Fixed Cost	**148.87**	**154.14**	**168.95**
Less: Non Tariff Income	*0.31*	*0.31*	*0.31*
Net Annual Fixed Cost	**148.57**	**153.84**	**168.64**

MePGCL submits before the Hon'ble Commission to kindly approve the Annual Fixed Cost of Rs. **148.57** Cr, Rs. **153.84** Cr and Rs. **168.64** Cr for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for MePGCL Old stations.

MePGCL submits that the Net Annual Fixed Cost of MePGCL old stations may be allotted to the old stations as per the capacity of each station. The station wise allotted Net Annual fixed cost is shown in the table below:

Table 2.40: Net AFC allotment to old stations

Sl. No.	Station		Annual Fixed Cost (Rs. Cr)		
		Capacity (MW)	FY 2015-16	FY 2016-17	FY 2017-18
1	Umiam Stage I	36.00	28.57	29.58	32.43
2	Umiam Stage II	20.00	15.87	16.44	18.02
3	Umiam Stage III	60.00	47.62	49.31	54.05
4	Umiam Stage IV	60.00	47.62	49.31	54.05
5	Umtru Power Station	11.20	8.89	9.20	10.09
	Total AFC for Old Stations	**187.20**	**148.57**	**153.84**	**168.64**

2.34 Summary of Annual Fixed Cost - Sonapani

The summary of the Annual Fixed Cost for Sonapani is provided in the table below:

Table 2.41: Annual Fixed Cost – Sonapani (Rs. Cr)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
Interest on Loan capital	0.30	0.60	0.60
Depreciation	0.50	0.50	0.52
O&M Expenses	0.51	0.54	0.62
Interest on working capital	0.07	0.08	0.08
Return on Equity	0.58	0.58	0.62
Income Tax	-	-	-
SLDC Charge	0.01	0.01	0.01
Total Annual Fixed Cost	**1.96**	**2.30**	**2.45**
Less: Non Tariff Income	-	-	-
Net Annual Fixed Cost	**1.96**	**2.30**	**2.45**

MePGCL submits before the Hon'ble Commission to kindly approve the Annual Fixed Cost of Rs. **1.96** Cr, Rs. **2.30** Cr and Rs. **2.45** Cr for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for Sonapani.

2.35 Computation of Capacity Charge and Energy Charge

MePGCL submits that based on the Annual fixed Cost approved by Hon'ble Commission it will calculate the capacity charge and energy charge based on following provisions:

57 Computation and payment of capacity charge and energy charge for Hydrogenerating 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 x 0.5 x NDM / NDY x (PAFM / NAPAF) (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:

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

Where,

AUX = Normative auxiliary energy consumption in percentage

DCi = Declared capacity (in ex-bus MW) for the ith 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 A1 and A2 MWh respectively, A1 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 (A1 + A2 – DE) MWh, subject to a maximum of DE MWh and a minimum of A1 MWh.

(iii) Actual energy generated (e.g. A1, A2) 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 x (100 – AUX) x (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.

3. Summary of Objections, Response of MePGCL and Commissions' Observation

The Commission has received objections on the ARR and Tariff proposal of MePGCL for 2015-16. Further the Commission in its Advisory Committee meeting has received suggestions/objections from the members. The Commission has held a public hearing on 09.03.2015 to which public were invited to get suggestions on the ARR of all the utilities. In the public hearing, a presentation was made by BIA giving its objections. The Commission has considered all responses received so far on the ARR and tried to make a balance between the interest of utility and consumers. In this chapter the details of the objections made by consumers and responses given by utility are as below.

BIA's Objections on Petition filed by MePGCL

Issue 1: Reduction in applicable NAPAF

1. MePGCL has sought to apply a 5% reduction in the applicable in NAPAF for all of its generating stations, due to difficulties in operation in the said region.
2. This claim of the MePGCL is untenable no such relaxation can be given in the NAPAF merely on a bald claim by MePGCL that it faces difficulties. The NAPAF is a well-defined term under the Regulations of the Hon'ble Commission, regarding the availability of the plant taking into consideration various aspects and conditions.

Response of MePGCL

It is prayed before the Hon'ble Commission to kindly consider the difficulties faced by generating stations located in the North Eastern Region and grant the 5% allowance in the reduction of NAPAF accordingly. It may not be out of place to mention that industries located in the North Eastern Region enjoy concessions/benefits/incentives in the form of tax holiday, subsidies, etc because of their location in this remote and difficult part of the country.

The objection is denied. It is submitted that MePGCL has followed Regulation 58(1) of Meghalaya state Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2014 while proposing to apply 5 % reduction in NAPAF. The regulation is reproduced below:

*"**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.

It is further submitted that the North East Region faces various problems relating to operation of Hydropower stations. Some of these problems are:-

- i) Difficulty in getting of spare parts whenever plant and machinery breaks down.
- ii) Shortage of trained and skilled manpower.
- iii) Poor communication network.
- iv) Heavy rainfall accompanied with lightning and disruption of tower lines and road communications etc, during monsoons.

It is submitted that the above difficulties are beyond the control of MePGCL. However, MePGCL is contemplating to go for Annual Maintenance Contract to ease the difficulties listed at (i) and (ii) above to a certain extent.

Issue 2: Head Variation in Reservoir

Not even in one project is the head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) is upto 8 %. The Hon'ble Commission would need to call for the DPR of the respective projects and verify this aspect;

For the ROR Plants, the calculations given by MePGCL need to be checked and verified thoroughly;

The MePGCL has furnished a calculation for NAPAF for the Umiam generating station

As per the claim of MePGCL, for Stage II and III, the percentage variation in the head is about 8% itself or slightly more than 8%. In the circumstances, there is no justification whatsoever for claiming a reduction in the NAPAF of more than 20%, namely from NAPAF of 90% which would be applicable if the percentage difference was 8 % to about 68% as claimed.

The claim of MePGCL is not being tenable as is evident from the fact that even in cases where the generating station is significantly affected by silt levels, the NAPAF is to be taken at 85% in terms of the Tariff Regulations of the Hon'ble Commission. As against this, the claim of MePGCL for the Umiam generating stations is much less than 70%. This ought not to be accepted.

With regard to the NAPAF of the Umtru plant, the MePGCL has not given any details as to how this plant is significantly affected by silt as specified in the Tariff Regulations of the Hon'ble Commission. Unless the MePGCL is in a position to provide authenticated data about the silt levels at the generating station and establish to the satisfaction of the Hon'ble Commission that the plant availability is significantly affected by silt warranting reduction in the NAPAF, the NAPAF for the said generating station ought to be taken at 90% as provided in Regulation 60(1)(a) of the Tariff Regulations of the Hon'ble Commission.

Response of MePGCL

1. The objection is denied as the NAPAF has been calculated as per the provision of the MYT Regulations, 2014. It is further submitted that the detailed calculation of NAPAF is clearly shown in clause 2.5.1.2 to 2.5.1.6 of the petition for MYT & Business Plan Petition for FY 2015-16 to FY 2017-18 dated 22nd December, 2014.

   The maximum and minimum head of a hydropower station is governed by the Full Reservoir Level (FRL) and Minimum Drawdown Level (MDDL) which were finalized during the design of the station.

   A list of the salient features showing the FRL and MDDL, etc. of Umtru, stage I,II,III and IV Power stations are shown in HG2 Format of the Petition for MYT & Business Plan Petition for FY 2015-16 to FY 2017-18 dated 22nd December, 2014.

   The maximum and minimum head were based on technical data derived by the manufacturers of the machines, which were submitted to the Hon’ble Commission vide letter at *Appendix* –I enclosed.

2. The objection is denied. It is submitted that as per Regulation 58(1) of the Multi Year Tariff Regulations, 2014

   (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

   It is submitted that the percentage Head variation for stage II & III is 4.46% and 9.88% respectively. Hence as per regulations, NAPAF for Stage II is taken as 85% and NAPAF for Stage III is calculated as 63.67% after NE allowance.

Hence it is submitted that MePGCL has strictly followed the Hon'ble Commission's regulation in proposing the NAPAF for Umiam Stage II & III.

3. The objection is denied. It is submitted that, as per regulation 58 (1) of the MYT Tariff regulation, 2014, for pondage type plants where plant availability is significantly affected by silt, the NAPAF is 85%.

4. Umtru Power station is the only plant under this category and accordingly, NAPAF for Umtru is **85.00%** as per regulations. MePGCL has followed the Hon'ble Commission's Regulation, while proposing the NAPAF for Umiam generating stations which do not fall under this category.

5. Four number of photographs of Umtru Reservoir showing very high silt levels which have significantly affected the operation of the Umtru Power station are furnished (Appendix –IIIA to IIID).

Issue 3: Reduction in Generation Level

It is evident from the historical operation of the generating stations of the MePGCL that there are substantial inefficiencies in the operation and the generation level can increase by prudent utility practices of MePGCL. In the circumstances, it is respectfully submitted that the Hon'ble Commission should disallow any reduction in generation levels as claimed including lower NAPAF for the generating stations of MePGCL.

Response of MePGCL

The objection is denied as all the stations are running efficiently. The operation of these plants depends on water availability which varies from year to year. When water availability during the year is high, the generation will be high and vice versa. It may not be out of place to submit that both Umtru and Stage-III Power Stations have reached the end of their useful life and there is an urgent need to take up Renovation & Modernisation works, for which MePGCL is trying to obtain the necessary funding. However, these stations are still generating inspite of their having reached the end of their useful life, because of the untiring efforts of MePGCL to keep these plants in operation.

Issue 4: Capital Expenditure on Schemes

a. MePGCL has proposed substantial capital expenditure on several schemes. These have been categorised as System Improvement Programmes, System Augmentation Programmes and Miscellaneous Capital Expenditure for each of the generating stations. It is respectfully submitted that several of these programmes are not capital expenditure but in the nature of Operation & Maintenance Expenses and Repair & Maintenance Expenditure. These include changing the operation of gates from manual to hydraulic security fencing, construction of toilets, water supply for security personnel etc. It is laughable that such works are being categorised as capital expenditure in the first place.

b. Further, MePGCL has proposed to finance most of the programmes through equity. It is not understood as to where is the equity with MePDCL to finance all these schemes. It is submitted that the Hon'ble Commission needs to scrutinize each of the schemes in detail and allow only such expenditure as is absolutely essential and truly in the nature of capital expenditure, namely one providing enduring benefits to the consumers.

c. It is also strange that for Myntdu Leksha Hydro Electric Project (MLHEP) which is a new project for which even the final tariff has not been determined, MePGCL is already proposing system augmentation / improvement. No additional capital expenditure can be allowed for the Leskha Project at any cost

d. With regard to the Lakroh Project, since 67% of the project is financed by grant, no element except O & M expenses need to be allowed for the same. No depreciation or other element of tariff should be given to MePGCL on such assets. In support of his continuation, the objector has quoted the judgment of APTEL. in Appeal No 134 of 2009 Power grid Corporation of India Ltd v CERC & Ors -

e. With regard to the new projects, namely Riangdo (3 X 1000 kW) & New Umtru HEP (2 X 2000 kW), MePGCL should be directed to file a petition for determination of provisional tariff as per Regulation 41.5 of the MYT Regulations, 2014 which reads as under -

f. "41.5 A Generating Company may file a Petition for determination of provisional tariff in advance of the anticipated Date of Commercial Operation of the Unit or Stage or Generating Station as a whole, as the case may be, based on the capital expenditure actually incurred up to the date of making the Petition or a date prior to making of the Petition, duly audited and certified by the statutory auditors and the provisional tariff shall be charged from the date of commercial operation of such Unit or Stage or Generating Station, as the case may be."

g. MePGCL cannot be allowed to seek regulatory approval for the new projects circumventing the above provision in the MYT Regulations, 2014.

h. Overall, the proposed capital expenditure of Rs. 1937.03 crores for the three years is unbelievable and unrealistic and cannot at all be approved by the Hon'ble Commission. It needs to be brought down based on realistic parameters and depends on which expenditure can actually be categorised as capital expenditure.

Response of MePGCL

a. In terms of accounting, an expense is considered to be a capital expenditure when the asset is a newly purchased capital asset or an investment that improves the useful life of an existing capital asset.

   Whereas, revenue expenditure incurred on fixed assets include costs that are aimed at 'maintaining' rather than enhancing the earning capacity of the assets. These are costs that are incurred on a regular basis and the benefit from these costs is obtained over a relatively short period of time.

   In relation to the major asset purchases that qualify as capital expenditures, revenue expenditures include the ordinary repair and maintenance costs that are necessary to keep the asset in working order without substantially improving or extending the useful life of the asset. As submitted above, the schemes shown in the capital investment plan are a part of capital expenditure and not a part of Operation and Maintenance/Repair and Maintenance.

b. It is submitted that the source and component of financing of the schemes is categorically mentioned in the Investment plan format submitted with the MYT petition dated 22nd December 2014. It is submitted before the Hon'ble commission to kindly considers the same.

c. It is submitted that MePGCL has projected the system augmentation programme for Myntdu Leshka Hydro Electric Project in FY 2015-16 & FY 2016-17. The details of the same are provided in the MYT & Business Plan petition for FY 2015-16 to FY 2017-18. The battery bank based power backup system is to ensure uninterrupted power supply at the Dam Control room, since it was experienced that a power failure of even 15 (fifteen) minutes may lead to overtopping of flood water over the Dam if the gates cannot be opened immediately because of power failure.

d. The objection is denied. The assets even if funded by grant have to be considered for O&M expenses. It is further submitted that with regard to Lakroh project, no component of cost is considered for tariff in the MYT & Business Plan petition for FY 2015-16 to FY 2017-18.

e. It is submitted that MePGCL has not considered the projects Riangdo and New Umtru while projecting ARR for the control period. A separate tariff petition for these projects will be filed as per MYT Regulations, 2014.

f. The objection is denied. It is submitted that MePGCL has proposed the capital expenditure plan as per the Multi Year Tariff Regulations, 2014 and the details of such capital expenditure and its nature are defined in the petition. It is also submitted that these schemes will in turn benefit the consumers in terms of efficiency improvement and sustainability of the power stations.

   It is submitted that MePGCL has proposed the tariff petition and its components keeping the interest of consumers in mind and projected all the costs and expenses in the same line.

   As per Notification dated 31st March 2012, of the Government of Meghalaya, all assets and liabilities of MeECL (holding company) were transferred to the three subsidiaries i.e. MePGCL, MePTCL and MePDCL from 1st April, 2013. Therefore till 31st March, 2012, consolidated accounts were maintained by MeECL as separate accounts of MePGCL, MePTCL and MePDCL were yet to be maintained.

   The segregated details of each generating station assets, liabilities, revenue & expenditure are also yet to be maintained.

   Umiam Stage I,II,III,IV and Umtru generating stations are very old and details of capital cost are not available.

   In view of the above, the MePGCL has submitted before the Hon'ble Commission to kindly accept the proposal for determination of single tariff for old stations (Umiam Stage I,II,III,IV and Umtru). However for new generating station, namely Sonapani, separate tariff proposal has been filed in the MePGCL MYT & Business Plan petition for FY 2015-16 to FY 2017-18.

It is submitted that the cost of Sonapani Mini hydel Project which is about Rs.7 crore per MW is more or less in line with the 16th Report of the Standing Committee on Energy (2010-2011) of MNRE which showed a range of Capital investment of Rs. 6.50 to Rs.7.50 crore per MW (Appendix-IV)

Annual Revenue Requirement

BIA has stated that MePGCL has sought to include all such costs and expenditure which have arisen due to the inefficiencies in the operation on the part of the MePGCL to be included in the revenue requirements and tariff of the MePGCL, which is not permissible. Only such costs and expenses and is prudent is liable to be passed on to the consumers. The basic objective of the Electricity Act is to protect the interest of consumers and all claims of the generators are to be considered in the above background and to ensure that the cost of electricity to the consumers is cheapest. This has been settled by the Hon'ble Appellate Tribunal in the case of NTPC Limited v. Central Electricity Regulatory Commission & Others, Appeals No. 134 of 2008 and connected appeals, dated 3.6.2010, wherein the Hon'ble Tribunal held as under:

"33. As per the provisions of section 61(d) of the Electricity Act, 2003, while determining the tariff, the consumers interest should be safeguarded. Hence the tariff should be so determined that it should be the cheapest at the consumers end. This is a basic object of the Electricity Act 2003. Every case of additional capitalization which will give rise to the tariff has to be seen in the light of the above-said objective. The Central Commission, keeping in view the said objective, has allowed the negative entries to be capitalized as it will reduce the capital cost and tariff will be cheaper at the consumer end. However, it has not allowed capitalization in respect of the amount that had been incurred by the generator by which no benefit would accrue to the beneficiaries."

In the light of the above, the objections on behalf of the objector to the specific elements of cost as claimed by the MePGCL are as under.

Issue 5: Details of Capital Cost of Gross Fixed Assets

BIA has submitted as under:

In terms of the MYT Regulations of the Hon'ble Commission, the details of the capital cost is required to be filed for each generating station separately. This is also the case with the Tariff Regulations of the Central Electricity Regulatory Commission.

MePGCL has only filed the consolidated capital cost for the existing generating stations. In the circumstances, it is very difficult to bifurcate and examine the reasonableness of the cost as claimed by MePGCL and whether the same can be passed on to the consumers in the tariff.

The MePGCL also needs to justify the cost of more than Rs. 10 crores as claimed for the micro-hydel (Sonapani) generating station of 1.5 MW which was commissioned in the year 2009. The capital cost for the said generating station is quite high at about Rs. 7 crores per MW. This aspect need to be considered by the Hon'ble Commission. Further, no additional capitalistaion can be allowed in case of this new station.

MePGCL has also claimed the total equity in the old generating stations. For the purposes of tariff determination, MePGCL has claimed the total amount of Rs. 315.42 crores (2015-16), Rs. 317.53 crores (2016-17) & Rs.328.74 crores (2017-18) as equity investment for the existing projects of MePGCL, which works out to 30% of the total gross fixed assets.

It is submitted that the equity investment cannot be simply taken at 30%. The well accepted practice in the electricity tariff determination process is that the equity investment of 30% is taken as the maximum cap, subject of actual deployment of equity of at least 30%. In other words, it is incumbent upon MePGCL to provide full and complete details of the equity investments actually made up to the level of at least 30% and only then can the equity base for the purposes of tariff determination be considered that the level of 30% of the gross fixed assets. The above aspect needs to be considered by the Hon'ble Commission.

Further, the Return on equity at 14% cannot be automatically allowed as a pass through since Regulation 31 of the MYT Regulations states as under-

"31 Return on Equity

31.1 Return on equity shall be computed on the equity base determined in accordance with regulation 27 and shall not exceed 14%."

Response of MePGCL

It is submitted that the actual base and equity addition projected for the entire control period is in line with the MSERC (Multi Year Tariff) Regulations, 2014. The relevant extract of the MSERC (Multi Year Tariff) Regulations, 2014 is stated as below.

“27 Debt-Equity Ratio 1 For a project declared under commercial operation on or after 1.4.2015, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan;

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.

Provided further that equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Provided any grant obtained for execution of the project shall not be considered as a part of capital structure for the purpose of debt-equity ratio.

“31 Return on Equity

31.1 Return on equity shall be computed on the equity base determined in accordance with regulation 27 and shall not exceed 14%.”

As stated in the above Regulations, it is submitted that MePGCL has considered either actual equity balance or 30% of the capital cost whichever is lower and hence projected return on equity. MePGCL has not considered funding from grants or consumer contributions for projecting return on equity. The details of the funding and source are provided in the Investment Plan format.

Also as per MSERC (Multi Year Tariff) Regulations, 2014 for control period, MePGCL has to project gross fixed assets in the petition to arrive at equity portion; accordingly the petition is submitted before the Hon’ble commission.

Issue 6: Depreciation

BIA has submitted that

The MePGCL has claimed the total depreciation of Rs. 19.58 crores, Rs. 20.09 crores & Rs. 21.28 crores for the old stations in a combined manner without giving any details. In the case of most of these stations, even as per MePGCL they are very old and most of the depreciation would have been charged to the extent of 90% of the capital value of the assets. Therefore, no additional depreciation should be given.

MePGCL has not given the asset wise break-up of Gross Fixed Assets relating to the old generating stations, nor provided any details in relation to generating stations for which depreciation is sought.

Response of MePGCL

It is submitted that the he Depreciation calculation is being done in line with the MSERC (MYT Regulations, 2014). The details of depreciation are shown in Format-6 of the MYT & Business Plan petition for FY 2015-16 to FY 2017-18 dated 22nd December, 2014.

Issue 7: Operation and Maintenance (O&M) Expenses

BIA has submitted that with regard to the Operation and Maintenance expenses claimed by MePGCL, that the same has to be allowed only on normative basis and the actual expenses claimed by MePGCL for some of the elements like employees expenses cannot be allowed.

The Hon'ble Commission need to take the Operation and Maintenance expenses for the year 2014-15 as the maximum limit, extrapolate the same for the control years in question, apply prudence check and then allow the Operation and Maintenance expenses on the said basis.

Response of MePGCL

The objection is denied. It is submitted that for projecting the Operation and Maintenance (O&M) Expenses, MePGCL has calculated the O&M expenses on the actual figures for Employee Cost, R&M and A&G expenses and also based on the methodology mentioned in the Regulation 56 of the Meghalaya State Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2014; as the actual expense are on the higher side the same has been taken for consideration.

COMMISSION OBSERVATIONS

The Commission has considered objections and suggestions raised by consumers and members of advisory committee by deciding the ARR and generation tariff for FY 2015-16.

The Commission has considered the suggestion given to it by stakeholder while determining the ARR of MePGCL, fixing the criteria of recovery of charges, normative and plant efficiency. These are dealt with at appropriate places in the present order.

4. Commission's Approach

4.1 General

In the earlier orders, the Commission discussed the principles and provisions of the Regulations for determining tariff for generating company. The Commission has tried to adhere to the Regulations, National Tariff Policy and provisions of Electricity Act, 2003 to determine the Tariff of different companies working in the power sector. However, at the same time, the Commission has also tried to adopt such regulations in a pragmatic manner so as to consider the ground realities. In the public hearing, consumers objected to non availability of audited accounts of MeECL and its subsidiaries and apprehended that there are chances of surpluses. It was even difficult for the Commission to validate numbers without verifying audited accounts. In the absence of audited account of 2012-13, and FY 2013-14 the Commission has therefore tried to validate expenditures of generating stations on the basis of actual accounting records for the period April 2014 – November 2014 and provisional records for previous years. By this approach the Commission has tried to fix the tariff for 2015-16 and maintain the continuity of improved cash flow in the sector. The Commission shall true up the numbers after the audit of financial statements of MePGCL are submitted.

The Commission has followed the MYT tariff regulations for the purpose of determining of all generating stations on the basis of records available to it and prudence check subject to reasonability of the cost and financial viability of the generating company. The Commission has also considered the MSERC (terms and condition for determination of tariff for generation from Renewable Energy Sources) Regulation 2014 subject to modifications wherever required so for Sonapani where separate details were provided.

4.2 Statutory requirements:

Section 64 of the Electricity Act, 2003 requires the generating companies to file an application for determination of tariff under section 62 of the Act in such manner as specified through the regulations by the Regulatory Commission. Section 61 of the

Act further requires the Commission to specify the terms and conditions for determination of tariff in accordance with the provision of the act. The act also provides that the Commission shall be guided by the principles and methodologies specified by Central Electricity Regulatory Commission, the National Tariff and Electricity Policies.

In the light of the above provisions of the act, the Commission has already notified MSERC (Multiyear tariff) Regulations 2014 and RE Regulations 2014. The regulations are applied in the State of Meghalaya till such time it is revised by the Commission. For the purpose of this Tariff Order, the Commission shall therefore, be guided by the said regulations subject to the relaxation wherever necessary for various valid reasons recorded therein.

By and large, in line with the provisions of tariff regulation, the Commission is following at present the cost plus approach and normative standards subject to prudence check and efficient norms.

4.3 Filing of Petition:

Regulation 18 specifies the process of filing a petition for determining the tariff of existing running power plants.

4.4 Capital Cost:

Regulation 28 and 52 provides the approval of actual capital cost subject to prudence check by the Commission for new investments. The Commission shall scrutinize the reasonableness of the capital cost, financial plans and interest during construction period, use of efficient technology and such other matters for determination of tariff. The regulation also prescribes that in case of any abnormal delay in execution of the project causing cost and time over run attributable due to the failure of the utility, the Commission may not approve the full capitalisation of interest and over head expenses. The regulation also prescribes that where power purchase agreement entered into between generating company and the distribution licensee provides for a ceiling of actual expenditure. The regulation has also prescribed that the Commission may issue guidelines for verifying the capital cost of hydro electric projects by an independent agency or expert and in such a case the capital cost as vetted by such agency may be considered by the Commission while determining the tariff of such hydro generating stations. For the purpose of this order the Commission has considered the GFA value as given in the transfer scheme notified by the Government of Meghalaya and added the assets after the commercial operation. The Commission has taken the same stand as taken in previous years that without audit of financial statements of Corporation, it will adhere to those numbers which are already approved by the Commission in its tariff order for 2014-15.

4.5 Additional Capitalisation

Regulation 29 provides that some of the capital expenditure (on account of un-discharge liabilities, on account of change in law, etc) actually incurred after the date of commercial operation and up to the cutoff date may be admitted by the Commission subject to the prudence check.

4.6 Renovation and Modernisation

Regulation 53 provides that the generating company for the purpose of extension of life beyond the useful life of a generating station or a unit thereof may result expenditure on renovation and modernisation. However, it shall make an application before the Commission for approval of the proposal with a detailed project report giving complete scope, justification, cost benefit analysis, estimated life extension, funding, phasing of expenditure, schedule of completion, reference price level, estimated completion cost. In case of Umiam Stage I & II there was no prior approval of the Commission. Therefore the Commission is allowing the MePGCL proposal to the extent it may meet out its obligations and consumers are also not unduly overburdened. However, after the audit is over, the Commission shall validate the numbers.

4.7 Debt Equity Ratio

Regulation 27 provides that for the purpose of determination of tariff of new generating stations commencing commercial operation after the notification of this regulation, the debt equity ratio shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance shall be treated as normative loan. Where actual equity employer is less than 30%, the actual equity employee shall be considered. It is important to note that issue of share capital shall only be treated as amount of equity invested for the purpose of determination of tariff.

In the case of existing generating station the debt equity ratio as per the balance sheet on the date of the transfer notification will be the debt equity ratio for the first year of operation subject to such modification as may be found necessary upon audit of the accounts if such balance sheet is not audited. The debt equity amount arrive shall be used for calculating interest on loan, return on equity, etc. In this tariff order, the Commission is not accepting the size of equity as proposed by the generation corporation without the proper audit is done and formalities with regard to distribution of shares completed as per Company Law. Moreover, until and unless these companies start functioning independently and improve their performance, it will allow the same return as allowed last year.

4.8 Components of Tariff

Regulation 54 provides that there will be tariff for supply of electricity from a hydro power generating station shall comprise of two parts, namely, annual capacity charges and energy charges.

The fixed cost of a generating station shall be recovered through annual capacity charges and 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) Income Tax.

The annual capacity charges shall be worked out by deducting any other income of the generating company from the total expenses.

4.9 Return on Equity

Return on equity shall be computed in accordance with regulation 53 on the equity base as determined in accordance with regulation 31 and shall not exceed 14%. However, in the absence of audited and separate accounts for each utility the Commission has decided to allow same return on equity as allowed in the previous year equally to generation, transmission and distribution utilities. The Commission shall take a view on return on equity which shall not exceed 14% for projects under MePGCL after the accounts are audited with CAG report on it. In this tariff order, the Commission has decided not to change its position from the previous years and do not allow return on equity as proposed.

4.10 Interest and finance charges on loan capital

Regulation 55 provides that 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 agreement, bond or debentures and the lending rates prevailing therein. However, the loan capital should meet the requirement of regulation providing debt equity ratio.

The regulation also prescribes that interest and finance charges attributable to capital work in progress (COD not achieved) shall not be allowed. There is a provision in the regulation that generating company shall make every effort to swap loans as long as it results in net benefit to it. In case of any moratorium period is availed by the generating, the depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

4.11 Operation and maintenance expenses

The operation and maintenance expenses shall comprise of the following:

a) Employees cost

b) Repair and maintenance

c) Administration and general expenses

In order to introduce efficient operation in the generation the Commission is considering allowing a ceiling on the O & M expenses so that at the time of truing up it may not allow any unreasonable expenses over and above the O & M ceiling. In the previous year, the Commission has allowed the O & M expenses as per Regulations which also met with the MePGCL proposal. This year the Corporation has demanded much more than what Regulation provides for. The approach for determining the O & M expenses this year shall not be different than the previous year. The Commission also feels that the expenses should be within the normative and should not exceed the budgeted figures. Accordingly the Commission has allowed combined O&M cost after considering escalation on the expenses as allowed in FY 2014-15. The petitioner requires controlling its expenses in each head to remain within the ceiling of O&M expenses.

4.12 Interest on working capital

Regulation 34 (iii) prescribes that working capital shall cover the following:

a) Operation and maintenance expenses for one month

b) Maintenance sphere at 15% of O&M

c) Two months receivables of AFC

Rate of interest on the working capital shall be short term prime lending rate of SBI @14.45%. On the basis of the previous year record the Commission has allowed interest amount including loan capital and working capital. The Commission has also considered relevant sections of RE regulations for Sonapani.

4.13 Depreciation

Regulation 33 provides that depreciation shall be computed on the assets/capital costs of the assets as entered by the Commission where the opening asset value recorded in the balance sheet as per the transfer scheme notification shall be deemed to have been approved. However, after the audit of the accounts necessary modification may be made. For the new assets the approved cost for the asset value shall be taken into account. The depreciation shall be calculated annually as per straight line method at the rates as specified in CERC regulations. In case of the existing projects the balance depreciable value as on 01.04.2010 shall be worked out by deducting the cumulative depreciation as admitted by the Commission from the gross value of the assets. Depreciation shall only be chargeable from the first year of operation. The Commission has allowed the depreciation in order to meet the financial commitments of the Corporation for renovation and modernization. However, after meeting its obligation under the contract, the licensee shall create a separate reserve for meeting the replacement of assets or modernization of the unit in future. The Commission has allowed sufficient budget in it and desired that the petitioner shall use it judiciously for its R& M work of old stations.

4.14 Income Tax

Income tax shall be treated as expenses and shall be recoverable from the consumers through tariff. The income tax actually paid shall be included in the ARR. Any under recovery or over recovery shall be adjusted every year on the basis of income tax certificate issued by the authorities.

4.15 Computation of capacity charges and energy charges

Regulation 57 provides the methodology to calculate the capacity charges and energy charges to be payable by the beneficiary. However, the Commission has determined the same in order to make simple tariff and its application for generator and distribution utility.

During the proceeding, the Commission has determined the tariff on the basis of the regulation as well as adopting a pragmatic approach in the interest of the all stakeholders.

5. Generating Stations and their performance for MYT period FY 2015-16 to FY 2017-18

5.1 ARR for FY 2015-16 to FY 2017-18 – Existing Generating Stations

Petitioner's Submission

MePGCL has proposed the following for determination of tariffs for its 6 generating stations.

5.2 Segregation of Financials

- Pursuant to Meghalaya Power Sector Reforms Transfer Scheme 2010 (as amended in 2012), the Assets and Liabilities including rights, obligations and contingencies is transferred to and vested in MePGCL from MeECL on and from 1.4.2012. Transfer of Assets and Liabilities to MePGCL is based on the provisional financials of MeECL for FY2011-12.
- The segregated annual accounts post restructuring and unbundling for FY 2012-13 are being finalized. The accounts for the holding company and its subsidiaries have been segregated by appropriating the Assets, Properties, Liabilities, Expenditures, and Obligations etc. as attributable to the respective companies. The Assets and liabilities of individual functions i.e Generation, Transmission and Distribution were maintained by erstwhile MeSEB and later MeECL, and appropriation of common items to respective companies is being done by taking relevant basis/ methodology.

5.3 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) & Mini Hydel, the installed capacity increased by 121.5 MW. All the Generating Stations except Sonapani Micro Hydel Project, as indicated in 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 are as under:

Table 5.1: Details of Existing Capacity

Sl. 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	I	1.5	1.5	27.10.2009
7.	Leshka	I	42	126	01.04.2012
		II	42		01.04.2012
		III	42		08.03.2013
	Total			**312.7**	

New Generation Capacity

- MePGCL is currently executing works of hydro electric projects which are proposed for commissioning in near future as under:

Table 5.2: Details of New Generating Stations

Sl. No.	Name & Location	Capacity (MW)	Year of Commencement	Schedule Date of Commissioning /
1	Lakroh SHP	1.5	2003	March 2014
2	New Umtru	40 (20*2)	2008	March 2015

It is submitted that for Lakroh SHP provisional tariff has been approved in the Tariff Order dated 30th March, 2013. The final tariff petition for Lakroh SHP will be filed after commissioning of the same.

5.4 Computation of Generation Energy

The following sections outline details of operational norms for computation of energy generation for MYT period FY 2015-16 to FY 2017-18 based on Tariff Regulations, 2011 or past trend as the case may be.

Operation Norms

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

a) Normative Annual Plant Availability Factor

Sl. 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	90 %
b	with head variation between FRL and MDDL of more than 8%	(Head at MDDL/Rated Head) x 0.5 + 0.2
2	Pondage type plant	where plant availability is significantly affected by silt -
3	Run –of River type plants	NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past

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.

b) Auxiliary Consumption

Sl. No.	***Station Particular***	***Norm***
1	*Surface hydro electric power generating stations with rotating exciters mounted on the*	*0.7% of energy generated*
2	*Surface hydro electric power generating stations with static excitation system*	*1.0% of energy generated*
3	*Underground hydro electric power generating stations with rotating exciters mounted on the*	*0.9% of energy generated*
4	*Underground hydro electric power generating*	*1.2% of energy generated*

c) Transformation Losses

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

Design Energy – Existing Generating Stations

The design energy for MePGCL power stations as approved in the earlier Tariff Orders is proposed for the control period as well. The station-wise design energy is given in Table below:

Table 5.3: Design Energy

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 Power Station	39.01
Sonapani	5.5

It is submitted by MePGCL that for the control period the approved design energy will be used for computation of energy charge. The month wise and station wise design energy is provided in the Formats in the petition.

Computation of 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:

Table 5.4: Features of Hydro Power Plant

Sl. No	Particulars	Umtru	Umiam-I	Umiam-II	Umiam-III	Umiam-IV	Sonapani
1	**Type of**						
a	*Surface/*	SURFACE	SURFACE	SURFACE	SURFACE	SURFACE	SURFACE
b	*Purely ROR/*	PONDAGE	STORAGE	POWER CHANNEL	PONDAGE	PONDAGE	ROR
c	*Peaking/N*	NON	NON	NON	NON	NON	NON
d	*No. of*	NA	NA	NA	NA	NA	NA
e	*Overload (MW) & Period*	NIL	NIL	NIL	NIL	NIL	NA
2	**Type of**						
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
b	*Static excitation*	NA	NA	NA	NA	Static Excitation	NA

Computation of NAPAF for Storage and Pondage type plants:

Based on the above details and the norms specified by Regulation 60 (1) (a) of the Tariff Regulations, 2011, the computation of NAPAF for Storage and Pondage type hydro generating stations is carried out as under:

Table 5.5: Computation of Head Variation for Storage & Pondage Plants

Name of Power Station	FRL (mtrs)	MDDL (mtrs)	Maximum Head	Minimum Head	% Head Variation
Umiam Stage I	981.46	960.12	169.0	130.0	23.08%
Umiam Stage II	804.06	800.85	78.5	75.0	4.46%
Umiam Stage III	679.70	672.05	162.0	146.0	9.88%
Umiam Stage IV	503.00	496.00	162.0	131.0	19.14%

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:

Table 5.6: Computation of NAPAF for Storage & Pondage Plants

Name of Power Station	% Head Variation	Rated Head	Head at MDDL	NAPAF (Head at MDDL /
Umiam Stage I	23.08%	145.0	130.0	64.83%
Umiam Stage II	4.46%	77.7	75.0	90.00%
Umiam Stage III	9.88%	150.0	146.0	68.67%
Umiam Stage IV	19.14%	140.0	131.0	66.79%

Computation of NAPAF for Pondage type plants: As per Regulation 60 (1) (b) of the Tariff Regulations, 2011 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 60 of the Tariff Regulations, 2011, after considering further allowance of 5% for difficulties in north east region, the NAPAF for Umtru is **80.00%.**

Computation of NAPAF for Run of River type plants: As per Regulation 60 (1) (c) of the Tariff Regulations, 2011, 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 **50.00%**. Further as per Regulation 60 of the Tariff Regulations, 2011, after considering further allowance of 5% for difficulties in north east region, the NAPAF for Sonapani is **45.00%**.

As per Regulation 60 of the Tariff Regulations, 2011, the computed NAPAF is shown below:

Table 5.7: NAPAF as per Operation norms for MePGCL Power Stations

Name of Power Station	NAPAF (%) as per workings	NAPAF (%) with 5% allowance
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 Power Station	85.00%	80.00%
Sonapani	50.00%	45.00%

Computation of NAPAF based on last year's actual generation

It is further submitted by MePGCL that as per direction of MSERC in the tariff order dated 10th April, 2014 has conducted study of last 3year's hourly generation to arrive at the existing level of availability. The computed PAFM based on last 3year's actual hourly generation is mentioned in the table below:

Table 5.8: PAFM based on actual hourly generation

Particulars		Umiam Stage I	Umiam Stage II	Umiam Stage III	Umiam Stage IV	Umtru	Sonapani
	FY	56%	45%	42%	68%	17%	47%
	FY	57%	15%	49%	60%	41%	59%
	FY	58%	53%	50%	65%	36%	67%
PAFM	Maximum	58%	53%	50%	68%	41%	67%

MePGCL submitted before the Commission to approve the maximum of last 3 year's actual PAFM as NAPAF for the control period.

Station Wise generation for the control period

Table 5.9: NAPAF proposed for FY 2014-15 and control period

Name of Power Station	NAPAF for FY 2014-15 (%)
Umiam Stage I	58%
Umiam Stage II	53%
Umiam Stage III	50%
Umiam Stage IV	68%
Umtru	41%
Sonapani	67%

MePGCL has however not furnished station-wise generation for each year of the control period.

Commission's Analysis

The Commission has done detailed analysis of the actual generation from FY 2007-08 to FY 2012-13 in to arrive at generation for FY 2014-15 as furnished by MePGCL.

Table 5.10: Six Year Generation Records

Sl. No.	Name of the Plant	Installed capacity (MW)	Designed Energy (MU)	Actual Generation (Source MePGCL)					
				FY 08-09	FY 09	FY 10	FY 11	FY 12	FY 13
1	Umiam	36	60.7	150.6	107.8	110.32	103.8	108.8	103.9
2	Umiam	20	29.5	67.27	48.67	51.2	47.52	12.9	50.93
3	Umiam	60	115.3	149.2	159.7	128.32	132.2	127.5	131.1
4	Umiam	60	129.5	247.7	193.7	187.1	205	204	190.0
5	Umtru	11.2	82.3	49.33	43.95	48.22	15.51	38.04	30.64
6	Sonapani	2	11.01				4.9	6.03	7.28

Table 5.11: Computation Of Average Generation

Sl. No	Name of Plant	Installe.	Designed	Option I	Option II	Option III
		(MW)	(MU)	Best gen In 6 yrs	Worst gen in 6 Yrs	Avg. of past 6 yrs
1	Umiam Stage I	36	60.7	150.6	103.8	114.2
2	Umiam Stage II	20	29.5	67.27	12.9	46.4
3	Umiam Stage III	60	115.3	149.2	127.5	138.0
4	Umiam Stage IV	60	129.5	247.7	187.1	204.6
5	Umtru	11.2	82.3	49.3	15.51	37.6
6	Sonapani	2	11.01	6.03	4.9	3.0
	Total			**670.1**	**451.71**	**543.9**

The total designed energy from six plants is approved as 553.21 MU for FY 2015-16 and in the control period. However under recovery on account of lower generation shall be considered based on availability of plants:

Table 5.12: Provisionally Approved Designed Energy

(MU)

Sl. No	Name of Plant	FY 2014-15 (MePGCL proposal)	FY 2014-15 (MSERC approval)
1	Umiam Stage I	76.58	116.29
2	Umiam Stage II	40.17	45.51
3	Umiam Stage III	124.37	139.4
4	Umiam Stage IV	162.13	207.5
5	Umtru	21.88	39.01
6	Sonapani	6.60	5.5
	Total	**431.73**	**553.21**

5.5 Auxiliary Consumption

MePGCL has given auxiliary consumption and transformation losses for each generating station as per the Regulation in the following Table:

Table 5.13: Auxiliary / Transformation Consumption

(%)

Name of the Plant	Auxiliary consumption (%)	Transformation losses (%)
Umiam Stage I	0.7	0.5
Umiam Stage II	0.7	0.5
Umiam Stage III	0.7	0.5
Umiam Stage IV	1.0	0.5
Umtru	0.7	0.5
Sonapani	0.7	0.5

The MePGCL has not furnished the energy generation for the control period FY 2015-16 to FY 2017-18. The Commission has not considered the new project Umtru until and unless it is commissioned and informed. However, in availability in the control period has been considered for the purpose of determination of ARR of MePDCL on adhoc basis. The same shall be reviewed when MePGCL files its mid term review by 30.08.2015 to the Commission. The Commission has considered the station-wise generations approved for FY 2014-15 for the control period as given below:

Table 5.14: Approved Energy for the control period

Sl. No.	Name of the plant	Energy (MU)		
		FY 2015-16	FY 2016-17	FY 2017-18
1	Umiam Stage I	116	116	116
2	Umiam Stage II	46	46	46

3	Umiam Stage III	139	139	139
4	Umiam Stage IV	207	207	207
5	Umtru	39	39	39
6	Sonapani	5	5	5
	Total	**552**	**552**	**552**

5.6 Computation of Generation Energy

Components of Tariff

The Regulation 52 provides components of tariff which is reproduced below for reference:

52. Components of Tariff

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.*
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 of Income*

Accordingly, MePGCL has computed and provided herewith various cost elements for determination of Tariff.

5.7 Gross Fixed Assets (GFA)

Petitioner's Submission

5.7.1 Gross Fixed Asset for MePGCL old stations

The opening balance of GFA of MePGCL as on 1.4.2013 is Rs**. 292.78** Cr (excluding MLHEP project cost). The closing GFA for each year of the control period is worked out considering actual capitalization during FY 2013-14, estimated capitalization during FY 2014-15 and projected capitalization during control period of FY 2015-16 to FY 2017-18.

Table 5.15: Gross Fixed Asset Details MePGCL old stations

(Rs. Cr)

Particulars	FY 2012-13 (Provisional)	FY 2013-14 (Provisional)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Opening values of Gross Fixed Assets	292.78	399.12	399.81	399.81	414.71	421.75
Addition during the year	106.67	0.69	-	14.90	7.04	37.36
Retirements during the year	0.33	-	-	-	-	-
Closing value of Gross Fixed Values	**399.12**	**399.81**	**399.81**	**414.71**	**421.75**	**459.11**

Source Table 32 (Page 9 of Tariff petition of MYT period)

MePGCL submits before the Hon'ble Commission to approve the GFA for MePGCL old stations (excluding Sonapani) as submitted in the above table.

5.7.2 Gross Fixed Asset (GFA)-Sonapani

MePGCL has submitted that the opening GFA of Sonapani as on 1st April, 2014 is Rs. 10.86 Crores. The GFA Sonapani for the control period of FY 2015-16 to FY 2017-18 is projected as detailed below including the land acquisition for the project for which originally lead for 95 years.

Table 5.16: Gross Fixed Assets – Sonapani

(Rs. Cr)

Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Opening values of Gross Fixed Assets	10.86	10.86	16.86	16.86
Addition during the year	-	6.00	-	0.38
Retirements during the year	-	-	-	-
Closing value of Gross Fixed Values	**10.86**	**16.86**	**16.86**	**17.24**

Source Table 33 (Page 9 of Tariff petition of MYT period)

Commission's Analysis

The Commission in the Tariff Order for FY 2014-15 dated 10th April, 2014 has examined the proposal of MePGCL for Gross Fixed Assets and recorded as below:

"MePGCL has projected a provisional figure of Gross Fixed Assets as on 31.03.2012 as Rs. 327.39 Crores for existing projects. For sonapani project MePGCL has projected Rs. 10.78 Crores GFA. During FY 2012-13 MePGCL has added Rs. 104.75 Crores fixed assets for Umiam Stage II and R&M work, therefore the closing value of GFA as on 31.03.2014 shall become Rs. 432.14 Crores. The Commission has examined the report on renovation and modernization work for stage II and allowed on provisional basis addition of assets. However, the Commission is not changing GFA opening value for FY 2011-12 without verification of audited results. GFA is approved by the Commission as follows:

Table 5.17: Gross Fixed Assets

(Rs. Crores)

Particulars	As Projected by MePGCL	As Approved by the Commission
Opening GFA as on 01.04.2012	327.39	286.49
Addition during FY 2012-13 as on 01.04.2013	104.75	104.75
As on 01.04.2013	432.14	391.24
As on 01.04.2014	432.14	391.24
As on 01.04.2015	432.14	391.24

5.7.3 Gross Fixed Assets during the Control Period

The MePGCL has proposed certain addition during the control period as given below:

Financial Year	Addition of Old Stations	Sonapani	Total
2015-16	14.90	6.00	20.90
2016-17	7.04	-	7.04
2017-18	37.36	0.38	37.74

In accordance with the Regulations, MePGCL is required to get the approval of the business plan prior to submission of ARR application. ***Accordingly the Commission directs the petitioner to submit the business plan for new investments by 30.8.15 for prior approval for all projects including Sonapani. Till such time the Commission will not allow any investments during the control period.***

5.7.4 Return on Equity

Petitioner's Submission

The MePGCL has projected the Return on Equity in the Petition as detailed in the Table below:

Table 5.20: Return on Equity Computation of MePGCL old stations

(Rs. Cr)

Particulars	FY 2012-13 (Actual)	FY 2013-14 (Actual)	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
Opening Equity (Rs. crore)	278.74	338.62	360.20	423.20	431.81	436.19
Addition during the year (Rs. Crores)	59.89	21.58	63.00	8.60	4.38	30.63
Closing Equity (Rs. Crores)	338.62	360.20	423.20	431.81	436.19	466.82
Equity considered for RoE (Rs. Crores)	310.74	310.95	310.95	315.42	317.53	328.74
RoE (%)	14%	14%	14%	14%	14%	14%
RoE (Rs. Crore)	**43.50**	**43.53**	**43.53**	**44.16**	**44.45**	**46.02**

Source Table 34

The MePGCL has submitted that the funding pattern is as given below:

Table 5.21: Funding pattern – Sonapani

Sl.No.	Particulars	Rs. Cr.
1	Equity	4.11
2	Grant	6.75
3	**Total**	**10.86**

The Return on Equity computed by MePGCL Sonapani for the control period as shown in Table below:

Table 5.22: Return on Equity – Sonapani

(Rs.Cr)

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Opening Equity	4.11	4.11	4.11	4.11
Addition during the year	-	-	-	0.34
Closing Equity	4.11	4.11	4.11	4.45
Equity considered for RoE	3.26	4.11	4.11	4.45
RoE (%)	14%	14%	14%	14%
Return on Equity	0.46	0.58	0.58	0.62

Commission's Analysis

The Commission has accepted the MePGCL proposal for Sonapani subject to ceiling in the capital cost as per normative in the Renewable energy regulations and allowed Rs 0.25 Crores, Rs. 0.25 Crores and Rs. 0.25 crores as RoE for FY 2015-16, FY2016-17 and FY 2017-18 respectively. However in the absence of audited accounts of the Corporation and MePGCL, the Commission is not able to accept the MePGCL's proposal for old existing plants and allowing the same RoE as allowed in FY 2014-15. Accordingly the total return on equity allowed shall be Rs 9.43 crores per annum for the control period. The Roe now allowed shall include RoE of Sonapani. The Commission has accordingly considered the equity for the control period as below:

Table 5.24: Return on Equity as allowed

(Rs. Cr)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
RoE Sonapani	0.25	0.25	0.25
RoE for other old stations	9.18	9.18	9.18
Total RoE allowed	9.43	9.43	9.43

The Return on Equity is allowed at Rs. 9.43 Cr for FY 2015-16, Rs. 9.43 Cr for FY 2016-17, Rs. 9.43 Cr for FY 2017-18 to MePGCL for old stations

5.8 Interest and Finance Charges

Petitioner's Submission

MePGCL has submitted that at present there is no outstanding loan for old projects except for R&M of Umiam Stage I & II.

The interest on loan has been computed by considering interest obligation for present and upcoming project loans. Detailed Interest and Finance charges are given in Format-7 and summarized as below:

Table 5.25: Computation of Interest on Loan MePGCL Old Stations

(Rs. Cr)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
Opening Balance (Rs. Cr)	-	6.30	8.95
Addition during the year (Rs. Cr)	6.30	2.65	6.73
Repayment during the year (Rs. Cr)	-	-	-
Closing Balance (Rs. Cr)	6.30	8.95	15.69
Average Interest Rate (%)	12.49%	12.04%	11.15%
Interest Payable (Rs. Cr)	**0.39**	**0.92**	**1.37**
Add: Finance Charges (Rs. Cr)	-	-	-
Total Interest and Finance charges (Rs. Cr)	**0.39**	**0.92**	**1.37**

It is further submitted by MePGCL that as per Regulation 27.1 of the MYT Regulations, 2014 on equity over and above 30% of GFA should be treated as normative loan. The normative loan has been computed as closing balance of equity less equity considered for RoE for every year. The interest on normative loan is calculated by considering the interest rate as average interest rate of respective year. The calculation of normative loan is shown in the table below:

Table 5.26: Computation of Interest on Normative Loan

(Rs. Cr)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
Normative Loan	116.39	118.66	138.08
Rate of Interest (%)	12.49%	12.49%	12.49%
Interest on Normative Loan	**14.53**	**14.28**	**15.40**

Table 5.27: Total Interest on Loan

(Rs. Cr)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
Total Interest of old Stations	14.93	15.20	16.78
Sonapani	0.30	0.60	0.60
Total	**15.23**	**15.80**	**18.38**

Commission's Analysis

MePGCL has claimed interest on the rate of 12.48%. the Commission has adopted the SBI PLR rate of 14.75% for the control period.

Table 5.28: Interest on Loan

(Rs. Cr)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
Opening Balance (Rs. Cr)	-	6.30	8.95
Addition during the year (Rs. Cr)	6.30	2.65	6.73
Repayment during the year (Rs. Cr)	-	-	-
Closing Balance (Rs. Cr)	6.30	8.95	15.69
Average Interest Rate (%)	14.75%	14.75%	14.75%
Interest Payable (Rs. Cr)	**0.46**	**1.13**	**1.82**
Add: Finance Charges (Rs. Cr)	-	-	-
Total Interest and Finance charges (Rs. Cr)	**0.46**	**1.13**	**1.82**

MePGCL has claimed interest on normative loan which is over and above the Equity (30% of GFA as per 27.1 Regulation of MERC Regulations, 2014). This is not approved as the Equity of MePGCL as per Transfer scheme is not decided. Since the Equity of MePGCL as a company is not known as per the audited records by C&AG, the amount over 30% Equity is not considered as loans and interest there on is allowed. In respect of Sonapani no interest charges are allowed as the project is funded by grant/equity. The Commission has provisionally allowed at this stage the interest on the loans for R&M work subject to validation and corrections as per the audited record.

The interest on loan is approved at Rs. 0.46 Cr for FY 2015-16, Rs. 1.13 Cr for FY 2016-17, Rs. 1.82 Cr for FY 2017-18 old stations excluding sonapani.

5.9 Depreciation

The MePGCL has submitted that it has computed depreciation as per Regulation 33 of MYT Regulation, 2014. The depreciation is projected based on the estimated completion of ongoing and upcoming projects during the control period.

Depreciation computed for stations

The computation of depreciation is shown in table below as given in Format – 6.

Table 5.29: Depreciation – MePGCL Old Stations

(Rs. Cr)

Sl.No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Land	-	-	-
2	Buildings	0.39	0.40	0.41
3	Hydraulic Works	6.35	6.70	7.19
4	Other civil Works	0.71	0.74	0.99
5	Plant & Machinery	12.16	12.28	12.28
6	Lines & Cables	0.14	0.14	0.14
7	Vehicles	0.14	0.14	0.14
8	Furniture	0.12	0.12	0.12
9	IT Equipment	-	-	0.45
10	Office equipment	0.08	0.08	0.08
	Total:	20.08	20.59	21.80
	Less: Sonpanai Depreciation	0.50	0.50	0.52
	Total Depreciation – MePGCL (Old Assets)	19.58	20.09	21.28

Table 5.30: Depreciation – Sonapani

(Rs. Cr)

Particulars	FY 2014-15 (Estimated)	FY 2015-16	FY 2016-17	FY 2017-18
Opening Value of Gross Fixed Assets (Rs. Cr)	10.86	10.86	16.86	16.86
Addition during the year (Rs. Cr)	-	6.00	-	0.38
Retirements during the year (Rs. Cr)	-	-	-	-
Closing Value of Gross Fixed Assets (Rs. Cr)	10.86	16.86	16.86	17.24
Depreciation Rate as per MYT Regulations (%)	4.60%	5.28%	5.28%	5.28%
Depreciation for the year (Rs. Cr)	0.50	0.50	0.50	0.52

Commission's Analysis

The Commission has considered the Opening GFA, additions during the year and closing gross fixed assets for the control period as above. In the absence of audited account, the Commission finds difficulty in accepting the asset values and therefore allows 50% of the depreciation amount in the control period. However this money shall be kept in a separate reserve for its use in future projects or for renovation and modernization work. The Commission has tried to promote renewable energy plants in the State by making relevant regulations and considered Sonapani accordingly with appropriate adjustments. Accordingly the Commission has allowed 0.31 as the depreciation charges during the control period for Sonapani.

The gross fixed assets for purpose of computation of depreciation are considered as given in the Table below:

Table 5.31: Depreciation for the Control Period

(Rs. Cr)

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
Opening GFA	391.24	391.24	391.24
Addition during the year	-	-	-
Closing GFA	391.24	391.24	391.24
Average GFA	391.24	391.24	391.24
Depreciation rate considered	5.28%	5.28%	5.28%
Depreciation as per Regulations	20.65	20.65	20.65
Depreciation allowed @50%	10.33	10.33	10.33

The Commission approves the depreciation at Rs. 10.33 Crore for FY 2015-16, FY Rs. 10.33 Crore for FY 2016-17 for Rs. 10.33 for FY 2017-18 for other old stations and Rs. 0.31, Rs. 0.31 and Rs. 0.31 crores in the control period for Sonapani as normative capital cost.

5.10 O & M Expenses

MePGCL has projected the O&M expenses for control period considering the base of FY 2007-08 (Actuals) escalating the expenses at 5.72% every year upto 2014-15 and the control period as per regulation 56 (4) and 56 (5) of MYT regulations, 2014. The projected O&M expenses by MePGCL are reproduced below:

Table 5.32: O&M Expenses for MePGCL for the Control Period (Category A)

Particulars	R&M Expenses	Employee Costs	A&G Expenses	Total
Base Value of FY 08	5.45	17.21	1.14	23.80
FY 09 after 5.72% escalation	5.76	18.20	1.21	25.16
50% Increase in Employee Cost for FY 10	-	9.10	-	9.10
Revised FY 10 figures after increase	5.76	27.29	1.21	34.26
FY 10 after 5.72% escalation	6.09	28.85	1.28	36.22
FY 11 after 5.72% escalation	6.44	30.51	1.35	38.29
FY 12 after 5.72% escalation	6.80	32.25	1.43	40.48
FY 13 after 5.72% escalation	7.19	34.10	1.51	42.80
FY 14 after 5.72% escalation	7.60	36.05	1.60	45.25
FY 15 after 5.72% escalation	8.04	38.11	1.69	47.83
FY 16 after 5.72% escalation	8.50	40.29	1.78	50.57
FY 17 after 5.72% escalation	8.99	42.59	1.88	53.46
FY 18 after 5.72% escalation	9.50	45.03	1.99	56.52

Similarly the O & M expenses for Sonapani are projected as per Regulation 55 (7) of MYT Regulation, 2014.

Table 5.33: O&M Expenses for Sonapani (Category C)

Sl. No	Particulars	Rs. Crore
1	Project Cost	10.86
2	O & M Expenses for FY 2009-10 (2% of Project Cost)	0.22
3	O & M Expenses for FY 2010-11 (5.72% escalation over previous year)	0.23
4	O & M Expenses for FY 2011-12 (5.72% escalation over previous year)	0.24
5	O & M Expenses for FY 2012-13 (5.72% escalation over previous year)	0.26
6	O & M Expenses for FY 2013-14 (5.72% escalation over previous year)	0.27
7	O & M Expenses for FY 2014-15 (5.72% escalation over previous year)	0.29
8	O & M Expenses for FY 2015-16 (5.72% escalation over previous year)	0.30
9	O & M Expenses for FY 2016-17 (5.72% escalation over previous year)	0.32
10	O & M Expenses for FY 2017-18 (5.72% escalation over previous year)	0.34

Summing-up the O&M expenses projected by MePGCL for its generating stations for the control period are shown below:

Table 5.34: Total O&M Expenses as per Regulations

(Rs. Cr)

Particulars	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
O & M Expenses & Category – A (Old Stations)	45.25	47.83	50.57	53.46	56.52
O&M Expenses for Category – C Stations) (Sonapani)	0.27	0.29	0.30	0.32	0.34

The MePGCL has further submitted that the pay-revision of employees are w.e.f from January 2015. This has to be implemented by the State Government as per the Commitment to the employees at the time of Corporatization of the Meghalaya State Electricity Board. The MePGCL has projected the O&M expenses based on the impact of pay-revision etc based on certain assumptions.

The MePGCL has also projected the O&M expenses based on actuals for the control period as given below:

Sl.No	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
	SALARIES & Allowances				
1	Basic Pay	16.07	28.21	29.61	31.06
2	Lumpsum / Arrear	0.18	-	-	-
3	Dearness Allowance	8.61	0.56	2.96	5.59
4	House Rent Allowance	1.78	3.38	3.55	3.73
5	Other allowance	1.46	1.82	1.86	2.14
6	Medical Reimbursement charges	0.44	0.44	0.44	0.44
7	Overtime Payment	0.08	0.08	0.08	0.08
8	Generation incentives	-	-	-	-
9	Salaries – Casual	1.90	1.90	1.90	1.90
10	**Sub Total**	**30.52**	**36.39**	**40.39**	**44.93**

Sl.No	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
11	Terminal Benefits				
12	Leave encashment Benefits	0.84	0.84	0.84	0.84
13	Staff welfare expenses	0.00	0.00	0.00	0.00
14	CPS	0.26	0.26	0.26	0.26
15	Workman compensation	-	-	-	-
16	Exgratia	0.01	0.01	0.01	0.01
17	**Sub Total**	**1.12**	**1.12**	**1.12**	**1.12**
	Pension Payment				
18	Basic Pension	-	-	-	-
19	Dearness Pension	-	-	-	-
20	Dearness Allowance	-	-	-	-
21	Any Other Allowance	-	-	-	-
22	Sub Total	-	-	-	-
23	Total (10+17+22)	31.64	37.50	41.51	46.05
24	Amount Capitalized	-	-	-	-
25	Net Amount	31.64	37.50	41.51	46.05
26	Add Prior Period Expenses	0.01	-	-	-
27	Grand Total	31.65	37.50	41.51	46.05

A&G Expenses for the Control Period based on actual.

Table 5.35: A&G Expense of MePGCL (Exlcuding MLHEP)

(Rs. Crore)

Sl. No	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Rent, Rates & Taxes	0.06	0.06	0.07	0.07
2	Insurance	1.62	1.77	1.92	2.10
3	Telephone, Postage & Telegrams	0.04	0.05	0.05	0.06
4	Consultancy fees	0.00	0.00	0.00	0.00
5	Technical fees	-	-	-	-
6	Other professional charges	0.00	0.00	0.00	0.00
7	Conveyance & travel expenses	0.94	1.03	1.12	1.22
8	Electricity & water charges	0.01	0.01	0.01	0.01
9	Others	0.12	0.13	0.15	0.16

Sl. No	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
10	Freight	-	-	-	-
11	Other material related expenses	0.03	0.03	0.04	0.04
12	Total Expenses	2.83	3.08	3.36	3.66
13	Less Capitalized	-	-	-	-
14	Net Expenses				
15	Add prior period				
16	Add Apportionment of Holding Expense	11.00	12.70	11.20	15.02
17	**Total Expenses**	**13.83**	**15.78**	**14.56**	**18.69**

R&M Expenses for the Control based on actuals

Table 5.36: R&M Expense of MePGCL (Excluding MLHEP)

(Rs. Cr)

Sl.No	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Plant & Machinery	7.36	8.02	8.75	9.54
2	Building	1.16	1.26	1.37	1.50
3	Hydraulic works	0.68	0.74	0.81	0.88
4	Lines & Cables	0.03	0.03	0.03	0.03
5	Vehicles	0.08	0.08	0.09	0.10
6	Furniture & Fixtures	0.11	0.12	0.13	0.15
7	Office Equipment	0.03	0.03	0.03	0.04
8	Civil Works	0.47	0.52	0.56	0.61
	Total	**9.91**	**10.81**	**11.79**	**12.85**
	Add / deduct share of other	-	-	-	-
	Total Expenses	**9.91**	**10.81**	**11.79**	**12.85**
	Less: Capitalized	-	-	-	-
	Net Expenses	**9.91**	**10.81**	**11.79**	**12.85**
	Add prior period	-	-	-	-
	Total R & M Expenses	**9.91**	**10.81**	**11.79**	**12.85**

The total O & M expenses for the control period based on actuals projected by MePGCL

Table 5.37: O&M Expenditure based on Actuals

Sl. No	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Employee Cost	31.65	37.50	41.51	46.05
2	R & M Cost	9.91	10.81	11.79	12.85
3	A & G Cost	13.83	15.78	14.56	18.69
	Total	**55.40**	**64.10**	**67.85**	**77.59**

Commission's Analysis

The Commission has considered the O&M expenses projected by the MePGCL for the control period based on Regulation and based on actuals as reproduced below:

Table 5.38: O&M Expenses as per Regulation

Sl.No	Particulars	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
1	O&M Expenses – Category A (Old Assets)	45.25	47.83	50.57	53.46	56.52
2	O&M Expenses – Category C (Sonapani)	0.27	0.29	0.30	0.32	0.34
	Total O&M Expenses	**45.52**	**48.12**	**50.87**	**53.78**	**56.86**

Table 5.39: O&M Expenditure based on Actuals

Sl.No	Particulars	FY 2014-15 (Estimated)	FY 2015-16 (Projected)	FY 2016-17 (Projected)	FY 2017-18 (Projected)
1	Employee Cost	31.65	37.50	41.51	46.05
2	R & M Cost	9.91	10.81	11.79	12.85
3	A & G Cost	13.83	15.78	14.56	18.69
	Total	**55.40**	**64.10**	**67.85**	**77.59**

The expenses can only be validated if the audited records were made available to the Commission. The Commission has examined the O&M expenses projected by MePGCL. In accordance with the regulations and available records, the Commission has allowed escalation on the O& M expenditures as allowed in FY 2014-15 and determined the charges for the control period. After getting the audited records the Commission shall review the same and if required appropriate changes shall be considered. For Sonapani the Commission has considered the RE regulations and allowed the O& M expenses accordingly after appropriate adjustments. The

Commission has allowed the combined O&M cost for the control period which are given below:

Table 5.41: O & M Expenses approved by the Commission for the control Period

(Rs. Cr)

Sl. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	O&M expenses for old stations	54.7	57.69	61.18
2	O&M expenses for Sonapani	0.30	0.32	0.34
4	**Total**	**55.00**	**58.01**	**61.52**

The Commission approves the O&M expenses for the control period at Rs. 55.00 Crore for FY 2015-16, Rs. 58.01 Crore for FY 2016-17 and Rs. 61.52 Crore for FY 2017-18.

5.11 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.”

Table 5.42: Interest on Working Capital – MePGCL Old Stations

Sl.No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	O&M Expenses for 1 Month	5.30	5.61	6.41
2	Maintenance spares @ 15% of O&M plus escalated by 6%	9.54	10.10	11.55
3	Receivables @ 2 months of Fixed Cost	24.76	25.64	28.11
4	**Total Working Capital Requirement (Rs. Crore)**	**39.60**	**41.35**	**46.07**
5	SBI Advance Bank rate as on 01.04.2014 (%)*	14.75%	14.75%	14.75%
6	**Interest on Working Capital**	**5.84**	**6.10**	**6.79**

* SBI Advance Bank rate (earlier SBI PLR) has not been revised since November 2013. Therefore the SBI PLR as on 01-11-2013 considered for interest on Working Capital.

Table 5.43: Interest on Working Capital - Sonapani

Sl. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	O&M Expenses for 1 Month	0.04	0.04	0.04
2	Maintenance spares @ 15% of O&M plus escalated by 6%	0.08	0.08	0.08
3	Receivables @ 2 months of Fixed Cost	0.33	0.38	0.41
4	**Total Working Capital Requirement (Rs. Crore)**	**0.45**	**0.51**	**0.55**
5	SBI Advance Bank rate as on 01.04.2014 (%)	14.75%	14.75%	14.75%
6	**Interest on Working Capital**	**0.07**	**0.08**	**0.08**

Commission's Analysis

Based on the analysis of various components of normative working capital, the Commission approves the working capital and interest on working capital as given table below:

Table 5.44: Interest on Working Capital, approved by the Commission for the Control Period

Sl.No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	O&M Expenses for 1 Month	4.56	4.81	5.10
2	Maintenance spares @ 15% of O&M plus escalated by 6%	8.20	8.65	9.17
3	Receivables @ 2 months of Fixed Cost	12.68	13.95	15.34
4	**Total Working Capital Requirement (Rs. Crore)**	**25.44**	**27.41**	**29.61**
5	SBI Advance Bank rate as on 01.04.2014 (%)	14.75	14.75%	14.75%
6	**Interest on Working Capital**	**3.75**	**4.04**	**4.37**

Table 5.44: Interest on Working Capital of sonapani, approved by the Commission for the Control Period

Sl. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	O&M Expenses for 1 Month	0.03	0.03	0.03
2	Maintenance spares @ 15% of O&M plus escalated by 6%	0.05	0.05	0.05
3	Receivables @ 2 months of energy charges	0.17	0..17	0.17
4	**Total Working Capital Requirement (Rs. Crore)**	**0.25**	**0.25**	**0.25**
5	SBI Advance Bank rate as on 01.04.2014 (%)	14.75%	14.75%	14.75%
6	**Interest on Working Capital**	**0.04**	**0.04**	**0.04**

Table 5.45: Total Interest on Working Capital

Sl.No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Old Stations	3.75	4.04	4.37
2	Sonpani	0.04	0.04	0.04
3	**Total Interest on Working Capital**	**3.79**	**4.08**	**4.41**

5.12 Income Tax

MePGCL has submitted that Income Tax will be claimed in subsequent follow-up in annual performance reviewed / true-up. As such Income Tax has not been claimed in the Petition.

5.13 Connectivity to SLDC and SLDC Charges

MePGCL has submitted that as per Regulation 59 of MYT Regulations, 2014 provides to claim of SLDC of connecting charges and expenses. It is submitted that as per the information received from SLDC, MePGCL has to pay SLDC charges for the control period of FY 2015-16 to FY 2017-18 as detailed below:

Table 5.46: SLDC Charges applicable to MePGCL

(Rs. Cr)

Sl. No	Particulars	Capacity (MW)	SLDC Charge		
			FY 2015-16	FY 2016-17	FY 2017-18
1	Umiam Stage I	36	0.20	0.19	0.21
2	Umiam Stage II	20	0.11	0.11	0.12
3	Umiam Stage III	60	0.33	0.32	0.37
4	Umiam Stage IV	60	0.33	0.32	0.37
5	Umtru Power Station	11.2	0.07	0.06	0.07
6	Sonpani	1.5	0.01	0.01	0.01

The Commission has considered that above SLDC charges and approves the same including Sonapani for the control period.

5.14 Summary of Fixed Costs – MePGCL Old Stations

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

Table 5.47: Annual Fixed Cost – MePGCL Ol Stations

(Rs. Cr)

Sl. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Interest on Loan Capital	14.93	15.20	16.78
2	Depreciation	19.58	20.09	21.28
3	O&M Expenses	63.59	67.31	76.97
4	Interest on Working Capital	5.84	6.10	6.79
5	Return on Equity	44.16	44.45	46.02
6	Income Tax	-	-	-
7	SLDC Charges	0.78	0.99	1.11
8	**Total Annual Fixed Cost**	**148.87**	**154.14**	**168.95**
9	Less: Non Tariff Income	0.31	0.31	0.31
10	**Net Annual Fixed Cost**	**148.57**	**153.84**	**168.64**

MePGCL has submitted that Net Annual Fixed Cost for MePGCL Old Stations to the MePGCL Old – A Stations as per the capacity of each station. The station-wise allotting Net Annual Fixed Cost is shown in the Table Below:

Table 5.48: Net AFC allotment to Old Stations

(Rs. Cr)

Sl. No	Particulars	Capacity (MW)	SLDC Charge		
			FY 2015-16	FY 2016-17	FY 2017-18
1	Umiam Stage I	36	28.57	29.58	32.43
2	Umiam Stage II	20	15.87	16.44	18.02
3	Umiam Stage III	60	47.62	49.31	54.05
4	Umiam Stage IV	60	47.62	49.31	54.05
5	Umtru Power Station	11.2	8.89	9.20	10.09
6	**Total AFC for Old Stations**	**187.20**	**148.57**	**153.84**	**168.64**

Summary of Annual fixed cost of Sonapani

The summary of the Annual Fixed Cost for Sonapani is provided in the table below:

Table 5.49: Annual Fixed Cost – Sonapani

(Rs. Cr)

Sl.No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Interest on Loan Capital	0.30	0.60	0.60
2	Depreciation	0.50	0.50	0.52
3	O&M Expenses	0.51	0.54	0.62
4	Interest on Working Capital	0.07	0.08	0.08
5	Return on Equity	0.58	0.58	0.62
6	Income Tax	-	-	-
7	SLDC Charges	0.01	0.01	0.01
8	**Total Annual Fixed Cost**	**1.96**	**2.30**	**2.45**
9	Less: Non Tariff Income	-	-	-
10	**Net Annual Fixed Cost**	**1.96**	**2.30**	**2.45**

MePGCL submits before the Hon'ble Commission to kindly approve the Annual Fixed Cost of Rs. 1.96 Cr, Rs. 2.30 Cr and Rs. 2.45 Cr for FY 2015-16, FY 2016-17 and FY 2017-18 respectively for Sonapani.

Commission's Analysis

Based on the Analysis of ARR components in the earlier paras in ARR to MEPGCL for the control period given below:

Table 5.50: Annual fixed cost approved for the control period for MePGCL old stations

(Rs. Cr)

Sl. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Interest on Loan Capital	0.46	1.13	1.82
2	Depreciation	10.33	10.33	10.33
3	O&M Expenses	54.70	57.69	61.18
4	Interest on Working Capital	3.75	4.04	4.37
5	Return on Equity	9.18	9.18	9.18
6	Income Tax	0	0	0
7	SLDC Charges	1.04	.99	1.14
8	**Total Annual Fixed Cost**	79.46	83.36	88.02
9	Less: Non Tariff Income	0.31	0.31	0.31
10	**Net Annual Fixed Cost**	**79.15**	**83.05**	**87.71**

Similarly for Sonapani, the Commission has fixed the AFC in the following manner keeping in view the interest of Renewable energy heritage plant in Meghalaya.

Table 5.51: Annual Fixed Cost approved for Sonapani

(Rs. Cr)

Sl.No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Interest on Loan Capital	-	-	-
2	Depreciation	0.31	0.31	0.31
3	O&M Expenses	0.30	0.32	0.34
4	Interest on Working Capital	0.04	0.04	0.04
5	Return on Equity	0.25	0.25	0.25
6	Income Tax			
7	SLDC Charges	0.01	0.01	0.01
8	**Total Annual Fixed Cost**			
9	Less: Non Tariff Income	-	-	-
10	**Net Annual Fixed Cost**	0.91	0.93	0.95

Allocation of AFC Plant Wise:

Regulation prescribes that annual fixed charges should be determined for each generating station so that the availability of the machine is validated by the concerned Load Despatch Centre on the basis of the schedules provided by each generating station for optimal utilization of all the energy declared to be available. MePGCL has proposed that net annual fixed cost should be allocated to the its power stations as per the capacity of each station. While allowing MePGCL proposal, the O&M expenses allowed to small hydro less than 25 MW (RE) like Umiam-II and

Umtru plants are far better than the RE regulation prescribes. The Commission has accepted it and allocated the annual fixed cost in the table below:

Table 5.53: Annual Fixed Cost allocated for each power station during control period

Sl. No	Particulars	Capacity (MW)	Approved AFC (Rs. Crores)		
			2015-16	2016-17	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
	Total	188.7	80.06	83.98	88.66

Recovery of annual fixed charges:

As per the regulation the recovery of annual fixed charges has to be made in two parts namely, capacity charges and energy charges. The Commission has adopted the similar approach as adopted in the last tariff order to allow the payment of fixed charges and energy charges in a simpler form. 50% recovery of fixed charges of Rs.40.03 crores in 2014-15 shall be made in 12 equal monthly installments by MePDCL which shall be Rs.3.336 crores per month to the generating company for its six existing plants. This amount shall be paid by MePDCL to MePGCL every month within seven days of invoice. Remaining terms and conditions shall be as per the Regulation. In addition to the fixed charges, generating company shall also recover 50% of annual fixed charges i.e. Rs.40.03 crores through energy charges on actual purchase of electricity by MePDCL at the rate approved for each plant in the last column of the table below:.

Table 5.52: Fixed and Energy charges approved for 2015-16

CAPACITY AND ENERGY CHARGES PLANTWISE FOR 2015-16							
Sl. No.	Name of Plant	Capacity (MW)	Designed/Annual Energy(MU)	AFC Allocation (Rs. Cr)	Average Tariff (Rs/Unit)	50% as Capacity charges (Rs. Cr.)	50% as energy charges (Rs. /KWH)
1	Umiam Stage I	36	116	15.22	1.31	7.61	0.66
2	Umiam Stage II	20	46	8.46	1.84	4.23	0.92
3	Umiam Stage III	60	139	25.37	1.83	12.68	0.91
4	Umiam Stage IV	60	207	25.37	1.23	12.68	0.61
5	Umtru	11.2	39	4.74	1.21	2.37	0.61
6	Sonapani	1.5	5	0.91	1.82	0.46	0.91
	Total	**188.7**	**552**	80.06	1.45	40.03	0.73

On the basis of the information provided by the MePGCL and discussions held, the Commission has determined the total AFC for the control period 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 generation available from these plants is 552 MU after allowing auxiliary consumptions. For the sake of clarity and efficiency, the Commission has tried to allocate the total annual fixed charges to be recovered from the beneficiary MePDCL in the Financial Year 2015-16 on these plants on the basis of their capacity and designed energy. This will give a signal to each generating station to make their schedules to SLDC on the basis of their capacity to generate and availability to the fullest. The station wise tariff shall give them a motivation to improve their current level of operation so as to optimize generation and get maximum revenue.

6. Directives

Compliance Report on the directives given in the tariff order of 2013-14

Direction 1:

Power purchase agreement: The regulation prescribes that there would be a power purchase agreement or commercial agreement between the company and beneficiary company. It will contain all the terms and conditions for purchase of energy and payment thereof. It would also cover the installed capacity and designed energy and the period of supply. The PPA should be in accordance with the tariff regulation notified by the Commission from time to time. Accordingly, the Commission directs the generating company and MePDCL to have a commercial agreement for purchase of energy from MePGCL plants within three months of issue of this order.

Compliance:

MePGCL submitted that a power purchase agreement has already been signed between MePDCL and MePGCL, copy of which has been sent vide their letter dated 25.09.2013.

Direction 2:

MePGCL shall file a tariff petition for new projects like Leshka and Lakroh after their COD achieved for determination of final tariff.

Compliance:

MePGCL submitted that revise cost estimate of the MLHEP was sent to CEA for vetting the same. Further it is informed that Government of Meghalaya has also form a state level technical committee for scrutiny of Leshka power project, report of which is awaited. The tariff filing shall be made after getting the project cost approved by CEA and others. For Lakroh project MePGCL submitted that it is yet to achieve commercial operation. MePGCL will be filing the petition as soon as the project is completed.

Direction 3:

Regulation prescribes that norms of operation shall be determined for each plant separately by calculating normative annual plant availability factor (NAPAF), auxiliary consumption and transformation losses. This year the Commission is not satisfied with the assumptions taken by the generating company for working out their NAPAF for each plant without any validated supporting information. The Commission directs MePGCL to conduct a study for determining the designed energy, availability, generation, water levels and determine NAPAF based on actual data and submit a report to the Commission with supporting data within six months time.

Compliance:

MePGCL has submitted a detailed report on the computation of NAPAF and designed energy vide their letter dated 25.09.2013. MePGCL has also studied the station wise hourly generation for the last three financial years and the same is reflected in the ARR petition.

Direction 4:

Performance improvement: The Commission directs MePGCL to conduct a bench marking study of its plant with other efficient utilities to explore further scope of improvement in operational efficiency, optimal utilisation of the sources, man power rationalisation including incentive/disincentive schemes. This study should give bench mark for each plant in respect of key parameters including cost and submit a report within six months of this order.

Compliance:

MePGCL submitted a report on step taken on efficiency improvement vide its letter dated 25.09.2013. However, without segregated details of O & M cost for different station MePGCL is unable to conduct bench marking study by comparing the same with the other utilities.

Direction 5:

Renovation and modernisation of existing plant: The Commission directs MePGCL to make comprehensive RMU schemes for efficiency improvement and life extension of old and existing plants and submit the detailed project report to the Commission within a period of six months giving road map for completing these schemes.

Compliance:

MePGCL submitted that a detailed report on R & M on the existing plant for stage II is already submitted to the Commission vide letter dated 25.09.2013.

Direction 6:

Financial statement of accounts: The Commission directs MePGCL to complete their annual accounts for 2012-13 and get it audited as per the statutory requirement so that in the next year ARR determination the Commission is not handicapped for want of audited data.

Compliance:

MePGCL submitted that statements of account for FY 2010-11 for the combined business of MeECL have been placed before the statutory auditor for its audit. Similarly, the statement of accounts for FY 2011-12 for the MeECL is being placed before the audit committee. For MePGCL, the process of trifurcation is under process and the statement of account for FY 2012-13 shall be prepared after the process is over.

Direction 7:

MePGCL shall open a depreciation reserve fund without 30 days of this order wherein the depreciation amount allowed against the existing plant shall be deposited. This fund shall be used for renovation and modernization work.

Compliance:

MePGCL informed that in absence of sufficient fund it is yet to open a separate depreciation reserve fund.

New Directions

Improvement of Performance

The Commission is concerned about the improvement in the performance of the Corporation so that the generation and the availability of the plants are improved. In order to conduct a bench mark study, the Commission has already directed the Corporation in its order for 2013-14. The Commission reiterates its position and direct the Corporation to apply the report made on bench marking. The Corporation is further directed to submit an action plan for implementation of efficiency improvement and manpower rationalization measures giving target dates for completion of each milestone of proposed plan within six months of issuance of this order.

Control on Expense

The Commission directs the Corporation to prepare an annual budget for FY 2015-16 for each and every plant and submit the same to the Commission within one month of the issuance of this Order so that expenses are made with in the provision of tariff order and regulations.

Business Plan

As required in the regulation MePGCL is required to file all investment plans to be undertaken in the control period for approval of the Commission by 30.08.2015 so that same may be considered at the time of midterm review. The Corporation is also required to file mandatory requirement for approval of the project like submission of DPRs, investment agreements, approval of the appropriate authority, cost and benefit analysis of the work to be undertaken, etc with the petition of approval of investment plans.

MePGCL is to ensure compliances of directions issued by the Commission from time to time and send their compliance report in timely manner. It is important to adhere with the efficiency standards at each level and the Corporation shall improve from the current level and reach to the best standards in the sector. Finally the Commission would like to appreciate the response from MePGCL for submitting all required information to the Commission as and when required.

(ANAND KUMAR)

CHAIRMAN, MSERC