



TARIFF ORDER

REVIEW FOR FY 2018-19

AND

**DETERMINATION OF AGGREGATE REVENUE REQUIREMENT
&
TARIFF FOR FY 2019-20**

FOR

MANIPUR STATE POWER DISTRIBUTION COMPANY LIMITED

Petition (ARR & Tariff) No. 1 of 2018

**JOINT ELECTRICITY REGULATORY COMMISSION
FOR MANIPUR AND MIZORAM**

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ABBREVIATIONS

Abbreviation	Description
A&G	Administrative and General
AAD	Advance Against Depreciation
ARR	Aggregate Revenue Requirement
CAG	Controller and Auditor General of India
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CWIP	Capital Work in Progress
DG	Diesel Generation
DPS	Delayed Payment Surcharge
EA, 2003	Electricity Act, 2003
EDM	Electricity Department, Manipur
EHT	Extra High Tension
FSA	Fuel Surcharge Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
GOI	Government of India
HT	High Tension
IEGC	Indian Electricity Grid Code
ISGS	Inter State Generating Station
IR	Inter Regional
JERC	Joint Electricity Regulatory Commission for Manipur and Mizoram
kV	Kilovolt
kVA	Kilovolt-ampere
kW	kilowatt
kWh	kilowatt-hour
LT	Low Tension
MAT	Minimum Alternate Tax
MDI	Maximum Demand Indicators
MSPCL	Manipur State Power Company Limited
MSPDCL	Manipur State Power Distribution Company Limited
MUs	Million Units
MYT	Multi Year Tariff
NLDC	National Load Despatch Centre
NTI	Non-Tariff Income
O&M	Operation and Maintenance
PGCIL	Power Grid Corporation of India Ltd
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSO	Power System Operation Corporation Ltd.
PPA	Power Purchase Agreement
PWW	Public Water Works
R&M	Repair and Maintenance
RoE	Return on Equity
RGVY	Rajiv Gandhi Gramina Vidyutikaran Yojana

SBAR	State Bank Advance Rate
SLDC	State Load Despatch Centre
T&D	Transmission and Distribution
UI	Unscheduled Interchange
RE	Revised Estimate
REC	Renewable Energy Certificate

JOINT ELECTRICITY REGULATORY COMMISSION FOR MANIPUR AND MIZORAM

**TBL Bhawan, 2nd to 5th Floor
Peter street, E-18, Khatla,
Aizawl, Mizoram – 796001**

Petition (ARR & Tariff) No. 2 of 2019

In the matter of

True up for FY 2017-18, Annual Performance Review for FY 2018-19 and determination of Aggregate Revenue Requirement (ARR) and retail Tariff for FY 2019-20 for sale of electricity by the Manipur State Power Distribution Company Limited (MSPDCL) in the State of Manipur

AND

Manipur State Power Distribution Company Limited ----- Petitioner

Present

**Mr. Lalchharliana Pachuau
Chairperson**

**Mr. Ngangom Sarat Singh
Member**

ORDER

1. The Manipur State Power Distribution Company Limited (hereinafter referred to as MSPDCL) is a deemed licensee in terms of section 14 of the Electricity Act 2003 (hereinafter referred to as Act), engaged in the business of distribution of electricity in the state of Manipur.
2. JERC (M&M) (MYT) Regulations, 2014 specify that the distribution licensee shall file ARR and Tariff Petition in all aspects along with requisite fee as specified in Commission's fees, fines and charges regulations, on or before 30th November of the preceding year.

MSPDCL has filed petition for determination of ARR and retail tariffs for FY 2019-20 along with true up petition for FY 2017-18 on 24.12 2018. However, the petition for Annual Performance Review (APR) for FY 2018-19 was submitted on 27.02.2019.

3. ARR & Tariff Petition

As per the directive of the Commission, the MSPDCL has filed the Petition for True-up for FY 2017-18 and APR for FY 2018-19 and determination of Aggregate Revenue Requirement (ARR) and Retail Tariff for FY 2019-20. In the petition MSPDCL has estimated ARR of Rs. 741.49 Crore for FY 2019-20 and Revenue from existing tariff at Rs. 410.11Crore and considered a tariff support of Rs.220 Crore from the Govt. of Manipur for FY 2019-20 thereby showing a gap of Rs. 111.38 Crore, which the MSPDCL proposed to recover through proposed tariff revision.

4. Admission of the petition

The Commission observed that the ARR filed by the Petitioner was incomplete and lacking critical and vital information required as specified in JERC for M&M Multi Year Tariff Regulations, 2014. Therefore, MSPDCL was asked to submit the required information vide Commission Letters No. H.20013/25/18-JERC, dated 09.01.2019 & H.20013/22/16-JERC, Dt.24/01/2019

Pending receipt of additional information, the Petition was admitted on 9th January 2019 and marked as petition (ARR and Tariff) No. 2of 2019 to avoid delay in processing of ARR.

The MSPDCL has submitted some data/information/clarifications etc. vide its letters No. 2/66/2018/MSPDCL(Comml)/2290-92, dated 02.02.2019.

5. True up of ARR for FY 2017-18

As per Regulation 10(2) of JERC (M&M) (MYT) Regulations, 2014 the licensee shall file an application for True up of the previous year along with Audited Annual Accounts. MSPDCL has submitted true up petition along with ARR petition for FY 2019-20 without annual accounts for FY 2017-18. The MSPDCL has furnished the ARR of Rs.540.37 Crore and shown a gap of Rs. 34.43 Crore after government subsidy 213.06 Crore. After detailed analysis the Commission provisionally arrived the ARR at Rs. 531.02 Crore and revenue gap of Rs.19.00 Crore after Government subsidy of Rs. 213.43 Crore on

considering the bare figures of revenue realised from LT & HT consumers within state and from surplus energy sales. No break-up details were provided by the MSPDCL in support of their submission and hence, the Commission could not finalise the True-up pending availability of the basic audited accounts figures. Fundamentally, the true-up would be processed on due verification of the audited actuals which are missing in this case and hence, there is no question of making any true-up for FY 2017-18 and it cannot be entertained at this juncture under these constraints.

6. Annual Performance Review for FY 2018-19

Though the JERC for M&M (MYT) Regulations 2014 do not specifically provides for annual performance review, the Commission considers it appropriate to review the current year ARR with reference to Revised Estimates (RE), but without effecting the principles in force. Accordingly, review for FY 2018-19 has been carried out which resulted in revised ARR of Rs.657.37Crores as against Rs.691.88 Crs estimated by MSPDCL. The revenue gap could not be assessed due to non-submission of required details such as revenues realised from within state sales and those from sale of surplus power in the ARR filings submitted by MSPDCL. Therefore, the APR filings is made by the Licensee with an intension to mere submission but kept lots of information unrevealed and he did not attempt to provide the fundamental data also for the desired object. Therefore, keeping in view of inadequacy of data to move forward, the Commission denies to make any conclusive decision on the APR filings submitted by the Licensee on 27.02.2019.

7. Public Hearing Process

Regulation 17 of the MYT Regulations, 2014 provides giving adequate opportunity to all stake holders and general public for making suggestions/objections on the Tariff Petition as mandated under section 64 of the Electricity Act 2003. Accordingly, the Commission directed MSPDCL vide letter No.H.20013/25/18-JERC dated 9th January 2019 to publish the ARR and Tariff Petition for the FY 2019-20 in an abridged form as public notice in newspapers having wide circulation in the state inviting suggestions/objections on the Tariff Petition.

Accordingly, MSPDCL has published the Tariff Petition in an abridged form as public

notice in the following newspapers and the Tariff petition was also placed on the website of MSPDCL. The last date for submission of suggestions/objections was fixed as 7th February 2019.

Sl. No.	Name of the Newspaper	Language	Date of Publication
1	Imphal Free Press	English	26 th & 27 th January 2019
2	Poknapham	Manipuri	31 st January 2019 & 1 st February 2019

The Commission received one objection / suggestion from all Manipur Power Consumers' Association on the petition filed by the MSPDCL. The Commission passed on the objection received to MSPDCL for communicating their response on the objections raised.

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, has decided to hold a public hearing at the headquarters of the state.

8. Notice for Public Hearing

Accordingly, the Commission published a notice in the following leading newspapers giving due intimation to the general public, interested parties, objectors and the consumers about the public hearing to be held at Imphal on 7.03.2019.

Sl. No	Name of the news paper	Language	Date of Publication
1	Poknapham	Manipuri	19 th & 20 th February 2019
2	Imphal Free Press	English	26 th & 27 th February 2019

9. Public Hearing

The Public hearing was held as scheduled on 7.03.2019 at Hotel Classic Grande, Imperial Hall, Imphal from 11 AM to 12:30 PM. During the public hearing, each objector was provided a time slot for presenting before the Commission his/her views on the petition of the MSPDCL. The main issues raised by the objectors during the public hearing and corresponding response of the MSDPCL are briefly narrated in Chapter - 4.

10. The proposal of MSPDCL was also placed before the State Advisory Committee in its meeting held on 5th March 2019 at Hotel Classic Grande, Regency Hall, Imphal from 11.00 AM and various aspects of the Petition were discussed by the Committee.
11. The Commission took into consideration the facts presented by the MSPDCL in its Petition and subsequent filings, the suggestions/objections received from stakeholders, consumer organizations, general public and State Advisory Committee and response of the MSPDCL to those suggestions/objections for approval of the ARR and tariff petition for FY 2019-20.
12. The Commission has reviewed the directives issued earlier in the Tariff orders for FY 2010-11 to FY 2018-19 and noted that some of the directives are complied and some are partially attended. The Commission has dropped the directives which are complied fully and the remaining directives are consolidated and fresh directives are added.
13. In exercise of the powers vested under section 62 read with section 64 of the Electricity Act 2003 and Regulation 16 JERC for M&M (Multi Year Tariff) Regulations, 2014 (hereinafter referred to as Tariff Regulations) and other enabling provisions in this behalf the Commission issues this order approving of the ARR and tariffs for supply of electricity in the state of Manipur.
14. This order is in Eleven chapters as detailed below;
 - Chapter 1: Introduction.
 - Chapter 2: Summary of ARR for FY 2019-20
 - Chapter 3: Power Sector in Manipur - An overview.
 - Chapter 4: Public Hearing process.
 - Chapter 5: True up for FY 2017-18
 - Chapter 6: Annual Performance Review for FY 2018-19.
 - Chapter 7: Analysis of ARR for FY 2019-20 and Commission's decisions.
 - Chapter 8: Tariff Principles and Design.
 - Chapter 9: Wheeling charges for FY 2019-20.
 - Chapter 10: Directives.

- Chapter 11: Fuel and Power Purchase Cost Adjustment.
15. The MSPDCL should ensure implementation of the order from the effective date after issuance of a public notice, in such a font size which is clearly visible in two daily newspapers having wide circulation in the state within a week and compliance of the same shall be submitted to the Commission by the MSPDCL.
16. This order shall be effective from 1st April, 2019 and shall remain in force till the next Tariff Order of the Commission.



(NGANGOM SARAT SINGH)
Member



(LALCHHARLIANA PACHUAU)
Chairperson

Place : Aizawl

Date: 26.03.2019

1. Introduction

1.1 JERC for Manipur and Mizoram (JERC, M&M)

In exercise of the powers conferred by the Electricity Act 2003, (hereinafter referred to as Act) the Government of India constituted Electricity Regulatory Commission for the States of Manipur and Mizoram to be known as “Joint Electricity Regulatory Commission for Manipur and Mizoram” vide GOI. Gazette (Extra Ordinary) Notification No. 23/3/2002 R&R dated 18/01/2005, (hereinafter referred to as Commission) as per the authorization given by the Government of Manipur and the Government of Mizoram vide Memorandum of Agreement dated 23/07/2004. The Commission is constituted with a two-member body designated to function as an autonomous authority responsible for regulation of the power sector in States of Manipur and Mizoram. The powers and functions of the Commission are as prescribed in the Act. The head office of the Commission is presently located at Aizawl, the capital town of Mizoram. The Commission became functional w.e.f January 24th, 2008.

- a) In accordance with the Act, the Commission discharges the following functions:
- i. Determine the tariff for generation, transmission, distribution and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under Section 42 of the Act, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
 - ii. Regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
 - iii. Facilitate intra-State transmission and wheeling of electricity
 - iv. Issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;

- v. Promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;
 - vi. Adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
 - vii. Levy fee for the purposes of this Act;
 - viii. Specify State Grid Code consistent with the Central Grid Code specified under Clause (h) of sub-section (1) of Section 79 of the Act;
 - ix. Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
 - x. Fix the trading margin in the intra-State trading of electricity, if considered, necessary;
 - xi. Discharge such other functions as may be assigned to it under the Act.
- b) Further, the Commission also advises the State Government on all or any of the following matters namely:
- i. Promotion of competition, efficiency and economy in activities of the electricity industry;
 - ii. Promotion of investment in electricity industry;
 - iii. Reorganization and restructuring of electricity industry in the State;
 - iv. Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by the State Government.
- c) The State Commission ensures transparency while exercising its powers and in discharging its functions.
- d) In discharge of its functions, the State Commission is guided by the national Tariff Policy (NTP) as brought out by GOI in compliance to Section 3 of the Act. The objectives of the NTP are to:
- Ensure availability of electricity to consumers at reasonable and competitive

rates;

- Ensure financial viability of the power sector and attract investments;
- Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;
- Promote competition, efficiency in operations and improvement in quality of supply.

1.2 Manipur State Power Distribution Company Ltd (MSPDCL)

In pursuance Electricity Act 2003, herein after referred to as Act, the erstwhile. State Electricity Department was unbundled into 2 (two) state owned functionally independent successor entities is, (i) Manipur State Power Company Ltd (herein after referred has MSPCL) a deemed transmission licensee and (ii) Manipur State Power Distribution Company Ltd (herein after referred has MSPDCL) a deemed distribution Licensee w.e.f 1st of Feb 2014, by a Gazette notification of the Government of Manipur vide Manipur state electricity reforms transfer scheme 2013 (or Transfer scheme 2013) dated 31st December 2013. MSPDCL is a 100% subsidiary of MSPCL and under takes power distribution within the state of Manipur. MSPDCL holds the entire network in the state at a voltage level of 11kv and below. All the existing generation assets of about 45 MW which are primarily function as back up generation facilities are transferred to MSPDCL. These generation assets are included as other business for MSPDCL. MSPDCL also carries out the trading activity.

The objectives of the MSPDCL are:

- Focuses on demand and distribution network growth.
- Lays emphasis on metering to help reduce distribution losses (100% metering)
- Focuses on metering to raise correct demand.
- Focuses on collection of revenue to reduce commercial losses and improve cash flow.
- Concentrated efforts into computerization of billing for efficient billing and in turn better and faster recovery.
- Focuses on power theft and correct metering and energy audit to improve efficiency.

2. Summary of ARR and Tariff Petition

2.1 Aggregate Revenue Requirement (ARR)

The MSPDCL, in its petition, has submitted the Aggregate Revenue Requirement for the MYT Second Control Period FY 2018-19 to FY 2022-2023 for meeting its expenses as shown in Table below.

Table 2. 1: ARR for Control period projected by MSPDCL for FY 2019-20

(Rs. Cr)			
Sl. No	Particulars	Amount	% of Total
A	Expenditure		
1	Cost of power purchase	452.66	61.05%
2	Inter-State Transmission charges	61.12	8.24%
3	Intra-state Transmission charges	86.57*	11.68%
4	NERLDC Charges	0.71	0.10%
5	O&M Expenses	123.82	16.70%
	<i>Employee Expenses</i>	106.68	14.39%
	Repair & Maintenance Expenses	7.69	1.04%
	Administrative & General Expenses	9.45	1.27%
6	Depreciation	0.31	0.04%
7	Interest on Loan	5.17	0.70%
8	Interest on Working Capital	6.59	0.89%
9	Provision for bad debts	3	0.40%
	Total Cost	739.95	99.79%
B	Add: Return on Equity	1.95	0.26%
	Add: Income Tax	0	0.00%
	B: Total	1.95	0.26%
C	Total ARR: A+B	741.9	100.06%
D	Less (Non-Tariff Income)	0.41	0.06%
	Sub-total (D)	0.41	0.06%
	Net Aggregate Revenue Requirement (C-D)	741.49	100.00%

Prayer

MSPDCL requests the Hon'ble Commission to:

- Admit the Petition for Limited Provisional True-up for FY 2017-18 and Tariff Determination for FY 2019-20, as submitted herewith;
- Approve the amounts claimed in the Limited Provisional True-up for FY 2017-18;
- Approve the category-wise tariffs proposed by MSPDCL for FY 2019-20;
- Condone any inadvertent omissions/ errors/ shortcomings and permit the

- Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date;
- e. Permit submission of any additional information required by the Commission during the processing of this Petition;
 - f. Pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case.

3. Power Sector in Manipur- An Overview

3.1 Geographical Reality

The MSPDCL is responsible for distribution of electricity in the State of Manipur, which has a total area of 22,347 Sq KM with nine districts namely, Bishnupur, Churachandpur, Chandel, Imphal-East, Imphal-West, Senapati, Tamenglong, Thoubal and Ukhrul. Manipur occupies an area of great strategic importance in North East corner of India. Manipur is bounded by States of Nagaland in the North, Mizoram in the South, Assam in the West and sharing international boundary with Myanmar in the East. The total population of Manipur State is 27.22 lakhs as per 2011 census. MSPDCL serves about 3.46 lakh consumers of various categories. Per capita consumption is about 207 kWh as on 31.03.2018.

3.2 Power Supply

a) Own Generation

The MSPDCL has own generation plants micro hydel, diesel with installed capacity of 45.11 MW. The units generated from the plants and the total fuel cost is summarised in Table below:

Table 3. 1: Own Generation

Sl. No	Item	Unit	FY 2017-18
1	Generation from Hydel	MU	NA
2	Diesel	MU	0.68
3	Total Units Generated	MU	0.68
4	Total Fuel Cost	Rs .Crore	1.19

b) Power Purchase

The MSPDCL is mostly dependent on Central Generating Stations (CGS) located in different parts of the North Eastern Region for meeting its energy requirement. The total firm share from own generation and the Central Sector Generating Stations of NEEPCO and NHPC and Tripura is 174.30 MW as shown in the Table below. The actual peak and off-peak availabilities are however always less because of low plant load factors.

Table 3. 2: Energy Allocation from Central Generating Stations (CGS)

Sl. No	Station	Installed Capacity MVA	FY 2017-18 (Actual)	
			Share Allocation (MW)	AVG Allocation (%)
A	Own Generation			
1	Leimakhong-Micro Hydel	0.60	0.60	100%
2	Various Diesel Generation Plants	44.51	44.51	100%
	Sub total	45.11	45.11	
B	NTPC			
	Bongaogaon	500	37.50	7.50%
B	NEEPCO(Hydro)			
1	Kopili I HEP	200	14.78	7.39%
2	Kopili II HEP	25	1.74	6.95%
3	Khandong HEP	50	3.28	6.56%
4	Ranganadi HEP	405	33.90	8.37%
5	Doyang HEP	75	5.90	7.87%
	Sub total	755	59.60	
C	NEEPCO(Gas Based)			
1	Assam Gas based Power Project	291	23.59	8.11%
2	Agartala Gas Turbine Power Project	130	10.69	8.23%
3	Kameng HP Stage-1	300	7.00	2.33%
	Sub total	721	41.28	
D	NHPC(Loktak HEP)			
1	Purchased	105	44.63	42.50%
	Sub total	105	44.63	
E	TRIPURA			
1	Baramura (Gas Based)(Unit IV)	21	5.25	25%
2	Baramura(Gas Based)(Unit V)	21	5.25	25%
	Sub total	42	10.56	25%
F	OTPC			
1	(Pallatana-Unit I)	363	21.035	5.79%
2	Pallatana-Unit II)	363	21.035	5.79%
	Sub Total	726	42.07	
	Total	2894.11	280.75	

The energy draws from various central generating stations and Tripura during 2017-18 are given Table below:

Table3. 3: Energy Draws from Central Generating Stations & Tripura

Station	(MU)
	FY 2017-18
NEEPCO (Hydro)	
Kopili I HEP	76.31
Kopili II HEP	7.66
Khandong HEP	16.52

Station	FY 2017-18
Ranganadi HEP	116.98
Doyang HEP	20.47
Sub total	237.94
NEEPCO (Gas Based)	
Assam Gas based Power Project	117.62
Agartala Gas Turbine Power Project	53.84
Agartala Gas Extension	
Sub total	171.46
NHPC (Loktak HEP)	
Purchased (20.02MW)	247.02
Free Power (12.60 MW)	97.16
Sub total	344.18
TRIPURA	
Baramura (Gas Based)- (Unit IV and V)	41.49
OTPC-Pallatana (Unit I)	222.55
OTPC-Pallatana (Unit II)	
Sub Total	264.04
NTPC Bongaigaon (Unit I)	29.78
NTPC Bongaigaon (Unit II & III)	
Sub total	29.78
Total	1047.40
UI Purchases/IEX	8.97
Gross Power Purchase	1056.37

(Transmission and Distribution)

For the purpose of drawing power from the Central Sector generating stations and other sources in the North Eastern Region, the MSPDCL has utilized 1 no. of 400 kV D/C line presently charged at 132 kV and 4 No's single circuit 132kV interstate transmission lines, 3 (three) being owned by PGCIL and two by MSPCL, as detailed below.

Owned by MSPCL

- Leimatak-Ningthoukhong-Karong-Kohima-132 kV line.
- Leimatak-Jiribam-132 kV line

Owned by PGCIL

- Silchar – Imphal – 400 kV D/C line charged at 132 kV
- Leimatak – Imphal - Dimapur – 132 kV line.
- Leimatak - Jiribam – 132 kV line.

Manipur, being a hilly state with its population unevenly dispersed and spread over remote corners, it is having large network of Sub-Transmission and Distribution system. The details of Distribution network, owned & operated by MSPDCL as on

31.03.2018, are given in Table below.

Table3. 4: Distribution Network as on 31.3.2018

Sl. No	Voltage	Distribution lines (Ckt. Km)		Sub-stations (nos.)	Sub- station/ transformer MVA
		Double Ckt. Km	Single Ckt. Km		
1	11kV lines	16.090	7055.88		
2	LT lines		11888.679		
3	Distribution transformers			5522	408.5
4	11 kV (UG)		0.010		
5	LT cable (UG)		44.43		

3.3 Distribution Loss

The Distribution loss of MSPDCL system is 22.98% during the year 2017-18. As against the Tariff Order approved Losses of 18.40%. The technical and commercial losses have not been segregated.

3.4 Consumer Profile

The category wise consumers and corresponding energy sales during the year 2017-18 are given in Table below:

Table3. 5: Number of consumers and connected load of MSPDCL for FY 2017-18

Sl. No	Consumer Category	FY 2017-18	
		No. of Consumers	Connected Load
		(Nos)	(KW)
A	LT Category	365661	541372.34
1	Kutir Jyoti	69639	10491
2	Domestic	278049	472683.3
3	Commercial	15161	37902.04
4	Public lighting	441	1144
5	Public waterworks LT	15	190
6	Agriculture & Irrigation LT	39	117
7	Small and cottage industry	2317	18845
	HT Category	1047	50380.21
	Commercial	35	1097
9	PWS HT	169	14845
10	Agriculture HT	25	625
8	Medium industry	73	1095
11	Large industry	27	3992.7
12	Bulk supply	718	28725.51
13	Grant Total	366708	591752.55

3.5 Demand

The energy demand of the MSPDCL is met by supply of power from own generation, central generating stations of North Eastern Region and Baramura Gas Based Plants in Tripura State. The annual energy requirement during the FY 2017-18 is 691.15 MU. As per Load Generation Balance Report (LGBR) of NERPC for FY 2017-18 the Maximum Demand during FY 2017-18 is 202 MW.

3.6 Energy Audit

The MSPDCL is not conducting Energy Audit effectively either at the incoming stage or at the consumer end. At present, the MSPDCL is arriving at the losses by taking the input at 11kV point and compare it with energy sales at consumer end and showing the difference as distribution loss. Proper energy audit should be carried out to find out the actual distribution loss.

3.7 Energy Metering

MSPDCL has stated in compliance to directive 11 that unauthorized connections and connected load are being taken care under the prepaid metering plan. MSPDCL has already achieved 100 % prepaid metering for EC-I. For EC-II & EC-III 100 % prepaid metering will be achieved by end of FY 2018-19. But there is no confirmation regarding the regularization of about 33,384 nos. of unauthorized connections.

3.8 Power Supply

The Power Supply in the state has been improved. The duration of power supply to the rural areas is about 14 to 18 hours a day while in urban and state capital is 24 hours a day.

4. Public Hearing Process

4.1 Introduction

On admitting the ARR and Tariff Petition for FY 2019-20, the Commission directed the MSPDCL to make available the copies of petition to the general public, post the petition on their website and also publish the same in newspapers in an abridged form and invite comments/objections/suggestions from them.

One written objection is received, received from all Manipur Power Consumers Association, Imphal.

4.2 Public Hearing

In order to ensure transparency in the process of determination of tariff as envisaged in the Electricity Act, 2003, Public Hearing was held at Hotel Classic Grande, Regency Hall, Imphal on 7th March 2019 from 11 A.M. to 12:30 P.M. During the Public Hearing the participants from general public were given an opportunity to offer their views in respect of the ARR and Tariff Petition for FY 2019-20 of MSPDCL. The list of stakeholders who attended the Public Hearing is given in Annexure-II. The Officers of MSPDCL who attended the Public Hearing responded on the issues raised by the objectors.

4.3 Proceedings of Public Hearing

The Objector, the Secretary, All Manipur Power Consumers' Association has raised the following objections from the said association and the item wise replies as furnished by the Licensee MSPCL are placed below:

OBEJECTION-1

All India average per capita consumption of energy for the year(2017-18) was 1149 kwh, whereas per capita consumption for some NE States for the year 2015-16, 2016-17 and 2017-18 were given below(in kwh):

	2015-16	2016-17	2017-18		2015-16	2016-17	2017-18
Manipur	298	279	286	Ar.Pra.	508	557	547
Nagaland	378	385	411	Meghalaya	760	564	591
Mizoram	450	465	459	Tripura	305	489	619

From the figures, it is evident that **Manipur is Lowest in Power Consumption till (2017-18)**, after depriving *Interior Remote Areas* and *Industries* of Manipur by Power Companies of Manipur particularly MSPDCL but they still claimed as one of the best in India instead of claiming *lowest per capita consumption* of the country(India), even may be *lowest in the World*.

Performance of **Tripura** is commendable and highest per capita consumption of Power in the NE region overtaking Meghalaya in (2017-18), when Manipur is passing through from *Bed to Worse* situation by introducing different types of *allergic* Policies by our **POWER COMPANIES**.

Today Per capita consumption of Energy for Manipur is **286 Units (2017-18)** and 459 Units (2017-18) as that of Mizoram, far below all India level of 1149 Units (2017-18). It is therefore requested that JERC(M&M) kindly consider **not to increase** the existing Retail tariff Rates of (2018-19) with the backwardness of the area in mind and Manipur already **Levied more** during (2018-19) for enable to bring per capita consumption in the national level in the coming years.

Reply from MSPDCL:

Per capita Consumption of Manipur for the FY 2017-18 is 286 units

MSPDCL Submission-It is pertinent to mention that the per capita consumption comes out to be 299.13 units for the FY 2017-18 where actual energy available at the state is taken for FY 2017-18 as submitted to Hon'ble Commission in limited provisional true-up petition and population in the state of Manipur taken as of census 2011.

It is pertinent to mention that Manipur state has very limited number of Industrial Consumer and that is the main reason for low per-capita consumption in the state of Manipur, although the state is having surplus power.

However, MSPDCL is taking every initiative to improve the per-capita by implementing the central government schemes like Saubhagya in which every house will be electrified in the state after completion of the scheme. In this way the per capita consumption of the state will increase.

OBEJECTION-2

On the other hand, as per LGBR, CEA (2018-19) indicates Manipur has *maximum energy shortage in the NE Region at 5.2%* and next to Jammu and Kashmir in the National Level, whereas our State Planners particularly MSPCL and MSPDCL tried to reduce the energy consumption of Manipur at their best level on the following counts while filling Retail Tariff Petition for FY-2019-20:

Reply from MSPDCL:

Manipur has Maximum Energy Shortage in NE Region

It is pertinent to mention that Manipur state is a power surplus state in totality. According to the limited provisional true-up petition filled by MSPDCL, there is a surplus power of 207 .74 MUs in the FY 2017-18 and for the FY 2018-19, there is surplus power estimated and submitted to the Hon'ble commission in the APR filling for the FY 2018-19.

OBJECTION-3

No provision for Kutir Jyothi program. *Please restore the programme for the poor.*

Reply from MSPCL:

No Provision for Kutir Jyoti- As per Kutir Jyoti Scheme, a consumer consuming more than 45 units of electricity in consecutive 3 months will be treated and charged as per domestic category tariff. It is pertinent to mention that as per data available from April 2018-September 2018, no consumer has been booked in the category of Kutir Jyoti (However, the numbers may vary from the actual figure once accounts get finalized).

OBJECTION-4

Reduced the initial ceiling limit of energy at 0-30 Units (2019-20) from 0-100 Units (2018-19) for Normal Domestic Consumers and increased the fixed Charges at Rs. 70/- per kW (2019-20) for the connected load from Rs.60/- per Kw(2018-19) connected load, *the highest rate* chargeable in any NE Region.

Please increase the initial ceiling limit of energy at 0-120 Units for FY-(2019-20) and reduce the fixed Charges at par with the other NE States.

Reply from MSPCL

Increase Ceiling limit to 0-120- It comes under the purview of Hon'ble Commission.

OBJECTION-5

In brief Under the same Joint Electricity regulatory Commission i.e. JERC (M&M), there are 2(two) different retail Tariff rates, that too entirely different angels.

Mizoram can look after better for their public than that of Manipur but their performance for the FY-(2018-19) is also sleeping from the preceding FY (2017-18).

Please arrange similar retail Tariff rates for Manipur and Mizoram.

Reply from MSPCL

Different Retail Tariff for Mizoram and Manipur- Determination of tariff comes under the purview of Hon'ble Commission.

OBJECTION-6

While preparing the Tariff Rates, the Power Companies of Manipur, i.e. **MSPCL** and **MSPDCL**, have forgotten, Manipur belongs to **SPECIAL CATEGORY STATE** and comparing with the other *advance & bigger states* of India for misleading the JERC (M&M) and general public.

Reply from MSPCL

Manipur comes under the SPECIAL category State - It is pertinent to inform, although Manipur comes under SPECIAL CATEGORY STATE but Manipur State government has been reducing the revenue subsidy given to MSPDCL from Rs 259.92 Cr to Rs 220 Cr (B.E) from FY 2015-16 to FY 2018-19. On the other hand, the quality and power supply in the state of

Manipur has improved drastically and in doing so the fixed expenses i.e. power purchase cost, employee cost etc has been increasing simultaneously. It is important to mention that Manipur State Government has informed MSPDCL through letter, that State is in financial crisis and cannot increase the revenue subsidy for the FY 2019-20.

MSPDCL has been left with no other option to meet its Approved ARR other than proposal of increase in tariff to Hon'ble Commission.

OBJECTION-7

The Power Companies of Manipur, i.e **MSPCL** and **MSPDCL**, never encourage the program of MNRE target installed capacity of Renewable Energy of 175GW by 2022, as the tariff also coming down to a very affordable rate(now below Rs.2.50 per Unit as per SECI) as per MNRE for bigger projects(both Wind and Solar).

Reply of MSPDCL :

MSPDCL and MSPCL never encourage the program of MNRE target installed capacity of Renewable energy of 175 GW by 2022:

It is to submit that the Nodal Agency for the Renewable Energy for Manipur State is MANIREDA. Policies formulation and primary approval of the project is done by MANIREDA.

5. Provisional True up for FY 2017-18

5.1.1 Background

The Commission had approved the ARR and tariff for FY 2017-18 vide Tariff Order dated 28.02.2017 based on projected data by MSPDCL. The Commission had carried out annual performance review for FY 2017-18 in its Tariff Order dated 12.03.2018 based on revised estimates furnished by MSPDCL. Now the MSPDCL has filed petition for Provisional True up for FY 2017-18 based on actuals without audited accounts. As per Regulation 10.6(ii) of JERC(MYT) Regulations 2014 the Commission has to undertake true up based on audited accounts and pass an order recording approved aggregate gain or loss on account of controllable factors and the amount of such gain or loss may be shared in accordance with Regulation 13 of JERC for M&M (MYT) Regulations 2014 and the components of approved cost pertaining to uncontrollable factors which were not recovered during previous years shall pass through as per Regulations 12 of JERC M&M (MYT) Regulations 2014. As per Regulation 12 read with regulation 13 of JERC M&M (MYT) Regulations 2014 one third of gains or losses on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the distribution licensee for such period as may be specified in the order of the Commission passed under these regulations.

The balance amount which will amounts to two-third of such gain may be utilized at the discretion of the distribution licensee.

As the MSPDCL has not filed audited accounts, the Commission has carried out provisional true up as requested by MSPDCL without passing on profit/ loss.

5.2 Energy Sales

The category wise actual number of consumers and connected load as compared to the earlier estimates for FY 2017-18 as mentioned in the tariff order for dated 28 February 2017 are as given below.

Table 5.1: Category-wise consumers for 2017-18 furnished by the MSPDCL

Sl. No	Category	Approved in T.O dated 28.2.2017		Actual furnished for FY 2017-18	
		No. of Consumers	Connected Load	No. of Consumers	Connected Load
1	Kutir Jyoti	34134	2008	69639	10491
2	Domestic	304198	368337	278049	472683.3
3	Commercial LT	14247	37785	15161	37902.04
4	Commercial HT	15	1097	35	1097
5	Public lighting	435	1144	441	1144
6	LT Public water works	8	190	15	190
7	HT Public water works	170	21928	169	14845
8	Agriculture and Irrigation LT	46	268	39	117
9	Irrigation & Agricultural HT	20	993	25	625
9	Cottage and Small Industries LT	3335	18845	2317	18845
10	Bulk HT	1003	58755	718	28725.51
11	Medium Industries	91	9338	73	1095
12	Large Industries	48	2586	27	3992.7
13	Total	357750	523174	366708	591752.55

The actual category wise energy sales as compared with the energy sales as approved by the Commission for FY 2017-18 in its tariff Order dt.28.02.2017 and now approved by the commission are given below:

Table 5.2: Category wise Energy sales approved by the commission after true up for FY 2017-18**(MU)**

Sl. No	Category	Approved in T.O Dated 28.02.2017	Actuals furnished by MSPDCL	Energy Sales Now approved by the Commission
1	Kutir Jyoti	7	18.17	18.17
2	Domestic	372	336.57	336.57
3	LT Commercial	42	47.33	47.33
4	HT Commercial	6	-	-
5	Public Lighting	5	3.67	3.67
6	LT Public Water-works	4	1.24	1.24
7	HT Public Water-works	15	19.83	19.83
8	LT Agri. & Irrigation	1	1.29	1.29
9	HT Agri. & Irrigation	1	0.83	0.83
10	Cottage & Small Industries	18	19.25	19.25
11	Bulk	95	106.63	106.63
12	Medium Industries (HT)	4	3.73	3.73
13	Large Industries (HT)	6	5.31	5.31
14	Temporary	-	0.14	0.14

Sl. No	Category	Approved in T.O Dated 28.02.2017	Actuals furnished by MSPDCL	Energy Sales Now approved by the Commission
	TOTAL	576	563.98	563.98

The Commission provisionally approves energy sales at 563.98 MU for FY 2017-18 as per the details furnished in ARR filings and these need to be cross checked with audited actuals when they are ready for considering them for True up in due course.

5.3 Distribution Loss

Petitioner's Submission:

The computation of actual Distribution loss for FY 2017-18 is shown in the Table below:

Table 5.3: Actual Distribution Loss for FY 2017-18

Sl. No	Particulars	Unit	Actuals
1	Total Power Purchase	MU	1056.36
2	Inter-State transmission loss in NER for FY 2017-18	MU	27.68
3	Net Power Purchase (1-2)	MU	1028.68
4	UI Overdrawal	MU	6.02
5	UI Underdrawal	MU	-13.34
6	Sale of Surplus Power	MU	207.73
7	Net power available at State periphery	MU	813.64
8	Intra-State Transmission Loss	MU	81.36
9	Net Energy requirement at DISCOM periphery for sale within State	MU	732.27
10	Energy Sales within the State	MU	563.98
11	Distribution loss	MU	168.29
12	Distribution Loss w.r.t. Energy Input at DISCOM periphery	%	22.98%
13	Distribution Loss w.r.t. Energy Input at State periphery	%	20.68%

The actual surplus energy available and sold by MSPDCL in the Indian Energy Exchange (IEX) in FY 2017-18 was 207.73 MU as compared to the surplus quantum of 297.02 MU approved by the Hon'ble Commission in the Tariff Order for FY 2017-18.

The actual Distribution Loss of 22.98% achieved by MSPDCL in FY 2017-18 is higher than the normative Distribution Loss of 18.40% approved by the Hon'ble Commission in the Tariff Order for FY 2017-18, as shown in the Table above.

MSPDCL respectfully submits that the actual Distribution Loss are slightly higher than the approved figures, on account of Manipur having a hilly terrain and characterized

by population spread throughout the State. The distribution system network in the State consists of long length of distribution and LT lines. In recent years, majority of the new connections through various schemes are in the LT category, which inherently incurs higher Distribution Loss.

MSPDCL wishes to bring to the attention of the Hon'ble Commission that in the above-said Order, the Distribution Loss have been calculated with reference to the energy injected at the State Periphery, as the Distribution Loss for FY 2017-18 have been considered as equal to the arithmetical difference between T&D Loss and Transmission Loss of 3.6% approved by the Hon'ble Commission (i.e., $22\% - 3.6\% = 18.40\%$). Hence, for the purpose of Limited True-up for FY 2017-18, MSPDCL has also calculated the Distribution Loss with reference to the energy injected at State periphery, which works out to 20.68%. The corresponding Distribution Loss with reference to the energy injected into the distribution system works out to 22.98%.

The inter-State Transmission loss has been considered as 2.62%, based on the Interstate transmission loss in North-Eastern Region for FY 2017-18, and has been deducted from the total Power Purchase quantum. Further MSPDCL has added the UI Over drawal and subtracted UI Under drawal and Surplus sales from the Net Power Purchase to compute the Net Power available at State Periphery for sale within the State of Manipur.

MSPDCL has considered the intra-State Transmission (MSPCL) loss of 10% for computing the power available at the DISCOM periphery. The Hon'ble Commission has been allowing intra-State Transmission loss of only 3.6%. MSPDCL respectfully submits that in other States, 33 kV system is part of the distribution network, whereas, in Manipur, the 33 kV system is part of MSPCL network, and the distribution network is from 11 kV and below voltages. Thus, when other SERCs have approved intra-State Transmission Losses of around 3 to 4%, the 33 kV loss has also been separately approved as around 5-6%, which works out to total loss of around 10% upto 33 kV level. The relevant data from some selected States, based on data available in the public domain, is given in the Table below:

Table 5.4: Approved Losses upto 33 kV level in other States

State	Intra-State Transmission Loss	33 kV Loss	Total
Maharashtra (MSEDCL)	3.92%	6%	9.92%
Bihar	3.92%	5%	8.72%

Source: Tariff Orders of respective SERCs

Hence, the intra-State Transmission (MSPCL) loss of 10% considered by MSPDCL for computing the Energy Balance is appropriate and needs to be allowed.

Further, MSPDCL respectfully submits that the Distribution Loss approved by the other SERCs are generally higher than the Distribution Loss approved by the Hon'ble Commission, as shown in the Table below:

Table 5.5: Distribution Loss and AT&C loss approved by Different SERCs

State	Particulars	Utility/Department	Order Reference	Approved by Commission
Arunachal Pradesh	AT&C Loss for FY 2016-17	Department of Power, Government of Arunachal Pradesh	Petition No. TP 01 of 2018, dated 31May, 2018	44%
Meghalaya	Distribution Loss for FY 2017-18	Meghalaya Power Distribution Corporation	Case No. 1/2018, dated 25September, 2018	21%
Bihar	Distribution Losses for FY 2017-18	NBPDCL	Case No. 40 of 2017	24%

Source: Latest Tariff Orders of respective SERCs

It is further submitted that MSPDCL has been incorporated in recent years and it has taken significant steps over the years to reduce the Distribution Loss. Hence, in view of all the above, MSPDCL requests the Hon'ble Commission to approve the actual Distribution Loss of 20.68% for FY 2017-18.

Commission's Analysis

The distribution loss calculation done by MSPDCL is not in order.

The pool losses in NER adopted by MSPDCL are in correct. As per actual average weekly loss from 03.04.2017 to 01.04.2018 the pool loss in NER system is 2.61%. Intra state transmission loss are however adopted at 7.97%. IEX purchases of 8.97MU and UI over draws of 15.73 MU are considered. Surplus energy sales are 270.34 MU

excluding UI under drawal of 13.34 MU, but not 207.74MU as furnished by MSPDCL. Distribution loss should be at distribution periphery but not at state periphery. So the distribution loss during FY 2017-18 is recalculated as detailed in the table below.

Table 5.6: Calculation of distribution loss during FY 2017-18 approved by the Commission

Sl. No	Particulars	Unit	Actual FY 2017-18
A	Own Generation	MU	-
B	Power purchase from CGS in NER	MU	1047.40
C	Pool loss	%	2.61
D	Pool loss	MU	27.34
E	ADD: UI purchases & IEX	MU	24.70
F	Less: UI sales (Surplus Power)	MU	270.34
G	Energy available (A+B+E)-(D+F)	MU	774.42
H	Less: Intra state transmission loss at 7.97%	MU	83.27
I	Net energy available for sale	MU	691.15
J	Energy sales within the state	MU	563.98
K	Distribution Loss	MU	127.17
L	Distribution Loss%	%	18.40%

Thus the distribution loss works out to 18.40% as against 22.98% furnished by MSPDCL.

The Commission provisionally considers distribution loss at 18.4 % for FY 2017-18 as against 22.98% furnished by MSPDCL after true up.

The MSPDCL shall conduct system studies and energy audit after proper metering systems are put into operation. Further, segregation of technical and commercial loss has to be completed by Sept-2019.

5.4 Energy Requirement

Based on the distribution loss, energy requirement approved by the Commission in its Tariff order dated 28.02.2017 and actuals furnished by the MSPDCL and now

approved by the Commission are furnished in Table below:

Table 5.7: Energy Requirement Approved by the Commission for FY 2017-18

Particulars	Units	Approved by the Commission in T.O dated 28-02-2017	Actuals by MSPDCL	Now approved by the Commission
Sales	MU	576	563.98	563.98
Distribution Loss (%)	%	18.4%	22.98%	18.4%
T&D Loss (MU)	MU	129.88	168.29	127.17
Energy Requirement	MU	705.88	732.27	691.15

5.5 Energy Availability and Source of Power

5.5.1 Own Generation

MSPDCL is having its own generation plants such as small hydel, diesel and HFO with installed capacity of 45.11 MW. Own generation approved by the Commission in its order dated 28.02.2017, actuals furnished by MSPDCL and now approved by the Commission after true up for FY 2017-18 are furnished in Table below:

Table 5.8: Own Generation approved by the Commission for FY 2017-18

(MU)

Particulars	Approved by the Commission in T.O dated 29.02.2016	Actuals furnished by the MSPDCL	Now approved by the Commission
Hydel		0	0
Diesel	0.68	0	0
Total	0.68	0	0

Commission's Analysis

The reasons for NIL generation is not furnished by MSPDCL. The Commission however provisionally approves own generation at NIL MU for FY 2017-18 after true up.

5.5.2 Power Purchase from central generating stations

Power purchase approved by the Commission in its order dated 28.02.2017, actuals furnished by MSPDCL and now approved by the Commission after True-up for FY 2017-18 are furnished in the Table below:

Table 5.9: Power purchase approved by the Commission for FY 2017-18 after True up (MU)

Sl. NO	Particulars	Commission Approved in T. O dated 28.02.2017	Actuals furnished by MSPDCL	Now Approved by the Commission
A	NEEPCO			
1	Kopili I	64.04	76.31	76.31
2	Kopili II	6.77	7.66	7.66
3	Khandong	10.75	16.52	16.52
4	Ranganadi	106.45	116.98	116.98
5	Doyang	18.12	20.47	20.47
6	Kamang stage I	18.40	-	-
7	Pare	-	-	-
8	Sub total	224.53	237.94	237.94
B	NEEPCO (GB)			
9	AGBPP	132.99	117.62	117.62
10	AGTPP	73.75	53.84	53.84
11	AGTPP ext	-	-	-
12	Monarchank Gas based P.P.	-	-	-
13	Sub Total	206.74	-	171.46
C	NHPC			
14	Loktak			
14(i)	Purchased	180.08	247.02	247.02
14(ii)	Free Power	70.83	97.16	97.16
15	Sub total	250.91	344.18	344.18
D	TRIPURA			
16	Baramura IV& V	81.84	41.49	41.49
E	O T P C			
17	Pallatana I & II	220.23	222.55	222.55
18	Sub total	307.07	264.04	264.04
F	N T P C			
19	Bongaigaon I	83.70	29.78	29.78
20	Sub total	83.70	29.78	29.78
21	UI Over drawl	-	-	15.73
22	IEX	-	8.97	8.97
23	Total	1067.95	1056.37	1072.10

Commission's Analysis

The MSPDCL has not considered UI Over drawal of 6.02 MU. After considering this quantity, the total power purchase works out to 1062.39 as follows:

Power Purchase from Generating Stations	1047.40
UI Over drawal 15.73	24.70
IEX Purchase 8.97	
Total	1072.10

The Commission provisionally approves power purchase of 1072.10 MU including free power of 97.16 MU from Loktak and UI purchases of 24.70 MU (8.97+15.73) for FY 2017-18 for true up.

5.6 Energy Balance

Energy Balance approved by the Commission in its order dated 28.02.2017 and actuals furnished by MSPDCL and now approved by the Commission are furnished in Table below:

Table 5.10: Energy Balance approved by the Commission for FY 2017-18 after true up

Sl. No	Particulars	Unit	Approved by the commission in T.O dated 28.02.2017	Actuals Furnished by MSPDCL	Now Approved by the Commission
A	Energy Requirement				
1	Energy Sales	MU	576	563.98	563.98
2	Distribution loss	%	18.40	22.98	18.40
3	Distribution loss	MU	129.88	168.29	127.17
4	Energy Requirement	MU	705.88	732.27	691.15
B	Energy Availability				
5	Own Generation (Net)	MU	0.68	-	-
6	Power Purchase	MU	1067.95	1056.36	1047.40
7	Less: External Losses	%	2.65	2.62	2.61
8	Less: External Losses	MU	28.30	27.68	27.34
9	Net energy available at state periphery (6-8)	MU	1039.68	1028.68	1020.06
10	UI Purchase			-7.32	24.70
11	Total (5+9+10)		1040.36	1021.36	1044.76
12	Transmission Loss (T.L) @ 3.6%	MU	37.45	81.36 (@7.97%)	83.27 (@ 7.97%)
13	Energy Available for Distribution	MU	1002.91	940.00	961.50
14	Surplus (13-4)	MU	297.02	207.73	270.34
15	Surplus grossed up by T.L % for sale outside the state	MU	308.12 (@3.60%)	225.71 (@ 7.97%)	293.76 (@ 7.97%)

(Source Table 7 and 9 of Petition)

Commission's Analysis

As seen from the data furnished by MSPDCL it is observed that the petitioner has erred in calculation of energy requirement with distribution loss of 20.68%. Had the distribution loss is taken as 22.98%, it is worked out as under.

Energy Sales	563.98
Distribution loss %	22.98%
Distribution loss	168.29
Energy Requirement	732.27

The MSPDCL has not furnished further data to energy balance. As such the energy balance is worked out with the available data which resulted in surplus power of 293.76 MU. UI under drawal of 13.34 MU is not considered as it comes under UI sales.

Thus the Energy balance resulted in surplus power of 293.76 MU which was sold under UI Sales.

5.7 Power Purchase Cost

Petitioner's submission

The MSPDCL has furnished actual power purchase cost of Rs.337.26 Crore during FY 2017-18 as detailed in Table below:

Table 5.11: Power Purchase cost actuals furnished by MSPDCL for FY 2017-18

Sl. No	Particulars	Quantity (MU)	Average Rate adopted MSPDCL (Rs./kWh)	Total cost (Rs. Cr)
1	NEEPCO (Hydro)			
2	Koppilil I	76.31	1.17	8.91
3	Koppilil II	7.66	1.25	0.96
4	Khandong	16.52	1.76	2.91
5	Ranganadi	116.98	2.21	25.81
6	Doyang	20.47	4.90	10.03
7	Kamang stage I			
8	Sub Total	237.94	11.29	48.62
9	NEEPCO(G			
10	A G B P P	117.62	3.37	39.69
11	A G T P P	53.84	2.88	15.50
12	Sub Total	171.46	6.25	55.19
13	N H P C			
14	Loktak			
15	Power Purchases	247.02	2.68	66.29
16	Free Power	97.16	-	-
17	Sub Total	344.18	2.68	66.29
18	TRIPURA			
19	BARAMURA IV & V	41.49	3.00	12.43
20	O T P C			
21	Pallatana I& II	222.55	3.25	72.29
22	Sub Total	264.04	6.25	84.72
23	N T P C			
24	Bangaigaon	29.78	16.61	49.46

Sl. No	Particulars	Quantity (MU)	Average Rate adopted MSPDCL (Rs./kWh)	Total cost (Rs. Cr)
25	UI/over drawal			1.574
26	UI Under drawal			(-)2.304
27	Solar			0
28	Non solar			
29	U I Purchases/IEX	8.97	3.39	3.04
30	NERLDC charges			0.64
31	Arrears/Supplementary charges			25.37
32	Reimbursement			4.68
33	Total	1056.37		337.26

Commission's Analysis

Commission in its order dated 29.02.2017 had approved power purchase cost of Rs. 317.33 Crore for purchase of 1067.95 MU including free power of 70.83 MU from Loktak and renewable energy certificates cost for solar at Rs.1.02 Crore and non solar at Rs.11.06 Crore at an average cost of Rs.2.97/kwh.

As seen from the actuals furnished by MSPDCL, it is observed that the following item which will not come under power purchase cost are included as detailed below:

Sl. No	Particulars	MU	Amount	Remarks
1	UI Under drawal	13.34	2.304	To be accounted for under sale of surplus power
2	NERLDC Charges	-	0.64	To be accounted for in transmission charges.

As such the above items are deleted from power purchase cost. There by the power purchase cost works out to Rs.338.92 Crore for purchase of 1072.10 MU including UI/IEX purchase of 24.70 MU (15.73+8.97) and free power of 97.16 MU from Loktak at an average cost of Rs.2.91/kWh excluding arrears payment etc of Rs.30.05 Crore and Rs.3.19/kWh including arrear payment etc of Rs. 30.05 Crore as detailed in table below:

Table 5.12: Power Purchase cost considered by the commission for FY 2017-18

Sl. No	Particulars	Quantity (MU)	Average Rate adopted MSPDCL (Rs./kWh)	Total cost (Rs. Cr)
1	NEEPCO (Hydro)			
2	Koppilil I	76.31	1.17	8.91
3	Koppilil II	7.66	1.25	0.96
4	Khandong	16.52	1.76	2.91
5	Ranganadi	116.98	2.21	25.81
6	Doyang	20.47	4.90	10.03
7	Kamang stage I			
8	Sub Total	237.94	2.043	48.62
9	NEEPCO(G			
10	A G B P P	117.62	3.37	39.69
11	A G T P P	53.84	2.88	15.50
12	Sub Total	171.46	3.22	55.19
13	N H P C			
14	Loktak			
15	Power Purchases	247.02	2.68	66.29
16	Free Power	97.16	-	-
17	Sub Total	344.18	1.93	66.29
18	TRIPURA			
19	BARAMURA IV & V	41.49	3.00	12.43
20	O T P C			
21	Pallatana I& II	222.55	3.25	72.29
22	Sub Total	264.04	3.21	84.72
23	N T P C			
24	Bangaigaon	29.78	16.61	49.46
25	Subtotal	29.78	16.61	49.46
25	UI/over& under drawal	15.73	1.00	-0.73
26	Solar			1.65
27	Non solar			
28	U I Purchases/IEX	8.97	3.38	3.04
39	Subtotal	24.70		6.264
30	Total	1072.10	2.54	308.87
31	Arrears/Supplementary charges			25.37
32	Reimbursement			4.68
33	Total	1072.10	3.19	338.28

The Commission provisionally considers power purchase cost of Rs. 338.28 Crore for purchase of 1072.10 MU including UI purchase of 24.70 MU and free power of 97.16 MU for FY 2017-18 and payment of supplementary bills of Rs. 25.37 Crore and reimbursement of Rs.4.68 Crore but excluding NERLDC charges of Rs.0.64 crs for the purpose of true up. However, the true-up would be finalised on assessing

the audited actuals in due course on their submission.

5.8 Transmission Charges

The Transmission charges approved by the commission in its order dt.28.02.2017 and actuals furnished by the MSPDCL and now approved by the commission for FY 2017-18 are as detailed in the Table below:

Table 5.13: Transmission charges approved by the commission for FY 2016-17 after true up

Sl. No.	Particulars	Approved by the Commission in T.O dated 28.02.2017	Actuals furnished by MSPDCL	Now Approved by the Commission
1	MSPCL Transmission Charges	68.15	68.15	64.94*
2	PGCIL Transmission Charges	57.45	45.16	45.16
3	SLDC Charges	3.10	0.14	0.14
4	NERLDC charges		0.64	0.64
4	Total	128.70	114.09	110.88

* As approved in true up order of MSPCL for 2017-18.

The Commission provisionally considers transmission charges at Rs 110.88 Crore for FY 2017-18 for true-up.

5.9 Operation and Maintenance Expenses

The Operation and Maintenance (O&M) expenses comprises:

- Employee Expenses, which includes the Basic Pay, Dearness Pay, Dearness allowances, house rent allowances, and other allowances, new pension scheme paid to the staff;
- Repair and Maintenance (R&M) Expenses, which includes all expenditure incurred on the maintenance and upkeep of distribution assets; and
- Administrative and General (A&G) Expenses, which includes all expenditure incurred in operating a business such as office and IT expenses, consultancy and regulatory fee, etc.

For the purpose of Limited provisional true-up for FY 2017-18, MSPDCL has claimed the employee expenses, R&M Expenses, and A&G Expenses have been claimed at actuals incurred for FY 2017-18.

5.9.1 Employee Cost

The employee cost approved by the Commission for FY 2017-18 in its order dated

29.02.2016 and actuals furnished by the MSPDCL and now approved by the Commission are furnished in Table below:

Table 5.14: Employee Cost approved by the Commission for FY 2017-18 after true-up

(Rs. Cr)				
Sl. No.	Particulars	Approved in Tariff Order dated 28.02.2017	Actuals furnished by MSPDCL	Now approved by the Commission
1	Employees Cost	83.98	74.20	74.20

The Commission provisionally considers employee cost at Rs 74.20 Crore as per actuals furnished by MSPDCL for FY 2017-18 after true-up.

5.9.2 R&M Expenses

R&M expenses comprise of expenses on repairs and maintenance of Plant and Machinery, Transformers, Lines, cable network, Vehicles, Office equipment, etc. The Hon'ble Commission approved R&M Expenses of Rs. 6.88 Crore in the Tariff Order for FY 2017-18. MSPDCL respectfully submits that R&M Expenses are essential for MSPDCL in order to maintain and strengthen the system and quality of supply. MSPDCL has incurred actual R&M Expenses of Rs. 8.91 Crore in FY 2017-18, as shown in the Table below:

Table 5.15: R&M Expenses (Actuals) furnished by MSPDCL for FY 2017-18

(Rs. Cr)		
Particulars	Approved	Actuals
R&M Expenses	6.88	8.91

MSPDCL requests the Hon'ble Commission to approve the actual R&M expenses of Rs. 8.91 Crore for FY 2017-18.

The Commission provisionally considers R&M expenses at Rs 8.91 Crore as per actuals furnished by MSPDCL for FY 2017-18 after true up.

5.9.3 Administration and General Expenses

Petitioner's Submission

A&G expenses comprise various sub-heads including the following:

- Travel and conveyance expenses

- Consultancy and regulatory fees
- IT services and outsourcing cost
- Office Expenses
- Publication Expenses
- Other administration Expenses

The Commission had approved A&G Expenses of Rs. 2.65 Crore in the Tariff Order for FY 2017-18. MSPDCL has actually incurred A&G expenses of Rs. 7.31 Crore in FY 2017- 18, as shown in the Table below:

Table 5.16: A&G Expenses for FY 2017-18

(Rs. Cr)

Sl. No	Particulars	Approved	Actual
1	Advertisement		0.35
2	Auditors remuneration		0.01
3	Bank Charges		0.0003
4	Consultancy		0.78
5	Ex-Gratia		0.16
6	Interest & Penalty		0.001
7	JERC Fees		0.25
8	Legal Fees		0.01
9	Mass Regularisation		0.05
10	Office Expenses		0.11
11	O&M		0.39
12	Printing & Stationary		0.08
13	ROC Filings		0.0005
14	Telephone		0.42
15	Travelling Expenses		0.18
16	Vehicle Hiring Charges		0.03
17	Vehicle Running and Maintenance		0.10
18	CCC		0.55
19	Outsourced manpower		2.87
20	Medical reimbursement		0.97
21	Total	2.65	7.31

The actual A&G expenses in FY 2017-18 are significantly lower than the actual A&G expenses in FY 2016-17 (Rs. 10.98 crore), as approved by the Hon'ble Commission in the Limited Provisional true-up for FY 2016-17. MSPDCL requests the Hon'ble Commission to approve the actual A&G expenses of Rs. 7.31 Crore for FY 2017-18.

The Commission provisionally considers Rs 7.31 Crore towards Administration and General Expenses as per the actuals furnished by MSPDCL for FY 2017-18 after true up.

Summary of O&M Expenses approved by the commission for FY 2017-18 are furnished in the table below:

Table 5.17: Summary of O&M Expenses approved by the commission for FY 2017-18 after true up

Sl. No	Particulars	Approved by the commission
1	Employee cost	74.20
2	R&M Expenses	8.91
3	A&G Expenses	7.31
4	Total	90.42

5.10 Capital Investment & Capitalization

Petitioner's Submission

MSPDCL undertakes capital expenditure to meet the growing demand for electricity in the State and for system augmentation and strengthening. MSPDCL receives significant grant from the State Government for creation of capital asset, as well as consumer contribution for capital works, with the balance funding sourced from loans.

The details of actual capitalization achieved in FY 2017-18 vis-à-vis the capitalisation approved by the Hon'ble Commission in the Tariff Order for FY 2017-18, is shown in the Table below:

Table 5.18: Capitalisation furnished by MSPDCL for FY 2017-18

Sl. No	Name of the Scheme	Approved	Actuals
1	State Specific Scheme (State Plan)	0	6.22
2	R&E-I State Plan Source	0	8.81
3	R&E-II Internal Source	0	5.01
Total		90.21	20.05

Commission's Analysis

The MSPDCL has not submitted audited annual accounts from 2015-16 to 2017-18. However, MSPDCL has furnished unaudited annual accounts for FY 2015-16 & FY 2016-17. Based on closing CWIP to end of 31.03.2015 the year-wise CWIP is arrived as follows, which are in conformity with the annual accounts for FY 2015-16 and FY 2016-17.

Sl. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	Opening CWIP	506.26	845.51	1068.93
2	Investment during the year	423.58	326.66	Not furnished

Sl. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
3	Capitalisation during the year	84.34	103.24	20.05
4	Closing CWIP (1+2-3)	845.51	1068.93	

While so, the capital investment furnished by MSPDCL in the petition and capital investment as per annual accounts are furnished here under:

Sl. No	Year	As per petition	As per Annual Accounts
1	2015-16	-	423.58
2	2016-17	55.00	326.66
3	2017-18	55.00	Not furnished

Audited annual accounts for FY 2017-18 are not furnished.

The MSPDCL is directed to reconcile the capital investment from FY 2015-16 onwards and furnish the correct data.

5.11 Gross Fixed Assets and Depreciation Petitioner's Submission

The closing balance of Gross Fixed Asset (GFA) for FY 2016-17 has been considered as the opening balance of GFA for FY 2017-18. The depreciation has been computed under straight-line Method, at the rates specified in the JERC (MYT) Regulations, 2014, on the GFA in use at the beginning of the year and addition in assets during FY 2017-18. The Depreciation for FY 2017-18 is shown in the Table below:

Table 5.19: Depreciation furnished by MSPDCL for FY 2017-18

(Rs. Cr)

Sl. No	Particulars	Approved	Actuals
1	Opening GFA	769.88	742.23
2	Addition during the Year	90.21	20.05
3	Retirement	-	-
4	Closing GFA	860.09	762.28
5	Average GFA	814.99	752.25
6	Average Rate of Depreciation	2.60%	2.60%
7	Depreciation	21.19	19.56
8	10% of Gross Depreciation	0.21	1.96

Commission's analysis

In the ARR petition for FY 2017-18 MSPDCL has stated that the loans before

31.01.2014 have been absorbed by Govt of Manipur. As such depreciation is being claimed on assets funded through the paid up equity of state govt or the new loans taken which is around 1% of total assets and claimed depreciation of 1% of total depreciation.

Accordingly, the commission allowed 1% of total depreciation as detailed in table below:

Table 5.20: Depreciation approved by the commission for FY 2017-18

(Rs. Cr)

Sl. No.	Particulars	FY 2017-18
1	Opening GFA	742.23
2	Addition	20.05
3	Closing GFA	762.28
4	Average GFA	752.26
5	Average Rate of Depreciation	2.42*
6	Depreciation	18.20
7	1% of Gross Depreciation	0.18

* Average rate of depreciation as per FY 2016-17 accounts.

The Commission provisionally considers depreciation of Rs 0.18 Crore for FY 2017-18 for true up.

5.12 Interest and Finance Charges

Petitioner's Submission

The major part of capital expenditure undertaken by MSPDCL is funded by the State Government's grants and consumer contribution. However, in addition to these sources of funds, MSPDCL has also taken a significant amount of loan from REC for RAPDRP-B Project and RGGVY project, and a Vehicle loan from SBI. The Hon'ble Commission had approved Interest expenses of Rs. 0.19 crore in the Tariff Order for FY 2017-18, including interest on Consumer Security Deposit of Rs. 0.03 crore. The repayment of loans during the year has been considered equal to the depreciation claimed for the year, in accordance with the JERC (MYT) Regulations, 2014, and the repayment has been considered proportionately based on the opening loan balance. The details of loans with the computation of Interest on loan is shown in the Table below:

Table 5.21: Interest on loan furnished by MSPDCL for FY 2017-18**(Rs. Cr)**

Sl. No.	Particulars	REC 1	REC 2	Vehicle Loan from SBI	New Loan	Total
1	Opening Loan	39.88	15.16	5.00	0.00	60.04
2	Additions during the year				5.06	5.06
3	Repayments during the year	1.30	0.49	0.16	0.00	1.96
4	Closing Loan	38.58	14.67	4.84	5.06	63.14
5	Average Loan	39.23	14.91	4.92	2.53	61.59
6	Rate of Interest	11.70%	11.70%	8.13%	11.70%	11.40%
7	Interest & Finance Charges	4.74	1.69	0.21		6.65
8	Interest on CSD					0.044
9	Total Interest	4.74	1.69	0.21	0.30	6.70

MSPDCL requests the Hon'ble Commission to kindly approve the actual interest on loan of Rs. 6.70 Crore for FY 2017-18.

Commission's Analysis

The MSPDCL in its MYT petition for FY 2016-17 and FY 2017-18 has stated that there are no outstanding loans at the beginning of FY 2016-17 and Rs.1 Crore each taken during FY 2016-17 and FY 2017-18. Interest during FY 2016-17 and FY 2017-18 is furnished as follows:

Table 5.22: Interest on Loan approved by the Commission for FY 2017-18

Sl. No.	Particulars	FY 2016-17	FY 2017-18
1	Opening Loan	0.00	0.77
2	Additions during the year	1.00	1.00
3	Repayment	0.23	0.26
4	Closing Loan	0.77	1.51
5	Average Loan	0.39	1.14
6	Rate of Interest	14%	14%
7	Interest charges	0.05	0.16
8	Interest on consumer S.D	0.02	0.03
9	Total Interest	0.07	0.19

In the absence of audited accounts for FY 2017-18 the interest amount of RS.0.19 Crore including interest on consumer security deposit is considered, tentatively.

The Commission provisionally considers interest and finance charges at Rs.0.19 Crore for FY 2017-18 including interest on consumer security deposit.

5.13 Interest on Working Capital Petitioner's Submission

In accordance with the JERC for M&M (MYT) Regulations, 2014, the Interest on Working capital for Distribution Wires Business and Retail Supply Business shall be determined as under:

"29.3 Distribution Wires Business

- i. The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the financial year, computed as follows:*
 - a) Operation and maintenance expenses for one month; plus*
 - b) Maintenance spares at one (1) per cent of the historical cost escalated at 6% from the date of commercial operation; plus*
 - c) Receivables equivalent to one (1) month of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs; minus*
 - d) Amount, if any, held as security deposits under clause (b) of sub- section (1) of Section 47 of the Act from Distribution System Users except the security deposits held in the form of Bank Guarantees.*
- ii. Interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) as on 1st April of the financial year in which the Petition is filed.*

29.4 Retail Supply of Electricity

- (i) The Distribution Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:*
 - (a) Operation and maintenance expenses for one month; plus*
 - (b) Maintenance spares at one (1) per cent of the historical cost escalated at 6% from the date of commercial operation; plus*
 - (c) Receivables equivalent to one (1) month of the expected revenue from sale of electricity at the prevailing tariffs; minus*
 - (d) Amount held as security deposits under clause (a) and clause (b) of sub-section (1) of Section 47 of the Act from consumers except the security deposits held in the form of Bank Guarantees;*
- (ii) Interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) as on 1st April of the financial year in which the Petition is filed."*

The computation of normative Interest on Working Capital (IoWC) for MSPDCL for FY 2017-18, in accordance with the above-reproduced Regulations, is shown in the Table below:

Table 5.23: Interest on working capital furnished by MSPDCL for FY 2017-18

(Rs. Cr)

Sl. No	Particulars	Approved	Actuals
1	O&M expenses for 1 month	7.79	7.53
2	Maintenance spares @ 1% of GFA	8.15	7.42
3	Receivables equivalent to one month of expected revenue at prevailing tariffs	21.19	19.82
4	Total	37.13	34.78
5	SBAR as on 01.04.2017	14.05%	14.05%
6	Interest on Working Capital	5.22	4.89

MSPDCL requests the Hon'ble Commission to approve the IOWC of Rs 4.89 Crore for FY 2017-18.

Commission's Analysis:

The SBAR as on 01.04.2017 is 13.85% but not 14.05%. Maintenance of spares also not correctly calculated. As such interest on working capital revised as detailed in table below:

Table 5.24: Interest on Working Capital for FY 2017-18 considered by the Commission for true-up

(Rs.Cr)

Sl. No	Particulars	Total Cost	One Month
1	O&M Expenses one month (90.42 /12)	90.42	7.54
2	Maintenance of spares at 1% of GFA escalated by 6%	742.23	7.42
3	Receivables for one month	237.83	19.82
4	Less: Amount held under SD		0.67
5	Sub Total		34.106
6	SBAR rate as on 01.04.2017		13.85%
7	Interest on Working Capital		4.72

The Commission provisionally considers interest on working capital at Rs 4.72 Crore for FY 2017-18 for true up.

5.14 Provision for bad debts

The Commission in its order dated 29.02.2017 had approved provision for bad debts

at Rs 3.00 Crore for FY 2017-18. The MSPDCL has not written off any amount.

Commission Analysis

As no amount is written off during FY 2017-18 the Commission has not considered any amount, towards provision for bad debts.

The Commission provisionally approves Rs NIL Crore towards provision for bad debts for FY 2017-18 after true up.

5.15 Return on Equity

The Commission in its Order dated 28.02.2017 had approved RoE at Rs 1.95 Crore for FY 2017-18. The MSPDCL has now furnished RoE at Rs 1.95 Crore for FY 2017-18.

The Commission provisionally considers RoE at Rs 1.95 Cr for FY 2017-18 after true up.

5.16 Non-Tariff Income

The Hon'ble Commission approved Non-Tariff Income of Rs. 0.37 Crore in the Tariff Order for FY 2017-18. The actual Non-Tariff Income earned by MSPDCL in FY 2017-18 was Rs. 5.35 Crore, as shown in the Table below:

Table 5.25: Non-Tariff Income for FY 2017-18

(Rs. Cr)			
Sl.No	Particulars	Approved	Actuals
1	Interest from Bank		4.19
2	3.75% Agency Charge		0.54
3	Miscellaneous Receipt		0.58
4	Fees from Tender forms		0.05
Total		0.37	5.35

The Commission provisionally considers non-tariff income at Rs. 5.35 Crore for FY 2017-18 after true up.

5.17 Aggregate Revenue Requirement

Aggregate Revenue Requirement approved by the Commission in its order dated 28.02.2017 and actuals by the MSPDCL and now approved by the Commission are furnished in table below:

Table 5.26: Aggregate Revenue Requirement approved by the Commission for FY 2017-18 after true up

(Rs. Cr)

Sl. No	Particulars	Approved in T.O dt 28.02.17	Actuals by MSPDCL	Approved by the Commission
1	Fuel Cost	1.19	-	-
2	Power purchase cost	317.33	337.26	338.28
3	Transmission charges (MSPCL)	68.15	68.15	64.94
4	Transmission charges	57.45	45.16	45.16
5	SLDC Charges	3.10	0.14	0.14
6	NERLDC	-	-	0.64
6	Employee costs	83.98	74.20	74.20
7	Repair & Maintenance expense	6.88	8.91	8.91
8	Administration & General Expenses	2.65	7.31	7.31
9	Depreciation	0.21	1.96	0.18
10	Interest & Finance Charges	0.19	6.70	0.19
11	Interest on Working capital	5.22	4.89	4.72
12	Provision for bad debts	3.00	-	-
	Total Cost	549.35	554.68	544.67
13	Add: Return on Equity / ROE	1.95	1.95	1.95
14	Less: Non-Tariff income	0.37	5.35	(-) 5.35
15	Surplus on true up of FY 2014-15	10.89	(-) 10.89	(-) 10.89
	Net Aggregate Revenue Requirement	540.04	540.39	530.38

5.18 Revenue from approved Tariff for FY 2017-18**Petitioner's Submission:****Table 5.27: Revenue from energy sales furnished by MSPDCL**

(Rs. Cr)

Sl. No	Particulars	Energy (MU)	Amount (Rs. Cr)	Average revenue (Rs/kWh)
1	Revenue from sale of power within the state	563.98	237.83	4.22
2	Sale of surplus power	207.74	55.05	2.65
	Total	771.72	292.88	3.32

Commission's Analysis:

Based on energy sales of 563.98 MU now approved by the Commission and the surplus power of 270.34 MU arrived the revenue from sale of power has to be worked out pending the details of the revenue from each category consumer is not available from the ARR filings, the mere revenue amount of 237.83 crs cannot be acceptable to the Commission and this will be taken up on submission of the audited annual account in due course but this is not decided yet.

Hence, no comment about the revenue gap made in this order.

6. Annual Performance Review for FY 2018-19

6.1 Background

The Commission in its Order dated 12.03.2018 had approved ARR and Tariffs for FY 2018-19 based on projected data by MSPDCL. Now MSPDCL has not filed the petition for annual performance review for FY 2018-19 even in spite of protracted correspondence. Though the JERC for M&M (MYT) Regulations, 2014 do not specifically provide for annual performance review, the Commission considers it appropriate and fair to revisit and review the approvals granted by it in the tariff order for FY 2018-19 with the information for FY 2018-19 without altering the principles and norms adopted earlier under suo-moto. These matters are discussed in succeeding paragraphs.

6.2 Energy sales

The category wise sales approved by the Commission in its Order dated 12.03.2018 and now approved by the Commission are furnished in table below.

Table 6.1: Energy sales approved by the Commission for FY 2018-19 after review (MU)

Sl. No	Name of category	Approved Sales in T.O Dt.12.03.2018	Now Commission approved
A	LT Industrial	421.2	481.21
1	Kutir jyoti	15	20.96
2	Domestic	337	386.83
	Commercial LT	42	44
3	Cottage and Small Industry	19	19.62
4	Public Lighting	5	5
5	Public Water Works	2	3.6
6	Irrigation and Agriculture	1.2	1.2
	HT industrial	138.77	145.46
	Commercial HT	6	7.89
1	Medium Industry	4	4.1
2	Large Industry	5	5
3	Bulk supply	106	110.21
4	Public water works	17	17.34
5	Irrigation and Agriculture	0.77	0.92
	Total	559.97	626.67

(Source Table 5.6 of Order dated 12.03.2018)

The Commission approved energy sales at 626.67 MU for FY 2018-19 after review.

6.3 Distribution loss

The Commission in its Order dated 12.3.2018 had approved distribution loss at 16.40% for FY 2018-19.

Commission analysis

The MSPDCL in their APR petition submitted on 27th February 2019 had indicated that distribution losses would be at 17.715%. Therefore, distribution losses already approved at 16.40% vide Commissions Order dated 12.03.2018 is now revised to 17.715% after review, as it is the reality that their losses have gone past the set target and cannot be controlled in one month's time during March 2019.

Thus the Commission approved distribution loss of 17.715% for FY 2018-19 after review.

6.4 Energy Requirement

The Commission its Order dated 12.03.2018 had approved energy requirement at 669.82 MU with distribution loss of 16.40%.

But as agreed in the Tripartite Memorandum of understanding dated 26.07.2016 amongst MOP Government of India, Government of Manipur and MSPDCL at New Delhi, transmission losses have to be reduced from 3.6% to 3.2% by FY 2018-19 and AT & T loss be reduced to 25.15 % in 2016-17, 18.70% in 2017-18 and 15% in 2018-19.

However, the distribution loss is considered at 17.715% for FY 2018-19 after reviewing the reality. Accordingly, with the approved energy sales of 559.97 MU the energy requirement arrived at 761.83 MU for FY 2018-19 after review as detailed in the detailed in the table below.

The estimated energy requirement furnished by MSPDCL and now approved by the Commission are furnished in table below.

Table 6.2: Energy requirement for FY 2018-19 approved by the Commission after review

Sl. No.	Particulars	Unit	Approved in T.O Dated 12.03.2018	Now approved by the Commission
1	Energy sales	MU	559.97	626.87
2	Distribution loss	%	16.40%	17.715%
3	Distribution loss	MU	109.85	134.96

Sl. No.	Particulars	Unit	Approved in T.O Dated 12.03.2018	Now approved by the Commission
4	Energy requirement	MU	669.82	761.83

6.5 Energy availability

6.5.1 Own generation

MSPDCL is having a capacity of 0.60 MW Micro Hydel Station at Leimakhong and various diesel generating stations of capacity 44.51 MW, total 45.11 MW capacity. In the (MYT) petition for FY 2018-19 to FY 2022-23 but the MSPDCL had furnished NIL generation from these stations.

The Commission approves own generation at NIL MU for FY 2018-18 after review

6.5.2 Power Purchase from Central Generating Stations

The MSPDCL is having allocation of power from various CGS plants of NEEPCO, NHPC and OTPC Pallatana as detailed in the table below:

The station wise allocation and power purchase and considered by the Commission for FY 2018-19 are furnished in table below:

Table 6.3: Energy Allocation from Central Generating Stations (CGS)

Sl. No.	Station	Installed Capacity MVA	FY 2018-19	
			Share Allocation (MWs)	AVG Allocation in (%)
A	NEEPCO(Hydro)			
1	Kopili I HEP	200	14.78	7.39%
2	Kopili II HEP	25	1.74	6.95%
3	Khandong HEP	50	3.28	6.56%
4	Ranganadi HEP	405	33.9	8.37%
5	Doyang HEP	75	5.9	7.87%
	Sub total	755	59.60	7.89%
B	NEEPCO(Gas Based)			
1	Assam Gas based Power Project	291	23.6	8.11%
2	Agartala Gas Turbine Power Project	129.9	10.69	8.23%
	Sub total	420.9	34.29	8.15%
C	NHPC(Loktak HEP)			
1	Purchased	105	31.62	42.50%
	Sub total	105	31.62	30.11%
D	TRIPURA			
1	Baramura (Gas Based)(Unit IV)	21	5.25	25%
2	Baramura(Gas Based)(Unit V)	21	5.25	25%
	Sub total	42	10.50	25%
E	New Projects			

Sl. No.	Station	Installed Capacity MVA	FY 2018-19	
			Share Allocation (MWs)	AVG Allocation in (%)
1	OTPC- (Pallatana-Unit I)	363.3	21.035	5.79%
2	OTPC-(Pallatana-Unit II)	363.3	21.035	5.79%
	Sub Total	726.6	42.07	5.79%
3	NTPC			
	i) Bongaigaon-1	500	37.5	7.50%
	ii) Bongaigaon-1	500	37.5	7.50%
	iii) Bongaigaon-1	500	37.5	7.50%
	iv) Para HEP	110	7.84	7.13%
	Sub Total	1610	120.34	7.47%
	Total	3659.5	298.42	8.15%

The energy purchase approved for FY 2018-19 in MYT Order dated 12.03.2018 is adopted for review also as detailed in the table below.

Table 6.4: Power purchase approved by the Commission for FY 2018-19 after review

Sl. No	Name of source	Power purchase approved by the Commission
A	CGS- NEEPCO	
1	Kopili I HEP	69.36
2	Kopili II HEP	7.16
3	Khandong HEP	13.74
4	Ranganadi HEP	108.77
5	Doyang HEP	19.60
6	AGBPP	121.63
7	AGTPP	62.41
B	CGS-NHPC	
1	Loktak HEP	195.46
2	Free Power	74.16
C	Others	
1	Baramura IV & V	60.42
2	OTPC-Pallatana I & II	251.38
3	NTPC-Bongaigaon	139.10
	Total	1123.19

Commission's analysis

The Commission approves power purchase of 1123.19 MU for FY 2018-19 including free power of 74.16 MU from Loktak after review.

6.6 Energy balance

The energy balance approved by the Commission in its order dated 12.03.2018 and now approved by the Commission are furnished in table below.

Table 6.5: Energy balance approved by the Commission for FY 2018-19 after review

Sl. No.	Particulars	Unit	Approved by the Commission in Order dated 12.03.2018	Now approved by the Commission
A	Energy requirement			
1	Energy sales	MU	559.97	626.87
2	Distribution loss	%	16.40	17.715
3	Distribution loss	MU	109.85	134.96
4	Energy requirement (1+3)	MU	669.82	761.83
B	Energy availability			
5	Own generation	MU	0.68	0
6	Power purchase	MU	1067.98	1123.19
7	Interstate loss on (6)	%	2.65%	2.61
8	Interstate loss on (6)	MU	28.30	29.32
9	UI purchase	MU		
10	Energy available at state periphery (5+6-8+9)	MU	1039.68	1093.87
11	Intra state transmission loss	%	3.60	10.00
12	Intra state transmission loss	MU	37.45	109.39
13	Net energy available at distribution periphery		1004.35	984.49
14	Surplus (12-4)		334.53	222.66
15	Grossed up by Trans. Loss		345.24	247.40

6.7 Power purchase cost

The Commission in its Order date 12.03.2018 had approved Power Purchase Cost of Rs.399.83 Cr for purchase of 1065.25 MU during FY2018-19. The cost for review of FY 2018-19 is as follows

Table 6.6: Power Purchase Cost estimated by the Commission for FY 2018-19 after review

S. No	Source	FY 2018-19		
		Purchased (MU)	Total Cost (Rs. Crs)	Average rate (Rs/kWh)
A	CGS - NEEPCO			
1	Kopili -I HE	62.82	12.38	1.97
2	Kopili-II HE	6.93	1.39	2.006
3	Khandong HE	12.85	3.73	2.903

S. No	Source	FY 2018-19		
		Purchased (MU)	Total Cost (Rs. Crs)	Average rate (Rs/kWh)
4	Ranganadi HE Project	109.18	36.50	3.343
5	Doyang HE Project	17.10	13.74	8.035
6	Assam GBPP	127.62	46.39	3.635
7	Agartala GTPP I & II	62.67	16.96	2.706
8	Kameng HEP Stage - 1 (Upcoming on September 2016)	NA		
B	CGS - NHPC			
1	Loktak HEP	188.49	89.75	4.762
2	Loktak Free Power	74.16	0	0.00
C	Other			
1	Baramura GBPP Unit IV and V	75.47	13.21	1.75
2	OTPC Pallatana Unit I & II	214.06	81.67	3.815
D	New Plants			
1	NTPC Bongaigaon Unit I	45.56	24.67	5.41
2	NTPC Bongaigaon Unit II	45.56	24.67	5.41
3	NTPC Bongaigaon Unit III	22.78	12.33	5.41
4	Monarchak Gas Based PP (NEEPCO)	NA		
5	Kameng HEP Stage I	NA		
6	Kameng HEP Stage II	NA		
7	Para HEP	30.59	16.05	5.25
8	Tuirial HEP	NA		
9	Lower Subansiri Stage I	NA		
10	Lower Subansiri Stage II	NA		
11	Renewable-Solar	0	20.71	
12	Renewable-Non Solar	0	1.73	
	Total	1095.84	415.88	3.795

The Commission approves power purchase cost of Rs.415.88 Cr including the RPO Obligation of 22.44crs for FY 2018-19 after review.

6.8 Fuel cost

The MSPDCL has not furnished any value fuel cost for 2018-19

The Commission approves fuel cost at Rs. NIL Cr for FY 2018-19 after review.

6.9 Transmission cost

The Commission in its Order dated 12.03.2018 had approved total transmission charges at Rs. 140.41 Cr for FY 2018-19. Now the same amount is considered after review for FY 2018-19.

**Table 6.7: Transmission charges approved by the Commission for FY 2018-19 after review
(Rs. Cr)**

Sl. No.	Particulars	Approved by the Commission
1	PGCIL charges	58.21
2	MSPCL charges	71.57
3	SLDC charges	0.71
	Total	130.49

The Commission approves transmission charges at Rs. 130.49 Cr for FY 2018-19 after review.

6.10 Operation & Maintenance Expenses

Operation & Maintenance Expenses comprises of

- (a) Employee cost
- (b) R&M expenses
- (c) Administrative and General expenses

6.10.1 Employee cost

The Commission in its Order dated 12.03.2018 had approved Employee cost at Rs. 98.78 Crore for FY 2018-19. Now the Commission considers the same amount.

The Commission approves employee expenses at Rs. 98.78 Cr for FY 2018-19 after review.

6.10.2 Repair & Maintenance Expenses

The Commission in its order dated 12.03.2018 had approved R & M expenses at Rs. 7.27 Crore for FY 2018-19. Now the same amount is considered for review.

The Commission approves R&M expenses at Rs.7.27 Cr for FY 2018-19 after review.

6.10.3 Administrative and General Expenses

The Commission in its Order dated 12.03.2018 had approved administration and General Expenses at Rs. 8.94Crore for FY 2018-19.

Commission analysis

The Commission approves Administrative and General Expenses at Rs. 8.94 Cr for FY 2018-19 after review.

Table 6.8: Summary of O&M expenses approved by Commission for FY 2018-19 after review.**(Rs. Cr)**

Sl. No.	Particulars	Approved by the Commission in its T.O dated 12.03.2018	Approved by Commission
1	Employee cost	98.78	98.78
2	R&M expenses	7.27	7.27
3	Administrative and General expenses	8.94	8.94
4	Grand Total	114.99	114.99

6.11 Capital investment

The MSPDCL has furnished revised capital investment of Rs.180 crore and capitalization of Rs. 304.33 Cr during FY 2018-19 as detailed in table below.

Table 6.9: CWIP projected by MSPDCL**(Rs. Cr)**

Sl. No.	Particulars	FY 2018-19
A	Opening balance of CWIP	1033.72
B	Fresh investment during the year	180.00
C	Investment capitalized out of opening CWIP	173.33
D	Investment capitalized out of fresh investment	130.00
	Total capitalization during the year (C+D)	304.33
	Closing balance of CWIP (A+B-C-D)	909.39

The Commission considers the investment of Rs.180 Cr and capitalization of Rs.304.33 Cr for FY 2018-19 after review.

6.12 Gross Fixed Assets and Depreciation

Depreciation for FY 2018-19 at Rs. 0.24 Cr approved by the Commission in its Order dated 12.03.2018 is adopted after review as detailed in the table below.

Table 6.10: Depreciation**(Rs Cr)**

Sl. No	Particulars	FY 2018-19
1	Opening GFA	832.66
2	Additions	304.33
3	Closing GFA	1136.99
4	Average GFA	984.86
5	Average rate of depreciation	2.42%
6	Depreciation	23.83
7	1% of gross depreciation amount	0.24

The Commission approves depreciation at Rs. 0.24 Cr for FY 2018-19 after review.

6.13 Interest and Finance charges

Details of the loan amounts and Interest cost computed for FY 2018-19 approved in the tariff order dated 12.03.2018 are summarized in the Table below.

Table 6.21: Interest and Finance charges estimated by MSPDCL for FY 2018-19

(Rs. Cr)

Particulars	Opening Loan-balance	Drawals during the year	Repayment of loan during the year	Closing balance of Loan	Rate of Interest	Interest on Loan
REC1	54.83	0	5.91	48.92	11.45%	5.94
Total Loan	54.83	0	5.91	48.92	11.45%	5.94

The Commission approves Interest and Finance charges at Rs.5.94 Crore for FY 2018-19 after review.

6.14 Interest and Working Capital

As per Regulation 29.4 of JERC (M&M) MYT Regulations, 2014, interest on working capital shall be allowed on estimated level and shall be computed as follows.

- O & M expenses for one-month plus
- Maintenance of spares at one (1) percent of historical cost escalates at 6% for the rates of commercial operations plus
- Receivable equivalent to one (1) month of the expected revenue from energy sales. The rate of interest be equal to State Bank Advance Rate (SABR) as on 1st April of the financial year in which the petition is filed.

Interest on working capital as furnished by MSPDCL for FY 2017-18 is tabulated in the table below.

Table 6.12: Interest on Working Capital estimated by MSPDCL for FY 2018-19

Rs. Cr)

Sl. No.	Particulars	One month cost
1	O & M Expenses one month	9.79
2	Maintenance of spares @ 1% of GFA Escalated by 6%	8.61
3	Receivable one month	25.61
4	Total	44.01
5	SBAR as on 01-04-2018	14.05%
6	Interest on working capital	6.18

Commission's Analysis

Commission in its Order dated 12.03.2018 had approved interest working capital at Rs. 5.81 Cr for FY 2018-19 with the rate of interest at 13.85% providing then.

Now the rate of interest has been reduced to 13.45%. Accordingly, the interest on working capital works out to Rs. 5.79 Cr for FY 2018-19.

Table 6.13: Interest on working capital approved by the Commission for FY 2018-19 after review

(Rs. Cr)			
Sl. No.	Particulars	Total cost	One month cost
1	O & M Expenses one month	114.99	9.58
2	Maintenance of spares @ 1% of GFA Escalated by 6%	786.764	7.87
3	Receivable one month	0.00	25.61
4	Total		43.06
5	SBAR as on 01-04-2018		13.45%
6	Interest on working capital		5.79

The Commission approves interest on working capital at Rs. 5.79 Cr for FY 2018-19.

6.15 Return on equity

The Commission in its Order dated 12.03.2018 approved ROE at 1.95Cr for FY 2018-19.

The Commission considers the same after review.

The Commission approved ROE at Rs.1.95 Cr for FY 2018-19 after review

6.16 Non tariff income

The Commission had approved non-tariff income at Rs. 0.39 Cr for FY 2018-19 in its Order dated 12.03.2018. While in the APR filing the same was indicated to be Rs.5.40crs by the Licensee.

The Commission now approves the non-tariff income at Rs. 5.40 Cr for FY 2018-19 after review.

6.17 Revenue from energy sales for FY 2018-19

The revenue realization from the energy sales to be approved by the Commission for FY 2018-19 could not be attempted as the Licensee fail to submit any sort of revenue amount details in the entire APR filings and hence the Commission denies to assess

the expected revenue realization in their review for the FY 2018-19 in view of the inadequate data submission.

The Commission approves revenue from sale of power at Rs. 369.76 Cr for FY 2018-19 after review.

6.18 Aggregate Revenue Requirement

Based on the approved data, the ARR furnished by MSPDCL and approved by the Commission are furnished in table below:

Table 6.14: Aggregate Revenue Requirement approved by the Commission for FY 2018-19 after review

Sl. No.	Particulars	Estimated by MSPDCL (in Rs. Cr)	Approved by Commission for FY 2017-18 (in Rs. Cr)
1	Fuel cost		
2	Power purchase cost	429.13	415.88
3	Interstate transmission charges	58.21	58.21
4	Intra state transmission charges	81.49	71.57
5	SLDC charges	1.42	0.71
6	Employee cost	98.78	98.78
7	R&M expenses	14.54	7.27
8	Administration & General expenses	4.16	8.94
9	Depreciation	0.24	0.24
10	Interest and finance charges	6.72	5.94
11	Interest on working capital	5.81	5.79
12	Provision for bad debt	3.00	
13	RoE	1.95	1.95
14	Less: Non-tariff income	5.40	5.40
15	Net ARR	691.88	669.89

6.19 Revenue Gap

Table 6.15: Revenue Gap

Sl. No.	Particulars	Approved in Tariff Order dated 12.03.2018	Approved by Commission for FY 2018-19 (in Rs. Cr)
1	Net ARR	671.88	669.89
2	Total revenue	370.35	--
3	Revenue gap	301.70	--

Commission's analysis

As seen from the above table the revenue gap could not be works out to due to non-submission of the revenue related details of any sort for the Commission examination for reasons not expressed at the time of review. Thus, no comments are offered by the Commission on the revenue gap status.

7. Analysis of Aggregate Revenue Requirement for FY 2019-20

7.1 Background

The ARR for the 2nd block of MYT control period from FY 2018-19 to FY 2022-23 was approved in the Commission's Tariff Order dt.12.03.2018.

Now, the MSPDCL has submitted revised ARR and Tariff petition for FY 2019-20. The Commission has analysed the said petition in the following paras.

7.2 Energy Sales

Proper estimation of category wise energy sales is essential to determine the quantum of power purchase and the likely revenue. This section examines in detail the consumer category wise sales projected by the MSPDCL in its petition for assessment of ARR.

7.3 Consumer Categories

The MSPDCL serves about 357750 consumers as on 31.03.2018 in its licensed area and the consumers are categorized as under:

- a) Kutir Joyti (LT)
- b) Domestic(LT)
- c) Commercial(LT&HT)
- d) Public Lighting(LT)
- e) Agricultural(LT&HT)
- f) Public water works(LT&HT)
- g) Cottage & Small industry(LT)
- h) Medium industry(HT)
- i) Large industry(HT)
- j) Bulk supply(HT)

The MSPDCL serves the consumers at different voltages according to the consumer's requirement. In the categories, of Commercial, Agriculture and public water works there are LT consumers as well as HT consumers, while medium Industry, Large Industry and Bulk Supply categories are under HT only and Kutir Jyoti and domestic

categories are under LT only. Now the MSPDCL in its petition has stated that Kutir Jyothi category has been clubbed with domestic (1st slab) category from 01.04.2019.

7.4 Growth of Consumers and Connected Load

Petitioner's submission

The MSPDCL has projected the category wise number of consumers and their connected load for FY 2019-20 as detailed in Tables below:

Table 7.1: No. of consumers and connected load projected by MSPDCL for FY 2019-20 (No's)

Category	Number of Consumers FY 2019-20	Connected Load assumed for FY 2019-20	Avg. Load (kW)
	Projected		
LT Category	415202	565184	
Kutir Jyoti			
Domestic	394977	505458	1.280
Commercial LT	17397	39230	2.255
Cottage and Small Industry	2333	19031	8.157
Public Lighting	441	1155	2.619
Public Water Works	15	192	12.8
Irrigation and Agriculture	39	118	3.026
HT Category	1081	50698	
Commercial	40	1127	28.175
Medium Industry	73	1137	15.575
Large Industry	30	4432	147.73
Bulk supply	735	29010	39.469
Public water works	177	14992	84.700
Irrigation and Agriculture	26	631	24.269
Total	416283	616513	

Commission's Analysis

As verified from the Connected load with reference to number of connections during FY 2019-20 the average connected load is not in conformity with the definition of that particular category as detailed below.

Sl. No	Category	Consumer Numbers	Connected load (KW)	Average Connected load(KW)	Remarks
1	Commercial HT	40	1127	28.18	Connected load of HT supply should be > 50 KW.
2	Agriculture HT	39	118	3.026	Connected load of HT supply should be > 50 KW.

Sl. No	Category	Consumer Numbers	Connected load (KW)	Average Connected load(KW)	Remarks
3	Medium Industry (HT)	73	1137	15.57	Connected load of HT supply should be > 50 KW.
4	Bulk supply(HT)	735	29010	39.47	Connected load of HT supply should be > 50 KW.

The MSPDCL is directed to verify the connected load of all the connections in the above categories and furnish actual connected load on or before 30.06.2019. A directive was also issued (Directive 11) in this regard long back. Under the compliance to directives MSPDCL is silent over the physical verification of services. It indicates that the seriousness of this directive is not felt by MSPDCL. MSPDCL is directed to send a quarterly report on physical verification of services starting from 01.07.2019 onwards.

The Commission had made a revised estimation of the number of consumers and the Contracted Load in MWs for the FY 2019-20 basing on the projected figures indicated in their APR filings for FY2018-19 with suitable modifications where felt needed, The estimates of the same is tabulated in the following table:

Table 7.1A: No. of Consumers and Contracted Loads revised by Commission for FY 2019-20

Category	Number of Consumers	Connected Load (MWs)
	Approved for FY 2019-20	
LT Category	525087	720597
Kutir Jyoti	66442	10963
Domestic	432483	637639
Commercial LT	23096	58815
Cottage and Small Industry	2375	11640
Public Lighting	601	864
Public Water Works	37	373
Irrigation and Agriculture	53	303
HT Category	1084	71534
Commercial	481	2224
Medium Industry	44	3232
Large Industry	14	7659
Bulk supply	432	49612
Public water works	102	7531
Irrigation and Agriculture	11	1276
Total	526171	792131

7.5 Overall Approach to Sales Projection

In this MYT Order Dt.12.03.2018, the commission had approved energy sales at 599 MU for 2019-20. The MSPDCL in its petition has projected 600 MU for FY 2019-20. Category wise sales approved by the commission, projected by the MSPDCL and now approved by the commission are furnished in table below:

Table 7.2: Category-Wise Energy Sale approved by the Commission for FY 2019-20 (MU)

Sl. No	Particulars	Approved in MYT Order	As per ARR Petition	Approved by Commission
A. LT Supply				
1	Kutir Jyoti	15.00	16.00	20.96
2	Domestic	337.00	363.00	386.83
3	Commercial LT	48.00	45.00	45.43
4	Public Lighting	5.00	5.00	5.08
5	Public Water Works LT	2.00	2.00	2.20
6	Irrigation and agriculture	1.20	1.20	1.27
7	Cottage and small industries	19.00	20.00	20.00
	L.T Total	427.20	452.20	481.77
B. HT supply				
4	Commercial HT	0.00	6.0	6.06
10	Public Water Works HT	17.00	17.0	18.66
11	Irrigation and agriculture	0.77	0.8	0.85
12	Medium Industries	4.00	4.0	4.10
13	Large Industries	5.00	6.0	6.00
14	Bulk supply	106.00	114.0	114.00
	H.T Total	132.77	147.80	149.67
	LT & HT Total	559.97	600.00	631.44

7.6 Distribution loss Petitioner's submission

The Commission in its MYT Order dt. 12.03.2018 has approved distribution loss at 15% for FY 2019-20.

Now the MSPDCL has projected the same distribution loss of 15% for FY 2019-20.

Accordingly, the Commission approves distribution loss for at 15% for FY 2019-20.

This is to subject to conducting system studies and energy audit.

Segregation of Technical and Commercial loss shall also be completed by installation and activation of appropriate energy meters by September 2019.

7.7 Energy Requirement

The Energy requirement approved by the commission for FY 2019-20 in its order dt.12.03.2018 and projected by MSPDCL and now approved by the commission are furnished in table below.

Table 7.3: Energy requirement approved by the Commission for FY 2019-20

Sl. No	Particulars	Approved	Projected	Now Approved
1	Energy sales (MU)	599	599	631.44
2	Distribution loss%	15.00%	15.00%	15.00%
3	Distribution loss MU	105.7	105.71	111.43
4	Energy Requirement (MU)	704.71	704.71	742.87

In this connection, it is to mention that the MSPDCL has projected category wise energy rates during FY 2019-20 at 600 MU as against 599 MU approved by the commission in its order dt.12.03.2018. The revenue from energy sales also calculated on 600 MU.

But while furnishing energy requirement the MSPDCL has considered energy sales at 599 MU instead of 600 MU projected which is contradicting. However, as the MSPDCL has considered energy sales of 600 MU for calculation of revenue etc.

The commission has considered energy sales at 631.44 MU and calculated energy requirement as indicated in the above table.

7.8 Energy Availability and Sources of Power

Petitioner's submission

Power Purchase Quantum

The MSPDCL has furnished its share from central generating stations and own generation at 391.12 MW as detailed in table below:

However, COD is not declared in respect of the following stations whose total plant capacity is 2421 MW and share of MSPDCL is 72.10 MW.

Table 7.4: List of Station whose Commercial Operation dates are not declared (MWs)

Total Power Purchase cost		MYT Period –II FY 2019-20		
Sl. No	Plant	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW
1	Kameng HEP Stage - 1 (Upcoming on September 2016)	300	2.33%	7.00

Total Power Purchase cost		MYT Period –II FY 2019-20		
Sl. No	Plant	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW
2	Monarchak Gas Based Power Project Neepco	250	7.51%	18.76
3	Kameng HEP Stage I	101	4.00%	4.04
4	Kameng HEP Stage II	300	2.33%	7.00
5	Pare HEP	300	2.33%	7.00
6	Tuirial HEP	110	4.00%	4.40
7	Lower Subansiri Stage I	60	4.00%	2.40
8	Lower Subansiri Stage II	1000	2.15%	21.50
9	Total	2421		72.10

Hence, the share of 72.10 MW is not considered till the COD of individual stations are declared. As such the effective share of MSPDCL is 319.02 MW (391.12-72.10).

The Power Purchase approved by the commission in its MYT order dt.12.03.2018, projected by MSPDCL and now approved by the commission is 1131 .37 MU.

Station wise details are furnished in table below:

Table 7.5: Power Purchase Quantum approved by the commission for FY 2019-20

(MU)

Total Power Purchase cost					For FY 2019-20
Sl. No	Plant	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW	Energy Quantity (MU)
A	Own Generation	45.11			
1	Leimakhong - Micro Hydel	0.60	100.00%	0.60	0
2	Various Diesel Generating plants	44.51	100.00%	44.51	0
B	CGS - NEEPCO				
1	Kopili -I HE	200.00	7.39%	14.78	65.41
2	Kopili-II HE	25.00	6.95%	1.74	7.24
3	Khandong HE	50.00	6.56%	3.28	13.42
4	Ranganadi HE Project	405.00	8.37%	33.91	115.12
5	Doyang HE Project	75.00	7.87%	5.903	18.13
6	Assam GBPP	291.00	8.11%	23.60	131.75
7	Agartala GTPP I & II	130.00	8.23%	10.699	64.55
9	Kameng HEP Stage - 1 (Upcoming on September 2016)	300.00	2.33%	7.00	NA
C	CGS - NHPC				
1	Loktak HE	105.00	42.50%	44.63	194.10
2	Loktak Free Power	0.00	0.00%	0.00	76.37
D	Other				
1	Baramura GBPP Unit IV	42.00	25.00%	10.50	77.31

Total Power Purchase cost					For FY 2019-20
Sl. No	Plant	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW	Energy Quantity (MU)
	and V				
2	OTPC Pallatana Unit I & II	726.60	5.79%	42.03	221.42
E	New Plants				
1	Para HEP	110.00	0.07	7.84	0
2	NTPC Bongaigaon Unit I	500	7.50%	37.50	48.85
3	NTPC Bongaigaon Unit II	500	7.51%	18.76	48.85
4	NTPC Bongaigaon Unit III	500	7.51%	18.76	48.85
5	Monarchak Gas Based Power Project Neepco	250.00	7.51%	18.76	NA
6	Kameng HEP Stage I	101.00	4.00%	4.04	NA
7	Kameng HEP Stage II	300.00	2.33%	7.00	NA
8	Pare HEP	300.00	2.33%	7.00	NA
9	Tuirial HEP	110.00	4.00%	4.40	NA
10	Lower Subansiri Stage I	60.00	4.00%	2.40	NA
11	Lower Subansiri Stage II	1000.00	2.15%	21.50	NA
12	Renewable-Solar				0.00
13	Renewable-Non Solar				0.00
14	IEX				
	Total	6125.71		391.14	1131.37

The Commission approves power purchase of 1131.37 MU including free power from Loktak HEP at 76.37 MU for FY 2019-20 as projected by MSPDCL.

7.9 Energy Balance for FY 2019-20

As discussed in Para 7.7, the energy requirement is calculated considering energy sales at 631.44 MU during FY 2019-20.

The Energy balance is recalculated considering NER Transmission loss at 2.85% being the average weekly loss from 02.04.2018 to 09.09.2018,

Intra state transmission loss is however considered at 8.50% though it was approved in MYT order dt. 12.03.2018 as 3%.

The commission approved energy balance resulted in surplus power of 262.83 MU as detailed in table below:

Table 7.6: Energy balance approved by the commission for FY 2019-20

Sl. No	Particulars	Unit	Approved by the commission in T.O dt.12.03.2018	FY 2019-20 Projected by MSPDCL	FY 2019-20 Now Approved
A	Energy Requirement	MU			
1	Energy Sales	MU	599	599	631.44
2	Distribution loss	%	15%	15%	15%

Sl. No	Particulars	Unit	Approved by the commission in T.O dt.12.03.2018	FY 2019-20 Projected by MSPDCL	FY 2019-20 Now Approved
3	Distribution loss quantum	MU	105.71	105.71	111.43
4	Energy Requirement at Distribution Periphery	MU	704.71	704.71	742.87
B	Energy Availability				
5	Own Generation	MU	-	-	-
6	Power Purchase	MU	1131.37	1131.37	1131.37
7	External Loss	%	2.60%	2.60%	2.85%
8	External Loss	MU	29.42	29.42	32.24
9	UI Purchases	MU	-	-	-
10	RPO Purchase	MU	-	-	-
11	Net Energy availability at state Periphery (5+6-8+9+10)	MU	1101.95	1101.95	1099.13
12	Less: Transmission Losses	%	3%	3%	8.5%
13	Transmission loss	MU	33.06	33.06	93.43
14	Energy available for distribution (11-13)	MU	1068.90	1068.90	1005.70
15	Surplus (14-4)	MU	364.19	364.19	262.83
16	Surplus grossed up by to loss %		375.45	375.45	287.25

The MSPDCL is directed to sell these surplus power under UI through IEX by proper planning in SLDC after meeting the states requirement without interruption and realize maximum revenue.

7.10 Power Purchase Cost

The Commission in its MYT Order dt.12.03.2018 had approved power purchase cost of Rs.452.66 Crore for purchase of 1131.37 MU including free power of 76.37 MU from Loktak during FY 2019-20.

The MSPDCL in its petition has furnished the same quantity and cost for power purchase for FY 2019-20.

In determining the power purchase cost for MSPDCL, the costs of commonly power purchased stations of both the P&ED, Mizoram and the MSPDCL, Manipur are compared for the parity in per unit cost so adopted. As the average per unit costs for these stations shall have to be same & uniform, since the tariffs for these central generating stations are being decided by the CERC itself. Hence, there shall not be any variation in these commonly purchased stations average rates. But, the average costs adopted by Manipur are much higher than those of the P&ED, Mizoram purchasing stations cost per unit. Therefore, the average per unit rates of P&ED,

Mizoram are adopted to all those commonly purchasing stations whose average costs are lower than those adopted by MSPDCL, Manipur. The power purchase cost, now approved by the commission for FY 2019-20, as a result of the above modifications in the costs are detailed in table below:

Table 7.7: Power Purchase Cost approved by the Commission for FY 2019-20

Sl. No	Source of Energy	FY 2019-20		
		Purchases (MU)	Total Cost (Rs.Crs)	Avg. CPU (Rs/kWh)
A	CGS - NEEPCO			
1	Kopili -I HE	65.41	7.97	1.22
2	Kopili-II HE	7.24	1.06	1.46
3	Khandong HE	13.42	2.41	1.80
4	Ranganadi HE Project	115.12	25.22	2.19
5	Doyang HE Project	18.13	8.01	4.42
6	Assam GBPP	131.75	49.74	3.77
7	Agartala GTPP I & II	64.55	22.99	3.56
8	Kameng HEP St- 1 (Upcoming on 9/2016)	NA		
B	CGS - NHPC			
1	Loktak HE	194.10	64.89	3.34
2	Loktak Free Power	76.37	0	0.00
C	Other			
1	Baramura GBPP Unit IV and V	77.31	14.20	1.84
2	OTPC- Pallatana Unit I & II	221.42	72.65	3.28
D	CGS - New Plants			
1	NTPC Bongaigaon Unit I	48.85	27.77	5.68
2	NTPC Bongaigaon Unit II	48.85	27.77	5.68
3	NTPC Bongaigaon Unit III	48.85	27.77	5.68
	Renewable Power			
1	Renewable-Solar	0	23.12	
2	Renewable-Non Solar	0	2.81	
	Grand Total	1131.37	378.36	3.34

The Commission approves the power purchase cost amount to be Rs. 378.36 Crore for the energy quantity of 1131.37 MU including free power of 76.37 MU from Loktak during the FY 2019-20.

7.13 Transmission Charges

Transmission charges approved by the commission for FY 2019-20 vide Tariff Order Dt.12.03.2018 and projected by MSPDCL and now approved by the commission are

furnished in Table below:

Table 7.8: Transmission Charges approved by the Commission for FY 2019-20

Particulars	Approved in MYT Order	Projected by MSPDCL	Now Approved
PGCIL charges	61.12	61.12	61.12
MSPCL Charges	87.87	86.57	85.68*
SLDC charges	0.71	0.71	0.71
Total Transmission Charges	149.70	148.40	147.51

* MSPCL charges are as approved for MSPCL ARR for FY 2019-20

The Commission approves transmission charges at Rs.147.51 Crore for FY 2019-20.

7.14 Operation and Maintenance Expenses

Petitioner's submission

- Operation and Maintenance expenses comprise of the following heads:
 - Employees Expenses which includes the basic pay, dearness pay, dearness allowances, house rent allowances, and other allowances, new pension scheme paid to the staff;
 - Repair and Maintenance (R&M) Expenses, which include all expenditure incurred on the maintenance and upkeep of distribution assets; and
 - Administrative and General Expenses, which include all expenditure incurred in operating a business such as office and IT expenses, consultancy and regulatory fee etc.
- The methodology adopted by MSPDCL for projecting the values of each component of the O&M expense for FY 2017-18 has been explained in the following section.

7.14.1 Employee Expense

Employee expenses approved by the commission in its order dt 12.03.2018 and projected by MSPCL and now approved by the commission are furnished in table below:

Table 7.9: Employee Cost approved by the Commission for FY 2019-20
(Rs. Cr)

Particular	Approved in MYT Order	Projected by MSPDCL	Now Approved
Employee expenses	106.68	106.68	106.68

The Commission approves employee expenses at Rs.106.68 Crore for FY 2019-20 same as projected by MSPDCL.

7.14.2 Repairs and Maintenance expenses

Table 7.10: Repairs and maintenance expenses approved by the Commission for FY 2019-20
(Rs. Cr)

year	Approved in MYT Order	Projected by MSPDCL	Now Approved
R & M expenses	7.69	7.69	7.69

The Commission approves R & M expenses at Rs.7.69 Crore for FY 2019-20 same as projected by MSPDCL.

7.14.3 Administrative and General Expenses

Petitioner's submission

- Administrative and General (A&G) expense comprise of various sub-heads including the following:

- Travel and conveyance expenses
- Consultancy and regulatory fees
- IT services and outsourcing cost
- Office expenses
- Publication expenses
- Other administration expenses

Administrative and General (A&G) expenses approved by the commission in its order dt.12.03.2018 projected by MSPDCL and now approved by the commission are furnished in the table below:

Table 7.11: Administrative & General Expenses approved by the commission for FY 2019-20

Particulars	Approved in MYT Order	Projected by MSPDCL	Now Approved
A&G expenses	9.45	9.45	9.45

The Commission approves A & G expenses during Control period FY 2019-20 same as projected by MSPDCL.

Table 7.4: Summary of O & M expenses approved by the Commission for FY 2019-20

(Rs. Cr)		
Sl. No	Particulars	FY 2019-20
1	Employee Cost	106.68
2	R & M expenses	7.69
3	Administration and General expenses	9.45
	Grand Total	123.82

7.15 Capital Expenditure Plan

Capital Expenditure and capitalization approved by the commission in Tariff Order dt 12.03.2018, and same is assumed to be projected by MSPDCL (as they have not given any details in their filing) and now approved by the commission are furnished in table below:

Table 7.13: Capital Expenditure & Proposed approved by commission

(Rs. Cr)

Sl. No.	Particulars	Approved for FY 2019-20	Projected for FY 2019-20	Now Approved for FY 2020-21
A	Opening Balance of CWIP	909.39	909.39	909.39
B	Fresh Investment during the year	120	120	120
C	Investment capitalised out of opening CWIP	186.83	186.83	186.83
D	Investment capitalised out of fresh Investment	90	90	90
	Total Capitalisation during the year (C+D)	276.83	276.83	276.83
E	Closing Balance of CWIP (A + B - C - D)	752.56	752.56	752.56

The Commission considers the Capital investment and Capitalization during FY 2019-20 as proposed by MSPDCL supra.

7.16 Gross Fixed Assets & Depreciation

GFA and depreciation approved by the commission in its order dated 12.03.2018, same is assumed to be projected by MSPDCL (as they have not given any details in their filing) and now approved by the commission are furnished in table below:

Table 7.14: Depreciation approved by the Commission for FY 2019-20**(Rs. Cr)**

Sl. No	Particulars	Approved in Tariff Order	Projected by MSPDCL	Now Approved
1	Opening GFA	1136.99	1136.99	1136.99
2	Additions	276.83	276.83	276.83
3	Closing GFA	1413.82	1413.82	1413.82
4	Average GFA	1275.40	1275.40	1275.40
5	Average Rate of depreciation	2.42%	2.42%	2.42%
6	Gross depreciation	30.86	30.86	30.86
7	1 % of Gross Depreciation	0.31	0.31	0.31

The Commission approves depreciation at 0.31 Crore for FY 2019-20 as detailed supra.

7.17 Interest and Finance Charges

The Commission approves Interest and Finance charges approved by the Commission in its order dated 12.03.2018, same is assumed to be projected by MSPDCL (as they have not given any details in their filing) and now approved by the Commission for FY 2019-20 as detailed in the table below.

Table 7.15: Interest and Finance charges approved by the Commission for FY 2019-20**(Rs. Cr)**

Sl. No	Particulars	Approved in MYT order dt. 12.03.2018	Projected by MSPDCL	Now Approved by Commission
1	Opening loan	48.92	48.92	48.92
2	Additions	-	-	-
3	Repayment	7.44	7.44	7.44
4	Closing loan	41.48	41.48	41.48
5	Average loan	45.20	45.20	45.20
6	Rate of Interest%	11.45	11.45	11.45
7	Interest on Loan	5.17	5.17	5.17

The Commission approves Interest and Finance charges at Rs.5.17 Crore for FY 2019-20 as projected by MSPDCL.

7.18 Interest on Working Capital

As per regulation 29 (3) of JERC for MYT Regulations 2014 Interest on working capital shall be allowed on normative basis computed on the following.

- Operation and Maintenance expenses for one month, plus
- Maintenance of spares at 1 % of historical cost escalated at 6 % from the date of commercial operation, plus

- (c) Receivables equivalent to one month of expected revenue from charges for use of distribution wires at the prevailing tariffs, minus
- (d) Amount if any held as security deposit under change (b) of sub section (1) of Section 47 of the Act from Distribution system users accept the security deposit held in the form of bank guarantees.

Interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) as on 1st April of the financial year in which the petition is filed and the present rate is 13.45 %.

Interest on working capital approved by the commission in its order dt.12.03.2018, same is assumed to have projected by MSPDCL (as they have not submitted any details in their filings) and now approved by the commission are furnished in table below:

Table 7.16: Interest on Working Capital approved by the Commission for FY 2019-20
(Rs. Cr)

S. No.	Particulars (Rs Cr)	Approved in Tariff Order	Projected by MSPDCL	Now Approved
A)	Receivables	739.02	316.87	587.67
A) ii)	Receivables equivalent to 1 months average billing	61.59	26.41	48.97
B) i)	Maintenance spare (GFA)	1562.20	1136.99	833.97
B) ii)	1% of GFA escalated by 6% from the CoD	16.43	12.05	8.34
C) i)	O&M Expenses	132.15	123.82	123.82
C) ii)	O&M Expenses one month	11.01	10.32	10.32
D)	Total Working capital A) ii) - B) ii) - C)ii)	89.03	51.71	67.63
E)	Less : Total Security Deposit	-	-	0.67
F)	Net working Capital requirement	89.03	51.71	66.91
	Interest Rate	13.852	14.05	13.45
	Interest on working capital	12.33	6.59	9.01

The Commission approves the interest on working capital at Rs. 9.01 Cr for FY 2019-20 as against Rs.6.59 projected by MSPDCL.

7.19 Provision for Bad Debts

Provision for bad and doubtful debts approved by the commission in its order dt.12.03.2018, same is assumed to have projected by MSPDCL (as they have not

submitted any details in their filings) and now approved by the commission are furnished in table below:

Table 7.17: Provision for Bad & Doubtful debt approved by the Commission for FY 2019-20 (Rs. Cr)

Particular	Approved in Tariff Order	Projected by MSPDCL	Now Approved
Provision for Bad & Doubtful Debts	3.00	3.00	3.00

The Commission approves provision for bad debts at Rs.3.00 Crore for FY 2019-20 as projected by MSPDCL.

7.20 Return on Equity

As per the JERC (Terms and Conditions for Determination of Tariff) Regulations, MSPDCL is entitled for a Return on Equity (RoE) at 19.38% after grossing up of 15.50% RoE with the prevailing MAT rate of 20.01%

Return on equity approved by commission in its order dt.12.03.2018, same is assumed to have be projected by MSPDCL (as there are no detailed in their ARR filings) and now approved by commission for FY 2019-20 are furnished in table below:

Table 7.18: Return on equity approved by Commission for FY 2019-20

Particular (Rs Cr)	Approved in Tariff Order	Projected by MSPDCL	Now Approved
Average Equity	10.05	10.05	10.05
ROE (%) for the Year as per Regulations	15.50%	15.50%	15.50%
Return on Equity	1.56	1.56	1.56
MAT Rate applicable for the Year	20.01%	20.01%	20.01%
Net RoE	1.95	1.95	1.95

The Commission approves ROE including MAT on ROE at 20.01 % at Rs. 1.95 Crore during FY 2019-20 as projected by MSPDCL.

7.21 Non-Tariff Income

Petitioner's submission

1. Non-tariff income includes rebate on power purchase on account of timely payment through Letter of Credit being given by NEEPCO and NHPC, Manipur tax

on Loktak, departmental charges, miscellaneous charges from consumers.

2. MSPDCL would like to submit that the detailed break up of non-tariff income is not available with them since the company is in the process of adopting Companies Act and a new accounting policy for compliance of the same. The actual details of non- tariff income would be available next year while the petition for FY 19-20 is filed. Till such time, we are constrained to project the income based on the actual expenses available. At present, MSPDCL feels that some components of other income might be booked/reported in the head of revenue from sale of power because of which the non-tariff income is coming less than the expected/estimated figures. From current year, accounting is being done under new heads and the actual information under new heads shall be submitted to the Commission along with the next tariff petition.
3. For projecting the non-tariff income, the approved figures by Hon'ble Commission in the tariff order dt.12.03.2018 is taken. Details of non-tariff income for FY 2019-20 is provided in table below:

Table 7.19: Non-tariff Income projected by MSPDCL for FY 2019-20

(Rs. Cr)	
Particular	FY 2019-20
Non-Tariff Income	0.41

Commission's Analysis

The MSPDCL is directed to account for revenue from the heads specified in Regulation 77 of JERC from MYT Regulations 2014 under Non-Tariff Income invariably from next tariff petition.

For the present non-tariff income is approved as projected by MSPDCL.

The Commission approves the non-tariff income of Rs.5.40 Crore during FY 2019-20 as the same amount was projected by the MSPDCL in APR filings made for FY 2018-19.

7.22 Aggregate Revenue Requirement

Petitioner's Submission:

Based on the above analysis and approvals, the Aggregate Revenue Requirement projected by the MSPDCL and approved by the Commission for FY 2018-19 are furnished in the following tables.

Table 7.20: Aggregate Revenue Requirement for Control period FY 2019-20

(Rs. Cr)

Sl.	Particulars	Approved in Tariff Order dt.12.03.2018	Projected by MSPDCL	% of Total
A	Expenditure			
1	Cost of power purchase	452.66	452.66	61.05%
2	Inter-State Transmission charges	61.12	61.12	8.24%
3	Intra-state Transmission charges	86.87	86.57	11.68%
4	NERLDC Charges	0.71	0.71	0.10%
5	O&M Expenses	123.82	123.82	16.70%
	<i>Employee Expenses</i>	106.68	106.68	14.39%
	<i>Repair & Maintenance Expenses</i>	7.69	7.69	1.04%
	<i>Administrative & General Expenses</i>	9.45	9.45	1.27%
6	Depreciation	0.31	0.31	0.04%
7	Interest on Loan	5.17	5.17	0.70%
8	Interest on Working Capital	6.59	6.59	0.89%
9	Provision for bad debts	3.00	3.00	0.40%
	Total Cost	741.25	739.95	99.79%
B	Add: Return on Equity	1.95	1.95	0.26%
	Add: Income Tax		0.00	0.00%
	B: Total	1.95	1.95	0.26%
C	Total ARR: A+B	743.20	741.90	100.06%
D	Less (Non-Tariff Income)	0.41	0.41	0.06%
	Sub-total (D)	0.41	0.41	0.06%
	Net Aggregate Revenue Requirement (C-D)	742.79	741.49	100.00%

Commission's Analysis

Based on the approved costs Aggregate Revenue Requirement for FY 2019-20 is approved as detailed below:

Table 7.21: Aggregate Revenue Requirement approved by the Commission for FY 2019-20

(Rs. Crs)

Sl. No	Particulars	Now approved by Commission
A	Expenditure	
1	Cost of power purchase	378.36
2	Inter-State Transmission charges	61.12
3	Intra-state Transmission charges	85.68
4	NERLDC Charges	0.71
5	O&M Expenses	123.82
	<i>Employee Expenses</i>	106.68
	<i>Repair & Maintenance Expenses</i>	7.69
	<i>Administrative & General Expenses</i>	9.45

Sl. No	Particulars	Now approved by Commission
6	Depreciation	0.31
7	Interest on Loan	5.17
8	Interest on Working Capital	9.01
9	Provision for bad debts	3.00
	Total Cost	667.17
B	Add: Return on Equity	1.95
	Add: Income Tax	
	B: Total	1.95
C	Total ARR: A+B	669.12
D	Less (Non-Tariff Income)	5.40
	Sub-total (D)	5.40
	Net Aggregate Revenue Requirement (C-D)	663.72

Commission approves net ARR at Rs.663.72 Crore for FY 2019-20 as against Rs.741.90 Crore projected by MSPDCL

7.23 Expected Revenue from Existing Tariff

Petitioner's submission

1. Revenue from sale of power for FY 2019-20 at existing tariff has been determined based on the category-wise energy sales approved by the Hon'ble Commission in the MYT Order for FY 2019-20 and the category-wise tariff approved by the Hon'ble Commission in the MYT Order for FY 2018-19.
2. Revenue from sale of power at existing tariff is estimated to be Rs 310.71 crore for FY 2019-20.

For FY 2019-20, while approving the Energy Balance, the Hon'ble Commission has approved quantum of surplus power to be sold by MSPDCL, as 375.45 MU. As the actual distribution losses as well as the intra-State losses in Manipur are much higher than that approved by the Hon'ble Commission, the actual quantum of surplus power that would be available to MSPDCL for sale, would be significantly lower. However, for the purposes of this Petition, MSPDCL has considered the same quantum of surplus power to be sold, as the ARR approved by the Hon'ble Commission for FY 2019-20 is being considered in totality.

3. MSPDCL has sold surplus power in the IEX at an average rate of Rs. 2.65/kWh in FY 2017-18 and at an average rate of Rs.2.65/kWh in the first half of FY 2018-19 (April

to September). Accordingly, MSPDCL has considered that it will be selling the surplus power at Rs 2.65/kWh in FY 2019-20. The impact of the difference in the quantum of surplus power and the rate for sale of surplus power, shall be claimed at the time of true-up for FY 2019-20. The estimated revenue from sale of surplus power in FY 2019-20 based on the approved quantum of surplus power and the expected rate for sale of surplus power, thus works out to Rs. 99.41 crore.

The Table below summarizes the category-wise revenue from sale of power at existing tariff for FY 2019-20:

Table 7.22: Revenue from Sale of Power in FY 2019-20 projected by MSPDCL at Existing Tariff of FY 2018-19

(Rs. Cr)

Category of Consumers	Energy Sales (MU)	Total Revenue (Rs. Crore)	Average Realization (Rs/kWh)
LT Supply			
Kutir Jyoti	16.00	4.23	2.65
Domestic	363.00	176.31	4.86
Commercial	45.00	27.19	6.04
Public Lighting System	5.00	3.34	6.68
Public Water works	2.00	1.36	6.82
Irrigation & Agriculture	1.00	0.43	3.57
Small Industry	20.00	8.98	4.49
Total LT Supply	452.00	221.86	4.91
HT Supply			
Commercial	6.00	4.35	7.25
Public Water works	17.00	12.37	7.28
Irrigation & Agriculture	0.80	0.35	4.35
Medium Industry	4.00	2.11	5.28
Large Industry	6.00	4.25	7.08
Bulk Supply	114.00	65.43	5.74
Total HT Supply	148.00	88.86	6.01
TOTAL MSPDCL	600.00	310.72	5.18
Surplus Power	375.12	99.41	2.65
Total	975.12	410.11	4.21

Commission's Analysis

As already discussed in Para 7.6 the surplus power to be sold under UI sales during FY 2019-20 is 371.42 MU. The petitioner projected the rate for U.I sales at Rs.2.65 / KWH. Since surplus is net firm power the same has to be sold through exchange/UI

and realise the revenue at ruling price in the exchange by proper planning at SLDC. Now with the category wise sales approved vide Para 7.5 the revenue from existing tariff and the revenue from sale of surplus power of 371.42 MU works out to Rs. 409.14 Cr for FY 2019-20 as detailed in the table below.

7.23: Revenue for FY 2019-20 from Existing Tariffs of FY 2018-19

Sl. No	Category	Energy Sales (MU)	Average Rate (Rs/kWh)	Revenue (Rs.Crs)
A	LT Supply			
1	Kutir Jyoti	20.96	2.46	5.16
2	Domestic	386.83	4.90	189.64
3	Commercial	45.43	6.73	30.57
4	Public Lighting	5.08	6.63	3.37
5	Public Water Works	2.2	6.89	1.52
6	Agriculture	1.27	3.68	0.47
7	Small Industries	20	4.20	8.41
8	Total LT	481.77	4.96	239.12
B	HT Supply			
9	Commercial	6.06	8.27	5.0101
10	Public Water Works	18.66	7.32	13.6545
11	Agriculture	0.85	5.66	0.4809
12	Medium Industries	4.1	6.49	2.6629
13	Large Industries	6	8.48	5.088
14	Bulk Supply	114	6.58	75.0149
15	Total HT	149.67	6.81	101.9113
16	Grand Total (LT+HT)	631.44	5.40	341.04
17	UI Sales	287.25	2.65	76.05
18	Total Sales	918.69	4.54	417.09

*Note: Detailed calculation is given in **Annexure - III***

Table 7.24: Revenue from revised tariffs for FY 2019-20 as per the Commission

Sl. No	Category	Energy Sales (MU)	Average Rate (Rs/kWh)	Revenue (Rs.Crs)
A	LT Supply			
1	Kutir Jyoti	20.96	2.80	5.87
2	Domestic	386.83	5.28	204.24
3	Commercial	45.43	7.17	32.58
4	Public Lighting	5.08	7.13	3.62
5	Public Water Works	2.2	7.44	1.64
6	Agriculture	1.27	4.07	0.52
7	Small Industries	20	4.55	9.11
8	Total Low Tension	481.77	5.35	257.58
B	HT Supply			
9	Commercial	6.06	8.93	5.41
10	Public Water Works	18.66	8.04	15.00
11	Agriculture	0.85	6.00	0.51
12	Medium Industries	4.1	6.94	2.85
13	Large Industries	6	9.04	5.42
14	Bulk Supply	114	7.14	81.35
15	Total High Tension	149.67	7.39	110.54
16	Grand Total (LT+HT)	631.44	5.83	368.12
17	UI Sales	287.25	2.65	76.05
18	Total Sales	918.69	4.83	444.17

Detailed calculation of revenue from sale within the State is given in **Annexure -IV**.

The Commission, accordingly, approves the revenue with approved Revised tariff at Rs.444.17 Crore as against Rs.410.11 Crore projected by MSPDCL.

7.24 Revenue Gap for FY 2019-20 with revised tariff

Table 7.25: Revenue Gap approved by the Commission for FY 2019-20

Particulars	Unit	Projected by MSPDCL	Approved by the Commission
Net Revenue requirement	Rs. Crore	741.49	663.72
Revenue from existing tariff	Rs. Crore	310.70	368.00
Sale of surplus power	Rs. Crore	99.41	76.05
Total Sales Proceeds	Rs. Crore	410.11	444.17
Revenue Gap	Rs. Crore	331.38	219.48
Internal Efficiency	Rs.Crore	0	0.07
Energy sales	MU	599.00	631.44
Sale of Surplus Power	MU	375.45	287.25
Total Energy Sales	MU	974.45	918.69

As seen from Para above, there is a revenue gap of Rs.219.48 Crore which is about

33.08% of Net ARR for FY 2019-20. The revised tariffs are approved w.e.f 01.04.2019. As such the Commission considers to revise the tariffs by an average increase of 7.94% under telescopic billing as against 36% proposed by MSPDCL without giving tariff shock to consumers to bridge the gap partially by revision in Tariffs. Owing to revision of tariffs the MSPDCL is expected to get additional revenue of Rs. 27.09 Crore (i.e Rs.368.12Crs – Rs.341.03 Crs), thereby the overall gap is reduced to Rs.219.55Crore of which the MSPDCL shall meet Rs.219.48 crores from Government subsidy and the remaining Rs.7 (seven) lakhs from their internal efficiency itself.

7.25 Government Subsidy/ Support

As seen from the above, it is clear that the revenue from sale of power is not sufficient to meet the expenditure and the MSPDCL shall continue to depend upon the subsidy/support from Government of Manipur. The net revenue gap of Rs. 219.55 Crore is arrived at (including internal efficiency amount of Rs.7 lakhs), as indicated at Para 7.24 supra, shall be met from Government subsidy/ support against Rs. 220 Crore as projected by MSPDCL.

The ARR & Tariff Petition for FY 2019-20 was filed by the MSPDCL, Manipur with the prior approval of the State Government. The licensee, in their submitted Tariff Petition, had proposed a tariff hike of 36% (i.e., for Rs.111.38 Crs) over the prevailing tariffs of FY 2018-19 resulting in a revenue gap amounting to Rs.220 Crs which needs to be absorbed only by way of subsidy from the State Government of Manipur.

To achieve the objective of year on year tariffs progressively reflects the cost of electricity supply, the grant of subsidy shall have to be reduced every year in decrementing fashion and ultimately make the power utility to manage without Government subsidy support. Keeping this in view, the Commission consciously considers the overall subsidy requirement to the extent of **Rs.219.55 crore (Rupees Two hundred and nineteen crores and fifty-five lakhs only)** for FY 2019-20 upon suitably revising the prevailing tariffs of FY 2018-19 at an average rate of increase at 7.94% (seven point nine four percent) only in order not to cause much burden to the

consumers.

The Section 65 of the Electricity Act 2003 mandates that the State Government shall release subsidy amount due to the licensee in advance so as to enable the licensee to implement the subsidized tariffs to their consumers as per Revised Subsidised Tariff schedule at Table-8.2 & detailed calculation at Annex-IV. The State Government should release the above stated subsidy amount in Twelve (12) equal monthly installment amounting to **Rs.18.29 (Rupees eighteen crore and twenty-nine lakhs only)** per month. The balance amounting to Rs.7.00 lakhs shall be met by MSPDCL through internal efficiency improvement. However, in the event of non-receipt of subsidy in any month from the Government, the licensee can adopt the applicable **full cost tariff (FCT)** at Table-8.3, while issuing the monthly energy bill for that month (detail revenue calculation is indicated at Annexure-IV). A brief summary of revenue amount from full cost Tariff and sale of surplus power is tabulated below for reference.

Table: 7.26. Revenue details of MSPDCL at Full Cost Tariff for FY 2019-20

Sl. No	Category	Energy Sales (MU)	Average Rate (Rs/kWh)	Revenue (Rs.Crs)
A	LT Supply			
1	Kutir Jyoti	20.96	7.55	15.83
2	Domestic	386.83	8.76	338.90
3	Commercial	45.43	11.18	50.79
4	Public Lighting	5.08	9.70	4.93
5	Public Water Works	2.20	10.68	2.35
6	Agriculture	1.27	7.90	1.00
7	Small Industries	20.00	9.60	19.20
8	Total LT	481.77	8.99	432.99
B	HT Supply			
9	Commercial	6.06	11.21	6.7906
10	Public Water Works	18.66	11.15	20.8062
11	Agriculture	0.85	10.52	0.894
12	Medium Industries	4.1	11.16	4.5744
13	Large Industries	6	12.43	7.4569
14	Bulk Supply	114	10.08	114.9428
15	Total High Tension	149.67	10.39	155.4649
16	Grand Total (LT+HT)	631.44	9.32	588.46
17	UI Sales	287.25	2.65	76.05
18	Total Sales	918.69	7.23	664.51

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There can be a situation where the outstanding subsidy was released by the government after passage of much time and thereby if consumers were billed at full cost tariffs in any relevant month or months. Given the situation, the entire excess amount so charged on account of full cost tariff shall have to be reflected as rebate, by the licensee at a time, in the immediate monthly billing cycle being issued to respective consumers soon after receiving such subsidy pertaining to the past. If the rebate amount is exceeding the monthly bill amount to be adjusted, then such excess amount may be carried forward and be adjusted in the following monthly bills issued to the consumer until full settlement is made.

Lastly, the brief summary of the calculations in support of subsidy amount arrived at, the average cost of supply and the average revenue realisation details are tabulated in the following table.

Table 7.27: Average Cost of Electricity supply within Manipur

Sl. No	Particulars	Units	Projected by MSPDCL	Approved by the Commission
1	Net overall ARR	Rs. Cr	741.49	633.72
2	Sale of surplus power	Rs. Cr	99.41	76.05
3	Net ARR within the state (1-2)	Rs. Cr	642.08	587.67
4	Govt. subsidy/ Support	Rs. Cr	220	219.55
5	Net ARR after Govt. subsidy (3-4)	Rs. Cr	422.08	368.12
6	Energy sale within the state	MU	599	631.44
7	Average cost of supply (3/6)	Rs/KWH	10.72	9.32
8	Avg. Revn. realisation (If subsidy is paid)- (5/6)	Rs/KWH	7.05	5.83
9	Avg. per unit Subsidy (7-8)	Rs/kWh	3.67	3.48

8. Tariff Principles and Design

8.1 Background

- a. The Commission, in determining the revenue requirement of MSPDCL for the year 2017-18 and the retail tariff, has been guided by the provisions of the Electricity Act, 2003, the National Tariff Policy (NTP), Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and Regulations on Terms and Conditions of Tariff notified by the JERC for M&M. Section 61 of the Act lays down the broad principles, which shall guide determination of retail tariff. As per these principles the tariff should “Progressively reflect cost of supply” and also reduce cross subsidies “within the period to be specified by the Commission”. The Act lays special emphasis on safeguarding consumer interests and also requires that the costs should be recovered in a reasonable manner. The Act mandates that tariff determination should be guided by the factors, which encourage competition, efficiency, economical use of resources, good performance and optimum investment.

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

- b. The NTP mandates that the Multi-Year-Tariff (MYT) framework be adopted for determination of tariff from 1st April 2006. Accordingly, the MSPDCL has filed petition for determination of ARR for to FY 2018-19 with reliable data.
- c. The mandate of the NTP is that tariff should be within plus / minus 20% of the average cost. It is not possible for the Commission at this stage to lay down the road map for reduction of cross subsidy within $\pm 20\%$ mainly because of consumers’ low paying capacity and relatively high cost of power. The gap in the year 2015-16 was 31.11% and that of 2017-18 is about 28.08

%. However, in this tariff order an element of performance target has been indicated by setting target for distribution loss reduction and increasing sales volume during FY 2018-19. The improved performance, by reduction of loss level, and increase in sales will result in substantial reduction in average cost of supply. The existing and proposed tariffs of MSPDCL are two part tariff. The Commission has considered for a nominal increase in tariff in view of the low paying capacity in the State.

d. Clause 8.3 of National Tariff Policy lays down the following principles for tariff design:

- (i) In accordance with the National Electricity Policy, consumers below poverty line who consume below a specified level, say 30 units per Month, may receive a special support through cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.
- (ii) For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify the roadmap, within six Months with a target that latest by the end of the year 2018-19 that tariffs are within $\pm 20\%$ of the average cost of supply. The road map would have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.

For example, if the average cost of service is Rs.3 per unit, at the end of year 2015-16, the tariff for the cross subsidized categories excluding those referred to in para-1 above should not be lower than Rs. 2.40 per unit and that for any of the cross subsidizing categories should not go beyond Rs.3.60 per unit.
- (iii) While fixing tariff for agricultural use, the imperatives of the need of using ground water resources in a sustainable manner would also need to be kept in mind in addition to the average cost of supply. The tariff for agricultural use may be set at different levels for different parts of the State depending on the condition of the ground water table to prevent excessive depletion of ground water.

- e. Regulation 16 of JERC for M&M (Terms and Conditions for Determination of Tariff) Regulations specifies.
- (i) The cross subsidy for a consumer category means the difference between the average per unit rate based on tariff schedule of the Commission for that Category and the combine average cost of supply per unit expressed in percentage terms as a portion of the combined average cost of supply.
 - (ii) In the first place, the Commission shall determine the tariff, so that it progressively reflects the combined average cost of supply of electricity and also reduce cross-subsidies within a reasonable period. In the second phase, the Commission shall consider moving towards category wise cost of supply as a basis for determination of tariff.
- f. The Commission has considered special treatment to Kutir Jyoti connections and agricultural sector. It has also aimed at raising the per capita consumption of the State from 100 kwh in 2010-11 to 162 kWh in 2014-15 and 300 kWh by the end of 2018-19. The Commission endeavors that the tariffs progressively reflects cost of supply in a shortest period and the Government subsidy is also to be reduced gradually. The tariffs have been rationalized with regard to inflation, paying capacity of consumers and to avoid tariff shock.

8.2 Tariffs Proposed by the MSPDCL and Approved by the Commission

a) Existing & Proposed by MSPDCL

MSPDCL in its tariff petition for FY 2019-20 has proposed for revision of the existing retail tariffs to various categories of consumers to earn additional revenue to meet the expenses partly.

The MSPDCL has proposed tariff revision as indicated in table - 8.1 below. The proposed increase in tariff by the MSPDCL would result in an overall increase of about 36%.

Table 8.1: Existing and Proposed Tariff for FY 2018-19

Proposed by MSPDCL		Existing Tariff		Proposed Tariff	
Sl. No	Consumer Category (FY 2019-20)	Fixed Charges (P.M)	Energy Charges	Fixed Charges (P.M)	Energy Charges
	LT SUPPLY		(Rs./kWh)		(Rs./kWh)
1	Kutir Jyoti				
	All units in Month	20.00 (Connection)	1.70	Merged with domestic	
2	Domestic				
	First - 100 kwh/Month	60.00	3.60	70.00	4.70
	Next 100 kwh/Month	60.00	4.35	70.00	6.45
	Above 200 kwh/Month	60.00	5.60	70.00	8.30
3	Non-Domestic/Commercial				
	First - 100 kwh/Month	80.00	5.00	90.00	7.40
	Next 100 kwh/Month	80.00	6.00	90.00	8.90
	Above 200 kwh/Month	80.00	7.10	90.00	9.90
4	Public Lighting	65.00	6.50	75.00	8.15
5	Public Water Works	100.00	6.70	115.00	8.40
6	Irrigation & Agriculture	60.00	3.50	70.00	4.80
7	Small Industry	65.00	3.75	75.00	5.35
	HT SUPPLY	Rs/kVA/PM	(Rs./kWh)	Rs/kVA/PM	(Rs./kWh)
1	Commercial	100.00	7.00	115.00	9.50
2	Public Water Works	100.00	6.10	115.00	8.25
3	Irrigation & Agriculture	100.00	3.30	115.00	4.50
4	Medium Industry	100.00	4.90	115.00	6.70
5	Large Industry	100.00	6.10	115.00	8.30
6	Bulk Supply	100.00	5.40	115.00	7.55

8.2.1 Tariffs Approved by the Commission

(a) Approved Subsidised Tariff for FY 2019-20

The Commission worked out the average rate to be Rs. 5.40/kWh on adopting the existing tariff of FY 2018-19 for the FY 2019-20 on the basis of increased number of consumers and energy consumption. Having considered the petition of MSPDCL for approval of Aggregate Revenue Requirement (ARR) and determination of Retail Tariff for supply of energy and having approved the Aggregate Revenue Requirement (ARR) with an overall gap of Rs. 219.55 Crore vide Para 7.24 of Chapter-7, the Commission considers to revise the subsidised tariffs under Telescopic billing with an average increase of 7.94% as against 36% proposed by MSPDCL as detailed below:

The Commission has not agreed to increase the fixed charges proposed by MSPDCL

except under KJ.

Table 8.2: Category wise Subsidised Tariffs approved by the Commission for FY 2019-20

Sl. No	Consumer Category (FY 2019-20)	Existing Tariff		Approved Subsidised Tariff	
		Fixed Charges (P.M)	Energy Charges (Rs./kWh)	Fixed Charges (P.M)	Energy Charges (Rs./kWh)
	LT SUPPLY		(Rs./kWh/PM)		(Rs./kWh/PM)
1	Kutir Jyoti				
	All Units/month	20 (Connection)	1.70	25.00	1.85
2	Domestic				
	First - 100 kwh/Month	60.00	3.60	60.00	3.90
	Next 100 kwh/Month	60.00	4.35	60.00	5.20
	Above 200 kwh/Month	60.00	5.60	60.00	6.00
3	Non-Domestic/Commercial				
	First - 100 kwh/Month	80.00	5.00	80.00	5.40
	Next 100 kwh/Month	80.00	6.00	80.00	6.50
	Above 200 kwh/Month	80.00	7.10	80.00	7.65
4	Public Lighting	65.00	6.50	65.00	7.00
5	Public Water Works	100.00	6.70	100.00	7.25
6	Irrigation & Agriculture	60.00	3.50	60.00	3.90
7	Small Industry	65.00	3.75	65.00	4.10
	HT SUPPLY	Rs/kVA/PM	Rs/kVA/PM	Rs/kVA/PM	Rs/kVA/PM
1	Commercial	100.00	7.00	100.00	7.60
2	Public Water Works	100.00	6.10	100.00	6.75
3	Irrigation & Agriculture	100.00	3.30	100.00	3.60
4	Medium Industry	100.00	4.90	100.00	5.30
5	Large Industry	100.00	6.10	100.00	6.60
6	Bulk Supply	100.00	5.40	100.00	5.90

In Kutir Jyothi category, the Fixed charge is applicable on per connection basis and in other categories under LT supply the Fixed charge is applicable on the Contracted Load per KW. Detailed rates for all categories of consumers are indicated in the Tariff Schedule.

There is no tariff for unmetered supply because no installation should be serviced without appropriate and correct meter as per Section 55 of Electricity Act 2003 and as per clause 5.1 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments. Billing should be done on KVAH instead KWH in HT supply.

Note:- The above table depicts fixed and energy charge only. Detailed Charges are given in the tariff schedule appended at Annexure- III & IV at the end of the Tariff Order.

(b) Approved Full Cost Tariff (FCT)

With the approved ARR for FY 2019-20, the Commission also works out the average cost of supply at the rate of Rs.9.32/kWh. In the event of non-receipt of subsidy in any month from the State Government, the Commission considers to make full cost tariff as tabulated below:

Table 8.3: Category wise Full Cost Tariff (i.e., without subsidy) approved by the Commission for FY 2019-20

Sl. No.	Consumer Category	Full Cost Tariff	
		Energy Charges (Rs.)	Fixed Charges (Rs.)
1	Kutir Jyothi		
	All Units	6.60/kWh	25 per Connection
2	Domestic		
i)	First 100 kWh	7.30/kWh	70/Contracted Load in kW
ii)	Next 100 kWh	7.80/kWh	70/Contracted Load in kW
iii)	Balance > 200 kWh	8.50/kWh	70/Contracted Load in kW
3	Non-Domestic/Commercial		
A	Low Tension		
i)	First 100 kWh	9.30/kWh	100/Contracted Load in kW
ii)	Next 100 kWh	10.00/kWh	100/Contracted Load in kW
iii)	Balance > 200 kWh	10.60/kWh	100/Contracted Load in kW
B	High Tension	9.60/kVAh	110/Billing Demand in kVA
4	Public Lighting	9.50/kWh	100/Contracted Load in kW
5	Irrigation & Agriculture		
A	Low Tension	7.60/kWh	100/Contracted Load in kW
B	High Tension	7.50/kVAh	110/Billing Demand in kVA
6	Public Water Works		
A	Low Tension	10.50/kWh	100/Contracted Load in kW
B	High Tension	9.50/kVAh	110/Billing Demand in kVA
7	Industrial		
A	Small Industry (LT)	8.90/kWh	100/Contracted Load in kW
B	Medium Industry	9.00/kVAh	110/Billing Demand in kVA
C	Large Industry	9.50/kVAh	110/Billing Demand in kVA
9	Bulk Supply	8.50/kVAh	110/Billing Demand in kVA

b) Miscellaneous Charges and Important Conditions of Supply

The detailed Tariffs including rates for un-metered categories of consumer, miscellaneous charges and Important Conditions of Supply furnished by MSPDCL are examined and approval is given as stipulated in the Tariff Schedule in the Appendix.

Wheeling Charges for FY 2019-20

9.1 Background

MSPDCL has wheeling charges at 1.18/kwh. The MSPDCL is not maintaining separate accounts for the distribution wire business and retail supply business. So the ARR of the wheeling business is arrived at as per the following matrix.

Table 9.1 Allocation matrix

Sl. No.	Particulars	Wire business	Retail Supply business
1	Power purchase cost	0	100
2	Employee cost	60	40
3	R & M expenses	90	10
4	Adm. & General Expenses	50	50
5	Depreciation	90	10
6	Interest & Finance Charges	90	10
7	Interest on working Capital	10	90
8	Provision for bad debts	0	100
9	Income tax	90	10
10	Return on equity	90	10
11	Contribution to contingency reserves	100	0
12	Non-tariff Income	10	90

9.2 ARR for wheeling business projected by MSPDCL

Table 9.2: ARR for Wires Business for FY 2019-20 projected by MSPDCL

Sl. No	Particulars	Total ARR	Wires Business (%)	Retail Supply Business (%)	Wires ARR	Supply ARR
A	Expenditure					
1	Cost of power purchase	452.66	0%	100%	0.00	452.66
2	Inter-State Transmission charges	61.12	0%	100%	0.00	61.12
3	Intra-State Transmission charges	86.57	0%	100%	0.00	86.57
4	NERLDC Charges	0.71	0%	100%	0.00	0.71
5	O&M Expenses	123.82			75.65	48.17
	Employee Expenses	106.68	60%	40%	64.01	42.67
	Repair & Maintenance Expenses	7.69	90%	10%	6.92	0.77
	Administrative & General Expenses	9.45	50%	50%	4.73	4.73
6	Depreciation	0.31	90%	10%	0.28	0.03

Sl. No	Particulars	Total ARR	Wires Business (%)	Retail Supply Business (%)	Wires ARR	Supply ARR
7	Interest on Loan	5.17	90%	10%	4.65	0.52
8	Interest on Working Capital	6.59	10%	90%	0.66	5.93
9	Provision for bad debts	3.00	0%	100%	0.00	3.00
	Total Cost	739.95			81.24	660.01
B	Add: Return on Equity	1.95	90%	10%	1.76	0.20
	Add: Income Tax	0.00	90%	10%	0.00	0.00
	B: Total	1.95			1.76	0.20
C	Total ARR: A+B	741.90			83.00	660.20
D	Less (Non-Tariff Income)	0.41	10%	90%	0.04	0.37
	Sub-total (D)	0.41			0.04	0.37
	Net Aggregate Revenue Requirement (C-D)	741.49			82.96	658.53

The proposed Wheeling Charges for FY 2019-20 have been computed based on the methodology adopted by the Hon'ble Commission for determining the Wheeling Charges for FY 2018-19 in the MYT Order dated March 12, 2018, as shown in the Table below:

Table 9.3: ARR for Wires Business for FY 2019-20 projected by MSPDCL

Sl.	Particulars	Units	Amount
1	ARR for Wires Business	Rs. Crore	82.96
2	Energy available at Distribution periphery	MU	704.71
3	Wheeling Charges	Rs/kWh	1.18

Thus, MSPDCL proposes Wheeling Charges of Rs. 1.18 per kWh for Open Access transactions in the State of Manipur.

Commissions Analysis

ARR for wheeling business arrived based on approved ARR and methodology vide Table 9.1 supra is as detailed in table below.

Table 9.4: ARR of wheeling business approved by the Commission for FY 2019-20

Sl. No	Particulars	Total ARR for FY 2019-20	ARR for wire business for FY 2019-20	Retail Supply for FY 2019-20
1	Power purchase cost including Transmission charges	525.87	-	525.87
2	Employee cost	106.68	64.01	42.67
3	R & M expenses	7.69	6.92	0.77
4	Adm. & General Expenses	9.45	4.73	4.72
5	Depreciation	0.31	0.28	0.03

Sl. No	Particulars	Total ARR for FY 2019-20	ARR for wire business for FY 2019-20	Retail Supply for FY 2019-20
6	Interest & Finance Charges	5.17	4.65	0.52
7	Interest on working Capital	9.01	0.90	8.11
8	Provision for bad debts	3.00	-	3.00
10	Return on equity	1.95	1.76	0.19
11	Contribution to contingency reserves			-
12	Less: Non-tariff Income	5.40	0.54	4.86
	Total	663.72	82.69	581.03

9.3 Wheeling Tariff

The wheeling tariff has been calculated on the basis of the ARR for wheeling business and total energy sold as detailed in table below:

Table 9.5: Wheeling Tariff approved by the Commission for FY 2019-20

Sl. No	Particulars	Unit	FY 2019-20
1	ARR for wheeling function	Rs/Crore	82.69
2	Energy available at Distribution periphery	MU	742.87
3	Wheeling tariff	Rs/kWh	1.113

The Commission approves wheeling charge at Rs. 1.113/kWh for FY 2019-20 as against Rs.1.18 proposed by MSPDCL.

9. Directives

10.1 General

While examining the information and data contained in the and Tariff Petition for FY 2019-20, it is observed that the computation and compilation of the data have been done based on assumptions only and as a result, there has been difficulties in finalization of the ARR and determination of retail tariff also. The above observation itself substantiates the fact that the administrative, technical and commercial performances of the MSPDCL require substantial improvement within a specified time frame.

Similar situation was noticed in the ARR & Tariff petition for the FY 2019-20. The Commission had observed that while there is ample scope for reducing cost and increasing efficiency in the operation of the department, serious efforts appear to be lacking. It is in the above context that certain directives were given in the earlier Tariff Orders of which some were fully complied with. The Commission expected that MSPDCL would take prompt action on the directives and monitor their implementation. Unfortunately, action is yet to be taken on most of the important directives, which could make significant difference to operational efficiency and cost. In some cases action has no doubt been initiated, but overall seriousness with which the directives were issued by the Commission does not appear to have been realized by the MSPDCL.

In the above background, the Commission is constrained to repeat the directives which have not been fully complied with and also specific new directives are added.

BALANCE DIRECTIVES ISSUED

Directive 2: Annual Statement of Accounts

MSPDCL was directed to prepare separate Annual accounts statements such as balance sheet, profit and loss Account and relevant schedules and statements, every year for regulatory purpose and submit to the Commission after duly getting them audited.

Compliance Status

MSPDCL is in the process of finalizing the financial statements of FY 2017-18 and will

submit the same to the Hon'ble Commission once it is finalized.

Comment of the Commission

MSPDCL should file next ARR tariff petition along with true up petition base on audited annual accounts figure for the years from 2015-16, 2016-17 and 2017-18. Their commission shall no longer entertain provisional true up.

Commission will no longer entertain provisional true up in the next tariff petition without the submission of the Audited annual accounts in full shape.

The delay in submission of true-up will cost the Licensee to forego the entitlement to claim for additional period cost due to inflation for the true-up delay.

Directive 3: Maintenance of Asset & Depreciation Registers

MSPDCL was directed to update the asset register and submit to the Commission soon.

Compliance Status:

Asset and depreciation registers for FY 2015-16 and 2016-17 are ready for submission.

Comment of the Commission

The registers that are ready may be submitted to the commission. It should be noted that the registers be upto dated ie., for FY 2017-18, FY 2018-19 and soon..

Directive 4: Management Information System (MIS)

MSPDCL was directed to take appropriate steps to build up credible & accurate database and management information system (MIS) and regularly update the same for future record and reference.

Arrangement may also be made for "On-line Payment" and "Payment through Bank" of the electricity bills.

Compliance Status

The MIS system is under progress and the database is being prepared. The online payment portal for pre-paid recharge is already active, where payments can be done through electronic wallets.

Comments of the Commission

Targeted data by which the up to date MIS be intimated

Directive 5: Revenue Arrears

The MSPDCL was directed to assess year wise Revenue Arrears due from consumers and submit a report by 30th September, 2011 to the Commission. The MSPDCL was also further directed to initiate action to collect/ liquidate the arrears.

Compliance Status

A major part of the total power sales is constituted by domestic category consumers and hence, the revenue arrears are expected to reduce through the actions initiated by MSPDCL.

1. Prepaid Consumer
2. Post Paid Consumer

MSPDCL deducts 20% on every recharge from the outstanding arrears of the respective consumers. HT consumers including hospitals have been sent disconnection warning notices for clearing their outstanding dues. Other government consumers having outstanding amount have been asked to clear the amount through government funding, for which a request has been made.

Comments of the Commission

Through prepaid meters' future accumulation of fresh arrears can be arrested. At present we are in Post-paid meters' usage stage. In the directive, it was requested to submitted category wise year wise arrears due at a point of time say as on 31.03.2018.

This may be reported by 30.06.2019.

Directive 8: Sale of Power outside the State

MSPDCL was directed to ensure that only surplus power be sold under UI sales after fully meeting the state's requirement without any stagnation of supply in the state. This may be ensured strictly.

Compliance Status

Due to improvement in the UI mechanism, the Power purchased under UI decreased from 33.58 MU in FY 2016-17 to 6.02 MU in FY 2017-18. Under UI mechanism the company has sold 13.34 MU of surplus energy available.

Further, another 207.74 MU of surplus power has been sold on the Power Exchange, after fully meeting the State's requirement.

Comment of the Commission

The average power purchase cost in Rs.6.84/kwh during FY 2017-18. While the surplus power of 225.71 MU but not 207.74 MU was sold at an average cost of Rs.2.438/kwh during FY 2017-18 by incurring loss in every unit sold. Instead had the power drawn to the actual requirement by proper planning this type of loss can be avoided.

Therefore, this practice of selling units at loss be discontinued forthwith. The loss on account of this surplus power sell cannot be passed on to the consumers partially, though Government subsidy is also absorbing to a greater extent. In future, the Commission will flag this kind of loss transactions and would disallow to pass it on to consumers from next year tariff determination.

Directive 10: Unauthorized Connection/ Theft of power Cases

&

Directive 11: Detailed Survey & Investigation

In the above two directives the Commission had directed to carryout detailed survey & Investigation to:

1. Identify unauthorized connections.
2. Physical verification of the connected load of all connections.
3. Physical verification of the categories under which the consumers are availing supply.
4. Verification & updating of names of the consumers etc. and
5. Regularize 30000 unauthorized consumers annually.

Compliance Status

The unauthorized connections and connected load are being taken care of under the pre-paid metering plan. MSPDCL has already achieved 100% pre-paid metering for EC-I. For EC-II and EC-III, 100% per-paid metering will be achieved by the end of the FY 2018-19.

Comment of the Commission

Unauthorized connections shall be brought under billing once they are identified and regularized but not by prepaid metering plan. Similarly unauthorized connected load

shall be brought under billing once it is identified and regularized. In either case physical verification of connections is only remedy.

Directive 12: Replacement of Defective Meters and Installation of Meters to Un-Metered Connections

The MSPDCL was directed to provide meters to all unmetered consumers and replace the defective meters within the time frame given in the commission order No. 24012/2/5/09 – JERC dt: 7.1.2011 on 100% metering plan and submit quarterly report regularly.

Compliance status

It is submitted that MSPDCL is allotting the New connection to the consumer only after installation of the Meter.

List of Replacement of Defective Meters and installation of Meters to Un-Metered Connection is under consideration & will be submitted once finalized.

Comment of the Commission

Targeted date by which the work in question be completed be intimated for following action.

BALANCE DIRECTIVES ISSUED IN FY 2015-16

Directive 13: Physical and Financial Status of RAPDRP & RGGVY Schemes

As per above directive MSPDCL has to submit physical and financial progress of work done and the impact of the works on revenue performance and metering with details of work done, amount of revenue increase etc.

Compliance Status

The details of Physical and financial status of RAPDRP & RGGVY Schemes are attached as **Annexure-2**.

Comments of the Commission:

The impact on works on revenue performance, metering with details of work done and amount of revenue increase were not indicated or replied. Even from the details submitted the financial progress appears to very low and it needs drastic improvement to achieve desired objective. The Licensee still needs to send the

additional details pending on this issue which may be communicated to the Commission at the earliest. The licensee shall submit the physical & financial progress achieved quarterly to the Commission until the completion of the works under both the schemes.

Directive 14: Interest on Security Deposit

MSPDCL was directed to furnish up to-date position of interest on security deposit as per regulation 6.10(5) of JERC (supply code) regulations 2010.

The above rule position may be followed scrupulously.

Compliance Status

MSPDCL has two security deposit accounts with State Bank of Indian Paona Bazaar (i) Security Deposit A/C (Meter) No 33810369620 (ii) Security Deposit A.C (Works) 34944027846. MSPDCL does not have accurate database for security deposit of consumers who were connected before the 31.01.2014 and the database is under progress.

The security deposits of pre-paid consumers who have been converted to post-paid have already been paid.

However, the summary of security deposit amount for FY 2017-18 is as attached as annexure-3.

Comment of the Commission

In the similar way, the licensee shall intimate the amount of Security deposit amount being received every year to the Commission. Besides, this amount shall be taken into the tariff submissions while arriving at interest on working capital amount as per the provisions of the MYT Regulation 2014 as it is noticed that Licensee is not indicating this amount in their ARR calculations.

Directive 16: Investment Plan and Capping of Capital expenditure

Annual Investment Plan shall be submitted to the Commission and necessary approval of Commission shall be obtained for all major capital works costing Rs. 5.00 Crore and above before execution of the works.

Compliance Status

No Such Capital Investment Plan has been proposed from MSPDCL own funds in the

FY 2019-20.

Comment of the Commission

Whether it is own funds or Govt. funds no matter, All capital works costing Rs.5.00 Crore and above shall be submitted to commission for approval.

Directive 17:

Maximum Demand Indicator Meters (MDI) to be provided to all high value connections

Compliance Status

The process of MDI Metering to all high value connections are been done on priority basis by MSPDCL.

Comment of the Commission

Targeted date by which the work will be completed be intimated soon.

Directive 18:

As verified from the Tariff Schedule, it is observed that unmetered categories are prevailing in all categories including HT. Continuance of HT connections without meters is highly irregular. As per Electricity Act, 2003 no service connection be released without meter. As such, the MSPDCL is directed to provide HT meters to all unmetered HT connections in the first instance and report compliance by 30.09.2016 positively.

In respect of LT categories all unmetered connections be provided with meters by 31.03.2017. Progress and providing meters to unmetered connections be reported quarterly indicating category wise number of unmetered connections at the beginning of the quarter and installed during the quarter and balance to be installed.

Compliance Status

In this regard it is submitted that MSPDCL is not allotting any new connection without installation respective meters. Further it is submitted that only 240 HT Consumer are left out of around 1200 HT consumer whose meters are to be install. MSPDCL is making every effort to do 100% Metering of HT consumer by FY 2018-19.

Comments of the Commission

Compliance if fixing meters to all unmetered connections be repeated by 30.09.2019 positively.

DIRECTIVES ISSUED IN FY 2016-17**Directive 19: Reduction of billing slabs**

MSPDCL is directed to reduce the billing slabs of LT Non-domestic/commercial from three to two slabs in the next Tariff Petition for FY 2017-18.

Compliance Status

There are only three existing tariff slabs for LT Non-domestic/commercial category. It aptly captures the sales and the consumer details of all the LT Non-domestic/commercial consumers. Further reduction of tariff slabs may not facilitate the utility to envisage the slab wise consumption for future projections. Moreover, most state Discoms in the country has minimum three tariff slabs in LT Non-domestic/commercial category. Therefore, we humbly request the Commission to allow us to continue with three tariff slab of LT domestic/commercial category

Commission's Comments

Under the circumstances explained the directive is dropped.

Directive 20: In house development of IT enabled system:

MSPDCL is directed to take steps for development of in house IT enabled system so that all software issues can be attended/solved departmentally instead of depending on consultants.

Compliance Status

MSPDCL would like to inform the Hon'ble Commission that there has been progress in the in-house development of IT enabled system in the last one year. Some in-house developed IT platforms are already in operation to improve administrative processes. A few notable accomplishments are listed below.

- *Powernodue.com*: It is a domain which has a database of all the employees along with their connection status. It incorporates a hassle free fast and efficient process of getting no-dues certificate.
- *Indent*: It is an IT enabled platform which facilitates and streamlines the approval process for despatch from store to field.
- Online prepaid recharge with e-wallets like NPCI Bharat Bill Payment System.

Furthermore, MSPDCL would like to state that it has bought Virtual Private Network and it is being planned to set up a physical server in one year to go digital with all the files available on one electronic platform. All these steps are guided towards making MSPDCL independent with its IT team and reducing dependency on consultants.

Comments of the Commission

Targeted date by which MSPDCL will be independent with its IT team may be indicated.

Directive 21:

Updation of computerised billing program of power factor and rebate/surcharge

MSPDCL should up-to-date computerised billing programme to facilitate adoption of power factor rebate/surcharge as indicated in the tariff schedule.

Compliance Status

The computerised billing program for power factor rebate/surcharge is under progress. The HT cell of MSPDCL is undertaking the necessary steps towards installation of the program and it is expected to complete it in FY 2018-19.

Comments of the Commission

Compliance may be reported in next tariff order.

Directive 22:

Installation of meters to all 11 kV feeders and DT's

MSPDCL should install meters for all 11 kV's and DT's in all RAPDRP covered towns by 30.06.2016. Sample study should be conducted to know the highest feeder loss and highest DT loss and report to be submitted to the Commission by 30.09.2016.

Compliance Status

It is submitted that under RAPDRP Part-A 72 nos. of 11KV Feeder meters and 925 nos. of DT meters were installed.

Comments of the Commission

Targeted sale by which 100% metering of 11 KV feeders be achieved may be intimated in the first insistance.

DIRECTIVES ISSUED IN FY 2017-18

Directive 23

As per Regulations 2 (19) of JERC (M&M) (MYT) Regulations, 2014 the Second

Control Period shall be five years from 01.04.2018. The MSPDCL is directed to submit the next ARR for Control Period from FY 2018-19 to FY 2022-23 and Tariff Petition for FY 2018-19 and true up petitions for FY 2015-16 and FY 2016-17 along with audited annual accounts for FY 2015-16 and FY 2016-17 invariably.

Compliance status

The MYT Petition for the second Control Period was filed last year, and the Hon'ble Commission has issued the MYT Order on 12th March, 2018. We would like to inform the Hon'ble Commission that the provisional balance sheet along with the audited balance sheet of MSPDCL for FY 2015-16 and FY 2016-17 are still being prepared and will be made available soon.

Comments of the Commission

Audited Annual Accounts for FY 2015-16 to FY 2015-16 to FY 2017-18 along with revised true up petitions be submitted soon.

Directive 24

The MSPDCL is directed to submit the required information in the format prescribed in JERC M&M (MYT) Regulations, 2014 from next tariff petition onwards which are mandatory.

Compliance status

MSPDCL has submitted all the necessary required information in the format prescribed.

Comments of the Commission

The tariff petition for FY 2019-20 indicates how irregularly prepared. Even the required formats as envisaged in JERC for M&M (MYT) regulations are not submitted. Even the formats submitted are not in order.

Directive 25

The Commission is of the view to introduce KVAH billing in energy charges to all HT categories and LT categories with contracted load 20 kWh and above with effect from FY 2018-19 onwards. The licensee is directed to see that all HT connections are provided with trivector/MDI meters for such connections without fail.

Compliance status

MSPDCL has been installing MDI meters for HT categories and LT Categories consumers on priority Basis. It is further submitted to Hon'ble Commission that once

MSPDCL is able to achieve 100% Implementation of MDI meters for HT and LT Categories Consumer it will introduce KVAH billing in the energy charges of all such consumer.

Comments of the Commission

Targeted sale by which the work will be completed may be reported in MYT Tariff petition invariably.

Directive 26: Accounting of non- tariff income

As per Form No.11 of JERC (M&M) (MYT) regulations, 2014, non tariff income comprises of:

	Particulars
A	Income from Investment, Fixed and Call Deposits
1	Interest income from Investments other than Contingency Reserve
2	Interest on fixed deposits
3	Interest from Banks other than Fixed Deposits
4	Interest on (any other items)
	Sub-Total
B	Other Non-Tariff Income
1	Interest on loans and Advances to staff
2	Interest on loans and Advances to other Licensee
3	Interest on loans and Advances to Leasors
4	Interest on Advances to Suppliers / Contractors
5	Gain on Sale of Fixed Assets
6	Income/Fee/Collection against staff welfare activities
7	Miscellaneous receipts
8	Meter Rent
9	Recovery from theft of energy
10	Surcharge and Additional Surcharge
11	Incentive due to Securitisation of CPSU Dues
12	Misc. charges from consumers
13	Delayed payment surcharge from consumers
14	Any other subsidies / grants other than those u/s 65
15	Commission on collection of Electricity Duty for MCD
	Sub-Total
	Total (A+B)

The MSPDCL is directed to account for the income relating to above heads in the respective heads and furnish the information in the format without omissions from next ARR.

Compliance status

MSPDCL wishes to submit to the Hon'ble Commission that it has segregated the Non-Tariff Income component wise as per directive of the Hon'ble Commission and it has submitted the details accordingly in Provisional True-up Petition for FY 2017-18.

Comments of the Commission

Why the same procedure be followed for FY 2019-20 be explained.

DIRECTIVES ISSUED IN FY 2017-18**Directive 27**

The MSPDCL is directed to fill up judiciously all Forms relevant to MYT Regulations viz. Appendix C,D and also submit year wise slab wise consumers, slab wise energy consumed and category wise total contracted load while submitting Tariff Petition for control period FY 2018-19 to 2022-23 to avoid additional information queries after submission of petition.

Compliance status

MSPDCL has filed up all the forms relevant to MYT Regulations along with year wise, slab wise consumers, slab wise energy consumed. MSPDCL has furnished all the data available as per the Directive along with the MYT Petition filed last year, and the Hon'ble Commission has issued the MYT Order on 12th March, 2018.

Comments of the Commission

Why the same procedure be followed in tariff petition for FY 2019-20 may be explained along with reasons for non-submission of APR for FY 2018-19.

Directive 28

The MSPDCL is directed to include ARR of MSPCL in the ARR of MSPDCL towards Intra state transmission charges and also incorporate the audited figure/true up figure in the true up of MSPDCL for the same .

Compliance status

MSPDCL would like to submit to the Hon'ble Commission that it has included the ARR of MSPCL in the ARR for MSPDCL in the provisional true up Petition of FY 2017-18 and Tariff Petition for FY 2019-20.

Comments of the Commission

The directive is fully complied with. Hence dropped.

NEW DIRECTIVES FOR FY 2018-19**DIRECTIVE 29**

MSPDCL was directed to ensure the installation and energization of meters at all 11 kV feeders which is the inter-company boundary and the energy injection point from MSPCL to MSPDCL system for proper energy accounting. The Commission also directed that there should be monthly joint reading of the meters by MSPCL and MSPDCL.

Compliance status

It is Submitted that MSPCL & MSPDCL to nominate nodal officers with minimum rank of DGM and co-ordinate the exercise of joint feeder meter reading, every month and compile feeder wise energy sent out / received by MSPCL / MSPDCL for energy audit. The joint meter readings are to be counter signed by the nodal officers. The Nodal Officer for joint metering from MSPDCL is nominated. Meter readings subject to correction are taken in the presence of the Substation Staff using CMRI.

Comments of the Commission

Compliance may be reported.

DIRECTIVE 30

MSPDCL and MSPCL were directed to conduct monthly joint meter reading of the 11 kV incoming meter (which is the injection point of energy from MSPCL to MSPDCL). MSPDCL was directed to complete installation and Energization of all 11 kV feeder meters by September, 2018 and calculate the energy injected by MSPCL to MSPDCL on monthly basis. MSPDCL was also directed to complete the DT metering by September, 2018 and conduct a case study of feeder-wise energy loss for all 11 kV lines. The Hon'ble Commission further directs the MSPDCL to come up with LT line losses for individual DT fed LT lines.

Compliance status

The Month wise feeder wise Energy received by MSPDCL from TRANSCOM periphery data has been prepared for the last quarter of 2017-18. The monthly wise feeder wise energy report is required to be reconciled with MSPCL and SLDC report.

At present, energy accounting through DT metering could not be done due to the below reasons

- 100% DTR metering was not done under the scheme.
- Deactivation of GPRS connectivity for the installed modems attached to DTs due to unstable network.
- The exorbitant recurring charges for the installed systems MSPDCL has been installing 11 KV feeder meters on priority basis.

It is expected that all meters will be installed by the end of FY 2018-19. The status report has been attached as **Annexure**.

Comments of the Commission

The directive is not fully complied with and hence, the Licensee should submit compliance report in full shape by 15th July 2019 as the licensee has stated that all the metering installations would be completed by the end of 2018-19.

DIRECTIVE 31

The Commission is of the view to introduce KVAH billing in energy charges to all HT categories and LT categories with contracted load of 20 kWh and above with effect from FY 2019-20 onwards. The licensee is directed to see that all HT connections are provided with trivector/MDI meters for such connections without fail.

Compliance status

MSPDCL has been installing MDI meters for HT categories and LT Categories consumers on priority Basis. It is further submitted to Hon'ble Commission that once MSPDCL is able to achieve 100% Implementation of MDI meters for HT and LT Categories Consumer it will introduce KVAH billing in the energy charges of all such consumer.

Comments of the Commission

Targeted date by which KVAH billing will be introduced be reported by 30.06.2019.

DIRECTIVE 32

MSPDCL was directed to furnish invariably the slab wise consumption from next ARR petition to assess the revenue correctly in respect of Domestic and Commercial / non Domestic categories by proper consumer indexing.

Compliance status

It is Submitted that MSPDCL have submitted the slab-wise consumption for Domestic and Commercial / non-Domestic categories in the ARR Petition for 2019-20.

Comments of the Commission

This directive is dropped as new directive is made in this respect.

DIRECTIVE 33

MSPDCL was directed to submit reliable average slab-wise monthly energy consumption per consumer and number of consumer in each slab during the FY 2017-18 (Actual), FY 2018-19 (Revised Estimate based on last 6 months) and FY 2019-20 (Projection) along with the Petition for determination of ARR & Tariff for FY 2019-20 positively in respect of Kutir Jyoti, Domestic and Non Domestic/Commercial under LT Categories. The Commission also directed to take necessary action immediately to make available the requisite data at the time of the Petition mentioned above.

Compliance status

It is Submitted that MSPDCL have submitted the slab-wise consumption for Domestic and Commercial / non-Domestic categories for FY 2019-20 in the ARR Petition.

Comments of the Commission

The data submitted in the is inadvertent and no conclusive decision could be made from the submitted data in APR for FY 2018-19. The Licensee shall sincerely submit the above data with full details in the future submissions. In the FY 2019-20, due to the data inadequacy, Commission had to make lots of assumptions in estimating the consumer related data and the quantum of consumption and the contracted loads in the process of tariff design for the FY 2019-20.

New Directives**Directive 34****Reduction of consumption slabs in Domestic and Comercial Categories of consumers:**

The Licensee shall reduce the number of consumption slabs in the following categories in the next year tariff filing proposals:

- (a) LT domestic from three slabs to two slabs.
- (b) LT Commercial from three slabs to two slabs.

Directive 35

Licensee shall submit the detailed information on the following items latest by 15th

August 2019:-

- a) Details of year wise pre-paid meters purchased so far with copies of supply/work order since the adoption of the pre-paid metering system.
- b) Year- wise installation of pre-paid meter since adoption of the pre-paid metering system.
- c) Circle wise installation of pre-paid meters giving details of sub-division with category wise consumers with activated pre-paid meters.
- d) Report on the year wise impact of pre-paid metering in the billing efficiency and collection efficiency of -
 - 1) Sub-division, Division and Circle since the adoption of prepaid meters.
 - 2) Upto date circle wise, Division/Sub-division list of consumers with activated/unactivated prepaid meter.
 - 3) Plan and target date for installation and activation of pre-paid meter to all the consumers under MSPDCL.

Directive 36

MSPDCL should work out strategy to arrive at slab-wise energy consumption per consumer per month in respect of domestic and commercial categories. The average number of consumers consuming electrical energy in the first slab, second slab and third slab in domestic and Commercial categories respectively should be submitted alongwith their tariff petition for FY2020-21 positively for proper assessment of revenue prjection.

Directive 37

MSPDCL should vigorously take up consumer metering either in Postpaid/Prepaid mode not only in valley but also in hilly areas, 100% metering should **be achieved within September 2019**. This will lead to meaningful consumption of Energy and fruitful consumer awareness campaign in hill areas and plain areas. This will also reduce un-accounted energy and Distribution losses of the DISCOM.

10. Fuel and Power Purchase Cost Adjustment

11.1 Background

Section 62 sub-section 4 of the Electricity Act, 2003 provides that no tariff or part of any tariff may ordinarily be amended, more frequently than once in every financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified. This provision of the Act requires the Commission to specify the formula for fuel surcharge.

Accordingly, the Commission has specified the formula for working out the Fuel and Power Purchase Cost Adjustment (FPPCA) charges and other terms and conditions of FPPCA allowed the distribution licensee to recover the FPPCA charges from the consumers.

Accordingly, the amount of Fuel and Power Purchase Cost Adjustment (FPPCA) charges shall be computed as under:

$$\text{FAC (Rs./kWh)} = \frac{Q_c(RC_2 - RC_1) + Q_o(RO_2 - RO_1) + Q_{pp}(R_{pp2} - R_{pp1}) + V_z + A}{(Q_{pg1} + Q_{pp1} + Q_{pp2}) \times [1 - \frac{L}{100}] - \text{PSE}} \times 100$$

Where,

Q_c = Quantity of coal consumed during the adjustment period in Metric Tons (MT).

= $(\text{SHR} \times Q_{pg}) (1 + \text{TSL}) \times 1000 / \text{GCV}$, or actual whichever is less.

R_{c1} = Weighted average base rate of coal supplied ex-power station coal yard as approved by the Commission for the adjustment period in Rs./MT

R_{c2} = Weighted average base rate of coal supplied ex-power station coal yard for the adjustment period in Rs./MT

Q_o = Actual Quantity of oil (in KL) consumed during the adjustment period or normative oil consumption as per Tariff order whichever is less.

R_{o1}	=	Weighted average base rate of oil ex-power station (Rs./KL) approved by the Commission for the adjustment period.
R_{o2}	=	Weighted average actual rate of oil ex-power station supplied (Rs. / KL) during the adjustment period.
Q_{pp}	=	Total power purchased from different sources (kWh) = $Q_{pp2} + Q_{pp3}$
Q_{pp1}	=	$Q_{pp3} \left[1 - \frac{TL}{100} \right]$ in kWh
TL	=	Transmission loss (CTU) (in percentage terms).
Q_{pp2}	=	Power Purchase from sources with delivery point within the state transmission or distribution system (in kWh)
Q_{pp3}	=	Power Purchase from sources on which CTU transmission loss is applicable (in kWh)
R_{pp1}	=	Average rate of Power Purchase as approved by the Commission (Rs./kWh)
R_{pp2}	=	Average rate of Power Purchase during the adjustment period (Rs./kWh)
Q_{pg}	=	Own power generation (kWh)
Q_{pg1}	=	Own Power generation (kWh) at generator terminal – approved auxiliary consumption
L	=	Percentage T&D loss as approved by the Commission or actual, whichever is lower.
SHR	=	Station Heat Rate as approved by the Commission (Kcal / kWh)
TSL	=	Percentage Transit and Stacking Loss as approved by the Commission
GCV	=	Weighted average gross calorific value of coal as fired basis during the adjustment period (Kcal / Kg)
V_z	=	Amount of variable charges on account of change of cost of unknown factors like water charges, taxes or any other

unpredictable and unknown factors not envisaged at the time of Tariff fixation subject to prior approval of the Commission (Rs.)

A = Adjustment, if any, to be made in the current period to account for any excess / shortfall in recovery of fuel of Power Purchase cost in the past adjustment period, subject to the approval of the Commission (Rs.)

PSE = Power sold to exempted categories (presently agriculture and BPL-Kutir Jyoti consumers)

If there are more than one power station owned by the Licensee Qc, Rc1, Rc2, Qo, Ro1, Ro2, Qpg and Qpg1 will be computed separately for each power station and sum of the increase/decrease of cost of all power stations shall be taken into consideration.

In case of the two distribution companies, there is no generation of their own. Therefore, Qc, Qo and Qpg1 will be zero in this case.

The Generating Company can levy FPPCA charges with the prior approval of the Commission.

Terms and conditions for application of the FPPCA formula

- 1) The basic nature of FPPCA is 'adjustment' i.e. passing on the increase or decrease in the fuel costs and power purchase cost, as the case may be, compared to the approved fuel costs and power purchase costs in this Tariff Order.
- 2) The operational parameters/norms fixed by the Commission in the Tariff Regulations/Tariff Order shall be the basis of calculating FPPCA charges.
- 3) The FPPCA will be recovered every month in the form of an incremental energy charge (Rs/kWh) in proportion to the energy consumption and shall not exceed 10% of the approved avg. cost of supply in the Tariff order and balance amount, if any, in the FPPCA over and above this ceiling shall be carried forward to be billed in subsequent month.

- 4) Incremental cost of power purchase due to deviation in respect of generation mix or power purchase at higher rate shall be allowed only if it is justified to the satisfaction of the Commission.
- 5) Any cost increase by the licensee by way of penalty, interest due to delayed payments, etc. and due to operational inefficiencies shall not be allowed.
- 6) FPPCA charges shall be levied on all categories of consumers.
- 7) Distribution licensee shall file detailed computation of actual fuel cost in Rs./kWh for each month for each of power stations of the state generators as well as cost of power purchase (Fixed and Variable) from each source/station and a separate set of calculations with reference to permitted level of these costs.
- 8) The data in support of the FPPCA claims shall be duly authenticated by an officer of the licensee, not below the rank of Chief Engineer on an affidavit supported with the certified copy of energy bills of power purchase, transmission and RLDC charges, bill for coal purchase and its transportation cost, oil purchase bill and the quantity of coal and oil consumed during the month.
- 9) Levy of FPPCA charge will be allowed only when it is ten (10) paise or more per unit. If it is less than 10 (ten) paise/unit, the same may be carried forward for adjustment in the next month.

The incremental cost per kWh due to this FPPCA arrived for a quarter shall be recovered in the energy bill of the month subsequent to the order of the Commission approving FPPCA with full details of rate and unit(s) on which FPPCA charges have been billed. The Generating Company and the Distribution Companies shall provide along with the proposal of FPPCA (as applicable to them) for a quarter, a compliance report of the previous order of the commission in respect of FPPCA.

TARIFF SCHEDULE

Appendix

Tariff Schedule

1. General Conditions of Supply (For all categories of Consumers):

1.1 Rebate for advance payment: For payment of energy bill in advance, a rebate of 1% shall be allowed on the rate of charge of the applicable tariff. This will be applicable only all consumers provided with prepaid energy meters.

1.2 Rebate/Surcharge for availing supply at voltage higher/lower than base voltage:

Those who avail supply at higher voltage than the classified supply voltage for corresponding load as per clause 3.2 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013, with up to date amendment. shall be allowed rebate and those availing at lower voltage than the specified voltage shall be levied surcharge as detailed below:

- (i) For consumers having contracted load up to 50 kW – If the supply is given at HV/EHV, a rebate of 5 % would be admissible on the rate of energy charge and fixed charge of the applicable tariff.
- (ii) For consumers having contracted load above 50 kW – If supply is given at voltage lower than the base voltage for corresponding load as per clause mentioned above, the consumer shall be required to pay an extra charge of 10 % on the bill amount (Energy charge + Fixed charge) calculated at the applicable tariff.
- (iii) All voltages mentioned above are nominal rated voltages as per clause 3.2 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.

1.3 Payment: All payments shall be made by way of Cash (up to the amount as acceptable to the licensee), Banker's Cheque, Demand Draft or Money Order or e-transfer on line. Cheques and demand drafts shall be payable at any branch of a scheduled commercial bank that is a member of the clearing house for the area where the concerned Sub Divisional Office is located.

However, part payment is subjected to acceptance by the competent authority. Bank

commission/charges, if any, should be borne by the consumers.

1.4 Validity of Existing Recharge Voucher: *For a consumer with prepaid meter who has purchased voucher prior to the effective date of new tariff, the existing voucher shall continue till such voucher is exhausted. The licensee shall cautiously issue voucher so that the existing voucher is valid for a minimum number of days beyond the effective date of new tariff.*

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

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

1.7 Voltage and frequency: All voltages and frequency shall be as per clause 3.1 and 3.2 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.

1.8 Power Factor Incentive / Surcharge: -

- a) If the average monthly power factor of the HT consumer/LT 3- phase consumer /LT industrial consumer **increases above 95%**, he shall be paid an incentive at the following rate:

For each one percent increase by which his average monthly power factor is above 95%, up to unity power factor	One percent (1%) of the total amount of the bill under the head 'energy charge'.
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- b) If the average monthly power factor of the HT consumer/LT 3- phase consumer /LT industrial consumer **falls below 90%**, he shall pay a surcharge in addition to his normal tariff at the following rate:

For each one percent by which his average monthly power factor falls below 90% up to 85%	One percent (1%) of the total amount of the bill under the head 'energy charge'.
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- c) If the average monthly power factor of the HT consumer/LT 3- phase consumer /LT industrial consumer **falls below 85%**, he shall pay a surcharge in addition to his normal tariff at the following rate

For each one percent by which his average monthly power factor falls below 85%	Two percent (2%) of the total amount of the bill under the head 'energy charge'.
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- d) If the average monthly power factor of the HT consumer/LT 3- phase consumer /LT industrial consumer falls below 70%, then the utility shall have the right to disconnect supply to consumer's installation after serving an advance notice of 15 days. Supply may be restored only after steps are taken to improve the power factor to the satisfaction of the Utility. However, this is without prejudice to the levy of surcharge for low power factor in the event of supply not being disconnected.
- e) For this purpose, the "average monthly power factor" is defined as the ratio of total 'Kilo Watt hours' to the total 'Kilo Volt Ampere hours' recorded during the month. This ratio will be rounded off to two figures after decimal. If figure 5 or above appears in the third place after the decimal, it shall be rounded off to the nearest higher figure in the second place after decimal.
- f) Notwithstanding the above, if the average monthly power factor of a new consumer is found to be less than 90% at any time during the first 6 (six) months from the date of connection, and if the power factor is maintained at desired levels in subsequent three months at not less than 90%, then the surcharge billed on account of low power factor during the said period, shall be withdrawn and credited in next month's bill.

1.9 Transformation loss: The consumers getting their supply at HT and metering done at the L.T side, then he/she shall be charged for transformation loss in kWh as per clause 5.7 JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 (together with latest amendment on date). However, the same is being reproduced for the sake of reference:

- (1) The average losses in the transformer shall be calculated as follows and added to the energy consumption indicated by the meter:

$$\text{Average transformer loss} = \frac{730 \times 1.0 \times C}{100} = \text{kVAh per month}$$

where C = KVA rating of the transformer. For conversion of kVAh to kWh or vice versa, latest power factor as per JERC (M&M) (Electricity Supply Code) Regulations, 2013 with latest amendment is to be used.

- (2) The transformer loss arrived at by the above formula shall be added to the energy consumption, even when the recorded energy consumption is nil.
- (3) 1% of the transformer capacity for transformer above 63 KVA will be added to the recorded maximum demand on the Low Tension side to arrive at the equivalent High Tension demand.

1.10 Rounding of Contracted Load/billing demand: For the purpose of calculation of fixed/demand charge in the monthly billing, the contracted load/billing demand shall be taken on actual basis **as recorded in DISCOM office (that is, not to be rounded).** **DISCOM should update contracted load/Billing demand as per clause 108 of JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment.**

1.11 Mixed load:- Any part of the connection given for one specified category should not be utilized for any other purpose to which higher rate of charge is applicable in the tariff schedule. A separate connection shall have to be taken for such loads or purposes falling under appropriate category, failing which the entire consumption so drawn shall be treated and would be billed in that corresponding category with higher applicable tariff for which any part of that connection is utilised.

1.12 Rounding-off to nearest Rupee: Each components of bill, such as energy charge, fixed/demand charge, meter rent, surcharge, rebate of any kind, etc, including interest, involving fraction of a rupee should be individually rounded-off to nearest rupee (fraction of 50 paise and above to be rounded-off to the nearest higher rupee and fraction less than 50 paise to be ignored). In case of non-availability/scarcity of small change of rupees less the Rs.10/-, consumer may be allowed to tender next higher amount divisible by 10. Such excess amount so tendered shall be carried forward to the next bill as a credit and shall not entitle any interest of whatsoever.

1.13 System of supply:

1.13.1 LT Supply:-

- i) Alternating current, 50 Hz, single phase 230 Volts up to 8kW
- ii) Alternating current, three phase, 400 Volts for loads above 8 kW **upto**50 kW.
Wherever 3-phase connection is required for a load less than or equal to 8 kW,
- ii) Alternating current, three phase, 400 Volts for loads above 8 kW **upto**50 kW.
Wherever 3-phase connection is required for load less than or equal to 8 kW, necessary justification shall be provided along with such request for consideration of licensee for extending such supply.

1.13.2 HT Supply:-

Supply of Electricity to the Consumers at voltage above 400V as per Clause 3.2 of JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment.

1.14 The maximum demand means the highest load measured in average kVA or kW at the point of supply of a consumer during any consecutive period of 30 (thirty) minutes during the month or the maximum demand recorded by the MDI during the month.

1.15 Billing demand: As defined in Clause 2.3(12) of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments.

1.16 Government Subsidy :- Section 65 of Electricity Act 2003 is hereby reproduced –

“Provision of subsidy by State Government.- If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under section 62, the State Government shall, notwithstanding any direction which may be given under section 108, pay, in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government:

Provided that no such direction of the State Government shall be operative if the payment is not made in accordance with the provisions contained in this section and the tariff fixed by the State Commission shall be applicable from the date of issue of orders by the Commission in this regard.”

The subsidy should be released in advance, failing of which the licensee shall implement tariff indicated under Full Cost Tariff (i.e Without Subsidy).

Therefore, if the government subsidy is regularly received, the licensee shall adopt tariff ‘A’ (Subsidised Tariff) or in the event of non-receipt of said subsidy, the Licensee shall be at liberty to implement tariff ‘B’ (Full Cost Tariff i.e., without Subsidy) during the period of non-receipt.

There can be a situation where the outstanding subsidy was released by the government after passage of much time and thereby if consumers were billed at full cost tariffs in any relevant month or months. Given the situation, the entire excess amount so charged on account of full cost tariff shall have to be reflected as rebate, by the licensee at a time, in the immediate monthly billing cycle being issued to respective consumers soon after receiving such subsidy pertaining to the past. If the rebate amount is exceeding the monthly bill amount to be adjusted, then such excess amount may be carried forward and be adjusted in the following monthly bills issued to the consumer until full settlement is made.

1.17 Tax or Duty:

The tariff does not include any tax or duty, etc., on electrical energy that may be payable at any time in accordance with any law / State Government Rules in force. Such charges, if any, shall be payable by the consumer in addition to tariff charges.

1.18 Contingency: - In case of any inconsistency between this Tariff schedule and the prevailing JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013, with up to date amendment. the provision, meaning and contents of the said Code shall prevail.

A: SUBSIDISED TARIFF**2. LT Supply:-****2.1 LT Category -1:- KutirJyoti / BPL(Below Poverty Line) Connection**

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

Permitted load:-Initially single light point connection which can be extended by one or two light points or as per the norms specified by competent Authority from time to time

Tariff Rates:

A) Fixed Charge : Rs 25.00 per month per connection.

B) Energy charge per month:

1) Metered Supply:

All Unit	@ Rs 1.85 per kWh
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Note: 1- if the total consumption of any consecutive three months is more than 45 kWh, then such consumer shall be re-categorised/converted into normal domestic category permanently from the very 1st/2nd/3rd month of that consecutive three

months, if the total unit consumed exceed the specified limit of 45 kWh from that instance and the bill be served as domestic category. (clause 4.90 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments may be referred to.)

Note 2: *In case a KutirJyoti /BPL consumer on getting converted into a domestic consumer, the re-categorised/converted consumer shall be required to pay towards load security/meter security deposit as applicable for domestic consumers. But, it shall not contradict clause 5.9 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments.*

2.2 LT Category-2:- Domestic

Applicability: Applicable for supply of energy exclusively for domestic purposes only in domestic premises with attached kitchen/kitchen facility. The Tariff is applicable to supplies for general domestic purposes such as Light, Fans, Heating devices, Television, VCR/VCP, Radio, Refrigerator, Air- conditioner, lift motors and all others appliances only for bona-fide residential used. This will not be applicable to institutions conducting commercial activities of any nature.

Tariff Rates:

A) Fixed Charge : Rs 60.00 per month per kW of contracted load.

B) Energy charge per month:-

1) Metered Supply:

First 100 kWh	@ Rs3.90 per kWh
Next 100 kWh	@ Rs 5.20 per kWh
➤ 200 kWh	@ Rs 6.00 per kWh

2.3 LT Category-3:- Non Domestic / Commercial:

Applicability: This tariff is applicable to all lights, all types of fans, heating devices, Television, VCR/VCP, Radio, Refrigerator, Air Conditioner, lift motors, pump and all other appliances for the purpose of private gain including other small power. This tariff includes power loads for non-domestic purposes like Government/semi-government/non-government offices, shops, hospitals, nursing homes, clinics,

dispensaries, health centres, restaurants, bars, hotels, clubs, guest houses, circuit houses/rest houses, tourist lodges, picnic spots, resorts, farm/garden houses, clubs, markets, optical houses, public buildings, community halls, stadiums, meeting/conference halls, religious premises like churches, temples, mosques, gurudwaras, religious offices, all types of studios, tea stalls, professional chambers (like Advocates, chartered Accountants, consultants, Doctors, etc.), private trusts, marriage halls, public halls, show rooms, centrally air-conditioning units, commercial establishments, X-ray plants, diagnostic centres', pathological labs, carpenters and furniture makers, repair workshops, laundries, typing institutes, internet cafes, STD/ISD PCO's, FAX/photocopy shops, tailoring shops, Government/Non-Government Institutions, schools, colleges, libraries, research institutes, boarding/lodging houses, railway stations, fuel/oil stations/pumps, bottling or filling stations /plants, service stations, Railway/Bus stations/terminals, All India radio/T.V. installations, printing presses, commercial trusts, societies, banks, financial institutions, theatres, cinema halls, circus, coaching institutes, common facilities in multi-storeyed commercial offices/ buildings, public museums, crematoriums, graveyards, orphanages/recognized charitable institutions where rental or fees of any kind are charged, non-recognized charitable institutions, power supply to tele-communication system/towers and others applications not covered under any other categories.

Tariff Rates:

A) Fixed Charge : Rs 80.00 per month per kW of contracted load.

B) Energy charge per month:

1) Metered Supply:

First 100 kWh	@ Rs.5.40 per kWh
Next 100 kWh	@Rs.6.50 per kWh
➤ 200 kWh	@ RS 7.65 per kWh

2.4 LT Category-4:- Public Lighting

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

Tariff Rates:

A) **Fixed Charge** : Rs 65.00 per month per kW of contracted load.

B) **Energy charge per month:**

1) **Metered Supply:**

All units : @ Rs7.00 per kWh

2.5 LT Category-5: Public Water Works (PWW)

Applicability: Applicable to all public water supply system and sewerage system.

Tariff Rates:

A) **Fixed Charge** : Rs 100.00 per month per kW of contracted load.

B) **Energy charge per month:**

1) **Metered Supply:**

All units : @ Rs 7.25 per kWh

2.6 LT Category-6:- Irrigation& Agricultural

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

Tariff Rates:

A) **Fixed Charge** : Rs 60.00 per month per kW of contracted load.

B) **Energy charge per month:**

1) **Metered Supply:**

All units : @ Rs 3.90 per kWh

2.7 LT Category-7:- Small Industry

Applicability: Applicable to all Industrial power consumers with demand of power upto 50 kW which are not covered by Category No. 3 (Supply of Non-Domestic/Commercial Purposes), such as steel fabrications, motor body builders, power handloom industry, poultry farming, pisciculture, prawn culture, floriculture in green houses, mushroom production, cold storage units, agriculture based industries,

horticulture and any other type of industry where raw material is converted into finished products with the help of electrical motive power, printing press, etc. This will include domestic or commercial within the industrial complex.

Tariff Rates:

A) Fixed Charge : Rs 65.00 per month per kW of contracted load.

B) Energy charge per month:

1) Metered Supply:

All units : @ Rs 4.10 per kWh

- 3. HT Supply:** The tariffs are applicable for Consumer availing supply at voltage above 400 V irrespective of connected load/contracted demand. It is mandatory to supply with voltage above 400 V, to consumer having a contracted Load of above 50 kW or Contract Demand of above 59 kVA, as per clause 3.2 of JERC for M&M (Electricity Supply Code) Regulations, 2013 with up to date amendment.

3.1 H.T. Category – 1: Commercial

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

Tariff Rates:

A) Demand Charge : Rs 100.00 per month per kVA of Billing Demand.

B) Energy charge per month:

1) Metered Supply:

All kVAh : @ Rs7.60 per kVAh

3.2 H.T. Category - 2: Public Water Works (HT- PWW)

Applicability: This tariff is applicable to similar purposes defined in LT Category-5 Supply for Public Water Works (PWW) and sewerage system.

Tariff Rates:

A) Demand Charge : Rs 100.00 per month per kVA of Billing Demand.

B) Energy charge per month:

1) Metered Supply:

All kVAh	:	@ Rs 6.75 per kVAh
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3.3 H.T. Category - 3: Irrigation & Agriculture

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

Tariff Rates:

A) Demand Charge : Rs 100.00 per month per kVA of Billing Demand.

B) Energy charge per month:**1) Metered Supply:**

All kVAh	:	@ Rs 3.60 per kVAh
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3.4 H.T. Category - 4: Medium Industry

Applicability: This Tariff is applicable to similar purpose defined in LT Category-7 for Small industry. with Contract Demand upto 125 kVA or Contracted Load upto 100kW.

Tariff Rates:

A) Demand Charge : Rs 100.00 per month per kVA of Billing Demand.

B) Energy charge per month:**1) Metered Supply:**

All kVAh	:	@ Rs 5.30 per kVAh
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3.5 H.T. Category- 5: Large Industry

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

Tariff Rates:

A) Demand Charge : Rs 100.00 per month per kVA of Billing Demand.

B) Energy charge per month:**1) Metered Supply:**

All kVAh	:	@ Rs 6.60 per kVAh
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3.6 H.T. Category - 6: Bulk Supply within the State

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

Tariff Rates:

A) Demand Charge : Rs 100.00 per month per kVA of Billing Demand.

B) Energy charge per month:

1) Metered Supply:

All kVAh	:	@ Rs 5.90 per kVAh
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B: FULL COST TARIFF (FCT) (i.e., WITHOUT SUBSIDY)

Sl. No.	Consumer Category	Full Cost Tariff	
		Energy Charges (Rs.)	Fixed Charges (Rs.)
1	Kutir Jyothi		
	All Units	6.60/kWh	25 per Connection
2	Domestic		
i)	First 100 kWh	7.30/kWh	70/Contracted Load in kW
ii)	Next 100 kWh	7.80/kWh	70/Contracted Load in kW
iii)	Balance > 200 kWh	8.50/kWh	70/Contracted Load in kW
3	Non-Domestic/Commercial		
A	Low Tension		
i)	First 100 kWh	9.30/kWh	100/Contracted Load in kW
ii)	Next 100 kWh	10.00/kWh	100/Contracted Load in kW
iii)	Balance > 200 kWh	10.60/kWh	100/Contracted Load in kW
B	High Tension	9.60/kVAh	110/Billing Demand in kVA
4	Public Lighting	9.50/kWh	100/Contracted Load in kW
5	Irrigation & Agriculture		
A	Low Tension	7.60/kWh	100/Contracted Load in kW
B	High Tension	7.50/kVAh	110/Billing Demand in kVA
6	Public Water Works		
A	Low Tension	10.50/kWh	100/Contracted Load in kW
B	High Tension	9.50/kVAh	110/Billing Demand in kVA
7	Industrial		
A	Small Industry (LT)	8.90/kWh	100/Contracted Load in kW
B	Medium Industry	9.00/kVAh	110/Billing Demand in kVA
C	Large Industry	9.50/kVAh	110/Billing Demand in kVA
9	Bulk Supply	8.50/kVAh	110/Billing Demand in kVA

4. Temporary Power Supply

Applicability: Temporary power supply shall be given through correct meter and carried out as per procedure laid down in clause 4.56 to 4.70 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments. If the applicant provides the materials for service line, it shall be treated as per clause 4.133 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments. **If the Licensee/MSPDCL desires to delegate power to various level of officers, it may be done through an executive order by the licensee. However, in all cases, overall duration of such delegation shall not violate the**

provisions of the supply code mentioned above. If the service line is arranged by consumer, it shall be adopted as per clause 4.133 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 (with latest amendments) and it shall be returned to the consumer after the period of supply is over. Energy charges bill shall be served as per the following rates:

Tariff Rates:

A) Fixed / Demand charge at 1.5 times the rate of fixed/demand charge of the applicable tariff category for which power supply is given.

B) Energy charge per month : at 1.5 times the rate of the highest slab rate of the applicable tariff category for which energy is supplied.

5 Computation of energy consumed for cases given below: -

5.1 Unmetered supply:- As per Section 55 of Electricity Act 2003 and as per clause 5.1 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 (with latest amendments), no installation should be serviced without appropriate and correct meter. As many years has elapsed from the effective date of the EA 2003 and even from the effective date of the Supply Code, the formula based computation of energy consumption in respect of unmetered supply is not acceptable and hence it is withdrawn through this order. Licensee should invariably install the requisite meters for all existing service connections and should not release any service connection without installing an appropriate and correct meter complying with provisions of Electricity Act 2003.

5.2 Short period of unmetered supply: - For un-meter (meter not available) supply as a result of defective, burnt, lost meter shall be treated as per the provisions of 6.11 – 6.13 of the Electricity Supply Code Regulations, 2013 (together with latest amendment) issued in this regard by this Commission.

5.3 For Un-authorised consumer/theft (includes by-pass of meter)/pilferage and cases are cover by section 135 of the Act. The energy consumed shall be computed as per provisions indicated at the Annexure 11.1.19 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 (together with latest amendments). The energy so computed shall be evaluated as follows:

(a) Load less than 10 kW

- (1) First instance: - Three (3) times the rate of the applicable tariff (fixed and variable charges) for which the unauthorised/theft of energy was so utilized.
- (2) Second and subsequent instances: Six (6) times the rate of the applicable tariff (fixed and variable charges) for which the theft/unauthorised energy was so utilized.

(b) Load exceeding 10 kW

- (1) First instance: - Three (3) times the rate of the applicable tariff (fixed and variable charges) for which the unauthorised/theft of energy was so utilized.
- (2) Second and subsequent instances: - Six (6) times the rate of the applicable tariff (fixed and variable charges) for which the unauthorised/theft energy was so utilized.

Note;- Additional punishment be given for such theft of energy shall be under the Electricity Act 2003 (with latest amendment) and/or as per the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.

6. Miscellaneous Charges (Part of Non-Tariff income)

6.1 Meter Rent

6.1.1 Meter Rent for non-prepaid meters: Monthly charges for hiring of the meter, indicator payable shall be as follows:

a)	AC, Single phase Energy meter, whole current	Rs. 10.00 per month
b)	AC, Three phase Energy meter, whole current	Rs. 20.00 per month
c)	AC, Three phase Energy meter, CT operated	Rs. 50.00 per month
d)	AC, Three phase Energy meter, CT & PT operated	Rs.500.00 per month

6.1.2 Meter Rent for Pre-Paid Meters: Monthly charges for hiring of the meter, indicator payable shall be as follows:

a)	AC, Single phase PP, Energy meter, whole current	Rs. 20.00 per month
b)	AC, Three phase PP, Energy meter, whole current	Rs. 40.00 per month

6.2 Other charges for meter:

(a) Meter shifting charge:

- (i) Rs 100.00 per shifting if resulted from reconstruction / modification of building and at consumer's request. Material to be borne by interest party.
- (ii) Free of cost if shifting is done in the interest to licensee. Required material to be borne by licensee.

Meter shifting shall be carried out as per Chapter – 5 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.

(b) Replacement of meter: Licensee shall have stock of energy meter as per clause 5.51 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment. Replacement of meter shall be carried out as per clause 5.31 to 5.50 of the same code mentioned above. Charges for other materials will be extra.

However, in case of replacement of post-paid meter by prepaid meter by the utility, no meter replacement charge shall be borne by the consumer and the entire charge shall be borne by the utility.

(i) Execution charge for re-installation/installation of meter:

- a) For existing consumer shall be Free of cost.
- b) For disconnected consumer being re-connected (if meter is removed) shall be charged @ Rs 75.00.
- c) For new consumer, it shall be included in the cost of service connection as under execution charges.

(ii) Cost of Energy Meters supplied by Licensee :

As per the Licensee's purchase rate plus testing fee, if supplied from the Licensee (energy meters approved / tested by the Licensee only shall be used. However, when the cause leading to subsequent replacement is either manufacturing defect or fault of licensee then, it shall be free of cost.

(c) Charges for testing of Meters at the request of consumers: :(Testing charge is inclusive of costs of meter re-sealing materials/equipment).

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

ii) For AC three phase LT energy meter, whole current:Rs.75.00 per meter per testing.

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

(iv) For energy meter AC three phase, CT & PT operated: Rs.150.00 per meter per testing.

In case the meter supplied by the Licensee fitted to the consumer premises is found to be defective from initial fitting, testing and replacement of meter shall be carried out as per clause 5.31 to 5.50 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. With up to date amendment.

6.3 Testing of Consumer's Installation:

The first test and inspection will be carried out free of cost as per clause 4.47 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity supply Code) Regulations, 2013. **with up to date amendment.** Should any further test or inspection is necessitated due to fault in the installation or due to non-compliance with the condition of supply by the consumer an extra charge of Rs. 100.00 per test, payable in advance, shall be levied. In the event of the consumer failing to pay the testing charge in advance with in stipulated time, the Licensee will be at liberty to disconnect the consumer's premise from the supplier's main.

6.5 Disconnection and Reconnection

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

(b) Reconnection charge shall be:

- (i) For AC single phase LT supply: Rs. 80.00
- (ii) For AC three phase LT supply : Rs.150.00
- (iii) For AC HT supply : Rs .400.00

Note: - Extra material required will be chargeable.

6.6 Charges for change of category:

Change of category will be carried out as per clause 4.72 to 4.80, clause 4.85 to 4.86 and 4.90 to 4.93 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity supply Code) Regulations, 2013. with up to date amendment.

6.7 Charges for Replacement of Connection Wire, Cut-out, Fuse, etc.:

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

The execution charge shall be as given below:

1. For Cable and wire:-

- i) Single phase connection: Rs.400.00 per connection.
- ii) LT Three phase connection: Rs.600.00 per connection.
- iii) HT Three phase connection: Rs.900.00 per 100meters of the HT line

2. For Cut out & Fuse:-

- (i) Rs 15.00 per cut out.
- (ii) Rs 5.00 per fuse

6.8 Re-rating of Installation: -

This charge is for meeting expenses toward spot verification of load and other connected recording works. Fees for re-rating of the consumer's installation at the request of the consumer shall be Rs.100.00 per rerating per connection.

These charges shall be payable by the consumer in advance. The aforesaid charges do not include the charges payable by the consumer for other works connected due to change of connected load. Rerating shall be carried out as per clause 4.94 to 4.107 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.

6.9 Security Deposit:

(a) Load Security:

The amount of load shall be calculated as per the procedure prescribed in clause 4.123 – 4.127 and determine as per Annexure 11.18 of the JERC for M&M (Electricity Supply Code) Regulations, 2013. **with up to date amendment. However, consumer with prepaid meter shall not be required to pay load security deposit.**

(b) Meter Security (if Licensee's own meter is used):

The amount of Security deposit for meter security shall normally be the price of the meter as fixed by the licensee from time to time in line with **Section 55 of Electricity Act 2003.**

6.10 Charges for Replacement of tamper proof Meter Box:

For AC single phase LT or three phases LT without CT or with CT, the charge will be as per Licensee's purchase rate in case the energy meter box is replaced by the Licensee from its store.

6.11 Service Lines & Service Connection:

- (i) Type of Service Connection:** Type of service connection and distance for service connection line length will be as per clause 4.2 read with clause 5.10 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.
- (ii) Cost of Service Connection:** As stipulated in clause 4.37 and 4.131 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment. If the consumer desires to arrange service connection materials, the Department (not below rank of Junior Engineer concerned) will check all the materials.

6.12 Mutation Fee: Mutation fee i.e. fee for change of name shall be Rs 50 per change. This shall be carried out as per clause 4.81 to 4.84 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.

6.13 Cost of Application Form: The application form shall be free of cost vide clause 4.14 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.

6.14 Operation & Maintenance (O&M) Charge on dedicated assets :-

The O & M charge of assets created out of such amount received without any obligation to return the same and no interest costs attached to such subvention, from consumer contribution, Deposit work and any similar nature shall be as follows: -

- (1) The completion costs shall be escalated at the rate of 4 % per annum from the year of completion to arrive the costs of the assets for 2015-16 level.
- (2) The annual O & M charges/expenses shall be 5 % from the 2015-16 level costs.
- (3) The O & M charges/expenses for each subsequent will be determined by escalating the base charges/expenses determined above for 2015-16, at the escalation factor of 5.72 % to arrive at possible O & M charges / expenses for each year.

ANNEXURES

ANNEXURE - I

MINUTES OF THE 19TH MEETING OF THE STATE ADVISORY COMMITTEE OF MANIPUR**Venue: REGENCY HALL, HOTEL IMPHAL, IMPHAL****Date & Time: 5TH MARCH 2019, 11AM**

The Chairman of the Committee, Mr. Lalchharliana Pachuau, Chairperson of the Joint Commission for Manipur & Mizoram chaired the meeting.

The list of members and participants attending the meeting is appended.

After welcoming the Members and Invitees, the Chairperson initiated the agenda wise discussion as below:

Agenda No.1. Confirmation on the Minutes of the 18th Meeting of the SAC, Manipur held on 19th February, 2018.

Requesting the members to express their views and comments on the minutes of the 18th SAC and after obtaining nods from the members, the minutes were declared as confirmed.

Agenda No. 2. Action taken report on the minutes of 18th SAC Meeting, Manipur.

i) Up to date status of action taken regarding installation of reliable meters on 11 kV feeders at all injecting points of MSPDCL and check meters (vide Agenda No. 3 of the minutes of 18th SAC, Manipur).

As per the action taken report furnished by MSPDCL, the up-to-date status of the installation of reliable meters on 11 kV feeder at all injecting points of MSPDCL and check meters as on 31st January, 2019 are as shown below:

**Status of Feeder Meter Installation
(As per MSPDCL record)**

Row Labels	Non-RAPDRP	R-APDRP	Grand Total
INCOMING			
Meter	83		83
No of Meter	16		16
Replacement Required	6		6
Grand Total (a)	105		105
OUTGOING			
Meter	79	67	146
No of Meter	38		38
Replacement Required	4		4
Grand Total (b)	121	67	188
STATION FEEDERS			
Meter	34		34
No of Meter	5		5
Replacement Required	1		1
Grand Total (c)	40		40
Overall Grand Total (a+b+c)	266	67	333

It is decided that reliable meters shall be provided to all the 11 kV incomers of MSPDCL lines within 4 (four) month by MSPCL to enable meter reading of energy injection to MSPDCL and MSPCL shall provide all necessary meters at 132 kV and 33 kV level within 6 months from now. At these 33/11 kV substation which are having RE type construction (i.e, without panels/control room etc.) The interface metering between MSPCL & MSPDCL can be achieved by installing correct rating of CT/PT combination (like that of used in boundary metering with meter as per CEA Meter Regulations) the interface meter should have accuracy class of 0.2S and the CT/PT should be compatible to accuracy class of the meter.

The MD, MSPCL informed the Committee that he shall look into the feasibility of such outdoor metering in Non-Conventional Substations and will achieved metering as committed in line with the foregone commitment.

ii) Action taken towards recovery of outstanding dues or writing off outstanding debt of different Department and installation of pre-paid meters in all Government Offices and residents (vide Agenda No. 4 of the minutes of 18th Meeting of SAC, Manipur).

As per the report given by Mr. L. Priyokumar, MD (MSPDCL), recovery of the outstanding dues of the different Departments is one of the major efforts that MSPDCL takes seriously and there is no plan of writing-off the outstanding dues of the different Departments. Disconnection letters were served to all the defaulting Departments. However, it may be noted that the budgetary provision of all Departments for the energy consumed is very meager. A reminder letter to the different Departments to clear all their respective outstanding dues was also served from time to time with a copy to the Principal Secretary (Finance), Government of Manipur vide file no. MSPDCL/ Comm/ Govt. Dues 17-18/Letters. The total Govt Outstanding dues as on 31st December 2018 is Rs. 92.35 crores. The Department wise breakup of the Govt. Outstanding Dues is also furnished in the Meeting.

He further stated that the working capacity of a pre-paid meter is limited within 50kW load and so providing pre-paid meters to Government Offices consuming energy through a dedicated transformer with load of above 50kW is not possible. Separate DTR meters are installed for such cases. Hence installation of pre-paid meters in all Government Offices is not considered mandatory.

In this regard, Dr. Ch Ibohal Meitei, Prof Manipur Institute of Management Studies, Manipur University has stated that the recovery of bad debt is very critical for the running of the company and to put more pressure to the defaulting Department their names should be published in the local domain for more public pressure. This suggestion was also endorsed by Dr. L. Sadananda Singh, General Secretary, Senior Citizens for Society, Manipur. It was also decided that the Commission will write to the Chief Secretary, Government of Manipur to take steps for the recovery of the bad debt at the earliest possible time and deduction to be made at source. Mr. L. Manglem Singh, Director, MANIREDA stated that MANIREDA has no outstanding due and the Department are paying bills regularly. It was decided that MSPDCL may come out with the real outstanding dues upto 31st December, 2018. Mr. Nobert Khayi, Social Worker, W.Phungreitang, Ukhrul informed the Committee that in Ukhrul there are hardly 2 / 3 staffs and people has to wait long hours to clear up their dues

in the office and requested MSPDCL to look after this matter urgently. He further suggested outsourcing of billing and collection of bill and conducting awareness programme regarding transmission and distribution status in Manipur. Mr. L. Priyokumar informed the members that they have been taking actions to improve billing and payment through internet to sort out various difficulties being faced by the consumers. The Meeting also agreed that MSPDCL should come up with more revenue collection centres.

iii) Reports on energy audit in RAPDRP towns (vide Agenda no. 5 of the minutes of 18th Meeting of SAC, Manipur).

MSPDCL furnished the energy audit report for the month of September, 2018 in RAPDRP Towns. After going through the report, Member of the Commission, Mr. Ng Sarat Singh suggested to improve billing efficiency above 90%. They should take 3 months reading to assess monthly consumption rate. Managing Director, MSPDCL should gear up so that there is no loss in revenue collection. It was again suggested to have joint meter readings at 33 kV and 11 kV Sub Station in presence of both MSPDCL and MSPCL representatives as per the schedule dates well prepared in advance by both of them together for taking the reading.

iv) The latest reconciled status of feeder meter installation at 11 kV feeders in the single line diagram of all the sub-stations showing incoming/outgoing 11 kV feeders. Details of sub-station-wise incoming/outgoing feeders of all voltage levels with meter installation status under MSPCL (vide Agenda No. 9 of the minutes of 19th Meeting of SAC Manipur).

Managing Director, MSPCL Mr. N.Sarat Singh explained in detail the status of metering of 11 kV, 33 kV and 132 kV feeders and furnished the detail network diagram to the Commission and promised that metering in all the 11 kV incoming feeders in all substations will be completed within 2 (two) months and all the outgoing 11 kV feeders will be completed within 6 (six) months.

Agenda 3 : Determination of Retail Tariff of MSPDCL for FY 2019 - 20 and Transmission Tariff of MSPCL for FY 2019 – 20.

The MD, MSPDCL explained in detail the basis of the proposal for the increase of the retail tariff for FY 2019–20. Mr. Elangbam Dolendra Singh, Adviser, All Manipur Power Consumer's Association enquired why the Commission always prepare different Tariff rates for Manipur and Mizoram. The Member of the Commission informed him that the situation of Manipur and Mizoram is different and the Commission cannot issue a common tariff for the two States. He further mentioned that the amount of fix charge in the proposed tariff is very high and it should not be increased and in view of huge number of urban poor consumers the proposed tariff is very high and is not agreeable at all. Dr. Ch. Ibohal Meitei has stated that there should not be a tariff shock and a nominal increase in tariff would be accepted by the consumers. He further stated that the MSPDCL should come up with better billing and collection centre by use of social network i.e. internet etc. where the consumers can pay their bills. Mr. Priyokumar, MD, MSPDCL replied that consumers will very soon can pay their dues through internet banking system. The Committee agreed for a small hike in the tariff for FY 2019- 20.

Agenda 4 : Truing Up

The 2 (two) companies has an Annual Audited Accounts for the year up to 2015 – 16 only. Chairman informed them they should take immediate steps for auditing of their accounts without which truing up cannot be a carried one. Both MDs, MSPDCL and MSPCL assured that audited annual accounts shall be made available at least up to FY 2016-17 in the next Tariff Petition.

Agenda 5: Revenue Collection Centre:

The Chairman informed the Committee that on visit by the Commission at faraway places like Chandel, Ukhrul and Senapati for Consumer awareness programmes, the public has informed the Commission that more payment counters are required. This also was affirmed by Mr. Nobert Khayi and he suggested that outsourcing of billing and collection of revenue may be thought of for far-flung areas. Mr. PriyoKumar, MD, MSPDCL informed the Committee that the Company already have taken steps and franchisee systems will be in operation very soon.

Agenda 6: Subsidy

As per the Electricity Act, 2003 the Government has to specify the specific category of consumer which should be given subsidy. The Government of Manipur has so far not reacted on this matter. MSPDCL shall make proposal to the Government of Manipur for incorporation in their filling of next Tariff Petition.

Agenda 7: Integration of billing system

The Chairman enquired from the MSPDCL whether the different prepaid meters manufactured by different companies could be integrated together. The MSPDCL informed the Committee that with a new software, the system could be integrated now, and there is no difficulty in re-calibrating the machines with new tariff rates.

The Meeting ended at 2:30 PM with a vote of thanks from the Chair.

Sd/- LALCHHARLIANA PACHUAU
Chairperson

Memo No. H. 11019/26/13-JERC

Dated Aizawl, the 15th March, 2019

Copy to:

1. Secretary to Hon'ble Chief Minister, Govt. of Manipur for kind information to the Hon'ble Chief Minister.
2. P.S. to Hon'ble Power Minister Govt. of Manipur for kind information to the Hon'ble Power Minister.
3. Secretary, Power Department, Govt. of Manipur for kind information and for taking necessary action on the Minutes of the Meeting.
4. All Members / Invitees of the State Advisory Committee for kind information and for taking necessary action on the Minutes of the Meeting.
5. Guard File.

LIST OF MEMBERS & PARTICIPANTS ATTENDENTS
THE 19TH MEETING OF STATE ADVISORY COMMITTEE OF MANIPUR

Date & Time: 5th March, 2019 (Tuesday) 11:00 a.m.

Venue: Hotel Classic Regency Hall, Imphal, Manipur.

Sl.No.	Participant Name	Designation / Organisation
List of Members		
1	Er. Lalchharliana Pachau	Chairperson, JERC (M&M)
2	Er. Ng. Sarat Singh	Member, JERC(M&M)
3	Mr. L.Manglem Singh	Director, MANIREDA, Imphal, Manipur
4	Dr. Ch. Ibohal Meitei	Professor, Manipur Institute of Management Studies, Manipur University
5	D r. L. Sadananda Singh	General Secretary, Senior Citizens for Society, Manipur
6	Mr. Elangbam Dolendra Singh,	Advisor, All Manipur Power Consumers' Association
7	Mr. Nobert Khayi	Social Worker, West Phungreitang, Ukhrul
8	Mr. Rishikumar Singh	President, All Manipur Entrepreneurs Association
9	Mr. M. Brojen Singh	Kakching Wairi Thongam Leikai, Manipur
10	Miss H.Lalthomawi	Advocate, Tipaimukh Road, Hiangtam Lamka, Manipur
11	Mr. R.S.Daikho	Reikhumai Taphou, Senapati, Manipur
SPECIAL INVITEES/INVITEES		
1	Er. L.Priyokumar	Managing Director, MSPDCL
2.	Er.N. Sarat Singh	Managing Director, MSPCL
3	Er. H.Thanthianga	Assistant Chief (Engineering), JERC (M&M)
4	Mr. Richard Zothankima	Assistant Secretary, JERC (M&M)
5	Mr. L.Dineshkumar Singh	General Manager (SLDC, MSPCL)
6	Mr. N.Dwijen Singh	Executive Director (Civil), MSPCL
7	Ms.Khoisnam Steela	DGM (Comm), SLDC
8	Ms.Tesah Janggougin Khongthang	Manager, LT Cell
9	Ms. Laishram Ritu	DGM (Sys. Opt), SLDC
10	Mr. H.Manimukta Singh	DGM, SLDC
11	Mr.L.Surchandra Singh	Manager, T.D. III
12	Mr. Ranjan .W	Dy. Manager, ED (Tech)
13	Mr. Amit Goenka	Sr. Manager (Deloitte), Consultant, MSPCL
14	Mr. Ng. Birjit Singh	GM, MSPCL
15	Mr. Th. Kaminimohon Singh	GM , Purchase
16	Mr. M.Budhachandra Sharma	GM Substation

Sl.No.	Participant Name	Designation / Organisation
17	Mr. K.Jila Singh	General Manager (Commercial), MSPDCL
18	Mr. H.Shantikumar Singh	ED (Tech), MSPCL
19	Mr. Th. Aton Singh	ED, Commercial, MSPDCL
20	Mr. Ng. Subhachandra Sharma	GM Substation
21	Mr. Jaspreet Singh	Consultant
22	Mrs. N.Purnima	Deputy Manager, MSPDCL
23	Mr. Y Dayanta	Manager (Projects), MSPDCL
24	Mr. Sh. Santosh Sharma	Manager, MSPDCL
25	Mr. G. Tapankumar Sharma	Manager MSPCL
26	Mr. S.Kripachariya Singh	DGM, MSPCL

ANNEXURE - II

LIST OF PERSONS WHO ATTENDED PUBLIC HEARING ON MULTI YEAR ARR & TARIFF PETITION FOR FY 2019-20 IN RESPECT OF MSPCL, MANIPUR

Venue:Hotel Classic, Regency Hall, Imphal, Manipur.

Date & Time: 7th March, 2019 (Wednesday) at 11:00 AM.

Sl. No.	NAME (IN CAPITAL)	Designation & Organisation
1	Er. Lalchharliana Pachuau	Chairperson, JERC (M&M)
2	Er. Ng. Sarat Singh	Member, JERC (M&M)
3	Mr. L. Priyokuma Singh	Managing Director, MSPDCL
4	Mr. H. Thanthianga	Asst. Chief (Engg.), JERC (M&M)
5	Mr. Richard Zothankima	Asst. Secy., JERC (M&M)
6	Mr. H. Shantikumar Singh	Executive Director (Tech.), MSPDCL
7	Mr. K. Hari Prasad	Consultant, ASCI, Hyderabad
On behalf of MSPDCL		
8	Mr. Th. Aton Singh	Executive Director/(Comml.), MSPDCL
9	Mr. K. Jila Singh	GM (Comml), MSPDCL
10	Mr. O. Kartik Singh	GM, Circle-I, MSPDCL
11	Mr. M. Dorendra Sharma	DGM (Comml), MSPDCL
12	Mr. Sh. Santosh Sharma	Manager, MSPDCL
13	Mr. Tesah Janggougin Khongthang	Manager, MSPDCL
14	Mr. H. Jiten Singh	Manager, MSPDCL
15	Mr. Usham Rocky Singh	Manager, HT Cell, MSPDCL
16	Mr. Th. Satyajeet Singh	DM (Power Package), MSPDCL
17	Mr. N. Purnima	DM, MSPDCL
18	Mr. Jaspreet Singh	Consultant (ABPS)
Representative of General Public		
19	Mr. K. Sanatomba	Gen. Secy, AMPCA
20	Mr. S. Chaoba Singh	President, AMPCA

ANNEXURE – III

MSPDCL - Expected Revenue in FY2019-20 from Existing Tariff of FY2018-19

Sl. No.	Consumer Category	No. of Consumers	Contracted Load (in kW)	Annual Units Sales (in MU)	Sales/Consumer/ Month (in kWh)	Existing Tariff		Revenue /month				Annual Revenue (in Rs. lakhs)	Avg. Revenue (Rs/kWh)
						Fixed Charge (Rs/kVAh or kWh)	Energy charge (Rs./kWh or kVAh)	Total Fixed Charges (Rs. lakhs)	Energy charge per Consumer (Rupees)	Total energy charge (Rs. lakhs)	Total Revenue (in Rs lakhs)		
1	2	3	4	5	6	7	8	9	10	11	12=(9+11)	13	14
1	Kutir Jyothi (Domestic)												
	All units	66442		20.96	26.29	Per Connection	1.70		44.69	29.69			
	Sub Total (a)	66442	10963	20.96		20		13.29	44.69	29.69	42.98	515.76	2.46
2	Domestic (General)												
i)	First 100 kWh	281114		149.00	44.17		3.60		159.01	447.00			
ii)	Next 100 kWh	108121		132.00	101.74		4.35		367.57	397.42			
iii)	Balance >200 kWh	43248		105.83	203.92		5.60		816.95	353.32			
	Sub Total (b)	432483	637639	386.83		60		382.58	1343.53	1197.74	1580.32	18963.84	4.90
	Total Domestic (a+b)	498925	648602	407.79				395.87	1388.22	1227.43	1623.30	19479.60	4.78
3	Commercial												
i)	First 100 kWh	9238		11.00	99.22		5.00		496.10	45.83			
ii)	Next 100 kWh	11548		25.00	180.41		6.00		982.46	113.45			
iii)	Balance >200 kWh	2310		9.43	340.25		7.10		2095.78	48.40			
	Sub Total (a)	23096	58815	45.43		80		47.05	3574.34	207.68	254.73	3056.76	6.73
4	Commercial-HT (b)	481	2224	6.06	1049.90	100	7.00	2.47	8165.89	39.28	41.75	501.01	8.27
	Total Commercial (a&b)	23577	61039	51.49				49.52	11740.23	246.96	296.481	3557.77	6.91
5	Public Lighting	601	864	5.08	704.38	65	6.50	0.56	4578.47	27.52	28.08	336.96	6.63
6	Public Water Supply - LT	37	373	2.20	4945.47	100	6.70	0.37	33134.65	12.26	12.63	151.56	6.90
7	Public Water Supply - HT	102	7531	18.66	15248.54	100	6.10	8.37	103351.22	105.42	113.79	1365.45	7.32
8	Agri & Irrigation - LT	53	303	1.27	2000.00	60	3.50	0.18	7000.00	3.71	3.89	46.68	3.67
9	Agri & Irrigation - HT	11	1276	0.85	6424.24	100	3.30	1.42	23555.55	2.59	4.01	48.09	5.67
10	Micro & Small Industry LT	2375	11640	20.00	701.75	65	3.75	7.57	2631.56	62.50	70.07	840.84	4.20
11	Medium Industry HT	44	3232	4.10	7765.15	100	4.90	3.59	42276.93	18.60	22.19	266.29	6.49
12	Large Industry - HT	14	7659	6.00	35714.29	100	6.10	8.51	242063.52	33.89	42.40	508.80	8.48
13	Bulk Supply HT	432	49612	114.00	21990.74	100	5.40	55.12	131944.44	570.00	625.12	7501.49	6.58
	Grand Total	526171	792131	631.44				531	603665	2311	2842	34103.53	5.40

ANNEXURE – IV

MSPDCL - Expected Revenue during FY2019-20 from Aproved Subsidised Tariff effective from 01.04.2019

Sl. No.	Consumer Category	No. of Consumers	Contracted Load (in kW)	Annual Units Sales (in MU)	Sales/Consumer/ Month (in kWh)	Subsidised Tariff		Revenue /month				Annual Revenue (in Rs. lakhs)	Avg. Revenue (Rs/kWh)
						Fixed Charge (Rs/kVAh or kWh)	Energy charge (Rs./kWh or kVAh)	Total Fixed Charges (Rs. lakhs)	Energy charge per Consumer (Rupees)	Total energy charge (Rs. lakhs)	Total Revenue (in Rs lakhs)		
1	2	3	4	5	6	7	8	9	10	11	12=(9+11)	13	14
1	Kutir Jyothi (Domestic)												
	All units	66442		20.96	26.29	per Connection	1.85		48.64	32.32			
	Sub Total (a)	66442	10963	20.96		25		16.61	48.64	32.32	48.93	587.16	2.80
2	Domestic (General)												
i)	First 100 kWh	281114		149.00	44.17		3.90		172.26	484.25			
ii)	Next 100 kWh	108121		132.00	101.74		5.20		399.05	431.46			
iii)	Balance >200 kWh	43248		105.83	203.92		6.00		933.52	403.73			
	Sub Total (b)	432483	637639	386.83		60		382.58	1504.83	1319.44	1702.02	20424.24	5.28
	Total Domestic (a+b)	498925	648602	407.79				399.19	1553.47	1351.76	1750.95	21011.40	5.15
3	Commercial												
i)	First 100 kWh	9238		11.00	99.22		5.40		535.79	49.50			
ii)	Next 100 kWh	11548		25.00	180.41		6.50		1062.67	122.72			
iii)	Balance >200 kWh	2310		9.43	340.25		7.65		2262.91	52.26			
	Sub Total (a)	23096	58815	45.43		80		47.05	3861.37	224.48	271.53	3258.36	7.17
4	Commercial-HT (b)	481	2224	6.06	1049.90	100	7.60	2.47	8865.82	42.64	45.11	541.33	8.93
	Total Commercial (a&b)	23577	61039	51.49				49.52	12727.19	267.12	316.641	3799.69	7.38
5	Public Lighting	601	864	5.08	704.38	65	7.00	0.56	4930.66	29.63	30.19	362.28	7.13
6	Public Water Suply - LT	37	373	2.20	4945.47	100	7.25	0.37	35854.66	13.27	13.64	163.68	7.45
7	Public Water Suply - HT	102	7531	18.66	15248.54	100	6.75	8.37	114364.05	116.65	125.02	1500.21	8.04
8	Agri & Irrigation - LT	53	303	1.27	2000.00	60	3.90	0.18	7800.00	4.13	4.31	51.72	4.07
9	Agri & Irrigation - HT	11	1276	0.85	6424.24	100	3.60	1.42	25696.96	2.83	4.25	50.97	6.01
10	Small Industry LT	2375	11640	20.00	701.75	65	4.10	7.57	2877.18	68.33	75.90	910.80	4.55
11	Medium Industy HT	44	3232	4.10	7765.15	100	5.30	3.59	45728.11	20.12	23.71	284.53	6.94
12	Large Industry - HT	14	7659	6.00	35714.29	100	6.60	8.51	261904.79	36.67	45.18	542.16	9.04
13	Bulk Supply HT	432	49612	114.00	21990.74	100	5.90	55.12	144161.52	622.78	677.90	8134.85	7.14
	Grand Total	526171	792131	631.44				534	657599	2533	3068	36812.3	5.83

Annexure-V

MSPDCL - Expected Revenue during FY2019-20 from Approved Full Cost Tariff (i.e Witout Subsidy)														
Sl. No.	Consumer Category	No. of Consumers	Contracted Load (in kW)	Annual Units Sales (in MU)	Sales/Consumer/ Month (in kWh)	Full Cost Tariff		Revenue /month				Annual Revenue (in Rs. lakhs)	Avg. Revenue (Rs/kWh)	ABR to Avg Rev (%)
						Fixed Charge (Rs/kVAh or kwh)	Energy charge (Rs./kWh or kVAh)	Total Fixed Charges (Rs. lakhs)	Energy charge per Consumer (Rupees)	Total energy charge (Rs. lakhs)	Total Revenue (in Rs lakhs)			
1	2	3	4	5	6	7	8	9	10	11	12=(9+11)	13	14	15
1	Kutir Jyothi (Domestic)													
	All units	66442		20.96	26.29	per conectn	6.60		173.51	115.28				
	Sub Total (a)	66442	10963	20.96		25		16.61	173.51	115.28	131.89	1582.68	7.55	81.01%
2	Domestic (General)													
i)	First 100 kWh	281114		149.00	44.17		7.30		322.44	906.42				
ii)	Next 100 kWh	108121		132.00	101.74		7.80		743.57	803.95				
iii)	Balance >200 kWh	43248		105.83	203.92		8.50		1543.32	667.46				
	Sub Total (b)	432483	637639	386.83		70		446.35	2609.33	2377.83	2824.18	33890.16	8.76	93.99%
	Total Domestic (a+b)	498925	648602	407.79				462.96	2782.84	2493.11	2956.07	35472.84	8.70	93.35%
3	Commercial													
i)	First 100 kWh	9238		11.00	99.22		9.30		922.75	85.25				
ii)	Next 100 kWh	11548		25.00	180.41		10.00		1734.10	200.25				
iii)	Balance >200 kWh	2310		9.43	340.25		10.60		3416.65	78.91				
	Sub Total (a)	23096	58815	45.43		100		58.82	6073.50	364.41	423.23	5078.76	11.18	119.96%
4	Commercial-HT (b)	481	2224	6.06	1049.90	110	9.60	2.72	11198.93	53.87	56.59	679.06	11.21	120.28%
	Total Commercial (a&b)	23577	61039	51.49				61.54	17272.43	418.28	479.818	5757.82	11.18	119.96%
5	Public Lighting	601	864	5.08	704.38	100	9.50	0.86	6691.61	40.22	41.08	492.96	9.70	104.08%
6	Public Water Suply - LT	37	373	2.20	4945.47	100	10.50	0.37	51927.44	19.21	19.58	234.96	10.70	114.81%
7	Public Water Suply - HT	102	7531	18.66	15248.54	110	9.50	9.20	160956.81	164.18	173.38	2080.62	11.15	119.64%
8	Agri & Irrigation - LT	53	303	1.27	2000.00	100	7.60	0.30	15200.00	8.06	8.36	100.32	7.89	84.66%
9	Agri & Irrigation - HT	11	1276	0.85	6424.24	110	7.50	1.56	53535.33	5.89	7.45	89.40	10.54	113.09%
10	Micro & Small Industry LT	2375	11640	20.00	701.75	100	8.90	11.64	6245.58	148.33	159.97	1919.64	9.60	103.00%
11	Medium Industy HT	44	3232	4.10	7765.15	110	9.00	3.95	77651.50	34.17	38.12	457.44	11.16	119.74%
12	Large Industry - HT	14	7659	6.00	35714.29	110	9.50	9.36	376984.17	52.78	62.14	745.69	12.43	133.37%
13	Bulk Supply HT	432	49612	114.00	21990.74	110	8.50	60.64	207690.32	897.22	957.86	11494.28	10.08	108.15%
	Grand Total	526171	792131	631.44				622	976938	4281	4904	58846	9.32	100.00%



**JOINT ELECTRICITY REGULATORY COMMISSION
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