MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION

5th Floor, Metro Plaza, Bittan Market, Bhopal - 462 016

AGGREGATE REVENUE REQUIREMENT AND RETAIL SUPPLY TARIFF ORDER FOR FY 2017-18

Petition No. 71/2016

PRESENT:

Dr. Dev Raj Birdi, Chairman
A. B. Bajpai, Member
Alok Gupta, Member

IN THE MATTER OF:

Determination of Aggregate Revenue Requirement (ARR) and Retail Supply Tariff for FY 2017-18 based on the ARR & Tariff Petition filed by the Distribution Licensees namely Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (East Discom), Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited (West Discom) and Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (Central Discom), and Madhya Pradesh Power Management Company Limited (MPPMCL).

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A1: ORDER

(Passed on this 31st Day of March, 2017)

1.1 This order is in response to the petition No. 71 of 2016 jointly filed by Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited, Jabalpur, Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited, Indore and Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited, Bhopal (hereinafter individually referred to as East Discom, West Discom and Central Discom respectively and collectively referred to as Discoms or Distribution Licensees or Licensees or the Petitioners), and Madhya Pradesh Power Management Company Limited, Jabalpur (hereinafter referred as the MPPMCL or collectively with Discoms referred to as the Petitioners) before Madhya Pradesh Electricity Regulatory Commission (hereinafter referred to as MPERC or the Commission). This petition has been filed as per the requirements of Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2015 {RG-35 (II) of 2015) (hereinafter referred to as the Tariff Regulations or Regulations).

1.2 In accordance with the Tariff Regulations, the Distribution Licensees are required to file their respective petition(s)/proposal(s) for the determination of Aggregate Revenue Requirement (ARR) and Retail Supply Tariff for FY 2017-18 latest by 31st October, 2016. Vide letter dated 29th October, 2016, MPPMCL requested the Commission to extend the date of filing of the petition up to 09th December 2016 based on the grounds that the annual accounts and the revised capex plans of the Discoms were not finalized. MPPMCL further stated that the Discoms were collating the commercial data with regard to sales, number of consumers, etc. and also working for the projection of expenses. The Commission granted the extension up to 30th November 2016. MPPMCL again requested the Commission to extend the date of filing of the petition first by 09th December 2016 as the Discoms required some more time to finalise their ARR. The Commission considered the request and allowed the time extension up to 09th December 2016.

1.3 The Petitioners filed the petition for determination of ARR and the retail supply tariff for FY 2017-18 on 08/12/2016. The petition was examined and found grossly deficient. Therefore, vide letter dated 12/01/2017 the Commission directed the Petitioners to file a revised petition incorporating the requisite information as required through the data gaps / additional information by 20th January 2017.

1.4 MPPMCL and Distribution Licensees jointly filed the petition (No.71/2016) on 20 January, 2017. Gist of the petition is given below:

Table 1 : Snapshot of the petition for FY 2017-18 (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom	State
Revenue from sale of power as per existing tariff	8376	10054	9114	27544
Aggregate Revenue Requirement (including True-up)	9950	11537	10586	32073
Revenue gap in Income and Expenditure for FY 2017-18	1574	1483	1472	4529

1.5 The Petitioners have proposed to recover the gap of Rs. 4529 Crore partially through revision in the retail supply tariff for FY 2017-18 (Rs. 2926 Crore). Further, the Petitioners requested the Commission to admit the remaining gap of Rs. 1603 Crore as regulatory assets.

1.6 The motion hearing was held by the Commission on 7th Feburary, 2017. The Commission admitted the petition and directed the Petitioners:

i. To publish the public notice in Hindi and English in the newspapers latest by 9 Feburary, 2017 for inviting objections /comments/suggestions from the stakeholders on the subject petition.

ii. English and Hindi version of the petition be kept ready for sale to stakeholders from 9 Feburary, 2017 positively at the offices mentioned in the public notice.

iii. To furnish the reply on data-gaps observed by the Commission within a fortnight.

1.7 Public notices comprising the gist of the tariff applications and tariff proposals were published by Petitioners on 9th Feburary, 2017 in the Hindi and English newspapers. The stakeholders were requested to file their objections/comments/suggestions latest by March 2, 2017.

1.8 The Commission received written objections from various stakeholders. Details of objections received, response from the Petitioners and views of the Commission thereof are given in the chapter 'A5: Public Objections and Comments on petition' of this order.

State Advisory Committee

1.9 The Commission convened a meeting of the State Advisory Committee (SAC) on 23rd February, 2017 for seeking advice on the petition. SAC members provided several valuable suggestions regarding true-up cost, sales projections, surplus energy, rationalisation of tariff schedules and terms and conditions of tariff and terminal benefit. Views of the SAC members are indicated in the chapter 'A5: Public

Suggestions and Comments on petition' of this order. These issues have been duly taken in cognizance by the Commission while determining the ARR and Tariff for the FY 2017-18.

Public Hearing

1.10 The Commission issued a press release on February 28, 2017 and subsequently published a public notice on March 02, 2017 in various newspapers across the State inviting interested stakeholders to present their views on the petition during public hearings. The Commission held public hearings on the ARR/Tariff petition at, Indore, Bhopal and Jabalpur as per the schedule given below:

Table 2: Public hearings

Name of Discom	Venue of Public Hearing	Date
M.P. Poorv Kshetra Vidyut Vitaran Company Ltd., Jabalpur	Tarang Auditorium, Shakti Bhavan, Rampur, Jabalpur	March 4, 2017
M.P. Paschim Kshetra Vidyut Vitaran Co. Ltd., Indore	Devi Ahilya Vishva Vidyalaya Auditorium, Khandwa Road, Indore	March 7, 2017
M.P. Madhya Kshetra Vidyut Vitaran Company Ltd., Bhopal	Auditorium, Academy of Administration, 1100 Quarters, Bhopal	March 9, 2017

1.11 The Commission has ensured transparency with regard to public participation and meticulously observed the same at every stage. Adequate opportunity has been given to all stakeholders to file as well as present their objections/comments/suggestions in the matter. The Commission has taken due cognizance of all the objections received in the office of the Commission within stipulated time and also raised during the hearings. As per the provisions of the Electricity Act, 2003 and relevant regulations notified by the Commission in this regard, the Commission has finalised this order.

Distribution Losses

1.12 Distribution loss reduction trajectory specified in the Tariff Regulations for the period from FY 2016-17 to FY 2018-19 is given in the following table:

Table 3: Distribution loss reduction trajectory as per Regulations

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
East Discom	18%	**17%**	16%
West Discom	16%	**15.5%**	15%
Central Discom	19%	**18%**	17%

1.13 The Commission has determined the ARR and tariffs for FY 2017-18 for the Discoms of the State by allowing losses only to the extent of distribution loss trajectory as given in the Table 3 above.

Energy Accounting and Meterisation

1.14 The Commission had emphasized the importance of energy accounting and meterisation from time to time separately and through previous tariff orders. Need for proper Energy Accounting and Energy Audit at various levels such as sub-stations, distribution feeders and distribution transformers as well as at the consumer end was also impressed upon the Discoms so as to provide reliable data about the actual level of distribution losses – technical and other. Discoms were directed to prepare and implement appropriate loss reduction strategies and schemes. Meterisation at various levels of the distribution network such as feeder/ DTR metering and consumer metering is of prime importance to locate high loss areas and to take action to curb losses. The Discoms have achieved 100% meterisation of the domestic connections in urban area but the progress in remaining area i.e. feeder/ DTR metering and consumer metering in rural area have not been found satisfactory. However, West Discom has reported 100% meterisation of the consumer metering in the rural area also. There appears to be some progress with regard to feeder meterisation, while meterisation of agricultural DTRs and individual un-metered domestic connections in rural areas remains neglected. The status as per periodic reports submitted by Discoms with regard to meterisation of un-metered rural domestic connections, agricultural predominant DTRs and HT feeders up to quater end December, 2016 is given below:

Table 4: Status of feeder meterisation

Sr. No.	Particulars	Central Discom		West Discom		East Discom	
		33kV feeders	11kV feeders	33kV feeders	11kV feeders	33kV feeders	11kV feeders
1	Total No. of energy Audit points	1745	4664	2512	5843	1696	4185
2	No. of feeders provided with energy audit metering.	1735	4610	2485	5729	1696	3914
3	No. of feeders where energy audit meters are lying defective	33	280	321	656	0	122
4	No. of feeders on which energy audit meters are yet to be provided	10	54	27	114	0	149

Table 5: Status of meterisation of un-metered rural domestic consumers

Particulars	Domestic Rural		
	Total no. of connections	No. of un- metered connections	Percentage (%) un- Metered
East Discom	2322012	306060	13.18%
West Discom	1861888	0	0%
Central Discom	1087674	84385	7.76%

Particulars	**Domestic Rural**		
	Total no. of connections	**No. of un- metered connections**	**Percentage (%) un- Metered**
State Total	5271574	390445	7.41%

Table 6: Status of meterisation of agricultural DTRs

Particulars	**Agricultural DTR**		
	Total no. of Pre-dominant Agricultural DTRs	**No. of DTRs provided with meters**	**Percentage (%) of DTRs provided with meters**
East Discom	72682	5784	7.96%
West Discom	120046	21076	17.56%
Central Discom	128331	38957	30.36%
State Total	**321059**	**44741**	**13.94%**

1.15 The Commission would like to emphasize that directive for meterisation of agricultural predominant DTRs is an interim arrangement till meters on all individual agricultural connections are provided. The Commission is of the firm view that all consumers should be metered individually. The present regime of billing on benchmark consumption to either domestic or agriculture consumers has got no incentive for energy saving by the consumers and it is also not possible to work out the real energy loss scenario. The Commission keeping in view of the fact that without the proper metering system in place it is not possible to assess the demand of the agriculture consumers, has, therefore, directed the Discoms to expedite feeder meterisation and DTR meterisation on priority basis. There is also a need to segregate technical and commercial losses.

Wheeling Charges, Cross Subsidy Surcharge and Additional Surcharge

1.16 The Petitioners have filed a separate petition (P.No. 52/16) before the Commission for levy of additional surcharge under the provisions of Section 42(4) of the Electricity Act 2003 and clause 13.1(g) of MPERC (Terms and Condition for open access in MP Regulations 2005) for approval of additional surcharge as may be deemed appropriate to be recovered from all Open Access consumers. The Commission held a public hearing on 24 January 2017 wherein the stakeholders suggested to determine the additional surcharge along with the Cross subsidy surcharges and wheeling charges in the Retail Supply Tariff Orders for ensuing years henceforth. Further, the petitioners have also requested the Commission in ARR & Retail supply tariff petition for determination of additional surcharge for FY 2017-18. Taking cognizance of the aforementioned prayer and submissions of the Stakeholders the Commission has decided to deal with the petition no. 52/2016 along with the instant petition.

1.17 The Wheeling Charges, Cross Subsidy Surcharge and Additional Surcharge for open access consumers have been dealt in ‘Chapter – A3: Wheeling Charges, Cross Subsidy Surcharge and Additional Surcharge’.

Aggregate Revenue Requirement of Discoms

1.18 The Commission has determined the aggregate revenue requirement of the Discoms for FY 2017-18 and accordingly revised the tariffs (energy charges and fixed charges) for different consumer categories. Since revenue income from the tariffs has been equivalent to the ARR determined for the Discoms, therefore need for creation of Regulatory Assets does not arise as prayed by the Petitioners. ARR determined takes into account the true-up of ARR for Discoms and ARR true up for MP Power Transmission Co. Ltd. (MPPTCL) and MP Power Generation Co. Ltd. (MPPGCL) for previous years.

1.19 The Commission has passed the orders for true up of ARR for Discoms for FY 2006-07. The approved true up amount has also been considered while filing the total ARR for FY 2017-18. Further, in compliance of APTEL order dated 15 Sept., 2015 the balance of true-up cost for FY 2007-08, FY 2008-09, FY 2009-10, FY 2010-11 and FY 2011-12 has been approved by Commission by order dt.12.01.2017, resulting in to Rs. 1969.47 Crore has been admitted in this retail tariff order.

1.20 The ARR admitted for the Petitioners is given below in the table:

Table 7: ARR admitted by the Commission for FY 2017-18 (Rs. Crore)

Particulars	**East**	**West**	**Central**	**State**
Power Purchase admitted	5746.67	7741.11	6422.29	19910.07
Inter State transmission charges	434.39	551.64	419.97	1406.00
Intra state transmission charges including SLDC	756.67	969.65	806.05	2532.37
O&M Expenses	1368.18	1341.09	1284.61	3993.89
Depreciation	116.50	105.05	159.54	381.10
Interest & Finance Charges				
On Project Loans	106.69	67.53	238.10	412.32
On Working Capital Loans	85.97	63.99	46.38	196.34
On Consumer Security Deposit	31.69	54.50	56.16	142.34
Return on Equity	219.05	177.63	302.14	698.82
Bad & Doubtful Debts	2.00	2.00	2.00	6.00
Total Expenses admitted	**8867.82**	**11074.19**	**9737.25**	**29679.25**
Other income+Non Tariff Income	243.40	349.37	268.57	861.34
Net total Expenses	**8624.42**	**10724.82**	**9468.68**	**28817.91**
Impact of True-Up Amounts of Past Years				

Particulars	East	West	Central	State
Impact of True Up for Discoms for FY 06-07	119.00	168.00	136.00	423.00
Impact of True up for MP Transco for FY 14-15	123.63	158.00	132.00	413.63
Impact of True up for MP Genco for FY 14-15	-169.00	-207.00	-186.00	-562.00
Impact of APTEL complied order for FY 2007-08 to FY 2011-12	721.40	519.98	728.09	1969.47
Total impact of True-Up Amounts of Past Years	**795.03**	**638.98**	**810.09**	**2244.10**
Total ARR	**9419.45**	**11363.80**	**10278.76**	**31062.01**

1.21 The Commission has continued with the prescribed mechanism for recovery of Fuel Charge Adjustment (FCA) on quarterly basis so that uncontrollable costs on account of variations in the variable charges are adjusted timely in accordance with the spirit of the tariff policy and directives by the Hon'ble APTEL.

1.22 The Commission has made suitable provisions to fulfil the Renewable Purchase Obligations (RPO) in the ARR of the Discoms as per relevant Regulations. The Petitioners are required to fulfil their RPOs as per provisions of relevant Regulations as amended from time to time.

1.23 The Commission has determined the voltage wise cost of supply vis-a-vis the cross subsidy percentage of the consumer categories on that voltage based on the proposals submitted by the Discoms. It may be mentioned here that the data/ information for working out the voltage wise cost of supply needs to be further validated to get a fair and correct picture. The voltage wise cost of supply vis-a-vis cross subsidy percentage worked out in this tariff order is only indicative in nature in the absence of requisite data. This is in compliance of directives given in the judgment of Hon'ble APTEL.

Implementation of the order

1.24 The Distribution Licensees must take immediate steps to implement this order after giving seven (7) days Public Notice in the newspapers, in accordance with Regulation 1.30 of MPERC (Details to be furnished and fee payable by licensee or generating company for determination of tariff and manner of making application) Regulations, 2004, as amended from time to time. The tariff determined by this order shall be applicable from April 10, 2017 to March 31, 2018, unless amended, extended or modified by an order of this Commission.

1.25 The Commission has thus accepted the petition of the Distribution Licensees of the State and MPPMCL with modifications and conditions and has accordingly determined the retail supply tariffs and charges recoverable by the Distribution Licensees in their area of supply for FY 2017-18. The detailed order provides for the grounds and reasons of determining the ARR, discusses the functional and financial performance of the three Distribution licensees and includes a section dealing with the status report on the compliance of the Commission's Directives as well as the responses of the Distribution Licensees thereto along with the Commission's observations on the suggestions and comments received from the stakeholders on the ARR and the tariff proposal. The Commission directs Petitioners that this order be implemented along with directions given and conditions mentioned in the detailed order and in the schedules of this order. It is further ordered that the licensees are permitted to issue bills to the consumers in accordance with the provisions of this tariff order and applicable Regulations.

(Alok Gupta)	**(A. B. Bajpai)**	**(Dr. Dev Raj Birdi)**
Member	**Member**	**Chairman**

A2: AGGREGATE REVENUE REQUIREMENT FOR FY 2017-18 OF PETITIONERS (EAST, WEST AND CENTRAL DISCOMS)

Sales forecast as projected by the Petitioners

2.1 The Petitioners have submitted that for projection of sale for FY 2017-18, category wise and slab wise actual data of the sale, number of consumers, connected/contract load, etc. of the preceding four years i.e FY 2012-13, FY 2013-14, FY 2014-15 & FY 2015-16 and available data for FY 2016-17 (up to August 2016) have been used. The actual sale for FY 2015-16 has deviated significantly from the sales forecast submitted in ARR/tariff petition for FY 2016-17 and also as compared to sale admitted in tariff order for FY 2015-16. The Petitioners have further stated that the sale for FY 2017-18 was projected on the basis of Number of Consumers, Connected Load and Consumption during the last 4 years and on the basis of revised estimate for FY 2016-17. The Petitioners have further submitted that the approach being followed is to analyze 3 year and 2 year Compound Annual Growth Rates (CAGRs) and year on year growth rate of each category and its sub-categories in respect of urban & rural consumers separately. After analysis of the data, appropriate / reasonable growth rates have been assumed for future consumer forecasts from the past CAGRs of the Category/Sub-category by the three Discoms. The past CAGR on sales per consumer / sales per kW and connected load has been applied while forecasting the connected load and sales in each category/sub-category. The use of specific consumption i.e. consumption per consumer and / or consumption per unit load is the basic forecasting variable and is widely used in load and energy sales forecasting. The basic intent in using this model is that, the specific consumption per consumer and / or consumption per unit load captures the trends and variations in the usage of electricity over a growth cycle more precisely. This method has also been recommended by the C.E.A.

2.2 It is submitted by the Petitioners that the existing norms for assessed consumption as specified by the Commission are understated and that actual consumption by temporary consumers of agriculture unmetered category are well above the existing norms.

2.3 The proposed norms submitted by the Petitioners for assessed consumption of unmetered temporary agriculture consumers under LV 5.1 category are as follows.

Particulars	**No. of units per HP or part thereof of sanctioned load per month**	
Type of Pump Motor	**Urban Area**	**Rural Area**
Three Phase	250	210
Single Phase	250	220

2.4 Details of the category wise sale as projected by the Petitioners, is given in the table below:

Table 8: Category wise sale projected by Petitioners (MU)

Particulars	**Projections For FY 2017-18**			
Consumer Categories	**East Discom**	**West Discom**	**Central Discom**	**Total for the State**
LT				
LV-1: Domestic	4,540	3,939	4,283	12,762
LV-2: Non Domestic	1,037	1,015	956	3,008
LV-3: Public Water Works & Street Light	408	455	361	1,224
LV4: LT Industrial	365	591	283	1,239
LV 5.1: Agriculture Irrigation Pumps	5,920	8,544	6,286	20,750
LV-5.2 :Agriculture related Use	9	1	127	138
LT Sale (MU)	**12,279**	**14,545**	**12,298**	**39,122**
HT				
HV-1: Railway Traction	0	0	0	0
HV-2: Coal Mines	443	0	35	477
HV-3.1: Industrial	1,865	2,149	2,632	6,646
HV-3.2: Non-Industrial	236	359	426	1,021
HV-3.3: Shopping Mall	10	50	19	78
HV-3.4: Power Intensive Industries	32	803	231	1,067
HV-4: Seasonal	9	12	2	22
HV-5.1: Public Water Works and Irrigation	97	478	194	769
HV-5.2: Other Agricultural	15	7	10	32
HV-6: Bulk Residential Users	286	31	174	490
HV-7: Synchronization/ Start-up Power	0	1	0	1
HT Sale (MU)	**2,993**	**3,889**	**3,722**	**10,604**
Total LT + HT Sale (MU)	**15,271**	**18,434**	**16,020**	**49,725**

Commission's Analysis

2.5 The Petitioners have requested for revision of norms for assessed consumption of unmetered temporary agriculture consumers under LV 5.1. Vide letter dated 12 January, 2017 the Commission has asked the Petitioners to submit the detailed study demonstrating the need for revision of norms for assessed consumption of unmetered temporary agriculture under tariff schedule LV 5.1. In reply dated 20 January, 2017 East Discom has submitted a study which was conducted for assessment of consumption of unmetered temporary agriculture consumers. The study was conducted only for six numbers 11 kV, agriculture feeders of Narsinghpur district, while West and Central Discoms have not submitted any study in this regard. Further, the Commission observed that sample size considered by the East Discom is inadequate and is neither representative of East Discom nor the State. Therefore, the Commission has not considered the proposal of the Petitioners and decided to continue with the existing assessed consumption norms for unmetered temporary agriculture under LV 5.1 tariff category.

2.6 The Commission has reviewed the sales forecast and compared the same with past trends. The Commission has taken due cognizance of submissions made by Discoms and various stakeholders for increase in projected sales. Accordingly, the Commission has moderated the sales in the Domestic, Non-Industrial, and Industrial category of consumers considering CAGR of past years. The Commission has admitted the category-wise sales as given in the Table below:

Table 9: Category wise sale admitted by the Commission (MU)

Particulars	**Projections For FY 2017-18**			
Consumer Categories	**East Discom**	**West Discom**	**Central Discom**	**Total for the State**
LV-1: Domestic	4262	3661	4005	11928
LV-2: Non Domestic	1051	1029	970	3050
LV-3.1: Public Water Works & Street Light	408	455	361	1224
LV4: LT Industrial	365	591	283	1239
LV 5.1: Agriculture Irrigation Pumps	5920	8544	6286	20750
LV-5.3 :Agriculture related Use	9	1	127	138
LT Sale (MU)	**12015**	**14281**	**12034**	**38330**
HV-1: Railway Traction	0	0	0	0
HV-2: Coal Mines	463	0	44	506
HV-3.1: Industrial	2060	2344	2827	7231
HV-3.2: Non-Industrial	242	369	436	1047
HV-3.3: Shopping Mall	10	50	19	78
HV-3.4: Power Intensive Industries	32	803	231	1067
HV-4: Seasonal	9	12	2	22
HV-5: Public Water Works and Irrigation & Other Agricultural	162	536	255	953
HV-6: Bulk Residential Users	286	31	174	490
HV-7: Synchronization/ Start-up Power	0	1	0	1
HT Sale (MU)	**3263**	**4145**	**3987**	**11395**
Total LT + HT Sale (MU)	**15278**	**18426**	**16021**	**49725**

2.7 The Commission has directed the Petitioners that they should not unduly restrict supply to any category of consumers during the tariff period.

Energy Balance

Petitioners Submissions

2.8 The Petitioners have projected the requirement of 63347 MU for procurement of energy for projected sale of 49725 MU. The Petitioners have converted the annual projected sale into monthly sale using the sale profiles observed in the past years. It is submitted by the Petitioners that for computation of the intra-State transmission losses (MPPTCL system losses), the actual data has been taken from the MP-SLDC online portal for the period from October 2015 to September 2016 (52 weeks) and accordingly average 2.87% has been considered for the future period.

2.9 For Western Region (WR), transmission losses of stations allocated to Madhya Pradesh have been considered and average loss level of 3.77% has been considered for FY 2017-18. In case of Eastern Region (ER) generating stations, average transmission losses allocated to Madhya Pradesh of the order of 2.09% have been considered for FY 2017-18.

2.10 The Petitioners have projected energy requirement on the basis of the month wise grossing up of the projected distribution losses. Accordingly, energy requirement for FY 2017-18 has been shown in the Table below:

Table 10: Energy requirement for FY 2017-18 as proposed by Petitioners

Particulars	**East Discom**	**Central Discom**	**West Discom**	**MP State**
Total Units sold to LT category (MU)	12,279	12,298	14,545	39,122
Total Units sold to HT category (MU)	2,993	3,722	3,889	10,604
Total Units Sold by Discom (MU)	15,271	16,020	18,434	49,725
Distribution loss (%)	17.00%	18.00%	15.50%	16.83%
Distribution loss (MU)	3,149	3,529	3,572	10,249
Units Input at Distribution Interface (MU)	18,420	19,549	22,006	59,975
Transmission loss (%)	2.87%	2.87%	2.87%	2.87%
Transmission loss (MU)	545	578	651	1,774
Input at G-T interface (MU)	18,965	20,127	22,657	61,749
WR-PGCIL Losses	3.77%	3.77%	3.77%	3.77%
ER-PGCIL Losses	2.09%	2.09%	2.09%	2.09%
External Loss (MU)	491	521	586	1,598
Total Units to be Purchased (MU)	**19,456**	**20,649**	**23,242**	**63,347**

Commission's Analysis

2.11 The distribution loss level trajectory as specified in the Tariff Regulations is given in the table below:

Table 11: Loss targets as per Regulations (in %)

Discom	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**
East Discom	18%	**17%**	16%
West Discom	16%	**15.5%**	15%
Central Discom	19%	**18%**	17%

2.12 The Commission has considered the distribution losses for FY 2017-18 as specified in the Tariff Regulations for projecting the energy requirement. For arriving at the total quantum of energy requirement the Commission has considered annual sale grossed up by annual level of prescribed loss levels as per the calculations shown in subsequent paragraphs/ tables.

2.13 To work out PGCIL system losses, the inter-State transmission losses have been considered separately for Eastern and Western Region generating stations. For Western Region generating stations, average transmission losses of 3.77% have been considered based on actual losses of past 52 weeks submitted by the Petitioners. Similarly these losses have been considered as 2.09% for Eastern Region generating stations.

2.14 The Commission has considered intra-State transmission losses as per actual at 2.87% for FY 2017-18 which is same with the Petitioners filing. The energy balance / power purchase requirement on the basis of the sale admitted by the Commission for the Discoms for FY 2017-18 is presented in the following table:

Table 12: Power purchase requirement as worked out by the Commission

Particular	**East Discom**	**West Discom**	**Central Discom**	**State**
Total Sales (MU)	15,278	18,426	16,021	49,725
Distribution loss (%)	**17.00%**	**15.50%**	**18.00%**	**16.78%**
Distribution loss (MU)	3,129	3,380	3,517	10,026
Input at T-D interface (MU)	18,408	21,806	19,538	59,752
Transmission loss (%)	**2.87%**	**2.87%**	**2.87%**	**2.87%**
Transmission loss (MU)	544	645	578	1,767
Input at G-T interface (MU)	18,952	22,451	20,116	61,519
PGCIL Losses %				
WR- PGCIL Losses %	3.77%	3.77%	3.77%	3.77%
ER- PGCIL Losses %	2.09%	2.09%	2.09%	2.09%
PGCIL Losses (MU)	482	571	511	1,564
Power Purchase Requirement (MU)	**19,434**	**23,022**	**20,627**	**63,083**

Assessment of Energy Availability

Petitioners Submissions

2.15 The Petitioners have assessed availability of energy for the State, on the following basis:

(a) Current long term allocated generation capacity of MP.
(b) New generating capacities coming up in future years for MP Genco, Central Sector, Joint Ventures, UMPP and under Competitive Bidding process.

(c) Impact of generation capacity allocation in WR and ER.
(d) Performance of plant during past three years.

2.16 The Petitioners have further submitted the projections of energy availability on the basis indicated in the following table:

Table 13: Energy availability Projections

MPPGCL - Shri Singaji STPS Phase -1 (Unit 1 & Unit 2)	PLF Taken at 82.5%
MPPGCL - Satpura TPS Extension (Unit 10 & 11)	PLF Taken at 75%
UMPP Sasan	PLF Taken at 90%
Jaiprakash Power, Nigri	PLF Taken at 82.5%
MB Power	PLF Taken at 82.5%
BLA Power	PLF Taken at 65%
Jhabua Power	PLF Taken at 82.5%
NTPC Lara STPS, Raigarh (Unit 1 & Unit 2)	PLF Taken at 82.5%
NTPC Gadarwara STPS, (Unit 1)	PLF Taken at 82.5%

2.17 The Petitioners have submitted that future projections for central generating stations (CGS) allocated to Madhya Pradesh have been made on the basis of average availability of the past three years. Further, for projecting the availability from the central sector stations, the latest allocation provided by Western Regional Power Committee (WRPC) in letter no. WRPC/Comml-I/6/Alloc/2016/9205 dated 30 August, 2016 and for Eastern Region NTPC Kahalgaon 2 vide GoI MoP letter no. 5/31/2006-Th.2 dated 21 February, 2007 have been considered for FY 2017-18.

2.18 The Petitioners have submitted that Government vide gazette notification dated 21st March 2016 has allocated all the generating stations to MPPMCL in order to maintain equitable allocation of the power purchased cost among all the three Discoms.

2.19 Following table shows MPPMCL allocated stations as well as the ensuing capacity additions which are expected to become operational till end of FY 2017-18:

Table 14: MPPMCL allocated stations submitted by the Petitioners

Station	Region	Ownership	Capacity (MW)	MP Share (%)	MP Share (MW)
Central Sector					
NTPC-Korba	WR	NTPC	2,100.00	23%	481.91
NTPC Korba -III	WR	Central	500.00	15%	76.33
NTPC-Vindyachal I	WR	NTPC	1,260.00	35%	443.39
NTPC-Vindyachal II	WR	NTPC	1,000.00	32%	318.21

Station	Region	Ownership	Capacity (MW)	MP Share (%)	MP Share (MW)
NTPC-Vindyachal III	WR	NTPC	1,000.00	25%	245.21
NTPC Vindhyanchal MTPS, Stage - 4 Unit 1 & Unit 2	WR	Central	1,000.00	28%	284.06
NTPC Vindhyanchal MTPS, Stage - 5	WR	Central	500.00	28%	141.69
NTPC Sipat Stage - 1	WR	Central	1,980.00	17%	337.75
NTPC - Sipat Stage II	WR	NTPC	1,000.00	19%	187.23
NTPC Mouda STPS, Stage -1 Unit 1 & Unit 2	WR	Central	1,000.00	18%	184.06
NTPC-Kawas	WR	NTPC	656.20	21%	140.17
NTPC-Gandhar	WR	NTPC	657.39	18%	117.19
NTPC - Kahalgaon 2	ER	NTPC	1,500.00	5%	74.00
KAPP – Kakrapar	WR	NPC	440.00	26%	114.13
TAPS- Tarapur	WR	NPC	1,080.00	21%	231.83
NTPC Lara STPS, Raigarh Unit 1	WR	Central	800.00	8%	63.80
NTPC Lara STPS, Raigarh Unit 2	WR	Central	800.00	8%	63.80
NTPC Gadarwara STPS, Unit 1	WR	Central	800.00	50%	400.00
MP GENCO					
ATPS - Chachai-Extn	State	MPPGCL	210.00	100%	210.00
STPS - Sarani-PH 1, 2 & 3	State	MPPGCL	830.00	100%	830.00
STPS Sarni Extension Unit 10	State	State	250.00	100%	250.00
STPS Sarni Extension Unit 11	State	State	250.00	100%	250.00
SGTPS - Bir'pur - PH 1 & 2	State	MPPGCL	840.00	100%	840.00
SGTPS - Bir'pur - Extn	State	MPPGCL	500.00	100%	500.00
Shri Singaji STPS Phase -1 Unit 1	State	State	600.00	100%	600.00
Shri Singaji STPS Phase -1 Unit 2	State	State	600.00	100%	600.00
Bargi HPS	State	MPPGCL	90.00	100%	90.00
Banasgar Tons HPS	State	MPPGCL	315.00	100%	315.00
Banasgar Tons HPS-Silpara	State	MPPGCL	30.00	100%	30.00
Banasgar Tons HPS-Devloned	State	MPPGCL	60.00	100%	60.00
Banasgar Tons HPS-Bansagar IV (Jhinna)	State	MPPGCL	20.00	100%	20.00
Birsighpur HPS	State	MPPGCL	20.00	100%	20.00
Marhi Khera HPS	State	MPPGCL	60.00	100%	60.00
Rajghat HPS	State	MPPGCL	45.00	51%	23.00
CHPS-Gandhi Sagar	State	MPPGCL	115.00	50%	58.00
CHPS-RP Sagar & Jawahar Sagar	State	MPPGCL	271.00	50%	136.00

Station	Region	Ownership	Capacity (MW)	MP Share (%)	MP Share (MW)
Pench HPS	State	MPPGCL	160.00	67%	107.00
JV Hydel & Other Hydel					
NHDC - Indira Sagar	State	JV	1,000.00	100%	1,000.00
Omkareshwar HPS	State	JV	520.00	100%	520.00
Sardar Sarovar	WR	JV	1,450.00	57%	827.00
Others(mini micro)	State	Others	30.00	100%	30.00
UPPMCL(Rihand Matatila)	State	Others	330.60	17%	55.00
DVC					
DVC (MTPS, CTPS)	ER	DVC	1,000.00	40%	400.00
DVC DTPS Unit 1	ER	JV	50.00	100%	50.00
DVC DTPS Unit 2	ER	JV	50.00	100%	50.00
IPPs					
Torrent Power GPP	WR	Private	1,147.50	9%	100.00
BLA Power Unit 1 & Unit 2	State	Private	32.00	100%	32.00
Jaypee Bina Power Unit 1 & Unit 2	State	Private	500.00	70%	350.00
Lanco Amarkantak	WR	Private	300.00	100%	300.00
UMPP Sasan Unit 1 to Unit 6	WR	Private	3,960.00	38%	1,485.00
Jhabua Power , Seoni	WR	Private	1,600.00	13%	210.00
Jaiprakash Power, Nigri Unit 1 & Unit 2	WR	Private	1,320.00	38%	495.00
MB Power Unit 1, Anuppur	WR	Private	600.00	35%	210.00
MB Power Unit 2, Anuppur	WR	Private	1,600.00	13%	210.00
Captive	State	-	17.00		17.00
Renewables					
Renewable Energy – Solar	State	Private	1,025.00		1,025.00
Renewable Energy - Other than Solar	State	Private	2,218.00		2,218.00

2.20 The Petitioners have submitted that after meeting the requirement of the State and selling power on the power exchange, the Petitioners still have to partially back-down plants so as to save on the variable costs being incurred. The Petitioners have applied month-wise merit order dispatch principles on the basis of variable costs for FY 2017-18, after considering all generating stations allocated to MPPMCL the Petitioners have also considered partial backing down of units/stations which are higher up in the MoD (provided the variable costs of such stations are higher than Rs. 2.43 per unit) , during those periods when their running is not required to meet the demand in that period and the market rates do not justify their running either. This addresses demand fluctuations and ensures that power procured from cheaper sources is fully utilized and avoids procurement of power from costlier sources. The resultant benefit of reduced power procurement cost or sale at a higher rate, whichever the case maybe, is in turn passed on to the consumers.

2.21 The following table shows the stations which are considered by the Petitioners for partial back down:

Table 15: Stations which are considered by the Petitioners for partial back down

Stations	**Normative Availability (MU)**	**Backdown (MU)**	**Net Availability (MU)**
	FY 18	**FY 18**	**FY 18**
Jaypee Bina Power Unit 1	842	691	150
Jaypee Bina Power Unit 2	842	691	150
MPPGCL - Shri Singaji STPS Phase -1, Unit 1	4,038	3,316	721
MPPGCL - Shri Singaji STPS Phase -1, Unit 2	4,038	3,316	721
STPS - Sarani-PH 2 & 3	3,345	2,007	1,338
NTPC Mouda Unit 1	615	430	185
NTPC Mouda Unit 2	615	430	185
BLA Power Unit 1	79	79	-
BLA Power Unit 2	79	79	-
Jhabua Power	1,404	1,263	141
MPPGCL - Shri Singaji Phase-2, Unit 1	-	-	-
MPPGCL - Shri Singaji Phase-2, Unit 2	-	-	-
Torrent Power	710	710	-
Total	**16,606**	**13,013**	**3,592**

2.22 The following table shows the overall station wise availability of all the stations after application of merit order dispatch and back-down for the period FY 2017-18 as submitted by the Petitioners:

Table 16: Total Availability of Energy submitted by the Petitioners (MU)

Category	**FY 2017-18**
Availability from all Stations allocated to MPPMCL	85601
Less: Availability from Stations partially backed down	13013
Total	**72588**

Commission's Analysis

2.23 The Commission observed that there is variation in MPPMCL allocation submitted to the Commission. The Commission vide notification no. 2211/F-3-13/2016/XIII dated 21st March, 2016, Energy Deptt. Govt. of Madhya Pradesh (GoMP) has allocated all existing and future generating capacities to MPPMCL. The Commission has further distributed the generating capacities among the Discoms as per their requirement.

2.24 In order to ascertain the energy availability individually from each station, the availability as filed by the Petitioners has been compared with the availability as worked out on the basis of past 3 years performance of the Generating Stations. Further, the Commission has considered the average of actual energy generation of the generating stations allocated to the state as filed in the petition for projecting the energy availability of existing Central Generating Stations.

2.25 The Commission has considered the energy availability of MPPGCL thermal generating stations for FY 2017-18 based on past three year PAF.

2.26 As regards availability projections for FY 2017-18 in respect of Indira Sagar Power Station (ISPS), Omkareshwar (OSP) and Sardar Sarovar Project (SSP) the Commission has considered the average of actual availability of past three years.

2.27 The Commission has considered the average of actual energy availability during past three years as projected by the Petitioners for FY 2017-18 for hydro generating stations of MPPGCL and Inter-State.

2.28 Energy availability of new generating stations has been projected on the basis of the norms specified in the CERC (Terms and Conditions of Tariff) Regulations, 2014 and MPERC Generation Tariff Regulations, 2015 on case to case basis.

2.29 In view of the Commission's orders dated 22 May, 2015 and 25 July, 2015 in Petition No. 16/2014 and 36/2015, respectively the Commission has not considered the availability and the cost of generation from BLA Units 1&2. Further, the Commission has not considered the availability and the cost thereon for the Sugen Torrent Generating Station since it was never scheduled during the year. The Commission has not considered the availability from MB Power Unit 2 also as the same is still under indefinite outage since long.

2.30 Month wise and generating station wise details of projected availability for FY 2017-18 are indicated in the table below:

Table 17 : Month wise availability projection for FY 2017-18

Sr. No.	Generating Stations	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Total
A.	**Central Generating Stations**													
1	WR – KSTPS	276	299	305	249	245	385	306	273	281	313	290	300	3,524

Sr. No.	Generating Stations	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Total
2	WR - VSTPS-I	240	220	224	192	127	225	237	262	277	222	230	246	2,701
3	WR - VSTPS-II	208	188	132	106	98	182	179	225	198	174	187	186	2,063
4	WR - VSTPS - III	173	157	159	151	91	98	142	163	165	148	141	160	1,749
5	WR-Vindhyachal Mega Project, Stage 4-Unit-1	87	90	87	90	90	87	90	87	90	90	81	90	1,061
6	WR-Vindhyachal Mega Project, Stage 4-Unit-2	87	90	87	90	90	87	90	87	90	90	81	90	1,061
7	WR-Vindhyachal Mega Project, Stage 5-Unit-1	86	89	86	89	89	86	89	86	89	89	80	89	1,043
8	WR - Kawas GPP	27	34	19	20	24	27	27	32	36	22	15	14	298
9	WR - Gandhar GPP	26	31	18	19	21	21	23	28	26	14	10	12	249
10	WR - Kakrapar APS	40	49	66	53	50	52	54	51	56	88	79	67	704
11	WR - Tarapur APS Unit 3 & 4	134	132	112	147	150	143	142	137	139	110	124	140	1,608
12	WR - Sipat -I (3 Units)	213	220	152	158	158	213	220	213	220	220	199	220	2,408
13	WR - Sipat -II	120	124	120	77	77	120	124	120	124	124	112	124	1,365
14	WR-NTPC Korba - 7	49	50	49	50	15	49	50	49	50	50	46	50	558
15	WR- NTPC Mauda TPS- Unit-1	55	56	55	56	56	55	56	55	56	56	51	56	663
16	WR-NTPC Mauda TPS-Unit-2	55	56	55	56	56	55	56	55	56	56	51	56	663
17	WR-NTPC Lara STPS, Raigarh u1	0	0	0	40	40	39	40	39	40	40	36	40	357
18	WR-NTPC Lara STPS, Raigarh u2	0	0	0	0	0	0	40	39	40	40	36	40	237
19	WR-NTPC Gadarwara STPS, Unit 1	0	0	0	0	0	0	253	245	253	253	228	253	1,485
20	ER-DVC Durgapur Steel TPS- Unit-1	23	15	23	15	24	23	24	23	24	24	22	24	263
21	ER-DVC Durgapur Steel TPS- Unit-2	23	15	23	15	24	23	24	23	24	24	22	24	263
22	ER- Kahalgaon STPS-II	32	33	23	24	24	32	33	32	33	33	30	33	360
23	ER-DVC (MTPS,CTPS)	141	191	126	132	191	184	191	184	191	191	172	191	2,084
	SUB TOTAL	**2,093**	**2,140**	**1,919**	**1,828**	**1,741**	**2,186**	**2,491**	**2,506**	**2,558**	**2,473**	**2,324**	**2,507**	**26,767**
B. State Generating Stations														
I	THERMAL													
1	Amarkantak Ext	136	141	136	141	141	136	141	136	141	141	127	141	1,657
2	Satpura TPS Ph I & II &III	410	424	410	424	424	410	424	410	424	424	383	424	4,987
3	SGTPS Ext Unit 5	321	331	321	331	331	321	331	321	331	331	299	331	3,900
4	SGTPS PH 1&2	412	426	412	426	426	412	426	412	426	426	384	426	5,011
5	Singaji Thermal Power Stations Phase I -Unit-1	297	306	297	306	306	297	306	297	306	306	277	306	3,608
6	Singaji Thermal Power Stations Phase I -Unit-2	297	306	297	306	306	297	306	297	306	306	277	306	3,608
7	Satpura Thermal Power Stations Exten - Unit 10	111	115	111	115	115	111	115	111	115	115	104	115	1,353

Sr. No.	Generating Stations	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Total
8	Satpura Thermal Power Stations Exten - Unit 11	111	115	111	115	115	111	115	111	115	115	104	115	1,353
	SUB TOTAL	**2,094**	**2,164**	**2,094**	**2,164**	**2,164**	**2,094**	**2,164**	**2,094**	**2,164**	**2,164**	**1,954**	**2,164**	**25,477**
II	HYDEL													
	INTERSTATE													
9	Gandhi Sagar	11	10	9	12	25	24	16	13	13	13	11	11	168
10	Ranapratap Sagar & Jawahar Sagar	23	22	19	25	54	51	34	29	28	28	24	25	362
11	Pench	17	16	14	18	39	37	25	21	20	20	18	18	262
12	Rajghat	2	2	2	2	5	5	3	3	3	3	2	2	35
	SUB TOTAL	**52**	**50**	**43**	**57**	**124**	**117**	**79**	**66**	**64**	**64**	**55**	**56**	**827**
	INTRA STATE													
13	Bargi	30	29	25	33	72	68	46	38	37	37	32	33	481
14	Birisinghpur	2	2	2	2	5	5	3	3	3	3	2	2	36
15	Bansagar – I*	89	85	73	97	212	201	134	113	109	109	95	96	1,413
16	Ban Sagar II													
17	Ban Sagar III													
18	Ban Sagar IV	6	6	5	7	15	14	9	8	8	8	7	7	99
19	Marikheda	6	6	5	7	15	14	9	8	8	8	7	7	100
	SUB TOTAL	**134**	**128**	**111**	**147**	**319**	**302**	**202**	**170**	**164**	**164**	**143**	**145**	**2,129**
	BILATERAL AND OTHERS													
20	Indira Sagar	163	155	134	178	387	367	245	207	199	199	173	176	2,582
21	Others (Mini Micro)	5	5	5	5	5	5	5	5	5	5	5	5	64
22	Captive	3	3	3	3	3	3	3	3	3	3	3	3	36
23	Sardar Sarovar	106	101	88	116	253	239	160	135	130	130	113	115	1,686
24	Omkareshwar	73	69	60	79	173	163	109	92	89	89	77	78	1,151
	SUB TOTAL	**350**	**333**	**290**	**382**	**821**	**778**	**523**	**442**	**426**	**426**	**371**	**377**	**5,519**
25	UPPCL (Rihand, Matatila,Rajghat)	7	7	6	8	17	16	11	9	9	9	8	8	114
	SUB TOTAL	**7**	**7**	**6**	**8**	**17**	**16**	**11**	**9**	**9**	**9**	**8**	**8**	**114**
III	IPPs													
26	UMPP Sasan, Sidhi Unit-1	151	156	151	156	156	151	156	151	156	156	141	156	1,839
	UMPP Sasan, Sidhi Unit-2	152	157	152	157	157	152	157	152	157	157	142	157	1,847
	UMPP Sasan, Sidhi Unit 3& 4	303	313	303	313	313	303	313	303	313	313	283	313	3,686
	UMPP Sasan, Sidhi Unit 5&6	303	313	303	313	313	303	313	303	313	313	283	313	3,686
27	Jaypee Bina Power, Sagar Unit-1	108	112	108	112	112	108	112	108	112	112	101	112	1,319
	Jaypee Bina Power, Sagar Unit-2	108	112	108	112	112	108	112	108	112	112	101	112	1,319
28	Jaiprakash Power, Nigri-Unit-1	157	162	157	162	162	157	162	157	162	162	146	162	1,908
	Jaiprakash Power, Nigri-Unit-2	157	162	157	162	162	157	162	157	162	162	146	162	1,908
29	MB Power, Anuppur Unit 1	132	136	132	136	136	132	136	132	136	136	123	136	1,603

Sr. No.	Generating Stations	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Total
30	Jhabua Power, Seoni	132	136	132	136	136	132	136	132	136	136	123	136	1,603
	Lanco TPS, Amarkantak	184	190	184	190	190	184	190	184	190	190	171	190	2,234
31	Renewable Energy Solar	110	110	110	108	108	108	110	110	110	110	110	110	1,314
	Renewable Energy Non Solar	363	364	363	363	363	363	363	363	363	362	363	362	4,352
	SUB TOTAL	**2,359**	**2,424**	**2,359**	**2,420**	**2,420**	**2,357**	**2,422**	**2,359**	**2,422**	**2,421**	**2,233**	**2,421**	**28,617**
	Grand Total	**7,089**	**7,245**	**6,822**	**7,006**	**7,607**	**7,851**	**7,892**	**7,647**	**7,806**	**7,720**	**7,088**	**7,678**	**89,452**

Bansagar I includes the Availability of Bansagar-II and Bansagar-II

2.31 Scheduling of Renewable energy sources would be governed by the appropriate Regulations amended from time to time.

Generating Stations	**Rate (Paisa /kWh)**
Renewable Energy Solar	643
Renewable Energy Non Solar including (Mini/Micro)	559

2.32 The Commission has applied the principles of Merit Order Dispatch (MOD) on all generating stations for FY 2017-18 and the Petitioners need to follow the same. The Commission worked-out MOD, as shown in the table below:

Table 18 : MOD on allocated generating stations for FY 2017-18

Generating Stations	**Dispatch Type (Must Run=1, Others =0)**	**Cost of Energy/ Variable charge (Paisa /kWh)**
WR - Kakrapar APS	1	231
WR - Tarapur APS Unit 3 & 4	1	280
Gandhi Sagar	0	0
Pench	0	0
Rajghat	0	0
Bargi	0	0
Birisinghpur	0	0
Bansagar – I	0	0
Ban sagar II	0	0
Ban sagar III	0	0
Ban sagar IV	0	0
Marikheda	0	0

Generating Stations	**Dispatch Type (Must Run=1, Others =0)**	**Cost of Energy/ Variable charge (Paisa /kWh)**
Ranapratap Sagar & Jawahar sagar	0	0
UPPCL (Rihand, Matatila, Rajghat)	0	0
Indira Sagar	0	0
Sardar Sarovar	0	0
Omkareshwar	0	0
Jaiprakash Power, Nigri- Unit-1	0	84
Jaiprakash Power, Nigri- Unit-2	0	84
UMPP Sasan, Sidhi Unit-1	0	115
UMPP Sasan, Sidhi Unit-2	0	115
UMPP Sasan, Sidhi Unit 3& 4	0	115
UMPP Sasan, Sidhi Unit 5&6	0	115
Vindhyachal Mega Project, Stage 5- Unit-1	0	121
WR - Sipat –II	0	124
WR - Sipat -I (3 Units)	0	128
WR-NTPC Korba – 7	0	130
WR-NTPC Lara STPS, Raigarh u1	0	130
WR-NTPC Lara STPS, Raigarh u2	0	130
WR-NTPC Gadarwara STPS, u1	0	130
WR – KSTPS, Korba	0	130
Lanco TPS, Amarkantak	0	167
WR - VSTPS – III, Vindhyachal	0	172
Amarkantak ext	0	173
WR - VSTPS-I, Vindhyachal	0	178
WR - VSTPS-II, Vindhyachal	0	178
WR-Vindhyachal Mega Project, Stage 4-Unit-1	0	181
WR-Vindhyachal Mega Project, Stage 4-Unit-2	0	181
MB Power, Anuppur Unit I	0	192
ER- Kahalgaon STPS-II	0	208
SGTPS EXT Unit No. 5, Birsinghpur	0	216
WR - Gandhar GPP	0	218
WR - Kawas GPP	0	219

Generating Stations	**Dispatch Type (Must Run=1, Others =0)**	**Cost of Energy/ Variable charge (Paisa /kWh)**
Satpura Thermal Power Stations Exten - Unit 10	0	222
Satpura Thermal Power Stations Exten - Unit 11	0	222
ER-DVC (MTPS,CTPS)	0	222
Captive	0	229
ER-DVC Durgapur Steel TPS- Unit-1	0	241
ER-DVC Durgapur Steel TPS- Unit-2	0	241
SGTPS PH 1&2, Birsinghpur	0	242
WR- NTPC Mauda TPS- Unit-1	0	249
WR-NTPC Mauda TPS- Unit-2	0	249
SATPURA TPS PH II &III	0	255
Jaypee Bina Power, Sagar Unit-1	0	261
Jaypee Bina Power, Sagar Unit-2	0	261
Singaji Thermal Power Stations Phase I -Unit-1	0	262
Singaji Thermal Power Stations Phase I -Unit-2	0	262
Jhabua Power, Seoni	0	280

2.33 After applying MOD, it has been observed that the availability from some generating stations would remain unutilized by the Discoms. The Commission has directed the Petitioners to sale the surplus power through power exchanges, bilateral arrangements or through bidding, after meeting demand of their consumers. Details of available and surplus energy has been shown in the Table below:

Table 19: Total Availability of Energy worked out by the Commission (MU)

Category	**FY 2017-18**
Availability from all Stations allocated to MPPMCL	89,452
Less: Availability from Stations backed down having variable rate above Rs 2.60/Unit *	11,459
Total Energy Available for Scheduling and to sale on the IEX	**77,993**

**Basis for considering Rs 2.60/Unit has been detailed in Section of "Management of surplus power"*

Assessment of Power Purchase Cost

Petitioners Submissions

2.34 For MPPMCL allocated stations, the Petitioners have considered cost as per the actual power purchase bills from September 2015 to August 2016. Details of the fixed cost and variable charges of MPPMCL allocated stations are mentioned in the table below:

Table 20 : **Fixed cost and Variable charges of MPPMCL allocated stations submitted by the Petitioners for FY 2017-18**

Station	Fixed Charges (Rs Crore)	Remarks	Variable Charges (Rs/unit)	Remarks
Central Sector				
NTPC-Korba	175.48	As per actual bills from Sep 15 to Aug 16	1.3	As per actual bills from Sep 15 to Aug 16
NTPC Korba –III	92.63	As per actual bills from Sep 15 to Aug 16	1.3	As per actual bills from Sep 15 to Aug 16
NTPC-Vindyachal I	182.92	As per actual bills from Sep 15 to Aug 16	1.78	As per actual bills from Sep 15 to Aug 16
NTPC-Vindyachal II	135.91	As per actual bills from Sep 15 to Aug 16	1.78	As per actual bills from Sep 15 to Aug 16
NTPC-Vindyachal III	226.45	As per actual bills from Sep 15 to Aug 16	1.72	As per actual bills from Sep 15 to Aug 16
NTPC Vindhyanchal MTPS, Stage - 4 Unit 1&2	302.26	As per actual bills from Sep 15 to Aug 16	1.81	As per actual bills from Sep 15 to Aug 16
NTPC Vindhyanchal MTPS, Stage – 5	96.15	As per actual bills from Sep 15 to Aug 16	1.75	As per actual bills from Sep 15 to Aug 16
NTPC Sipat Stage - 1	320.91	As per actual bills from Sep 15 to Aug 16	1.37	As per actual bills from Sep 15 to Aug 16
NTPC - Sipat Stage II	213.31	As per actual bills from Sep 15 to Aug 16	1.24	As per actual bills from Sep 15 to Aug 16
NTPC Mouda STPS, Stage -1 Unit 1&2	213.91	As per actual bills from Sep 15 to Aug 16	2.49	As per MOD for Oct 16
NTPC-Kawas	74.67	As per actual bills from Sep 15 to Aug 16	2.19	As per actual bills from Sep 15 to Aug 16
NTPC-Gandhar	72.26	As per actual bills from Sep 15 to Aug 16	2.44	As per actual bills from Sep 15 to Aug 16

Station	Fixed Charges (Rs	Remarks	Variable Charges (Rs/unit)	Remarks
NTPC - Kahalgaon 2	80.34	As per actual bills from Sep 15 to Aug 16	2.08	As per actual bills from Sep 15 to Aug 16
KAPP- Kakarpar	-	-	2.41	As per actual bills from Sep 15 to Aug 16
TAPS- Tarapur	-	-	2.9	As per actual bills from Sep 15 to Aug 16
NTPC Lara STPS, Raigarh Unit 1	57.56	Taken proportionately as per NTPC Korba III (92.63/77X63.80)/12x9	1.3	taken equal to NTPC Korba III
NTPC Lara STPS, Raigarh Unit 2	28.78	Taken proportionately as per NTPC Korba III (92.63/77X63.80)/12x6	1.3	taken equal to NTPC Korba III
NTPC Gadarwara STPS, Unit 1	240.61	Taken proportionately as per NTPC Korba III (92.63/77X 400)/12x6	1.3	taken equal to NTPC Korba III
MP GENCO				
ATPS - Chachai-Extn	204.25	As per actual bills from Sep 15 to Aug 16	1.73	As per actual bills from Sep 15 to Aug 16
STPS - Sarani-PH 2 & 3	367.14	As per actual bills from Sep 15 to Aug 16	2.55	As per actual bills from Sep 15 to Aug 16
STPS Extension Unit 10, Sarani	260.85	As per actual bills from Sep 15 to Aug 16	2.22	As per actual bills from Sep 15 to Aug 16
STPS Extension Unit 11, Sarani	260.85	Taken as per unit 1	2.22	Taken as per unit 1
SGTPS - Bir'pur - PH 1 & 2	382.34	As per actual bills from Sep 15 to Aug 16	2.47	As per actual bills from Sep 15 to Aug 16
SGTPS - Bir'pur – Extn	441.56	As per actual bills from Sep 15 to Aug 16	2.19	As per actual bills from Sep 15 to Aug 16
Shri Singaji STPS Phase -1 Unit 1	440.58	As per MPERC order dated 10.11.2014	2.69	As per actual bills from Sep 15 to Aug 16
Shri Singaji STPS Phase -1 Unit 2	420.8	As per MPERC order dated	2.69	Taken as per unit 1

Station	Fixed Charges (Rs	Remarks	Variable Charges (Rs/unit)	Remarks
		18.03.2015		
Bargi HPS	8.2	As per actual bills from Sep 15 to Aug 16	0.63	As per actual bills from Sep 15 to Aug 16
Banasgar Tons HPS	66.26	As per actual bills from Sep 15 to Aug 16	0.92	As per actual bills from Sep 15 to Aug 16
Banasgar Tons HPS-Silpara	2.26	As per actual bills from Sep 15 to Aug 16	0.9	As per actual bills from Sep 15 to Aug 16
Banasgar Tons HPS-Devloned	2.49	As per actual bills from Sep 15 to Aug 16	1.27	As per actual bills from Sep 15 to Aug 16
Banasgar Tons HPS-Bansagar IV (Jhinna)	3.75	As per actual bills from Sep 15 to Aug 16	1.21	As per actual bills from Sep 15 to Aug 16
Birsingpur HPS	1.53	As per actual bills from Sep 15 to Aug 16	1.06	As per actual bills from Sep 15 to Aug 16
Marhi Khera HPS	11.06	As per actual bills from Sep 15 to Aug 16	2.17	As per actual bills from Sep 15 to Aug 16
Rajghat HPS	0.96	As per actual bills from Sep 15 to Aug 16	2.25	As per actual bills from Sep 15 to Aug 16
CHPS-Gandhi Sagar	2.81	As per actual bills from Sep 15 to Aug 16	0.77	As per actual bills from Sep 15 to Aug 16
CHPS-RP Sagar & Jawahar Sagar	-	-	1.51	As per actual bills from Sep 15 to Aug 16
Pench THPS	9.85	As per actual bills from Sep 15 to Aug 16	0.5	As per actual bills from Sep 15 to Aug 16
JV Hydel & Other Hydel				
NHDC - Indira Sagar	548.53	As per actual bills from Sep 15 to Aug 16	0.47	As per actual bills from Sep 15 to Aug 16
Omkareshwar HPS	404.45	As per actual bills from Sep 15 to Aug 16	0.38	As per actual bills from Sep 15 to Aug 16
Sardar Sarovar	162.96	As per actual bills from Sep 15 to Aug 16	0.82	As per actual bills from Sep 15 to Aug 16
Others(mini micro)	29.5	As per actual bills from Sep 15 to Aug 16 (Rs 4.61X64)/10	-	-
UPPMCL(Rihand Matatila)	-		0.4	As per actual bills from Sep 15 to Aug 16
DVC				

Station	**Fixed Charges (Rs**	**Remarks**	**Variable Charges (Rs/unit)**	**Remarks**
DVC (MTPS, CTPS)	389.83	As per actual bills from Sep 15 to Aug 16	2.23	As per actual bills from Sep 15 to Aug 16
DVC DTPS Unit 1	53.35	As per actual bills from Sep 15 to Aug 16	2.41	As per actual bills from Sep 15 to Aug 16
DVC DTPS Unit 2	53.35	As per actual bills from Sep 15 to Aug 16	2.41	As per actual bills from Sep 15 to Aug 16
IPPs				
BLA Power Unit 1	19.52	As per actual bills from Sep 15 to Aug 16	2.43	As per actual bills from Sep 15 to Aug 16
Jaypee Bina Power Unit 1	267.87	As per actual bills from Sep 15 to Aug 16	2.71	As per actual bills from Sep 15 to Aug 16
Jaypee Bina Power Unit 2	267.87	Taken as per unit 1	2.71	Taken as per unit 1
Lanco Amarkantak	285.12	As per actual bills from Sep 15 to Aug 16	1.68	As per actual bills from Sep 15 to Aug 16
UMPP Sasan Unit 1	31.64	As per quoted tariff	1.56	As per actual bills from Sep 15 to Aug 16
UMPP Sasan Unit 2	31.76	As per quoted tariff	1.56	Taken as per unit 1
UMPP Sasan Unit 3&4	63.4	As per quoted tariff	1.56	Taken as per unit 1
UMPP Sasan Unit 5&6	63.4	As per quoted tariff	1.56	Taken as per unit 1
Jhabua Power, Seoni	246.49	As per MB power unit 1	2.8	As per MOD Oct'16
Jaiprakash Power, Nigri Unit 1	202.1	As per actual bills from Sep 15 to Aug 16	0.84	As per actual bills from Sep 15 to Aug 16
Jaiprakash Power, Nigri Unit 2	202.1	Taken as per unit 1	0.84	Taken as per unit 1
MB Power Unit 1, Anuppur	246.49	As per actual bills from Sep 15 to Aug 16	1.92	As per actual bills from Sep 15 to Aug 16
MB Power Unit 2, Anuppur	246.49	Taken as per unit 1	1.92	Taken as per unit 1
Torrent Power	52	As per actual bills from Sep 15 to Aug 16	-	-
Captive	-	-	2.29	As per actual bills from Sep 15 to Aug 16
Renewable				

Station	Fixed Charges (Rs	Remarks	Variable Charges (Rs/unit)	Remarks
Renewable Energy – Solar	844.58	Calculated as per the weighted average cost (Rs 6.43*1314 MU)/10	-	-
Renewable Energy - Other than Solar	2344.83	Calculated as per the weighted average cost (Rs 5.60*4187 MU)/10	-	-

2.35 The table below shows the details of the costs viz. fixed costs and variable costs for all the existing plants for determining the power purchase cost for FY 2017-18.

Table 21 : Fixed cost and Variable cost as filed for the existing stations for FY 2017-18

Station	Fixed Cost (Rs Crore)	Variable Cost (Rs Crore)
Central Sector		
NTPC-Korba	175.48	459
NTPC Korba –III	92.63	72
NTPC-Vindyachal I	182.92	480
NTPC-Vindyachal II	135.91	368
NTPC-Vindyachal III	226.45	301
NTPC Vindhyanchal MTPS, Stage - 4 Unit 1&2	302.26	368
NTPC Vindhyanchal MTPS, Stage – 5	96.15	171
NTPC Sipat Stage - 1	320.91	330
NTPC - Sipat Stage II	213.31	169
NTPC Mouda STPS, Stage -1 Unit 1&2	213.91	92
NTPC-Kawas	74.67	65
NTPC-Gandhar	72.26	61
NTPC - Kahalgaon 2	80.34	75
KAPP	-	169
TAPS	-	466
NTPC Lara STPS, Raigarh Unit 1	57.56	32
NTPC Lara STPS, Raigarh Unit 2	28.78	14
NTPC Gadarwara STPS, Unit 1	240.61	90
MP GENCO		
ATPS - Chachai-Extn	204.25	265
STPS - Sarani-PH 2 & 3	367.14	341

Station	**Fixed Cost**	**Variable Cost**
MPPGCL - Satpura TPS Extension Unit 10	260.85	326
MPPGCL - Satpura TPS Extension Unit 11	260.85	326
SGTPS - Bir'pur - PH 1 & 2	382.34	827
SGTPS - Bir'pur – Extn	441.56	724
MPPGCL - Shri Singaji STPS Phase -1 Unit 1	440.58	194
MPPGCL - Shri Singaji STPS Phase -1 Unit 2	420.8	194
Bargi HPS	8.2	30
Banasgar Tons HPS	66.26	108
Banasgar Tons HPS-Silpara	2.26	11
Banasgar Tons HPS-Devloned	2.49	16
Banasgar Tons HPS-Bansagar IV (Jhinna)	3.75	12
Birsingpur HPS	1.53	4
Marhi Khera HPS	11.06	22
Rajghat HPS	0.96	8
CHPS-Gandhi Sagar	2.81	13
CHPS-RP Sagar & Jawahar Sagar	-	55
Pench THPS	9.85	13
JV Hydel & Other Hydel		
NHDC - Indira Sagar	548.53	124
Omkareshwar HPS	404.45	49
Sardar Sarovar	162.96	169
Others(mini micro)	29.5	-
UPPMCL(Rihand Matatila)	-	5
DVC		
DVC (MTPS, CTPS)	389.83	465
DVC DTPS Unit 1	53.35	64
DVC DTPS Unit 2	53.35	64
IPPs		
BLA Power Unit 1	19.52	-
Jaypee Bina Power Unit 1	267.87	41
Jaypee Bina Power Unit 2	267.87	41
Lanco Amarkantak	285.12	338
UMPP Sasan Unit 1	31.64	282
UMPP Sasan Unit 2	31.76	282
UMPP Sasan Unit 3&4	63.4	565
UMPP Sasan Unit 5&6	63.4	565
Jhabua Power, Seoni	246.49	39

Station	**Fixed Cost**	**Variable Cost**
Jaiprakash Power, Nigri Unit 1	202.1	139
Jaiprakash Power, Nigri Unit 2	202.1	139
MB Power Unit 1, Anuppur	246.49	270
MB Power Unit 2, Anuppur	246.49	270
Torrent Power	52	-
Captive	-	8
Renewables		
Renewable Energy – Solar	844.58	-
Renewable Energy - Other than Solar	2344.83	-

Commission's Analysis

Central Generating Stations (Thermal)

2.36 The Commission has considered latest available tariff orders issued by CERC for NTPC and other Stations in Western Region and Eastern Region for determination of fixed cost of individual stations, details of which are shown in the Table 22.

2.37 Fixed costs of thermal power stations have been computed as per recovery of fixed cost in terms of CERC (Terms and Conditions of Tariff) Regulations, 2014.

2.38 The Commission has considered variable cost for FY 2017-18 on the basis of actual bills raised by NTPC, MPPGCL and other generators to MPPMCL during the period November 2015 to October 2016.

Central and State Generating Stations (Hydel)

2.39 The Commission has considered latest available tariff orders issued by appropriate Commissions for individual stations for determining the fixed cost of Hydel Stations, details of which are shown in the Table 22.

M.P Power Generating Stations

2.40 Fixed costs of the MPPGCL stations have been considered in accordance with the Generation MYT order issued by MPERC for the control period FY 2016-17 to FY 2018-19 details of which are shown in the Table 22. Variable cost for FY 2017-18 have been considered as charged in actual bills raised by MPPGCL.

Renewable Sources

2.41 The Commission has considered quantum of 1314 MUs and 4419 MUs from Solar and Non-solar, respectively. As regards rate of solar power, weighted average rate of Rs 6.43/ kWh has been considered for existing solar capacities. For Non-Solar, weighted average rate of Rs 5.59/ kWh has been considered.

Captive Generation

2.42 Discoms have filed total availability of 36 MU @ Rs. 2.29/ kWh from captive power plants during FY 2017-18. The Commission has admitted the same. The Commission has directed the Discoms that purchase of power from captive power plants should be undertaken as per procedure prescribed in MPERC (Power purchase and other matters with respect to conventional fuel based Captive Power Plants) Regulations (revision – 1) 2009 dated 31st January, 2009.

New/ Other Generating Station

2.43 The Commission has considered the charges from the relevant CERC, MPERC orders for new generating stations, wherever available. The Commission has considered the fixed charges and variable charges on case to case basis for the new generating stations where orders are not available.

Table 22: Basis of Fixed and Variable charges for the generating stations during FY 2017-18

Sr. No.	Generating Stations	Fixed Charges based on actual availability (Rs. Crore)	Basis	Energy Charges (Paisa/kWh)	Basis
A. Central Generating Stations					
1	WR – KSTPS, Korba	179	CERC order dated: 25.01.2017, Petition No.345/GT/2014	130.33	Average of 12 months up to Oct 2016
2	WR - VSTPS-I, Vindhyachal	161	CERC order dated: 5.12.2016, Petition No.306/GT/2014	177.72	Average of 12 months up to Oct 2016
3	WR - VSTPS-II, Vindhyachal	131	CERC order dated: 6.2.2017, Petition No.327/GT/2014	178.24	Average of 12 months up to Oct 2016
4	WR - VSTPS – III, Vindhyachal	183	CERC order dated: 6.2.2017, Petition No.343/GT/2014	172.00	Average of 12 months up to Oct 2016
5	WR-Vindhyachal Mega Project, Stage 4-Unit-1	236	CERC order dated: 2.09.2015, Petition No.70/GT/2013	181.33	Average of 12 months up to Oct 2016
6	WR-Vindhyachal Mega Project, Stage 4-Unit-2	236	CERC order dated: 2.09.2015, Petition No.70/GT/2013	181.33	Average of 12 months up to Oct 2016
7	WR-Vindhyachal Mega Project, Stage 5-Unit-1	159	CERC order dated: 31.08.2016, Petition No.234/GT/2015	120.90	Average of 12 months up to Oct 2016
8	WR - Kawas GPP	23	CERC order dated: 01.08.2013, Petition	218.51	Average of 12 months up to Oct 2016

Sr. No.	Generating Stations	Fixed Charges	Basis	Energy Charges	Basis
			No.25/GT/2013		
9	WR - Gandhar GPP	24	CERC order dated: 11.09.2013, Petition No.23/GT/2013	217.70	Average of 12 months up to Oct 2016
10	WR - Kakrapar APS	0	-	231.42	As per CEA Notification dated 1.7.2012
11	WR - Tarapur APS Unit 3 & 4	0	-	280.13	As per CEA Notification dated 1.7.2012
12	WR - Sipat -I (3 Units)	319	CERC order dated: 6.12.2016, Petition No.295/GT/2014	127.58	Average of 12 months up to Oct 2016
13	WR - Sipat –II	165	CERC order dated: 17.9.2014, Petition No.132/GT/2013	123.88	Average of 12 months up to Oct 2016
14	WR-NTPC Korba - 7	82	CERC order dated: 20.06.2016, Petition No.26/RP/2015	129.56	Average of 12 months up to Oct 2016
15	WR- NTPC Mauda TPS- Unit-1	118	CERC order dated: 1.02.2017, Petition No.328/GT/2014	249.00	Average of 12 months up to Oct 2016
16	WR-NTPC Mauda TPS- Unit-2	118	CERC order dated: 1.02.2017, Petition No.328/GT/2014	249.00	Average of 12 months up to Oct 2016
17	WR-NTPC Lara STPS, Raigarh Unit1	63	As per NTPC Korba - 7 order	129.56	As per NTPC Korba - 7 order
18	WR-NTPC Lara STPS, Raigarh Unit 2	42	As per NTPC Korba - 7 order	129.56	As per NTPC Korba - 7 order
19	WR-NTPC Gadarwara STPS, Unit 1	263	As per NTPC Korba - 7 order	129.56	As per NTPC Korba - 7 order
20	ER-DVC Durgapur Steel TPS- Unit-1	65	CERC order dated: 20.04.2015, Petition No.66/GT/2012	241.11	Average of 12 months up to Oct 2016
21	ER-DVC Durgapur Steel TPS- Unit-2	65	CERC order dated: 20.04.2015, Petition No.66/GT/2012	241.11	Average of 12 months up to Oct 2016
22	ER- Kahalgaon STPS-II	37	CERC order dated: 21.1.2017, Petition No.283/GT/2014	207.53	Average of 12 months up to Oct 2016

Sr. No.	Generating Stations	Fixed Charges	Basis	Energy Charges	Basis
23	ER-DVC (MTPS,CTPS)	299	CERC order dated: 23.1.2015, Petition No.138/GT/2013 and CERC order dated: 12.3.2015, Petition No.196/GT/2013	221.93	Average of 12 months up to Oct 2016
B. State Generating Stations					
I	THERMAL				
1	Amarkantak Ext	214	As per MPERC order dated 14 July 2016 in petition No.8/2016	173.42	Average of 12 months up to Oct 2016
2	STPS PH II &III, Sarani	355	As per MPERC order dated 14 July 2016 in petition No.8/2016	254.59	Average of 12 months up to Oct 2016
3	SGTPS ext., Unit No. 5 Birisinghpur	410	As per MPERC order dated 14 July 2016 in petition No.8/2016	215.62	Average of 12 months up to Oct 2016
4	SGTPS, PH II &III Birisinghpur	370	As per MPERC order dated 14 July 2016 in petition No.8/2016	242.00	Average of 12 months up to Oct 2016
5	Singaji Thermal Power Stations Phase I -Unit-1	537	As per MPERC order dated 14 July 2016 in petition No.8/2016	261.59	Average of 12 months up to Oct 2016
6	Singaji Thermal Power Stations Phase I -Unit-2	537	As per MPERC order dated 14 July 2016 in petition No.8/2016	261.59	Average of 12 months up to Oct 2016
7	Satpura Thermal Power Stations Exten - Unit 10	256	As per MPERC order dated 14 July 2016 in petition No.8/2016	221.75	Average of 12 months up to Oct 2016
8	Satpura Thermal Power Stations Exten - Unit 11	256	As per MPERC order dated 14 July 2016 in petition No.8/2016	221.75	Average of 12 months up to Oct 2016
II	HYDEL				
	INTERSTATE				
9	Gandhi Sagar	11	As per MPERC order dated 14 July 2016 in petition No.8/2016	0.00	-

Sr. No.	Generating Stations	Fixed Charges	Basis	Energy Charges	Basis
10	Ranapratap Sagar & Jawahar Sagar	51	As per Gandhi Sagar Tariff Order	0.00	-
11	Pench	32	As per MPERC order dated 14 July 2016 in petition No.8/2016	0.00	-
12	Rajghat	11	As per MPERC order dated 14 July 2016 in petition No.8/2016	0.00	-
Intra State					
13	Bargi	20	As per MPERC order dated 14 July 2016 in petition No.8/2016	0.00	-
14	Birisinghpur	4	As per MPERC order dated 14 July 2016 in petition No.8/2016	0.00	-
15	Bansagar – I	197	As per MPERC order dated 14 July 2016 in petition No.8/2016	0.00	-
16	Ban Sagar II				-
17	Ban Sagar III				-
18	Ban Sagar IV	18	As per MPERC order dated 14 July 2016 in petition No.8/2016	0.00	-
19	Marikheda	34	As per MPERC order dated 14 July 2016 in petition No.8/2016	0.00	-
Bilateral And Others					
20	Indira Sagar	707	CERC order dated: 31.5.2016, Petition No.265/GT/2014	0.00	-
21	Others (Mini Micro)	0	As per the Petitioners	558.51	As per Petitioner
22	Captive	0	As per the Petitioners	229.31	As per Petitioner
23	Sardar Sarovar	365	Based on MPERC Order dated Aug.6,2013	0.00	-
24	Omkareshwar	456	CERC order dated: 26.5.2016, Petition	0.00	-

Sr. No.	Generating Stations	Fixed Charges	Basis	Energy Charges	Basis
			No.264/GT/2014		
25	UPPCL (Rihand, Matatila,Rajghat)	5	As per Petitioners	0.00	-
III	IPPs				
26	UMPP Sasan, Sidhi Unit-1	31	As per Quoted Tariff	114.90	As per Quoted Tariff
	UMPP Sasan, Sidhi Unit-2	31	As per Quoted Tariff	114.90	As per Quoted Tariff
	UMPP Sasan, Sidhi Unit 3& 4	63	As per Quoted Tariff	114.90	As per Quoted Tariff
	UMPP Sasan, Sidhi Unit 5&6	63	As per Quoted Tariff	114.90	As per Quoted Tariff
27	Jaypee Bina Power, Sagar Unit-1	226	MPERC order in Petition No. 5 of 2016	260.65	Average of 12 months up to Oct 2016
	Jaypee Bina Power, Sagar Unit-2	226	MPERC order in Petition No. 5 of 2016	260.65	Average of 12 months up to Oct 2016
28	Jaiprakash Power, Nigri- Unit-1	319	MPERC order dated 31.3.2015 in Petition No. IA No. 01 of P-3/2014	83.70	Average of 12 months up to Oct 2016
	Jaiprakash Power, Nigri- Unit-2	319	MPERC order dated 31.3.2015 in Petition No. IA No. 01 of P-3/2014	83.70	Average of 12 months up to Oct 2016
29	MB Power, Anuppur Unit I	214	MPERC order dated 29.07.2015 in Petition No. 31 of 2015	192.03	Average of 12 months up to Oct 2016
30	Jhabua Power, Seoni	229	MPERC order dated 6.09.2016 in Petition No. 16 of 2016	280.00	As per Oct 2016 MOD as submitted by the Petitioners
	Lanco TPS, Amarkantak	285	As per Petitioners	167.38	Average of 12 months up to Oct 2016
31	Renewable Energy Solar	0	-	643.00	As per Petitioners
	Renewable Energy Non Solar	0	-	558.51	As per Petitioners

Fixed Cost

2.44 The Commission has appropriately considered the quantum and cost of the concessional energy provided to the State while working out the power purchase cost. Accordingly, fixed costs of all generating stations allocated among Discoms is given in the following table:

Table 23 : Total fixed costs of all generating stations allocated among Discoms (Rs Crore)

Particulars	Fixed Cost (Rs. Crore)			
	East	West	Central	State
WR - Kakrapar APS	0.00	0.00	0.00	0.00
WR - Tarapur APS Unit 3 & 4	0.00	0.00	0.00	0.00
Others (Mini Micro)	0.00	0.00	0.00	0.00
Renewable Energy Solar	0.00	0.00	0.00	0.00
Renewable Energy Non Solar	0.00	0.00	0.00	0.00
Gandhi Sagar	3.46	4.10	3.67	11.22
Pench	9.81	11.62	10.41	31.84
Rajghat	3.33	3.94	3.53	10.80
Bargi	6.12	7.25	6.49	19.85
Birisinghpur	1.30	1.54	1.38	4.23
Bansagar – I	60.18	71.30	63.88	195.36
Ban sagar II	0.00	0.00	0.00	0.00
Ban sagar III	0.00	0.00	0.00	0.00
Ban sagar IV	5.63	6.67	5.97	18.26
Marikheda	10.50	12.44	11.15	34.08
Ranapratap Sagar & Jawahar sagar	15.65	18.54	16.61	50.79
UPPCL (Rihand, Matatila, Rajghat)	1.54	1.82	1.63	5.00
Indira Sagar	214.58	254.19	227.75	696.52
Sardar Sarovar	91.06	107.87	96.65	295.59
Omkareshwar	136.99	162.28	145.40	444.66
Jaiprakash Power, Nigri- Unit-1	98.26	116.40	104.29	318.95
Jaiprakash Power, Nigri- Unit-2	98.26	116.40	104.29	318.95
UMPP Sasan, Sidhi Unit-1	9.63	11.41	10.22	31.27
UMPP Sasan, Sidhi Unit-2	9.67	11.46	10.26	31.39
UMPP Sasan, Sidhi Unit 3& 4	19.30	22.87	20.49	62.66
UMPP Sasan, Sidhi Unit 5&6	19.30	22.87	20.49	62.66
Vindhyachal Mega Project, Stage 5-Unit-1	49.00	58.04	52.01	159.05
WR - Sipat –II	50.96	60.37	54.09	165.43
WR - Sipat -I (3 Units)	98.15	116.27	104.18	318.61
WR-NTPC Korba - 7	25.32	29.99	26.87	82.18
WR-NTPC Lara STPS, Raigarh	19.47	23.07	20.67	63.21

Particulars	Fixed Cost (Rs. Crore)			
	East	West	Central	State
Unit1				
WR-NTPC Lara STPS, Raigarh Unit 2	12.94	15.32	13.73	41.99
WR-NTPC Gadarwara STPS, Unit1	81.10	96.07	86.08	263.24
WR – KSTPS	55.07	65.24	58.45	178.77
WR-Lanco TPS, Amarkantak	87.80	104.01	93.19	285.00
WR - VSTPS – III	56.41	66.82	59.87	183.10
Amarkantak ext	65.99	78.18	70.04	214.21
WR - VSTPS-I	49.52	58.67	52.57	160.76
WR - VSTPS-II	40.46	47.93	42.94	131.33
WR-Vindhyachal Mega Project, Stage 4-Unit-1	72.66	86.07	77.12	235.85
WR-Vindhyachal Mega Project, Stage 4-Unit-2	72.66	86.07	77.12	235.85
WR-MB Power, Anuppur Unit I	65.91	78.08	69.96	213.96
ER- Kahalgaon STPS-II	11.47	13.58	12.17	37.22
SGTPS EXT	126.38	149.71	134.14	410.22
WR - Gandhar GPP	7.45	8.82	7.91	24.18
WR - Kawas GPP	7.00	8.29	7.43	22.72
Satpura Thermal Power Stations Exten - Unit 10	78.98	93.56	83.83	256.38
Satpura Thermal Power Stations Exten - Unit 11	78.98	93.56	83.83	256.38
ER-DVC (MTPS,CTPS)	92.14	109.15	97.80	299.09
Captive	0.00	0.00	0.00	0.00
ER-DVC Durgapur Steel TPS-Unit-1	20.09	23.80	21.33	65.22
ER-DVC Durgapur Steel TPS-Unit-2	20.09	23.80	21.33	65.22
SGTPS	113.92	134.96	120.92	369.80
WR- NTPC Mauda TPS- Unit-1	36.42	43.14	38.65	118.21
WR-NTPC Mauda TPS- Unit-2	36.42	43.14	38.65	118.21
Satpura TPS PH II &III	109.39	129.59	116.11	355.10
Jaypee Bina Power, Sagar Unit-1	69.72	82.59	74.00	226.30
Jaypee Bina Power, Sagar Unit-2	69.72	82.59	74.00	226.30
Singaji Thermal Power Stations Phase I -Unit-1	165.30	195.82	175.45	536.57

Particulars	Fixed Cost (Rs. Crore)			
	East	West	Central	State
Singaji Thermal Power Stations Phase I -Unit-2	165.30	195.82	175.45	536.57
WR- Jhabua Power, Seoni	70.64	83.68	74.98	229.30
Total	**2,997.41**	**3,550.78**	**3,181.42**	**9,729.61**

Variable Cost

2.45 Variable costs computed on the basis of scheduled energy, is shown below in the table:

Table 24: Station wise admitted variable cost of scheduled energy

Particulars	Variable Cost (Rs. Crore)			
	East	West	Central	State
WR - Kakrapar APS	50.18	59.44	53.26	162.88
WR - Tarapur APS Unit 3 & 4	138.81	164.43	147.33	450.57
Others (Mini Micro)	11.01	13.04	11.69	35.74
Renewable Energy Solar	260.19	308.23	276.17	844.58
Renewable Energy Non Solar	748.77	887.01	794.74	2,430.52
Gandhi Sagar	0.00	0.00	0.00	0.00
Pench	0.00	0.00	0.00	0.00
Rajghat	0.00	0.00	0.00	0.00
Bargi	0.00	0.00	0.00	0.00
Birisinghpur	0.00	0.00	0.00	0.00
Bansagar – I	0.00	0.00	0.00	0.00
Ban sagar II	0.00	0.00	0.00	0.00
Ban sagar III	0.00	0.00	0.00	0.00
Ban sagar IV	0.00	0.00	0.00	0.00
Marikheda	0.00	0.00	0.00	0.00
Ranapratap Sagar & Jawahar sagar	0.00	0.00	0.00	0.00
UPPCL (Rihand, Matatila, Rajghat)	0.00	0.00	0.00	0.00
Indira Sagar	0.00	0.00	0.00	0.00
Sardar Sarovar	0.00	0.00	0.00	0.00
Omkareshwar	0.00	0.00	0.00	0.00
Jaiprakash Power, Nigri-	49.20	58.28	52.22	159.70

Particulars	**Variable Cost (Rs. Crore)**			
	East	**West**	**Central**	**State**
Unit-1				
Jaiprakash Power, Nigri-Unit-2	49.20	58.28	52.22	159.70
UMPP Sasan, Sidhi Unit-1	65.10	77.12	69.10	211.32
UMPP Sasan, Sidhi Unit-2	65.36	77.43	69.38	212.18
UMPP Sasan, Sidhi Unit 3& 4	130.47	154.55	138.48	423.49
UMPP Sasan, Sidhi Unit 5&6	130.47	154.55	138.48	423.49
Vindhyachal Mega Project, Stage 5-Unit-1	38.85	46.02	41.23	126.10
WR - Sipat –II	52.11	61.73	55.31	169.15
WR - Sipat -I (3 Units)	94.66	112.14	100.47	307.27
WR-NTPC Korba - 7	22.28	26.40	23.65	72.33
WR-NTPC Lara STPS, Raigarh Unit1	14.23	16.86	15.11	46.20
WR-NTPC Lara STPS, Raigarh Unit 2	9.45	11.20	10.04	30.69
WR-NTPC Gadarwara STPS, Unit1	59.28	70.22	62.92	192.42
WR – KSTPS, Korba	141.50	167.63	150.19	459.32
WR-Lanco TPS, Amarkantak	115.19	136.45	122.26	373.90
WR - VSTPS – III	92.65	109.75	98.34	300.74
Amarkantak ext	88.50	104.84	93.94	287.29
WR - VSTPS-I	147.88	175.18	156.96	480.02
WR - VSTPS-II	113.27	134.18	120.22	367.66
WR-Vindhyachal Mega Project, Stage 4-Unit-1	59.24	70.18	62.88	192.30
WR-Vindhyachal Mega Project, Stage 4-Unit-2	59.24	70.18	62.88	192.30
WR-MB Power, Anuppur Unit I	90.42	107.11	95.97	293.49
ER- Kahalgaon STPS-II	20.97	24.84	22.25	68.05
SGTPS EXT, Birsinghpur	217.34	257.47	230.68	705.49
WR - Gandhar GPP	13.06	15.47	13.86	42.39
WR - Kawas GPP	15.59	18.47	16.55	50.61
STPS Exten - Unit 10, Sarani	69.14	81.91	73.39	224.44

Particulars	Variable Cost (Rs. Crore)			
	East	West	Central	State
STPS Exten - Unit 11, Sarani	58.57	69.39	62.17	190.13
ER-DVC (MTPS,CTPS)	40.87	48.41	43.38	132.66
Captive	0.42	0.50	0.45	1.38
ER-DVC Durgapur Steel TPS- Unit-1	2.12	2.51	2.25	6.88
ER-DVC Durgapur Steel TPS- Unit-2	1.72	2.04	1.82	5.58
SGTPS, Birshinghpur	7.22	8.55	7.66	23.44
Total	**3,344.54**	**3,962.01**	**3,549.87**	**10,856.42**

Renewable Power Obligation (RPO)

Petitioners Submissions

2.46 The Petitioners have submitted that the Commission has notified MPERC (Co-generation and generation of electricity from Renewable sources of energy) (Revision-I) Regulation, 2010 [ARG-33(I)(v) of 2015] vide notification dated October 02, 2015. As per Regulation 4.1 of this regulation, the minimum quantum of electricity is 1.50% for Solar and 7.00% for Non-Solar of the total energy requirement of the Petitioners for FY 2017-18.

2.47 Accordingly, the Petitioners have calculated the RPO requirement (which is already included in the power purchase cost) is shown in the following table:

Table 25: RPO for FY 2017-18

Renewable Purchase Obligation Computations		**FY 2017-18**
Solar	%	1.50%
Other than Solar	%	7.00%
Total	%	8.50%
Ex-bus renewable energy requirement to fulfill RPO (MU)		
Solar	MU	950
Other than Solar	MU	4,434
Total	MU	5,384
Energy Available from existing Renewable Sources		
Solar	MU	1,314
Other than Solar	MU	4,187
Total	MU	5,501
Shortfall		
Solar	MU	-
Other than Solar	MU	247

Renewable Purchase Obligation Computations		**FY 2017-18**
Total	MU	247
Extra Surplus available after meeting RPO obligations	MU	247
IEX rate	Rs/unit	2.43
Additional revenue from sale of surplus due to RPO obligation	Rs Crore	60
Renewable Energy purchase Rates		
Solar	Rs./unit	6.43
Other than Solar	Rs./unit	5.60
Additional Cost due to RPO Obligation		
Solar	Rs. Crore	-
Other than Solar	Rs. Crore	138.37
RE Power Purchase from new/other sources to fulfill RPO	**Rs. Crore**	**138.37**

Commission's Analysis

2.48 The Commission has notified MPERC (Co-generation and generation of electricity from Renewable sources of energy) (Revision-I) Regulation, 2010 [ARG-33(I) (v) of 2015] on October 02, 2015. The Commission has considered procurement of power from renewable energy sources through PPA or through short term market to ensure RPO compliance.

2.49 The relevant section of the Fifth amendment of MPERC (Co-generation and generation of Electricity from Renewable sources of energy) (Revision-I) Regulations, 2010 [ARG-33(I)(v) of 2015], is reiterated below:

"4.1 The minimum quantum of electricity to be procured by all the Obligated Entities from generators of Energy including Co-generation from Renewable Sources of electricity expressed as percentage of their total annual procurement of Electrical Energy during the following Financial Years shall be as under:-

Financial Year	*Cogeneration and other Renewable Sources of Energy*		
	Solar (%)	*Non Solar (%)*	*Total (%)*
2015-16	*1.00*	*6.00*	*7.00*
2016-17	*1.25*	*6.50*	*7.75*
2017-18	***1.50***	***7.00***	***8.50***
2018-19	*1.75*	*7.50*	*9.25*

."

2.50 For FY 2017-18, the minimum quantum of electricity from Renewable sources of energy is 1.50% from Solar and 7.00% from Non-Solar sources. Accordingly, the Commission has computed the quantum of solar and non-solar power purchase requirement based on the total energy requirement admitted for FY 2017-18, as shown in the table below:

Table 26: Renewable energy requirement computed by the Commission (MU)

Particulars	East Discom	West Discom	Central Discom	State
RPO Solar	1.50%	1.50%	1.50%	1.50%
RPO Non Solar	7.00%	7.00%	7.00%	7.00%
Total	8.50%	8.50%	8.50%	8.50%
Ex-bus Renewable energy requirement to fulfill RPO (MU)				
RPO Solar	291	345	309	946
RPO Non Solar	1,360	1,612	1,444	4,416
Total (MU)	1,651	1,958	1,753	5,362
Energy available from existing Renewable Sources (MU)				
Solar	404	480	429	1,314
Non Solar	1,309	1,552	1,390	4,251
Total	1,714	2,032	1,819	5,565
Shortfall				
Solar	0	0	0	0
Non Solar	51	60	54	165
Total	**51**	**60**	**54**	**165**

2.51 The Commission has worked-out the cost of renewable energy power purchase to fulfil the RPO compliance as shown in the table below:

Table 27: RE power purchase cost admitted by the Commission for FY 2017-18

Particulars	East Discom	West Discom	Central Discom	State
Power Purchase Rate (Rs/kWh)				
Solar from existing sources	6.43	6.43	6.43	6.43
Non-Solar	5.59	5.59	5.59	5.59
A- RE Power Purchase Cost from existing sources (Rs Crore)				
Solar	187.44	222.05	198.95	608.43
Non-Solar	731.46	866.50	776.37	2,374.33
Sub-Total	918.90	1,088.55	975.32	2,982.77
B- RE Power Purchase Cost from new/ other sources to fulfill RPO(Rs Crore)				
Solar	0.00	0.00	0.00	0.00
Non-Solar	28.40	33.64	30.14	92.18
Sub-Total	28.40	33.64	30.14	92.18
Total (A+B)	**947.30**	**1,122.19**	**1,005.46**	**3,074.95**

Management of Surplus Energy

Petitioners Submissions

2.52 The Petitioners have submitted that as per the power supply position, the state is expected to have surplus energy in most of the months in FY 2017-18. Currently, MPPMCL sells surplus power through Power Exchange (IEX) at a cost which is determined by the market.

2.53 The Petitioners have further submitted that the average IEX rate is Rs 2.43 per unit on the basis of the past three years' rates (October 2013 to September 2016). Hence, For the purpose of computation of revenue from surplus energy, the average rate has been considered as Rs 2.43 per unit.

2.54 The energy surplus for Discoms vis-à-vis overall energy availability and energy requirement as well as the details of revenue from sale of energy are shown in the table below. This revenue has been subtracted from the variable power purchase costs, while computing the total power purchase costs of the Discoms.

Table 28: Management of Surplus Energy with Discoms for the MYT period FY 2017-18

Particulars	**Units**	**FY 2017-18**
Ex-bus energy available	MU	72,588
Ex-bus energy required by Discoms	MU	63,347
Surplus Energy	MU	9,241
Additional surplus due to RPO obligation	MU	247
Management of Surplus energy		
Sale of total surplus energy via IEX	MU	9,488
Rate of Sale of Surplus Energy		
IEX	Rs. per unit	2.43
Revenue from Sale of Surplus Energy through IEX	**Rs. Crore**	**2306**

Commission's Analysis

2.55 After allowing long term purchases from MPPMCL allocated generating stations as per merit order principle, it has been observed that there is a surplus quantum of 26369 MU.

2.56 The Commission has considered the average rate of Rs.2.60 per unit for sale of surplus power through IEX/ PXIL/bilateral arrangements/bidding derived on the basis of the analysis of IEX data for FY 2014-15, FY 2015-16 and FY 2016-17. As sale of surplus energy has been considered at Rs 2.60 /kWh, stations having variable rate more than Rs 2.60/kWh are to be backed-down. Accordingly, quantum of surplus energy from stations having variable rate below Rs 2.60 /kWh are 14,910 MU.

2.57 Details of saving in power purchase cost through sale of surplus power has been shown in the table below:

Table 29 : Details of saving in power purchase cost through sale of Surplus energy

SL No	Particulars	Reference	Admitted
1	Total energy availability (MU)	A	89,452
2	Total energy requirement of Discoms (MU)	B	63,083
3	Total Surplus energy available (MU)	C=A-B	26,369
4	Surplus energy available at variable rate below Rs 2.60 (Mus)	D	14,910
5	Variable cost of surplus energy having variable rate below Rs 2.60 (Rs Crore)	E	3,609
6	Per unit cost of sale of surplus power (Rs/kWh)	F	2.60
7	Revenue from sale of surplus power (Rs Crore)	G=D*F	3,882
8	Fixed cost of surplus energy (Rs Crore)		3376
9	**Total saving in fixed cost of surplus energy from sale of surplus energy (below Rs 2.60 per Unit)(Rs Crore)**	**H=G-E**	**273**

2.58 Discom-wise distribution of revenue from sale of surplus power (below Rs 2.60 per Unit) is shown in the table below:

Table 30 : Discom-wise details of saving in fixed cost from sale of Surplus energy (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom	Total
Revenue from sale of surplus power (below Rs 2.60 per Unit)(Rs Crore)	1,583	941	1,358	3,882

Inter State Transmission Charges associated with existing capacities

Petitioners Submissions

2.59 The Petitioners have submitted that inter-state transmission charges consist of the charges for transmission system of WR and ER. The actual inter-state transmission charges for FY 2014-15 amounted to Rs 1,419 Crore and the actual interstate transmission charges for FY 2015-16 amounted to Rs 1406 Crore. This suggests the interstate transmission charges were almost the same over a period of one year. However, only 2% has been considered for projecting the Interstate transmission charges for FY 2016-17 to FY 2018-19.

2.60 The Petitioners have further submitted that the estimated Inter-state transmission charges for FY 2016-17 to FY 2018-19 amounts to Rs 1,434 Crore, Rs. 1,463 Crore and Rs. 1,492 Crore, respectively. These costs have then been allocated to Discoms based on past trend of actual costs as mentioned below:

Table 31: **Inter-state transmission charges filed by Discoms for FY 2017-18**

Particulars	**PGCIL Costs (Rs Crore)**
East Discom	452
West Discom	437
Central Discom	574
Total	**1463**

Commission's Analysis

2.61 PGCIL charges consist of charges to be paid for transmission systems of Western Region and Eastern Region. The Commission has reviewed inter-state transmission charges as per the actual bills available for FY 2014-15, FY 2015-16, estimated for FY 2016-17 and FY 2017-18 and the claims filed by the Petitioners. The Commission has observed that the Petitioners have considered 2% increase for projecting the Inter-State transmission charges for FY 2016-17 and FY 2017-18 in-spite of decrease in Inter-State charges in FY 2015-16 from FY 2014-15. The Commission has not considered any increase in inter State transmission charges over the level of FY 2015-16 of Rs. 1406 Crore and considered the same inter-state transmission charges for FY 2016-17 and FY 2017-18. These charges have been further allocated amongst Discoms, based on past trend of actual cost as submitted by the Petitioners in the following Table:

Table 32: PGCIL charges admitted for FY 2017-18 (Rs. Crore)

Particulars	**East Discom**	**West Discom**	**Central Discom**	**Total**
Inter-State Transmission charges	434.39	551.64	419.97	1,406.00

Intra - State Transmission and SLDC Charges

Petitioners Submissions

2.62 The Petitioners have submitted that for intra-state transmission charges, various expense items of MPPTCL costs (other than terminal benefits liabilities) have been considered as admitted by the Commission in MYT Order for MP Transmission Company dated June 10, 2016. Further, MPPTCL fixed costs as approved by the Commission in order dated 10th June 2016 for FY 2017-18 have been considered.

2.63 For FY 2017-18 the annual SLDC charges have been computed based on the transmission capacity of Discoms and the rate for Long-term Access Customers of Rs. 5567.53/ MW as approved by MPERC in the SLDC tariff order for FY 2016-17.

2.64 Further the Petitioners have allocated intra-state transmission charges including SLDC charges and terminal benefits for FY 2017-18 to three Discoms as per past trend as indicated in the table below:

Table 33: Intra-State Transmission Charges including SLDC charges filed by Petitioners for FY 2017-18
(Rs. Crore)

Particulars	FY 2017-18
East Discom	760
West Discom	982
Central Discom	800
Total	**2542**

Commission's Analysis

2.65 The Petitioners have projected the intra-state transmission charges (including SLDC charges) of Rs. 2542 Crore for FY 2017-18. The Commission has considered intra-state transmission charges of Rs. 2524 Crore as projected in the transmission tariff order dated 10 June, 2016.

2.66 As regard SLDC charges, the Commission has considered Rs. 8.24 Crore from the latest available tariff order as admitted by the Commission in the order dated 5 April, 2016 for FY 2016-17 towards levy and collection of SLDC charges for FY 2017-18.

2.67 Accordingly, intra–state transmission charges Rs 2532 Crore (Rs 2524 Crore + Rs 8.24 Crore) for FY 2017-18 including SLDC charges have been admitted as given in the table below:

Table 34 : MPPTCL charges including SLDC charges admitted for FY 2017-18 (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom	Total for State
MPPTCL charges including SLDC charges and terminal benefits	757	970	806	2,532

2.68 The Commission has allowed the terminal benefits and pension expenses for FY 2017-18 on provisional basis on "pay as you go" principle payable to MP Transco to the extent of Rs.1177.90 Crore. This is based on the MPPTCL tariff order for FY 2017-18. The actual amount of terminal benefits shall be considered by the Commission in the true-up petition to be filed by MPPTCL after exercising prudence check.

MPPMCL Costs: Details and Discom wise Allocation

Petitioners Submissions

2.69 The Petitioners have submitted details of MPPMCL costs with estimated net expenses of Rs. (-) 194.50 Crore for FY 2017-18 and allocated the same to three Discoms based on total energy requirement at state boundary. Details of the expenses and costs allocated to Discoms are mentioned in the table below:

Table 35: Expenses of MPPMCL as filed for FY 2017-18 (Rs Crore)

Particulars	Amount
Purchase of Power	(0.14)
Inter-State Transmission Charges	54.18
Depreciation Expenses	4.86
Interest and Finance Charges	42.77
Repairs and Maintenance Expenses	3.72
Employee Expenses	64.79
A&G Expenses	44.07
Other Expenses	2.47
MPPMCL Costs	**216.72**
Less: Other Income	411.22
Net MPPMCL costs	(194.50)

Table 36: **MPPMCL Costs allocated to Discoms (Rs Crore)**

Particulars	FY 2017-18
East Discom	(59.74)
West Discom	(63.40)
Central Discom	(71.37)
Total	**(194.50)**

Commission's Analysis

2.70 The Petitioners have filed Rs. (-) 194.50 Crore as MPPMCL expenses for FY 2017-18. The Commission has observed that most of the expenses included in MPPMCL cost relate to the expenses proposed to be incurred for the power purchase. The Commission is of the opinion that such expenses should have been included under power purchase cost. Further, the Commission has admitted expenses of Rs. 112.58 Crore towards O&M expenses only and Rs. 411.22 Crore as other income. Net MPPMCL cost admitted in this order is Rs. (-) 298.64 Crore. The expenses related to power purchase, if any, incurred by MPPMCL would be appropriately considered at the time of truing up for FY 2017-18, after prudence check. Further, the Commission directs MPPMCL to file petition for determination of trading margin with appropriate Commission.

Petitioners Submissions

2.71 Details of total power purchase cost as filed by the Petitioners, is given in the table below:

Table 37: Total Power Purchase Cost as filed for FY 2017-18

Total Power Purchase Cost		East Discom	West Discom	Central Discom	State
A	Ex-bus Units to be Purchased (MU)	19,456	23,242	20,649	63,347
B	Fixed Cost (Rs. Crore)	3,833	4,558	4,068	12,459
C	Variable Cost (Rs. Crore)	2,765	3,321	2,935	9,020
D	MPPMCL costs (Rs. Crore)	(59.74)	(71)	(63)	(194)
E = B+C+D	Total Power Purchase Cost - Ex Bus (Rs. Crore)	6,538	7,808	6,939	21,285
E/A	Rate of Power Purchase (Rs./kWh)	3.36	3.36	3.36	3.36
H	External Losses (MU)	491	586	521	1,598
I	Inter -State Transmission Cost (Rs. Crore)	452	574	437	1,463
J = (A-H)	Energy to be Purchased at State Periphery (MU)	18,965	22,657	20,127	61,749
K = (I + E)	Total Power Purchase Cost at State Boundary (Rs. Crore)	6,990	8,383	7,376	22,748
J/K	Rate of Power Purchase at State Boundary (Rs./kWh)	3.69	3.70	3.66	3.68
L	Intra State Transmission Cost – MPPTCL including SLDC (Rs. Crore)	760	982	800	2,541
M = (K+L)	Total Power Purchase Cost at Discom Interface (Rs. Crore)	7,749	9,365	8,175	25,290
N	Intra- State Transmission Loss (MU)	545	651	578	1,774
O = (K-N)	Energy to be Purchased at Discom Boundary (MU)	18,420	22,006	19,549	59,975
M/O	Rate of Power Purchase at Discom Boundary (Rs./kWh)	4.21	4.26	4.18	4.22

Commission's Analysis

2.72 The Commission observed that MPPMCL has signed the Bulk Power Supply Agreement (BPSA) with SEZ, Indore on 29 March, 2016 for supply of power on long term basis up to 40 MW from its allocated generating stations. Accordingly, the Commission has accounted for the revenue earned by the sale of power to SEZ in to the total power purchase cost admitted for the Discoms. The total power purchase cost as admitted by the Commission is summarized in the following table:

Table 38 : Total power purchase cost admitted for FY 2017-18 (Rs Crore)

Particulars	**East Discom**	**West Discom**	**Central Discom**	**State**
Total Fixed Charges	2,997.41	3,550.78	3,181.42	9,729.61
Total Variable Charges	4,456.25	5,278.95	4,729.82	14,465.02
Total Power Purchase cost	7,453.65	8,829.73	7,911.25	24,194.63
less: Revenue from sale of surplus power	1,583.15	941.01	1,357.53	3,881.69
less: Expense towards sale of Power to SEZ	32.11	38.03	34.08	104.22
MPPMCL Cost	-91.73	-109.58	-97.35	-298.66
Total Power Purchase cost	5,746.67	7,741.11	6,422.29	19,910.07
PGCIL Charges	434.39	551.64	419.97	1,406.00
MPPTCL Charges	756.67	969.65	806.05	2,532.37
Grand Total	**6,937.73**	**9,262.39**	**7,648.31**	**23,848.44**
Power purchase rate at ex-bus (Rs/Unit)	3.57	4.02	3.71	3.78
Power purchase rate at State Periphery (Rs/Unit)	3.66	4.13	3.80	3.88
Power purchase rate at Discom Periphery (Rs/Unit)	3.77	4.25	3.91	3.99
Power purchase rate at Consumer end (Power purchase per unit sales)(Rs/Unit)	4.54	5.03	4.77	4.80

Pooled Power Purchase Cost

2.73 The Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 have stipulated the provision for determining the pooled cost of power purchase for the purpose of computing the Floor and Forbearance price of Renewable Energy Certificates. The relevant provision of the Regulation is reproduced below:

*"5. **Eligibility and Registration for Certificates:***
(1)
:
:
c. it sales the electricity generated either (i) to the distribution licensee of the area in which the eligible entity is located, at a price not exceeding the pooled cost of power purchase of such distribution licensee, or (ii) to any other licensee or to an open access consumer at a

mutually agreed price, or through power exchange at market determined price.

Explanation.- for the purpose of these regulations 'Pooled Cost of Purchase' means the weighted average pooled price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers long-term and short-term, but excluding those based on renewable energy sources, as the case may be."

2.74 Accordingly, the pooled power purchase cost has been computed considering ex-bus power purchase excluding renewable energy sources as mentioned in the table below:

Table 39 : Pooled Power Purchase cost for FY 2017-18

Particulars	**FY 2017-18**
Power Purchase Requirement excluding renewable energy sources (MU) Ex- Bus	57,353.57
Total Power Purchase Cost excluding renewable energy sources (Rs Crore)	20,883.78
Pooled Power Purchase Cost (Rs/kWh)	**3.64**

Capital Expenditure Plans/ Capitalization of Assets

Petitioners Submissions

Investments

2.75 The Petitioners have submitted they are undertaking various projects in forthcoming years for system strengthening and reduction of distribution losses. The focus is on creation of new 33/11 kV S/s, bifurcation of overloaded 33 kV feeders, feeder bifurcation of agricultural feeder at 11 kV level, Addl. / Aug of PTRs, Installation of DTRs, conversion of bare LT line into AB Cables and replacement of service lines etc.

2.76 The Petitioners have further submitted that the overall distribution loss of the system is the sum of technical and commercial losses. The technical losses are mainly due to poor infrastructure which needs strengthening, renovation and up-gradation of the capacity of lines, sub-stations and associated infrastructures. The commercial losses are mainly due to pilferage of energy which can also be reduced to a large extent by re-engineering of the system which requires capital investment and dedicated efforts. Discoms are working on both the issues and the distribution losses have considerably come down but not up to the normative loss levels.

2.77 Details of Discom wise capital investment plans under various schemes for FY 2017-18 as filed are indicated below:

Table 40 : Capital Investment plan for FY 2017-18 (Rs. Crore)

Discoms	**Amount**
East	2029
West	1837
Central	1666
Total for the State	**5532**

Capitalization and CWIP

2.78 Discom wise capitalization plan and the status of capital works in progress (CWIP) as filed by the Petitioners for FY 2017-18 are indicated below:

Table 41 : Discom wise year wise capitalization and bifurcation of CWIP (Rs. Crore)

Particulars	**East Discom**	**West Discom**	**Central Discom**
Opening Balance of CWIP	1,033	1,924	871
Fresh Investment during the year	2,029	1,837	1,666
Investment capitalized	1,633	979	1,197
Closing Balance of CWIP	**1,428**	**2,781**	**1,340**

Commission's Analysis on Asset Capitalization

2.79 The Commission has directed the Discoms to obtain appropriate approval for their capital expenditure as per Regulation 10.3 of MPERC (The Conditions of Distribution License for Distribution Licensee (including Deemed Licensee)), Regulations 2004. The Discoms shall submit a detailed capital investment plan, financing plan and physical targets indicating physical and financial achievement against various schemes for meeting the requirement of load growth, reduction in distribution losses, improvement in quality of supply, reliability, metering etc.

2.80 The capital investment plan shall show separately, ongoing projects that will spill over into the year under review and new projects (along with justification) that would commence during the tariff period but would be completed within or beyond the tariff period.

2.81 The net asset addition by the Discoms as per audited accounts for FY 2014-15 and FY 2015-16 are given in the Table below:

Table 42 : Net Asset capitalization during FY 2014-15 and FY 2015-16 (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom
FY 2014-15	692.89	566.19	1164.71
FY 2015-16	134.63	487.79	897.06

2.82 For considering the asset addition for the Discoms, generally the Commission has considered the average asset addition of the Discoms during the past years. Accordingly, the Commission has worked-out the average asset addition during last two years i.e., FY 2014-15 and FY 2015-16, which comes out to be Rs 413.76 Crore, Rs 540.13 Crore and Rs 1030.89 Crore, respectively, for East, West and Central Discoms. Further, the Commission has observed that the Petitioners have projected Rs 1032 Crore, Rs 520 Crore and Rs 531 Crore for East, West and Central Discoms, respectively for FY 2016-17. As the asset addition projected for FY 2016-17 by West and Central Discoms is less than the average asset addition worked out by the Commission, the Commission has considered the projections as envisaged by West and Central Discoms. While for East Discom the Commission has observed that the asset addition during the past years has been less than the projections given by the East Discom for FY 2016-17. Therefore, the Commission has appropriately considered the average of the asset addition during FY 2014-15 and 2015-16 for FY 2016-17 for East Discom. For FY 2017-18, the Commission has considered the average asset addition of previous three years i.e., FY 2014-15, FY 2015-16 and FY 2016-17, as shown in the table below:

Table 43: Asset capitalization admitted for FY 2016-17 and FY 2017-18 (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom
FY 2016-17	413.76	520.00	531.00
FY 2017-18	413.76	533.42	864.26

Operations and Maintenance Expenses

Petitioners Submissions

2.83 The Petitioners have submitted that Operation and Maintenance (O&M) expenses have been projected on the basis of the relevant provisions of the Tariff Regulations. Component wise O&M expenses have been discussed below.

Employee Expenses

2.84 The Petitioners have submitted that employee costs have been calculated as per the provisions of the Tariff Regulations. Petitioners have made following assumptions for calculation of Employee costs:

a) For the calculation of the Dearness allowance (DA), basic pay has been taken at the same level as notified in the MPERC regulations. For computation of Dearness allowance, a 6% increase has been considered for every six months for all three Discoms (every year in January and July). Based on this, the DA as a percentage of Basic Salary (approved by MPERC) is shown in the table below:

Particulars	FY '17	FY '18	FY '19
DA as percentage of Basic for first quarter - Apr to June	125%	137%	149%
DA as percentage of Basic for 2nd and 3rd quarter - July to Dec	131%	143%	155%
DA as percentage of Basic for 4th quarter - Jan to March	137%	149%	161%

b) Incentives/ Bonus to be paid to the employees have been considered as per the previous trend in the audited accounts.

c) Leave Encashment and Provident Fund (PF)/Cash Financial Assistance (CFA)/Group Term Insurance Scheme (GTIS)/ New Pension Scheme (NPS):

- MPPTCL is providing fund to Discoms, only to meet out Terminal Benefits liability of Gratuity, Pension and Commutation of pension.
- Other than these components, Discoms make payment of Leave Encashment and PF/CFA/GTIS/NPS. Hence, expenses incurred on account of Leave Encashment and PF/CFA/GTIS/NPS have been claimed separately in addition to the terminal benefits costs claimed as part of Intra-State Transmission Charges in the total Power Purchase Costs of Discoms.

d) The employee cost arising due to the eligibility of 3rd higher pay scale under assured career progression scheme cannot be ascertained at this stage. Hence expenditure on this account is not being considered in this petition. However, the same shall be accounted for in true-up petition.

e) The Petitioners further submitted that the impact of seventh pay commission recommendations, to the extent applicable, will be impending on it and is mandatory from the Petitioner's side to pay the difference (in pay as notified) as arrears to its employees. Hence, the Petitioners requested the Commission to allow the impact of seventh commission pay structure also during the tariff determination exercise for FY 2017-18 or allow the Petitioners to claim it during the true up filing exercise.

2.85 Accordingly, employee expenses have been claimed as Rs 998 Crore, Rs 1029 Crore and Rs 1012 Crore by East, West and Central Discoms, respectively.

A&G Expenses

2.86 Petitioners have claimed the A&G expenses as per the provision of the Regulation 34.1 of the Tariff Regulations as Rs 184 Crore, Rs 153 Crore and Rs 105 Crore for East, West and Central Discoms respectively. Petitioners have further submitted that norms of A&G expenses specified in the Tariff Regulations exclude fees paid to the MPERC and taxes payable to the Government. Accordingly, fees paid to the MPERC and taxes payable to the Government have been considered over and above the normative A&G expenses specified in the Tariff Regulations.

2.87 The Petitioners have also submitted that in line with the recent policy of the Government of India; the Petitioners are proposing to move towards cash less economy. However, currently the cashless modes of payment entails levy of service charges. The Petitioners proposed that the service charges be not recovered from the consumers at the time of payment. As such it is proposed that the service charge payable to cash less bill payment intermediaries be separately allowed as permissible expenses for ARR. Assuming a cost of Rs. 5 per transaction and further assuming about 25% of non-agricultural consumers shall avail cash less payment services, it is requested to approve additional estimated cost of Rs. 15 crore per year (100, 00,000*.25*5*12) in the ARR. Further, the Petitioners submitted that detailed information of actual cost incurred on this account shall be submitted by it at the time of true-up.

R&M Expenses

2.88 Petitioners have submitted that as per the provisions of Tariff Regulations, Repair and Maintenance (R&M) expenses are admissible @ 2.3 % of opening GFA. These expenses are projected as Rs. 166 Crore, Rs. 140 Crore, and Rs. 184 Crore for East, West and Central Discoms, respectively for FY 2017-18.

2.89 Summary of claims of the Petitioners in respect of O&M Expenses is shown in the table below:

Table 44: O&M expenses claimed for FY 2017-18 (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom
Employee Cost (including arrears, DA and others)	998	1,029	1,012
A&G Expenses	184	152	105
R&M expenses	166	140	184
MPERC Fees	0.37	0.44	0.39
Total O&M expenses	1,347	1,322	1,302

Commission's Analysis on O&M Expenses

2.90 Tariff Regulations specify normative O&M Expenses for the Discoms. These expenses comprise Employee expenses, Repair and Maintenance (R&M) expenses and Administrative and General (A&G) expenses. The amount of employee expenses and A&G expenses for FY 2017-18 have been specified in the Regulations. R&M expenses are specified as 2.3% of opening GFA for the FY 2017-18. These norms exclude pension, terminal benefits and incentive to be paid to employees, taxes payable to the Government, MPSEB expenses and fee payable to MPERC.

2.91 The Commission had allowed the terminal benefits and pension expenses for the FY 2017-18 on provisional basis under the transmission charges on "pay as you go" basis. It has been noted that various stakeholders have been demanding contribution towards fund for the Terminal Benefit (Pension, Gratuity and Leave Encashment) Trust as per Provision 3(6) of the MPERC (Terms and Conditions for allowing pension and terminal benefits liabilities of personnel of Board and successor entities) regulations, 2012(G-38 of 2012), extract of the same is shown below:

"3(6) The liabilities in regard to the contribution to be made under sub-clause 2(iii) above shall be allowed in the tariff of respective Successor Entities in the relevant year limited to the extent to be decided by the Commission in the relevant tariff order..."

2.92 Considering the long pending demand, the Commission has considered the nominal annual amount of Rs. 120 Crore towards the Pension and Terminal Benefit Trust Fund (liabilities provision) which is to be contributed by the Discoms to the Registered Terminal Benefits Trust. The Commission has directed the Discoms to file the mechanism along with detailed conditions with regards to management of funds within 3 months.

2.93 The Commission has considered it appropriate to allow DA @ 137% for April to June, @ 143% for July to December and @ 149% for January to March of the Basic salary as proposed by the Petitioners subject to true-up.

2.94 The Commission has admitted the PF/NPS liability for the employees being recruited after 2005 as proposed by the Petitioners.

2.95 As regards Seventh Pay Commission, the Commission is of the view that any impact in employee expenses based on change in salary due to implementation of recommendation of seventh pay commission will be allowed during the true-up for FY 2017-18 based on actual. Extract of clause 34.2 of the Tariff Regulations is as under:

"34.2 *Any expenses due to change in accounting policy, increase in salary etc. due to revision in pay to revision in pay / salary structure including payment of arrears on account revision in pay/ salary structure etc., shall be excluded from the norms in the trajectory and shall be allowed on actual basis."*

2.96 The Commission has admitted employee expenses as shown in the table below:

Table 45: Employee Expenses as admitted for FY 2017-18 (Rs. Crore)

Particulars	**East Discom**	**West Discom**	**Central Discom**	**Total**
Employee expenses				
Basic Salary	396.00	415.00	370.00	1181.00
DA	566.28	593.45	529.10	1688.83
leave encashment in lieu of retirees	17.00	13.00	46.00	76.00
NPS/PF	18.00	6.00	12.07	36.07
Total Employee expense	**997.28**	**1027.45**	**957.17**	**2981.90**

2.97 The Commission has considered the A&G expenses as specified in the Tariff Regulations and also considered the fees paid to the Commission as claimed by the Petitioners. The Commission is supportive of Petitioners endeavours in promoting digital and cashless transactions and shall consider the service charges payable to cash less bill payments intermediaries at the time of true-up along with taxes payable to the Government as per actual. Details of A&G expenses and fees paid to the MPERC as admitted are given in the Table below:

Table 46: A&G Expenses as admitted for FY 2017-18 (Rs. Crore)

Particulars	**East Discom**	**West Discom**	**Central Discom**	**Total**
A&G expenses	179.00	138.00	103.00	420.00
MPERC fees	0.50	0.50	0.50	1.50
Total A&G expenses	**179.50**	**138.50**	**103.50**	**421.50**

2.98 R&M expenses @ 2.3% of opening GFA of respective Discoms for the financial year have been considered.

Table 47: R&M Expenses as admitted for FY 2017-18 (Rs. Crore)

Particulars	**East Discom**	**West Discom**	**Central Discom**	**Total**
Opening GFA as on 1st April, 2017	6582.74	5875.73	7997.51	20455.98
% as R&M of opening GFA as specified in Tariff Regulations	2.3%	2.3%	2.3%	2.3%
Total R&M	**151.40**	**135.14**	**183.94**	**470.49**

2.99 Total O&M expenses admitted by the Commission for FY 2017-18, have been summarized in the table below:

Table 48: O&M Expenses as admitted for FY 2017-18 (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom	State
Employee Expenses	997.28	1027.45	957.17	2981.90
A&G Expenses	179.50	138.50	103.50	421.50
R&M Expenses	151.40	135.14	183.94	470.49
Terminal Benefits Provision	40.00	40.00	40.00	120.00
Total O&M expenses	**1,368.18**	**1,341.09**	**1,284.61**	**3,993.89**

Depreciation

Petitioners Submissions

2.100 The Petitioners have submitted that they have developed detailed depreciation model based on rates specified by the Commission in Annexure-II of Tariff Regulations. The depreciation worked out for FY 2017-18 is shown in Table below:

Table 49: Depreciation claimed by Petitioners (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom
Land under Lease	0	0	0
Building	2	4	3
Hydraulic Works	0	0	1
Other Civil Works	0	0	0
Plant and Machinery	98	93	151
Line Cable Networks etc.	193	123	154
Vehicles	0	0	0
Furniture and fixtures	0	0	0
Office Equipments	5	5	10
Assets not belonging to board/RGGVY	26	26	30
Intangible Assets	0	2	
Total	**324**	**254**	**349**

Commission's Analysis of Depreciation

2.101 As per the Tariff Regulations, depreciation shall be calculated annually based on 'straight line method' and at the rates specified in Annexure II of the Regulations on the assets of distribution system declared in commercial operation as on 31st March,

2017. Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

2.102 In case of existing projects, the Tariff Regulations specify that the balance depreciable value as on 1st April, 2017 shall be worked out by deducting the cumulative depreciation including advance against depreciation as admitted by the Commission up to 31st March, 2017 from the gross depreciable value of the assets. The rate of depreciation shall continue to be charged at the rate specified in Tariff Regulations till cumulative depreciation reaches 70 %. Thereafter, the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90 %.

2.103 The Commission has observed that depreciation claimed by the Discoms has not been duly substantiated with the detailed asset wise registers to ensure that claims made are only against those assets which have not been fully depreciated.

2.104 For computing the depreciation, the Commission has considered the closing GFA of true-up order for FY 2012-13 as opening GFA for FY 2013-14. Asset addition for FY 2016-17 and FY 2017-18 has been considered as admitted in previous section. Consumer contribution, grants and subsidies towards the cost of capital assets during respective years have been reduced from GFA for arriving at net GFA for FY 2017-18. Consumer contribution, grants and subsidies for FY 2016-17 has been considered as an average of FY 2014-15 & FY 2015-16 and for FY 2017-18 an average of FY 2014-15, FY 2015-16 & FY 2016-17 has been considered. Net GFA has been considered for allowing depreciation for FY 2017-18 on the basis of opening GFA for FY 2017-18 plus half of average addition during FY 2017-18 net of the consumer contribution.

2.105 The Commission has considered the depreciation rates i.e. 2.44%, 2.81%, and 2.44%for East, West and Central Discoms for FY 2017-18, as considered in the tariff order for FY 2016-17. However, the Commission clarifies that the difference in depreciation amount as admitted by the Commission in this tariff order and the depreciation worked out on the basis of audited accounts for FY 2017-18 shall be duly considered at the time of truing up of the ARR for FY 2017-18 subject to scrutiny of Asset Register.

2.106 The depreciation admitted for FY 2017-18 is given in the following table:

Table 50: Depreciation admitted for FY 2017-18 (Rs. Crore)

Particular	**East**	**West**	**Central**	**Total**
Opening GFA as on 1st April, 2013	**3,310.46**	**2,929.48**	**3,451.90**	**9,691.84**

Particular	East	West	Central	Total
Add: Addition during FY 2013-14	1,072.52	447.79	1,136.36	2,656.67
Less: Consumer Contribution in FY 2013-14	114.88	240.96	214.18	570.02
Opening GFA as on 1st April, 2014	**4,268.10**	**3,136.31**	**4374.08**	**11,778.48**
Add: Addition during FY 2014-15	692.89	566.19	1164.71	2,423.79
Less: Consumer Contribution in FY 2014-15	350.92	248.81	278.07	877.80
Opening GFA as on 1st April, 2015	**4,610.06**	**3,453.69**	**5,260.72**	**13,324.47**
Add: Addition during FY 2015-16	134.63	487.79	897.06	1,519.48
Less: Consumer Contribution in FY 2015-16	134.63	458.87	213.56	807.06
Opening GFA as on 1st April, 2016	**4,610.06**	**3482.61**	**5944.22**	**14,036.89**
Add: Addition during FY 2016-17	413.76	520.00	531.00	1,464.76
Less: Consumer Contribution in FY 2016-17	303.98	353.84	245.82	903.63
Opening GFA as on 1st April, 2017	**4719.85**	**3648.77**	**6229.40**	**14,598.02**
Add: Addition during FY 2017-18	413.76	533.42	864.26	1,811.44
Less: Consumer Contribution in FY 2017-18	303.98	353.84	245.82	903.63
Closing GFA as on 31st March 2018	4829.64	3828.35	6847.84	15505.83
Average GFA	4774.74	3738.56	6538.62	15,051.92
Rate of Depreciation	**2.44%**	**2.81%**	**2.44%**	
Depreciation	**116.50**	**105.05**	**159.54**	**381.10**

Interest and Finance Charges

Petitioners submissions

2.107 The Petitioners have submitted that Regulation 31 of Tariff Regulations provides for the method of calculation of interest and finance charges on loan capital. The methodology adopted by the Commission in the tariff order for FY 2016-17 has been adopted for projecting the interest and finance charges on project loans for FY 2017-18.

East Discom

2.108 East Discom has filed following details for working the interest on capital loans:

Table 51: Interest cost claimed (Rs. Crore)

Particulars	Amount

Opening balance of GFA identified as funded through debt	1,390
Addition to GFA during the year	1,633
Consumer contribution during the year/ Asset Constructed Under RGGVY During the year	832
Net addition to GFA during the year	802
30% of addition to net GFA considered as funded through equity	241
Balance addition to net GFA during the year funded through debts	561
Debt Repayment due during the year (equal to the depreciation claim)	324
Closing balance of GFA identified as funded through debt	1,627
Average of loan balances	1,509
Weighted average rate of interest (%) on all loans	11.91%
Total interest on project loans	180
Finance charge	12
Total Interest on Project loans & Finance Charge	191

West Discom

2.109 West Discom has filed following details for working the interest on capital loans:

Table 52: Interest cost claimed (Rs. Crore)

Particulars	**Amount**
Opening balance of GFA identified as funded through debt	1,274
Addition to GFA during the year	979
Consumer contribution during the year/ Asset Constructed Under RGGVY During the year	-
Net addition to GFA during the year	979
30% of addition to net GFA considered as funded through equity	294
Balance addition to net GFA during the year funded through debts	686
Debt Repayment due during the year (equal to the depreciation claim)	254
Closing balance of GFA identified as funded through debt	1,705
Average of loan balances	1,490
Weighted average rate of interest (%) on all loans	9.93%
Total interest on project loans	148
Finance charge	11
Total Interest on Project loans & Finance Charge	159

Central Discom

2.110 Central Discom has filed following details for working the interest on capital loans:

Table 53: Interest cost claimed (Rs. Crore)

Particulars	Amount
Opening balance of GFA identified as funded through debt	2,632
Addition to GFA during the year	1,197
Consumer contribution during the year/ Asset Constructed Under RGGVY During the year	-
Net addition to GFA during the year	1,197
30% of addition to net GFA considered as funded through equity	359
Balance addition to net GFA during the year funded through debts	838
Debt Repayment due during the year (equal to the depreciation claim)	349
Closing balance of GFA identified as funded through debt	3,120
Average of loan balances	2,876
Weighted average rate of interest (%) on all loans	9.93%
Total interest on project loans	310
Finance charge	19
Total Interest on Project loans & Finance Charge	329

Commission's Analysis of Interest and Finance Charges

2.111 Tariff Regulations provide that interest charges to be considered as pass through in the ARR only for the loans for which the associated capital works have been completed and assets have been put to use.

2.112 Interest on loans for works under construction is considered as interest during construction (IDC) which shall be capitalized and added to the project cost at the time of asset capitalization. Therefore, such interest cost has not been considered as pass through in the ARR. The underlying principle for considering the capitalization instead of capital expenditure incurred during the year is that the consumer should bear the interest cost related to those assets only which are put to use. The asset under construction is not used by the consumers. Interest cost incurred during the course of construction of assets becomes a part of CWIP and therefore, is not admitted as pass through.

2.113 The Commission has worked out the interest cost for FY 2017-18 in the following manner:

a) Net asset addition to GFA during the year is arrived by subtracting the consumer contribution received from total asset addition to GFA. The Commission has considered the average value of consumer contribution; grants and subsidies added during FY 2014-15 and FY 2015-16 to project for FY 2016-17 and FY 2017-18.

b) 30% of the net asset addition to GFA during the year has been considered as funded through the equity. Balance of net asset addition to GFA is considered as having been funded through debt and added to the total debt in GFA

c) Debt repayments have then been subtracted from the total debt identified with completed assets as computed from the above. The repayment for FY 2016-17 and FY 2017-18 shall be deemed to be equal to the depreciation allowed for that year.

d) Asset additions during the year have been treated as financed 70% through loan and 30% through equity.

e) The Commission has observed that the Petitioners while computing interest on project loans have considered the weighted average interest rate from long term as well as short term loans. The Commission vide letter dated 9.2.2017 has directed the Petitioners to submit the weighted average interest rate for long term loans only. But the Petitioners didn’t submit the same. Therefore, the Commission from Format F3a submitted by the Petitioners has identified the long term loans and worked out the weighted average interest rates.

f) Other finance costs for FY 2017-18 have been admitted as per actual from the audited accounts for FY 2015-16 submitted by the Petitioners.

2.114 Interest and finance charges admitted for FY 2017-18 are given in the following table:

Table 54: Interest and finance charges admitted for FY 2017-18 (Rs. Crore)

Particular	**East Discom**	**West Discom**	**Central Discom**	**State**
FY 2013-14				
Debt identified with GFA as on 1st April, 2013	1,051.80	703.52	1,139.05	2,894.37
70% of addition to net GFA considered as funded through Loan net of Consumer Contribution	670.35	144.78	645.52	1,460.65
Debt repayment	92.46	85.22	95.48	273.16
Debt identified with GFA as on 31st March, 2014	1,629.69	763.07	1,689.09	4,081.86
FY 2014-15				

Particular	**East Discom**	**West Discom**	**Central Discom**	**State**
Debt identified with GFA as on 1st April, 2014	1,629.69	763.07	1,689.09	4,081.86
70% of addition to net GFA considered as funded through Loan net of Consumer Contribution	239.38	222.17	620.65	1,082.19
Debt repayment	108.31	92.59	117.54	318.45
Debt identified with GFA as on 31st March, 2015	1,760.76	892.65	2,192.19	4,845.60
FY 2015-16				
Debt identified with GFA as on 1st April, 2015	1,760.76	892.65	2,192.19	4,845.60
70% of addition to net GFA considered as funded through Loan net of Consumer Contribution	0.00	20.24	478.45	498.69
Debt repayment	112.49	97.46	136.70	346.64
Debt identified with GFA as on 31st March, 2016	1,648.27	815.44	2,533.94	4,997.66
FY 2016-17				
Debt identified with GFA as on 1st April, 2016	1,648.27	815.44	2,533.94	4,997.66
70% of addition to net GFA considered as funded through Loan net of Consumer Contribution	76.85	116.31	199.63	392.79
Debt repayment	113.82	100.20	148.52	362.54
Debt identified with GFA as on 31st March, 2017	1,611.30	831.56	2,585.06	5,027.91
FY 2017-18				
Debt identified with GFA as on 1st April, 2017	1,611.30	831.56	2,585.06	5,027.91
70% of addition to net GFA considered as funded through Loan net of Consumer Contribution	76.85	125.70	432.91	635.46
Debt repayment	116.50	105.05	159.54	381.10
Closing debt associated with GFA	1,571.64	852.21	2,858.42	5,282.27
Average debt	1,591.47	841.88	2,721.74	5,155.09
Weighted average rate of interest (%) on all loans as per Petitioner	5.95%	6.96%	8.15%	
Interest on Project Loans	94.75	58.58	221.85	375.18

Particular	East Discom	West Discom	Central Discom	State
Other Finance cost	11.95	8.95	16.25	37.15
Interest cost admitted on project loans	**106.69**	**67.53**	**238.10**	**412.32**

Interest on Working Capital

Petitioners Submissions

2.115 The Petitioners have stated that the working capital requirement has been estimated based on the norms specified in the Regulations. East, West and Central Discoms have considered interest rate of 14.05% for the calculation of the interest on the working capital.

2.116 Discoms have further requested the Commission to consider the amount of security deposit received during the year only, for the purpose of computing working capital requirement. Claims made by the Discoms are given below:

Table 55: Interest on Working Capital as filed for 2017-18 (Rs Crore)

Sr. No.	Particulars	East Discom	West Discom	Central Discom
	For Wheeling Activity			
1	1/6th of annual requirement of inventory for previous year	11.40	7.85	11.82
2	O&M expenses			
2.1	R&M expenses	165.63	140.38	183.89
2.2	A&G expense	183.97	152.72	105.36
2.3	Employee expenses	997.25	1,028.66	1,012.34
2.4	Total of O&M expenses	1,346.85	1,321.76	1,301.59
2.5	1/12th of total	112.24	110.15	108.47
3	Receivables			
3.2	Annual Revenue from wheeling charges	0.00	3.26	0.00
3.3	Receivables equivalent to 2 months average billing of wheeling charges	0.00	0.54	0.00
4	Total Working capital (1+2.5+3.3)	123.64	118.54	120.28
5	Rate of Interest	14.05%	14.05%	14.05%
6	Interest on Working capital	17.37	16.66	16.90
	For Retail Sale activity			
	Particular			
1	1/6th of annual requirement of inventory for previous year	0.60	1.96	0.62
2	Receivables			
2.1	Annual Revenue from Tariff and charges	8,376.49	10,204.65	9,874.88

2.2	Receivables equivalent to 2 months average billing	1,396.08	1,700.78	1,645.81
3	Power Purchase expenses	7,749.42	7,808.19	8,175.42
3.1	1/12th of power purchase expenses	645.79	650.68	681.28
4	Consumer Security Deposit	469.42	807.34	832.00
5	Total Working capital (1+2.2-3.1-4)	281.47	244.71	133.15
6	Rate of Interest	14.05%	14.05%	14.05%
7	Interest on Working capital	39.55	34.38	18.71
	Total Interest on Working Capital from Wheeling Activity	17.37	16.66	16.90
	Total Interest on Working Capital from Retail Activities	39.55	34.38	18.71
	Net Interest on Working Capital	56.92	51.04	35.61

Commission's Analysis of Interest on Working Capital

2.117 Tariff Regulations specify that the total Working Capital shall consist of expenses towards working capital for the supply activity and wheeling activity. The parameters considered for computation of working capital for wheeling and supply activity have also been specified. Rate of interest on working capital shall be equal to the State Bank Advance Rate as on 1st April of the relevant year.

2.118 The Commission has considered Gross block at the start of FY 2017-18 as Rs 6582.74 Crore, Rs. 5875.73 Crore and Rs. 7997.51 Crore for East, West and Central Discoms, respectively. One percent of this value pro-rated to two months would work out to Rs. 10.97 Crore, Rs. 9.79 Crore, and Rs. 13.33 Crore for East, West and Central Discom respectively. This has been considered as the inventory requirement for wheeling activity and retail activity. This has been further divided into wheeling and retail inventory in the ratio of 80:20 as adopted in last tariff order. The consumer security deposit has been considered as discussed in the section on interest on consumer security deposit. Values of other elements of working capital have been recomputed for the expenses admitted by the Commission in the relevant sections of this order.

2.119 The Commission has been allowing the interest on working capital separately for wheeling and retail activity in earlier tariff orders. However, during the true up exercise for the year 2012-13, it had been observed that the Discoms were not able to provide segregated details for wheeling and retail activity. Moreover, as both activities are undertaken simultaneously by the Discoms, the available resources are common for both. Therefore, the Commission has taken working capital requirement together for wheeling and retail activities.

2.120 Tariff Regulations allow working capital interest to the Discoms at the rate equal to the State Bank of India (SBI) Advance Rate as on 1st of April of the relevant year. The SBI Advance Rate on 1.1.2017 stands at 14.00% as latest available. Accordingly, the normative interest rate for working capital loans to Discoms would be limited to 14.00%. The interest on working capital admitted by the Commission for wheeling and retail sale activity combined together is shown in the table below:

Table 56: Interest on Working Capital admitted by the Commission (Rs. Crore)

For wheeling activity					
Sr. No.	**Particulars**	**Months**	**East Discom**	**West Discom**	**Central Discom**
A)	1/6th of annual requirement of inventory for previous year	2	8.78	7.83	10.66
B)	O&M expenses				
	R&M expenses				
	Employee expenses				
	A&G Expenses				
B) i)	Total of O&M expenses		1,368.18	1,341.09	1,284.61
B) ii)	1/12th of total		114.02	111.76	107.05
C)	Receivables				
C) i)	Annual Revenue from wheeling charges		0.00	2.88	0.00
C) ii)	Receivables equivalent to 2 months average billing of wheeling charges	2	0.00	0.48	0.00
D)	Total Working capital		122.79	120.07	117.71
	(A), B) ii), C) ii))				
E)	Rate of Interest		14.00%	14.00%	14.00%
F)	**Interest on Working capital**		**17.19**	**16.81**	**16.48**
For Retail Sale activity					
A)	1/6th of annual requirement of inventory for previous year	2	2.19	1.96	2.67
B)	Receivables				
B) i)	Annual Revenue from Tariff and charges		8,624.42	10,724.82	9,468.68
B) ii)	Receivables equivalent to 2 months average billing		1,437.40	1,787.47	1,578.11
C)	Power Purchase expenses		5,746.67	7,741.11	6,422.29
C) i)	1/12th of power purchase expenses		478.89	645.09	535.19
D	Consumer Security Deposit		469.42	807.34	832.00
E)	Total Working capital (A+B ii) - C i) - D)		491.29	337.00	213.59
F)	Rate of Interest		14.00%	14.00%	14.00%
G)	**Interest on Working capital**		**68.78**	**47.18**	**29.90**
	Summary				
	For wheeling activity		17.19	16.81	16.48
	For Retail Sale activity		68.78	47.18	29.90
	Total Interest on working Capital		85.97	63.99	46.38
	Total Interest on working Capital admitted		**85.97**	**63.99**	**46.38**

Interest on Consumer Security Deposit

Petitioners Submissions

2.121 Discoms have submitted that interest on consumer security deposit has been paid to the consumers according to relevant Regulations. They have further submitted that interest on consumer security deposit has been calculated as per the RBI Bank Rate as on April 1, i.e., 7.75%.

Table 57: Interest on Consumer Security Deposit as per Regulations for FY 2017-18 (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom
Interest on Consumer Security Deposit	36	63	64

Commission's Analysis of Consumer Security Deposit

2.122 The Commission has computed the interest on consumer security deposit as per the norms of the Tariff Regulations at RBI latest Bank Rate of 6.75% and admitted the same as shown in the table below:

Table 58: Interest on Consumer Security Deposit (CSD) admitted for FY 2017-18 (Rs. Crore)

Particular	East	West	Central
Interest on Consumer Security Deposit	31.69	54.50	56.16

Return on Equity

Petitioners submissions

2.123 The Petitioners have submitted that the return on equity (RoE) for the period has been calculated as per the Tariff Regulations. Claims made by the Discoms are shown in the following table:

Table 59: Return on Equity for 2017-18 (Rs. Crore)

Sr. No.	Particulars	East Discom	West Discom	Central Discom
A	Gross Fixed Assets at the beginning of year (net of consumer contributions)	2,917	2,727	7,995
A1	Opening balance of GFA identified as funded through equity	1,527	1,454	1,716
A2	Opening balance of GFA identified as funded through debt	1,390	1,274	5,597
B	Proposed capitalization of assets as per the investment plan (net of consumer contribution)	802	979	1,083

Sr. No.	Particulars	East Discom	West Discom	Central Discom
B1	Proportion of capitalized assets funded out of equity, internal reserves	241	294	597
B2	Balance Proportion of capitalized assets funded out of project loans (B - B1)	561	686	486
C1	Normative additional equity (30% of B)	241	0	325
C2	Normative additional debt (70% of B)	561	0	758
D1	Excess / shortfall of additional equity over normative (B1-C1)	0	294	272
D2	Excess / shortfall of additional debt over normative (B2-C2)	0	686	-272
E	Equity eligible for Return (A1+(C1/2)) or (A1+(B1/2)), whichever is lower	1,647	1,601	1,878
Return on Equity (16% on E)		**264**	**256**	**301**

Commission's Analysis of Return on Equity

2.124 Tariff Regulations specify that RoE shall be computed on pre-tax basis @ 16%. The paragraphs under the Commission's analysis of interest and finance charges in this order explain the approach for identification of debt and equity component related with completed assets. This approach results in the total equity identified with GFA as at the end of FY 2017-18. The return on equity is then determined by allowing the specified rate of 16% on the total equity identified which is allocated in proportion to GFA. The total equity identified along with RoE as admitted for FY 2017-18 is tabulated below.

Table 60: Return on Equity admitted for FY 2017-18 (Rs. Crore)

Particular	East	West	Central
FY 2013-14			
Total Equity identified with GFA as on 31st March, 2013 (Closing equity from True-up Order for FY 2012-13)	929.75	867.48	962.36
30% of addition to net GFA considered as funded through equity net of consumer contribution	287.29	62.05	276.65
Total Equity identified with GFA as on 31st March, 2014	1217.05	929.53	1239.01
FY 2014-15			
30% of addition to net GFA considered as funded through equity net of consumer contribution	102.59	95.21	265.99
Total Equity identified with GFA as on 31st March, 2015	1319.64	1024.74	1505.00
FY 2015-16			

Particular	East	West	Central
30% of addition to net GFA considered as funded through equity net of consumer contribution	32.94	49.85	85.56
Total Equity identified with GFA as on 31st March, 2016	1352.57	1083.26	1795.61
FY 2016-17			
30% of addition to net GFA considered as funded through equity net of consumer contribution	32.94	49.85	85.56
Total Equity identified with GFA as on 31st March, 2017	1385.51	1133.11	1881.16
FY 2017-18			
30% of addition to net GFA considered as funded through equity net of consumer contribution	32.94	53.87	185.53
Total Equity identified with GFA as on 31st March, 2018	1418.45	1186.98	2066.70
Average Equity	1369.04	1110.20	1888.37
RoE @16% for FY 2017-18	**219.05**	**177.63**	**302.14**

Other items of ARR

2.125 Apart from the expense components discussed above, there are certain other items which form part of the ARR of the Discoms. These include provision for bad debts, and other (non-tariff) income. These are detailed below:

Bad and doubtful debts

Petitioners submissions

2.126 The Petitioners have claimed provision for bad debts as 1% of the total revenue earned from the projected sale. Discoms further requested the Commission to allow the complete 1% amount of revenue as bad debts as per Tariff Regulations. The Petitioners also submitted that they have actual write-off of bad debts is more than the prescribed 1% of revenue. The Petitioners have requested that the Commission would allow 1% of revenue as bad debts as per Tariff Regulations.

Table 61: Bad and Doubtful Debts for FY 2017-18 as per Regulations (Rs Crore)

Particulars	East Discom	West Discom	Central Discom
Bad and Doubtful Debts	84	101	99

Commission's Analysis on Bad and Doubtful debts

2.127 Tariff Regulations specify that bad and doubtful debts in the ARR shall be allowed based on actually written off bad debts in the past as per the available latest audited financial statements to the extent Commission considers it appropriate and shall be trued up during the true up exercise for the relevant year subject to a maximum limit of 1% of the yearly revenue.

2.128 Tariff Regulations stipulates that the delayed payment surcharge is not an income therefore, the amount written off against it shall also not be considered as an expense. The Commission has also not considered principal amount written off under any scheme as it has been waived off at the behest of the company to attract recovery of arrears.

2.129 Discoms have neither stated the efforts they made for recovery of the principal amount nor given any reasoning for such waiver except that waiver has been made under some scheme. The Commission is therefore, not inclined to admit expenses against such waivers by the Discoms so that the regular paying consumers are not loaded with this burden.

2.130 The Commission provisionally admits the expenses against the bad and doubtful debts to the tune of Rs 2 Crore for each Discom, subject to true up.

Other Income

Petitioners submissions

2.131 The Petitioners have submitted that main components of non-tariff income are meter rent, wheeling charges, supervision charges, sale of scrap and miscellaneous charges from consumers. Meter rent and miscellaneous charges have been projected as a percentage of tariff income.

2.132 Table below indicates the details of other income filed by Discoms for FY 2017-18:-

Table 62: Other Income (Rs Crore)

Particulars	**East Discom**	**Central Discom**	**West Discom**
Income from Investment, Fixed & Call Deposits	4	43	25
Interest on loans and Advances to staff	0	0	0
Interest on Advances to Suppliers / Contractors	6	9	3

Particulars	East Discom	Central Discom	West Discom
Income/Fee/Collection against staff welfare activities	0	0	0
Miscellaneous receipts	61	10	37
Misc. charges from consumers (meter rent, etc)	38	88	55
Deferred Income (Consumer Contribution)	0	0	0
Wheeling charges	0	0	3
Income from Trading other than Power (i.e sale of scrape, tender form)	30	0	12
Supervision charges	0	0	16
Recovery from theft	9	0	0
Others	29	1	0
Total	**177**	**150**	**151**

Commission's Analysis on Other Income

2.133 The actual other income received as per audited accounts for the previous years are shown in the table below:

Table 63: Total actual other income as per audited accounts (Rs Crore)

Discoms	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
East Discom	162.45	152.02	141.17	209.05
West Discom	289.67	252.28	214.23	303.56
Central Discom	231.20	378.43	159.63	231.74
Total	**683.32**	**782.73**	**515.03**	**744.35**

2.134 Based on the above actual other income received as per audited accounts for FY 2012-13 to FY 2015-16, which includes the receipts against meter rent, recovery from billing against cases of theft/ unauthorized use of energy, misc. receipts etc., the Commission has admitted other income for FY 2017-18 as tabulated below:

Table 64: Other Income admitted for FY 2017-18 (Rs. Crore)

Particulars	East Discom	West Discom	Central Discom	State
Other Income	243.40	349.37	268.57	861.34

2.135 The ARR as admitted for FY 2017-18 is presented in the following table:

Table 65: Aggregate Revenue Requirement (ARR) as admitted (Rs Crore)

Particulars	East	West	Central	State
Power Purchase admitted	5746.67	7741.11	6422.29	19910.07
Inter-State transmission charges	434.39	551.64	419.97	1406.00

Particulars	East	West	Central	State
Intra-state transmission charges including SLDC	756.67	969.65	806.05	2532.37
O&M Expenses	1368.18	1341.09	1284.61	3993.89
Depreciation	116.50	105.05	159.54	381.10
Interest & Finance Charges				
On Project Loans	106.69	67.53	238.10	412.32
On Working Capital Loans	85.97	63.99	46.38	196.34
On Consumer Security Deposit	31.69	54.50	56.16	142.34
Return on Equity	219.05	177.63	302.14	698.82
Bad & Doubtful Debts	2.00	2.00	2.00	6.00
Total Expenses admitted	**8867.82**	**11074.19**	**9737.25**	**29679.25**
Other income + Non Tariff Income	243.40	349.37	268.57	861.34
Net total Expenses	**8624.42**	**10724.82**	**9468.68**	**28817.91**
Impact of True-Up Amounts of Past Years				
Impact of True Up for Discoms for FY 06-07	119.00	168.00	136.00	423.00
Impact of True up for MP Transco for FY 14-15	123.63	158.00	132.00	413.63
Impact of True up for MP Genco for FY 14-15	-169.00	-207.00	-186.00	-562.00
Impact of APTEL complied order for FY 2007-08 to FY 2011-12	721.40	519.98	728.09	1969.47
Total impact of True-Up Amounts of Past Years	**795.03**	**638.98**	**810.09**	**2244.10**
Total ARR	**9419.45**	**11363.80**	**10278.76**	**31062.01**

Segregation of admitted ARR between Wheeling and Retail Sale activities

2.136 Tariff Regulations provide that the Discoms should file their ARR in three parts, viz. for power purchase activity, for wheeling (distribution) activity and for retail sale activity. The Regulations clearly list out the items of fixed costs (i.e. other than power purchase) that should be included in wheeling and retail sale activities. The purpose of segregating the total distribution expenses into wheeling and retail sale activities is to establish the wheeling charges that are to be recovered from open access customers.

2.137 Discoms have complied with the Tariff Regulations to the extent that they have filed the ARR segregated among expenses for power purchase, wheeling and retail sale activities. Discoms have considered normative interest on working capital, bad debts and interest on consumer security deposits in retail sale activity. All other items have been considered entirely as part of wheeling activity.

2.138 The Commission allocates the fixed costs related to wheeling and retail sale activities in the following manner:

Wheeling activity shall include:

(a) O&M expenses
(b) Depreciation
(c) Interest on project loans
(d) Interest on working capital loans – for normative working capital for wheeling activity
(e) Return on Equity
(f) Other miscellaneous expenses
(g) Less: Other Income as attributed to wheeling activity

Retail sale activity shall include:

(a) Interest on working capital loans – for normative working capital for retail sale activity
(b) Interest on Consumer Security Deposits
(c) Bad and Doubtful debts
(d) Less: Other Income as attributed to retail sales activity
(e) Less: Saving from Operational efficiency measures

Aggregate Revenue Requirement (ARR) admitted by the Commission for FY 2017-18

2.139 On the basis of above, the ARR for FY 2017-18 for all the three Discoms is admitted as under:

Table 66: Total ARR as admitted (Rs. Crore)

Particulars	East	West	Central	Total
Power Purchase Cost including MPPMCL cost	5746.67	7741.11	6422.29	19910.07
PGCIL charges	434.39	551.64	419.97	1406.00
Transco Charges (MP TRANSCO) including Terminal Benefits	756.67	969.65	806.05	2532.37
(A) Sub Total- Power Purchase Cost	**6937.73**	**9262.39**	**7648.31**	**23848.44**
Wheeling Activity				
O&M cost	1368.18	1341.09	1284.61	3993.89
Depreciation	116.50	105.05	159.54	381.10
Interest on Project Loans	106.69	67.53	238.10	412.32
Return on Equity	219.05	177.63	302.14	698.82
Interest on Working Capital – Wheeling	17.19	16.81	16.48	50.48
(B) Sub Total- Wheeling ARR for FY 2017-18 as approved	**1827.62**	**1708.12**	**2000.87**	**5536.61**
Retail Activity				

Particulars	East	West	Central	Total
Bad and Doubtful Debts	2.00	2.00	2.00	6.00
Interest on Consumer Security Deposit	31.69	54.50	56.16	142.34
Interest on Working Capital – Retail	68.78	47.18	29.90	145.86
Less: Other Income - Retail & Wheeling	243.40	349.37	268.57	861.34
(C) Sub Total- Retail ARR for FY 2017-18 as approved	**-140.94**	**-245.70**	**-180.51**	**-567.14**
Total ARR for FY 2017-18	**8624.42**	**10724.82**	**9468.68**	**28817.91**

Revenue from revised tariffs

2.140 The consumer category wise revenue at admitted tariff for FY 2017-18 is presented in the table below:

Table 67: Revenue from revised tariffs in FY 2017-18 (Rs. Crore)

Customer Categories	East Discom		West Discom		Central Discom		State	
	Sales (MU)	Revenue (Crore)	Sales (MU)	Revenue (Crore)	Sales (MU)	Revenue (Crore)	Sales (MU)	Revenue (Crore)
LV: Categories								
LV-1: Domestic Consumers	4262	2493	3661	2141	4005	2487	11928	7122
LV-2: Non Domestic	1051	848	1029	882	970	829	3050	2559
LV-3.1: Public Water Works	257	146	276	160	249	142	782	448
LV-3.2: Street light	151	92	179	112	112	68	442	272
LV-4: Industrial	365	291	591	455	283	221	1239	967
LV-5.1 Agriculture	5920	3054	8544	4584	6286	3506	20750	11144
LV-5.2 Other than agriculture use	9	5	1	1	127	61	138	67
HV: Categories								
HV-1: Railway Traction	0	0	0	0	0	0	0	0
HV-2: Coal Mines	463	376	0	0	44	37	506	412
HV-3.1: Industrial	2060	1597	2344	1845	2827	2116	7231	5558
HV-3.2: Non-Industrial	242	202	369	308	436	370	1047	880
HV-3.3: Shopping mall	10	8	50	42	19	17	78	67
HV-3.4: Power Intensive Industries	32	23	803	487	231	166	1067	675
HV-4: Seasonal and Non Seasonal	9	7	12	9	2	1	22	17
HV-5.1: Irrigation, PWW and other than Agriculture	162	96	536	316	255	149	953	560

Customer Categories	East Discom		West Discom		Central Discom		State	
	Sales (MU)	Revenue (Crore)	Sales (MU)	Revenue (Crore)	Sales (MU)	Revenue (Crore)	Sales (MU)	Revenue (Crore)
HV-6: Bulk Residential Users	286	183	31	20	174	110	490	312
HV-7: Synchronization/ Start-up Power	0	0	1	1	0	0	1	1
Total	**15278**	**9419**	**18426**	**11364**	**16021**	**10279**	**49725**	**31062**

Gap / surplus at revised tariffs:

2.141 Details of total ARR as admitted by the Commission and the revenue income from existing tariff is shown in the table below:

Table 68: Final ARR and revenue from existing tariffs (Rs Crore)

Particulars	East	West	Central	State
Total ARR for FY 2017-18 (A)	8624.42	10724.82	9468.68	28817.91
Impact of True Up for Discoms for FY 06-07	119.00	168.00	136.00	423.00
Impact of True up for MP Transco for FY 14-15	123.63	158.00	132.00	413.63
Impact of True up for MP Genco for FY 14-15	-169.00	-207.00	-186.00	-562.00
Impact of APTEL complied order for FY 2007-08 to FY 2011-12	721.40	519.98	728.09	1969.47
Total True-up (B)	795.03	638.98	810.09	2244.10
Total ARR for FY 2017-18 (A+B=C)	**9419.45**	**11363.80**	**10278.76**	**31062.01**
Revenue at existing Tariffs (D)	8,635.95	10,356.85	9,380.14	28,372.94
Uncovered Gap/Surplus (D-C=E)	**-783.50**	**-1,006.95**	**-898.62**	-2,689.07
Revenue at Proposed Tariffs (F)	9,419.45	11,363.80	10,278.76	31,062.01
Uncovered Gap/Surplus (F-C=G)	**0.00**	**0.00**	**0.00**	**0.00**

A3: WHEELING CHARGES, CROSS SUBSIDY SURCHARGE AND ADDITIONAL SURCHARGE

Determination of "wheeling cost"

3.1 The Commission allocates the fixed costs of distribution (i.e. other than power purchase) for wheeling activity in the following manner for the purpose of determining wheeling cost:

Wheeling activity shall include:

(a) O&M expenses
(b) Depreciation
(c) Interest on project loans
(d) Interest on working capital loans – on normative working capital for wheeling activity
(e) Return on Equity
(f) Other miscellaneous expenses
(g) Less: Other Income as attributed to wheeling activity

3.2 On the basis of the admitted ARR for FY 2017-18, the expenditure towards wheeling activity for all the Discoms is Rs. 5536.31 Crore as per Table 66.

Segregation of costs among voltage levels

3.3 The costs of distribution identified as attributable to wheeling activity may further be distributed among the two voltage levels of distribution i.e. 33 kV and below 33 kV. Though, the EHT consumers (i.e. at voltages above 33 kV) are consumers of the Discoms but they are not directly connected to the distribution system. Certain costs such as cost related with metering, billing and collection are associated with EHT consumers. At this juncture, the Commission is not inclined to get into those details, primarily on account of data unavailability.

3.4 The Distribution Licensees in the State presently do not maintain account of their costs on voltage-wise basis. Similar is the case with other Government owned Distribution Licensees operating in most of the States in India.

3.5 It is observed that the present accounting practices followed by Discoms do not permit segregation of GFA among the voltage levels directly. The Commission, therefore, considers it appropriate to adopt the approach to use the transformation capacity in MVA at interfaces of 33/11 kV and 11/0.4 kV.

3.6 The data used for this exercise for the value of the asset base is as follows:

Table 69 : Identification of asset value

Voltage level of Lines	East Discom (ckt-kms)	West Discom (ckt-kms)	Central Discom (ckt-kms)	Cumulative length of lines (ckt-kms)	Per unit cost (Lakh Rs./ckt-km)	Total Cost of lines (Rs. Crs.)
33KV	19,122.31	16,652.55	16,725.26	52,500.12	15.22	7,991.73
Below 33 KV						
(a) 11 KV	1,49,605.93	1,36,490.92	1,44,707.96	4,30,804.81	10.62	45,767.93
(b) LT	1,36,598.58	1,85,501.42	1,30,472.36	4,52,572.36	4.78	21,649.75
Sub-Total	2,86,204.51	3,21,992.34	2,75,180.32	8,83,377.17		67,417.68
Total	**3,05,326.82**	**3,38,644.89**	**2,91,905.58**	**9,35,877.29**		**75,409.41**

Table 70 : Total Cost of transformer voltage level

Transformer Voltage Level	East Discom	West Discom	Central Discom	Cumulative capacity (MVA)	Per unit cost (Lakh Rs./MVA)	Total Cost (Rs. Crore)
33/11KV Transformer	9,282.15	11,349.30	10,330.60	30962.05	39.54	12243.85
11/0.4KV Transformer	9,248.41	15,118.05	12,529.00	36895.47	2.91 per 100 KVA	10072.46
Total	**18,530.56**	**26,467.35**	**22,859.60**	**67857.52**		**22316.31**

3.7 Data for length of lines and transformation capacity expected to be added during FY 2017-18 are taken as provided in the petition.

3.8 In order to identify the asset values at different voltage levels, it is necessary to "assign" the interface transformers to either voltage levels. For this exercise, the Commission considers it appropriate to include the distribution transformers (11/0.4 kV) to be a part of the 11 kV network and the power transformers of 33/11 kV to be a part of the 33 kV network. Based on this method, the asset values at different voltage levels work out to:

Table 71 : Identification of value of network at each voltage level

Voltage level	Cost of Lines (Rs. Crore)	Cost of Transformation (Rs. Crore)	Total Cost (Rs. Crore)
33KV	7991.73	12243.85	20235.58
Below 33 KV	67417.68	10072.46	77490.14
Total	**75409.41**	**22316.31**	**97725.72**

3.9 Expenses of wheeling activity are worked out using the asset value ratios as obtained from above, as given in table below:

Table 72 : Identification of network expenses (wheeling cost) at different voltage level)

Voltage level	Assets value (Rs. Crore)	Assets value Ratio (%)	Total wheeling cost (Rs Crore)	Wheeling Cost (Rs Crore)
33KV	20235.58	20.71%		1146.44
Below 33 KV	77490.14	79.29%	5536.61	4390.17
Total	**97725.72**	**100.00%**		**5536.61**

Sharing of Wheeling costs

3.10 The cost of wheeling is again required to be allocated to the users at the same voltage levels since the 33 kV network is used by the consumers at 33 kV and below 33 kV (those at 11 kV and LT).

3.11 This allocation of wheeling cost is done based on the usage of the network at different voltage level by consumers. The Commission has chosen to adopt "Units to be Sold" at different voltage levels as the measure of network usage to allocate the costs as detailed below:

Table 73 : Allocation of wheeling cost over distribution system users

	Particulars	**Rs in Crore**
A	Wheeling Cost at 33 kV	1146.44
B	Sales at 33 kV(MU)	6107.48
C	Total Sales (MU) {excluding sales at 132 kV}	45994.60
D	Proportion of 33 kV sales to total sales (%)	13.28%
	Cost allocation	
E	**Wheeling cost of 33 kV allocated to 33 kV users only (A*D)**	**152.23**

3.12 Based on this allocation and considering the consumption at 33 kV, the wheeling charges in Rupees per unit are determined as follows :

Table 74 : Wheeling Charges

Voltage	Wheeling Cost allocated (Rs. Crore)	Sales (MU)	Wheeling charges (Rs./unit)
EHT	-	-	-
33 kV	152.23	6107.48	0.25

Applicability of wheeling charges under different scenarios

3.13 Various scenarios of location of Open Access generators and their consumers and the consequent applicability of transmission and wheeling charges shall be as below:

(a) Scenario 1: Generator is connected to Transmission network (EHT voltages), while the consumer is connected to the distribution network at 33 kV of Distribution Licensee: The scenario shall attract both transmission and wheeling charges since power required by the open access consumer will flow downstream from the transmission network through distribution network up to the consumer's connection.

(b) Scenario 2: Generator is connected to distribution network at 33 kV of Distribution licensee, while the consumer is connected to the transmission network (132 kV or above): In this scenario, the consumer's requirement will be met by power flow over transmission network alone. The power generated by the open access generator will be locally consumed within the Discom and will not flow upstream to the open access consumer. Hence, such transactions shall attract only the transmission charges.

(c) Scenario 3: Both Generator and consumer are connected to the transmission network (132 kV or above): Only transmission charges shall apply, since there is no usage of distribution network.

(d) Scenario 4: Both generator and consumer are connected to the distribution system of any of the Distribution Licensee at 33 kV: The power generated by the open access generator will be consumed within the Discoms under the conditions of uniform retail tariff throughout the M.P. and hence it will contribute to meeting the demand of the open access consumer. Therefore, there is no additional usage of transmission network in this transaction. Hence, such transactions shall attract only the wheeling charges.

3.14 The Commission has determined the applicability of above charges for encouraging open access. Above formulations also conform to the principle that power flows on the network by displacement method.

Determination of Cross-Subsidy Surcharge

3.15 The Tariff Policy notified by GOI on dated 28 January, 2016 prescribes the following formulae for determination of cross- subsidy surcharge for various categories of consumers.

"8.5 Cross-subsidy surcharge and additional surcharge for open access

8.5.1 …

….

Surcharge formula:

S= T – [C/ (1-L/100) + D+ R]
Where
S is the surcharge
T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation
C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation
D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level
L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level
R is the per unit cost of carrying regulatory assets.
Above formula may not work for all distribution licensees, particularly for those having power deficit, the State Regulatory Commissions, while keeping the overall objectives of the Electricity Act in view, may review and vary the same taking into consideration the different circumstances prevailing in the area of distribution licensee.

Provided that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access.

Provided further that the Appropriate Commission, in consultation with the Appropriate Government, shall exempt levy of cross subsidy charge on the Railways, as defined in Indian Railways Act, 1989 being a deemed licensee, on electricity purchased for its own consumption.

8.5.4 The additional surcharge for obligation to supply as per section 42(4) of the Act should become applicable only if it is conclusively demonstrated that the obligation of a licensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. The fixed costs related to network assets would be recovered through wheeling charges.

8.5.5 Wheeling charges should be determined on the basis of same principles as laid down for intra-state transmission charges and in addition would include average loss compensation of the relevant voltage level.
”

3.16 Accordingly, the cost of supply to the consumer may be computed on the basis of the weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation.

3.17 The weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation works out as below :

Table 75 : weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation

Generating Stations	Requirement (MU)	Total cost (Rs. Crore)	Wt. Average rate of power purchase (Rs./unit)
Dispatched	63,082.87	19,910.07	3.16

3.18 Tariff Policy specifies that the Loss level (term 'L') should be worked out for each voltage level separately. Losses at each voltage level are assumed as below for this purpose because of non-availability of required reliable data with the Discoms:

Table 76 : Voltage-wise losses

Voltage Level	Loss level (L)
EHT (transmission system) including External losses	5.36%
33 kV (only 33 kV system)	5.83%

3.19 The cost of transmission shall be uniformly spread over all consumers at every voltage level, as the transmission network is utilized by all consumers. Therefore, similar to wheeling costs, the admitted transmission charges for FY 2017-18 are worked out as under:-

Table 77 : Transmission Charges

Particulars	Rs. Crore
PGCIL Charges	1,406.00
MPPTCL Charges	2,532.37
Total Charges	**3,938.37**
Units to be handled by MPPTCL	63,082.87
Transmission Charges(Rs per unit)	0.62

3.20 Finally, the term in the Tariff Policy formula 'T', Average Tariff for each category is derived from their expected revenue for FY 2017-18.

3.21 As per the MPERC (Open Access) Regulations, 2005, the consumers with contract demand of 1 MW or above are allowed open access w.e.f. 1st October, 2007. These consumers are to be connected at 33 KV or above as per Madhya Pradesh Electricity Supply Code, as amended from time to time.

3.22 In accordance with the above, the total cost (Rs/unit) for various categories of HT consumers having contract demand of 1 MW or above at 132 kV/33 kV under various scenario are worked out as detailed in the table below ("scenario wise cost"). The Cross-Subsidy Surcharge shall be the difference of average tariff and the total cost (Rs/unit) for the particular category at particular voltage. The category wise average tariff as per tariff order for FY 2017-18 is given in the table below ("category wise average tariff"). However, Cross-Subsidy surcharge shall not exceed 20% of the average tariff applicable to the category of the consumers seeking open access. In case where cross-subsidy surcharge, based on above methodology, works out as negative, the same shall be considered as zero for billing purposes.

3.23 Aforementioned wheeling charges and cross subsidy surcharges shall be applicable to consumers availing open access from renewable source of energy as per the provisions of the MPERC (Co-generation and generation of Electricity from Renewable sources of energy) (Revision-I) Regulations, 2010 [ARG-33(I)(v) of 2015] as amended from time to time.

Table 78 : Scenario wise cost (Rs. per unit)

Scenario	Wt. Average rate of power purchase (Rs./unit)	Cost of Power grossed up for distribution losses (5.83%)	Cost of Power grossed up for transmission losses (5.36%)	Transmission charges (Rs. per unit)	Wheeling charges (Rs. per unit)	Total Charges [C/(1-L/100)+D+R]
1	3.16	3.35	3.54	0.62	0.25	4.41
2	3.16		3.33	0.62		3.96
3	3.16		3.33	0.62		3.96
4	3.16	3.35	3.54		0.25	3.79

Table 79 : Category wise average tariff (Rs. per unit)

Category of HT/EHT consumers	Average Tariff 'T'
HV- 1 : Railway Traction	-
HV- 2 : Coal Mines	8.14
HV- 3.1 : Industrial	7.69
HV- 3.2 : Non-Industrial	8.40
HV-3.3: Shopping Malls	8.50
HV-3.4: Power Intensive Industries	6.34
HV-4 : Seasonal	7.64
HV- 5.1 : Public Water Works	5.88
HV- 5.2 : Other than Irrigation	4.85
HV- 6 :Bulk Residential Users	6.37

Category of HT/EHT consumers	Average Tariff 'T'
HV-7: Synchronization power for generators connected to the grid	8.75

Note: Cross-Subsidy surcharge shall not exceed 20% of the average tariff applicable to the category of the consumers seeking open access

Determination of Additional Surcharge

3.24 The Petitioners have prayed in the petition for the determination of additional surcharge to be levied from consumers who are permitted open access in accordance with the provisions of Tariff policy, 2016.

3.25 The Petitioners have further submitted that in view of above, they have filed a separate petition (P.No. 52/16) before the Commission for levy of additional surcharge under the provisions of Section 42(4) of the Electricity Act 2003 and clause 13.1(g) of MPERC (Terms and Condition for open access in MP Regulations 2005) for approval of additional surcharge as may be deemed appropriate to be recovered from the all Open Access consumers.

3.26 In respect of Petition No. 52/16, the Commission held the motion hearing on 20.09.2016 and observed that data submitted by the Petitioners are inadequate to substantiate their claim and directed vide its order dated 27.10.2016 to furnish the additional information /data gap in revised petition. Subsequently, the Commission vide letter dated 16. 11.2016 has further directed the Petitioners to file the month-wise data based on 15 minute’s block interval for FY 2015-16 clearly showing the calculation of claimed additional surcharge recoverable from open access consumers. During the subsequent hearing held on 08.12.2016, the Petitioners have informed the Commission that directives of the Commission have been complied and the same have been furnished based on 15 minute block intervals for the FY 2015-16. As per revised data, additional surcharge for open access consumer has been worked out by the Petitioners as per the following methodology:

a. Total surrendered power (MW) of allocated generating stations which is the difference between total entitlement and total scheduled power during each of 96 time blocks of the day of 15 minutes interval has been determined for each month of FY 2015-16.

b. Total surrendered power (MW) of allocated Generating stations thus obtained has been converted into energy (MUs). Similarly, Open access power scheduled for each 15 minute block for each day is determined and converted into energy (MUs).

c. The monthly average of the surrendered power (MW) and Open access power so obtained is further converted in to energy (MU).

d. Based on the MOD principles on the variable cost basis (from monthly bills of generating stations) during each month, a comparative analysis on daily basis is made between open access scheduled and total surrendered power in MW.

e. The fixed cost per unit of these generating stations has been obtained for each day of the month. Further, averages of per unit fixed cost of these generating stations are considered for each day of the month vis-a-viz Open access scheduled on that day.

f. Further, summation of open access scheduled (MW) in a month is converted in to energy (MU) and then multiplied with average of per unit fixed cost during month to obtain cost of energy surrendered due to open access during the said months.

g. Additional surcharge on Open Access consumer (Rs/Unit) is worked-out by dividing cost of energy surrendered due to open access (as obtained above) by open access units.

Commission's Analysis

3.27 In respect of aforesaid petition (52/2016), the Commission had held a public hearing on 24 January 2017 and heard the comments of stakeholders for further consideration. The key suggestions are as follows -

a. Majority of stakeholders requested the Commission to determine the additional surcharge on the basis of latest data available with the Petitioners.
b. Some of the stakeholders including the New & Renewable Energy Department, GoMP have requested the Commission to keep the consumption of renewable power procured under Open Access/Captive projects outside the ambit of the proposed additional surcharge.
c. It has also been suggested that the incidence of fixed charges of surrendered capacity may be scrutinised as to whether it has been driven by Open Access or any other factors.
d. It was further suggested that additional surcharge may be determined along with the Cross subsidy surcharges and wheeling charges in the Retail Supply Tariff Orders for ensuing years henceforth.

3.28 The Commission, taking cognizance of the Petitioners prayer in instant ARR & Retail supply tariff petition for determination of additional surcharge for FY 2017-18, has merged the Petition No. 52/2016 with instant petition. Accordingly, the Commission has considered the submissions made by the Petitioners and stakeholders in light of the provisions specified in the clause 5.8.3 of the National Electricity Policy, Section 42(4) of the Electricity Act 2003 besides relevant clause 13.1 of MPERC (Term & conditions for Open Access in MP) Regulations, 2005 and determined additional surcharge on a yearly basis for Open Access consumers of the State in addition to levy of Cross subsidy surcharge specified in Tariff policy 2016.

3.29 The Commission has examined the methodology proposed by the Petitioners in regard to computation of additional surcharge and has inclined to approve the same in principles for determination of additional surcharge to be recovered from Open Access consumers for FY 2017-18 on the basis of latest data made available by Petitioners for previous 12 months commencing from September 2015 to August 2016. The Commission has scrutinized the submission made by the Petitioners vide letter dated 20.02.2017 wherein the Petitioners have worked out the additional surcharge of Rs 1.08 per unit. The Commission has computed the additional surcharge by considering the average monthly fixed rate of surrendered power, which is based on daily least fixed rate of the generating station in the surrendered power. The Commission worked-out additional surcharge is shown in the table below:

Table 80 : Determination of additional surcharge

Sl no	Months	Energy entitlement (Cr Unit)	Energy Scheduled in (Cr Unit)	Energy Surrendered (Cr Unit)	Average monthly fixed rate (based on daily least fixed rate) (Rs per unit)	OA Units (Cr Units)	Cost of Surrendered Energy due to Open Access (Rs. Cr.)
1	**2**	**3**	**4**	**5=3-4**	**6**	**7**	**8=(7*6)**
1	Sep-15	648.38	559.54	88.84	1.20	1.02	1.22
2	Oct-15	675.18	622.45	52.74	0.92	0.68	0.63
3	Nov-15	667.65	574.95	92.71	0.94	1.30	1.22
4	Dec-15	703.75	620.91	82.84	0.68	2.73	1.85
5	Jan-16	727.35	592.33	135.02	0.76	4.08	3.11
6	Feb-16	677.37	562.07	115.30	0.73	4.86	3.55
7	Mar-16	743.50	541.49	202.01	0.85	3.41	2.90
8	Apr-16	725.68	569.76	155.92	0.82	2.45	2.02
9	May-16	785.17	510.51	274.65	0.46	6.97	3.21
10	Jun-16	759.96	476.10	283.87	0.68	6.76	4.58
11	Jul-16	794.74	435.78	358.96	0.54	9.38	5.10
12	Aug-16	824.32	471.78	352.54	0.52	9.54	4.97
Total		**8733.07**	**6537.69**	**2195.39**		**53.17**	**34.36**
Additional Surcharge on OA Consumers (Rs./Unit) = (8/7)							**0.646**

The Commission has thus determined the additional surcharge of Rs 0.646 per unit on the power drawn by the Open Access consumers from the date of applicability of this Retail Supply Tariff Order.

A4: FUEL COST ADJUSTMENT CHARGE

Petitioner's submission

4.1 The Petitioners have submitted that the prevailing FCA formula does not cover the recovery of incremental power purchase cost wherein power purchase has been made due to factors beyond their control. This includes shortage in supply from the identified power supply sources in the tariff order requiring them to purchase power at a higher price from the power market or other sources to meet the demand.

4.2 They have further submitted that quantum of power purchase may not be restricted on the basis of normative loss levels, as the Petitioners have to meet the power demand of the consumers according to obligation to supply mandated under the Electricity Act, 2003. It is also submitted that in the given operating conditions of the power system, the quantum of energy and the power demand are more or less uncontrollable variables. It is submitted that for the purpose of tariff determination, the average power purchase cost per unit based on the prudent cost may be considered. The Petitioners have also submitted the interpretation that the cost based on the average power purchase cost per unit on the quantum of power based on normative loss should be passed on to the consumer and any cost in excess of that shall be borne by the Petitioners. It is also averred that the methodology of passing on full fixed cost element of the power purchase cost to consumers as a legitimate cost shall maintain proper balance between the interests of consumers and the Petitioners, since it is based in overall averaging method and impact of all the factors over an annual cycle are covered and distributed equitably.

4.3 The Petitioners have submitted that in view of the aforementioned facts and as per the Regulations, it will be more appropriate to design single formula for recovery of FCA charge simultaneously with incremental power purchase cost. The formula proposed by the Petitioners is produced as under:

$$PPCA\ for\ billing\ quarter\ (\mathrm{p/u}) = \frac{\mathrm{APPC\ (Rs.Crore)x100}}{\mathrm{Normative\ Sale\ (MU)}}$$

Where,

APPC (Average Power Purchase Cost) = sum of (a) difference in per unit average cost actually billed by each power generator/sources and as allowed in the tariff order, multiplied by (b) units availed from each such generating station in the preceding quarter,

Preceding Quarter = the period of preceding three months excluding the period of two months immediately preceding to the billing quarter,

Billing Quarter = the period of three months for which IPPCA is to billed and shall be a period commencing on first day to last day of quarter for the quarter commencing from 1st April ending 30th June and so on.

Normative Sale = the sale grossed down from the total actual ex-bus drawal from all sources (generators + other sources) during preceding quarter by the normative PGCIL, transmission and distribution losses for the months of the preceding quarter provided in the tariff order.

Commission's analysis

4.4 The Commission has considered the submissions made by the Petitioners. The relevant Regulations have provision for allowing incremental power purchase costs in addition to the levy of FCA. However, at this juncture, the Commission is of the opinion that only FCA be allowed to be recovered and any further additional burden on the consumers during the tariff period may not be warranted. Any additional costs on this account would be considered after due prudence check at the time of true up. Moreover, a substantial portion on account of increases in power purchase costs is taken care of levy of FCA. The Commission therefore decides to continue with levy of quarterly FCA charge only.

4.5 In view of Regulation 9 of the Tariff Regulations, the Commission hereby decides to continue with the FCA formula along with its associated mechanism/modalities as detailed in the following paragraphs.

4.6 FCA formula for deriving Fuel Cost Adjustment for recovery/adjustment of un-controllable costs due to increase or decrease in the cost of fuel in case of coal, oil, and gas based generating plants is as shown below:

$$\text{FCA for billing quarter (p/u)} = \frac{\text{IVC (Rs. Crore)x1000}}{\text{Normative Sale (MU)}}$$

Where,
IVC = sum of – (a) difference in per unit variable cost actually billed by each long term coal or gas based power generator and variable cost as allowed in the tariff order, multiplied by (b) units availed from each such generating station in the preceding quarter. Variable costs of Hydel Generating Stations shall not be considered for the purpose of working out the increase in variable Cost of Power Purchase.

Preceding Quarter = the period of preceding three months excluding the period of two months immediately preceding to the billing quarter,

Billing Quarter = the period of three months for which FCA is to billed and shall be a period commencing on first day to last day of quarter for the quarter commencing from 1st April ending 30th June and so on.

Normative Sale = the sale grossed down from the total actual ex-bus drawal from all sources (Generators + Other sources) during preceding quarter by the normative PGCIL, transmission and distribution losses for the months of the preceding quarter provided in the tariff order.

4.7 FCA shall have to be worked out on the basis of the normative parameters as per respective generation tariff orders issued by the appropriate Commissions. Further variation if any, shall need prior approval of the Commission.

4.8 FCA charge shall be in the form of paise per unit (kWh) rounded off to the nearest integer. For this purpose, fraction up to 0.5 shall be ignored and fraction higher than 0.5 shall be rounded off to the next higher integer. This charge shall be added to or deducted from, as the case may be, the energy charges as per the existing tariff for the energy consumed to every consumer and shall be indicated separately in the electricity bills issued to the consumers and shall be treated as part of energy charge.

4.9 FCA charge shall be uniformly applicable to all categories of consumers of the Distribution Companies in the State.

4.10 MPPMCL has been authorized by the Discoms to procure power on their behalf for retail supply to consumers. The responsibility of working out the rate of FCA every quarter shall rest with the MPPMCL.

4.11 MPPMCL shall workout change in variable cost of power purchase during the preceding quarter based on the bills received by them from the Long Term Coal, oil and Gas based Generators. The information shall be prepared in the following manner for every month of the "preceding quarter" and summated thereafter for the quarter:

Table 81: Format for FCA charge

Month/ quarter	Name of generating station/ other source	Power Drawn ex-bus	Variable cost incurred based on actual variable charges		Variable cost as per rates provided in tariff order		Increase in variable cost of power purchase
		(MU)	Rate (paise/unit)	Cost (Rs. Cr)	Rate (paise/unit)	Cost (Rs. Cr)	[5-7] (Rs. Cr)
1	2	3	4	5	6	7	8
Total							

4.12 MPPMCL shall workout "normative sale". For this purpose normative PGCIL, transmission and distribution loss (percentage /quantum) for the months of preceding quarter, as provided in the tariff orders, shall be subtracted from the total ex-bus power drawn during the preceding quarter to arrive at normative sale.

4.13 FCA charge shall be worked out by the MPPMCL based on the formula provided here in above and details shall be submitted to the Commission for verification at least 15 days before the commencement of the billing quarter. After approval of the Commission FCA charge shall be leviable for the following quarter.

4.14 The Distribution Companies shall commence billing of FCA charge from the first day of the billing quarter.

4.15 The rate and amount of FCA charge shall be shown separately in the consumer bills.

4.16 Following illustration is given for the purpose of understanding:

4.17 If the "billing quarter" is say "July to Sept", then the "preceding quarter" shall mean the period "Feb to April" and the period of May and June months is allowed to collect the data/ details and finalization of FCA charge.

4.18 The details of the normative Losses for PGCIL System and MPPTCL System and normative distribution losses as per the tariff orders of the Commission are indicated in the table below:

Table 82: Normative Losses - for PGCIL System, MPPTCL System and distribution losses

Month/Year	PGCIL Losses*		MPPTCL Losses**	Distribution Losses***
	Region	%	%	%
Jan., 17	W.R.	3.77%	2.88%	17.60%
	E.R.	2.09%		
Feb., 17	W.R.	3.77%	2.88%	17.60%
	E.R.	2.09%		
March, 17	W.R.	3.77%	2.88%	17.60%
	E.R.	2.09%		
April, 17	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
May, 17	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
June, 17	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
July, 17	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
August, 17	W.R.	3.77%	2.87%	16.78%

Month/Year	PGCIL Losses*		MPPTCL Losses**	Distribution Losses***
	Region	%	%	%
	E.R.	2.09%		
September, 17	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
October, 17	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
November, 17	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
December, 17	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
January, 18	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
February, 18	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		
March, 18	W.R.	3.77%	2.87%	16.78%
	E.R.	2.09%		

* PGCIL Losses: % PGCIL loss is based on input separately from E.R. and W.R.

** Transmission Losses: % M.P. Transmission losses are based on input at State periphery.

*** Distribution Losses: % Distribution losses are based on input at Discoms periphery.

A5: PUBLIC SUGGESTIONS AND COMMENTS ON LICENSEES' PETITIONS

5.1 After admission of the ARR and Tariff proposals for FY 2017-18 filed by the three Discoms, public notice was published in the prominent newspapers of the State to invite comments/objections/suggestions from various stakeholders. The tariff petition filed by the Petitioners along with a gist of the petition was uploaded on the Commission's and the Petitioners' websites. The Commission has considered all the comments received up to the date of public hearings. Names of Stakeholders who had filed the comments/ objections on Discoms ARRs/Tariff Proposals for FY 2017-18 are given in Annexure-I.

5.2 The Commission subsequently issued a public notice inviting all stake holders willing to present their suggestions/objections related to the ARR and Tariff proposals in person during the public hearings. Number of comments received on ARRs/Tariff proposals is shown in the table below :-

Table 83 : Numbers of suggestions received

Sr. No.	Name of Discom	Number of suggestions received on ARR & Tariff Proposal for FY 2017-18
1.	West Discom, Indore	63
2.	Central Discom, Bhopal	28
3.	East Discom, Jabalpur	29
	Total	**120**

5.3 The Commission held public hearings as per following schedule:-

Table 84 : Public hearings held:

Sr. No.	Name of Distribution Company	Venue of Public Hearing	Date
1	M.P. Poorv Kshetra Vidyut Vitaran Company Ltd., Jabalpur (East Discom)	Tarang Auditorium, Shakti Bhavan, Rampur, Jabalpur	March 4, 2017
2	M.P. Paschim Kshetra Vidyut Vitaran Co. Ltd., Indore (West Discom)	Devi Ahilya Vishva Vidyalaya Auditorium, Khandwa Road, Indore	March 7, 2017
3	M.P. Madhya Kshetra Vidyut Vitaran Company Ltd., Bhopal (Central Discom)	Auditorium, Academy of Administration, 1100 Quarters, Bhopal	March 9, 2017

5.4 During the course of hearing, majority of the respondents from all consumer categories opposed tariff hike as proposed by the Discoms. Most of the respondents welcomed the proposed change in general terms and conditions of tariff by the Petitioners in favor of consumers and requested the Commission to consider the same.

5.5 Some of the stakeholders expressed their concern over poor progress of meterisation so far achieved by the Discoms specifically in case of domestic and agricultural connections in rural areas. They opined that one of major cause of high distribution & commercial losses across the Discoms is lack of meterisation of un-metered connections for domestic and agriculture categories. With regard to management of surplus power available in the State, majority of the stakeholders submitted that the Discoms need to explore alternative mechanisms to deal with the issue of surplus power in a prudent manner. Some stakeholders requested that the Commission may determine tariff in such a way that surplus power is consumed within the state such as introducing night tariff or by providing higher rebate in off peak hours. Some of the stakeholders suggested that costly power purchase agreements be abandoned to avoid the burden of fixed cost which leads to tariff hike. They also suggested that the principle of merit order dispatch should be scrupulously followed by the Petitioners.

5.6 As part of the tariff exercise, a meeting of the State Advisory Committee (SAC) was convened on 23.02.2017 at the Commission's office to obtain their views on the ARR/Tariff proposals of licensees. The issues raised and suggestions made by the members of SAC have been appropriately considered.

5.7 While a number of suggestions/ objections and comments have been received and given due consideration by the Commission, only salient objections/suggestions received related to the tariff petition including those raised during the public hearings, have been grouped together according to the nature of the suggestions/objections and are summarized in this chapter as given in the following paragraphs. Some of the issues raised by the stakeholders do not relate to tariff and ARR, hence not discussed here.

ISSUE No. 1:Minimum Consumption Charges

Issue Raised by Stakeholders

To withdraw or to reduce the condition of minimum consumption as the average cost of such consumers is ranging from Rs. 15-20 per unit and the numbers of such consumers are not more than 1-2%.

Discoms have not submitted the study on impact assessment of tariff minimum consumption as directed by the Commission.

Petitioners' Response

As per clause 42.1(d) of the Tariff Regulations the tariff minimum charges cannot be removed unless the fixed charges are aligned with recovery of full fixed cost. On the other hand there is a need to increase fixed charges in the line of the fixed cost of the Discoms.

Commission's views

The Commission has prudently reduced the TMM in some LV categories of consumers in this order.

ISSUE No. 2:Power Purchase Cost

Issue Raised by Stakeholders

Reasons for increase in power purchase cost in past years may be scrutinized. The Discoms have never tried to renegotiate the higher cost PPA.

Discoms are purchasing costly power from private generating companies and the PPAs were signed without consulting stakeholders. Govt. should consider generating more energy from state owned power plants than purchasing power from private generating stations.

Petitioners' Response

Estimated power purchase cost and expenses presented in the Petition are in accordance with the Tariff Order of appropriate Commissions, Tariff Regulation and power purchase bills of previous years. Reasons for increase in average power purchase cost are as below:

1. Most of the PPAs are on cost plus basis. The rise in cost of fuel/transportation; taxation etc., is pass through to the buyer.
2. Growth in demand as expected is not commensurate with energy generation added.
3. Addition of renewable energy to meet RPO targets.

The projected total power purchase cost as filed for FY 2016-17 was based on previous year available rates. In the petition for FY 2017-18, actual data of 5 months have been considered and accordingly revised estimate for FY 2016-17 has been made. Therefore, the difference in the figures submitted in the petition FY 2016-17 and in RE of FY 16-17 is observed.

The ARR petition has been filed in accordance with the tariff principles laid down in "The Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for supply and wheeling of Electricity and Methods and Principles of Fixation of Charges) Regulations, 2015 (RG -35 (II) of 2015)".

MP State has tied up capacity with many generators anticipating a rise in consumer demand. The consumer demand is rising every year and in times of peak months of November and December the Petitioners are relying on the banked power to supply these to consumers. Hence, one cannot entirely say that the power tied up is not fully used throughout the year.

Commission's views

Power purchase cost has been appropriately considered as per provisions of Tariff Regulations and considering the CERC and MPERC orders issued for respective generating stations and power purchase bills of previous years.

The Commission has specified normative benchmark in the regulations notified for Generating stations. Similarly the distribution loss trajectory for each Discoms is specified by the Commission for control period & accordingly energy requirement of each Discoms is considered.

ISSUE No. 3:Renewable Purchase Obligation (RPO)

Issue Raised by Stakeholders

As per Petition, procurement from solar is 912 MU against the RPO of 781 MU, while there is a shortfall of 1677 MU in other than solar. The generation from solar roof top should be considered under RPO requirement and the surplus in solar generation should be considered for adjustment against non-solar obligation. In view of number of wind power and other plants likely to come up in FY 2017- 18, the Commission may consider the obligation to be transferred to year 2018. This will bring in a saving of Rs.900 Crore.

Petitioners' Response

The State has met solar RPO but has a shortfall in non solar RPO. The RPO compliance has to be met to honor the regulation of the Commission. The excess of one source of power cannot be used to offset the compliance requirement of another source of power.

Commission's views

The Commission agrees with the Petitioners submission and appropriately addressed the issue in the order.

ISSUE No. 4:Surplus Power

Issue Raised by Stakeholders

State has 9488 MU as surplus power. Power Management Company proposes to sell the surplus energy through IEX @ Rs. 2.43 per unit making a loss of Rs. 1.79 per unit. Stakeholders further submitted some suggestion as

- The surplus power should be offered to Railway at the attractive rates i.e. above IEX rates since Railway has requirement of 2300 MU.
- The night rebate should be increased from 20% to 30% which will increase the power consumption at night.

Petitioners' Response

- M P Power Management Company Limited is already pursuing the matter with Railways to sell the surplus power at negotiable rate. The Petitioners has also proposed a rebate of Rs. 2 per unit on energy charges for the railway consumer.
- The stakeholder's concern is already dealt by the Commission by providing "ToD" rebate of 20%. Time of day surcharge is already reduced to 0% for HT consumers during peak hour. Further, it is to inform that the load curve of the MP is flattened as compared to previous year.
- It is stated that, in case the rate of power exchange (IEX) is lower than the variable cost of the generator, then MPPMCL prefers to back down the station

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and appropriately addressed the issues related to disposal of surplus power in this tariff order.

ISSUE No. 5:Change in Definition of Rural Area

Issue Raised by Stakeholders

As per Section 14 of EA 2003, Discoms and Commission cannot decide the definition of rural area. Stakeholders further submitted the Act gives power to State Govt. only to define the rural area and thus proposal cannot be accepted.

Petitioners' Response

As per Section 14 of the Electricity Act it can be inferred that the intention of said provision of the Act is to authorize the State Government for defining the 'Rural area' for the purpose of 'grant of exemption from the need to obtain license for distribution of power' This does not, in any way, refer to the definition of rural/urban area which may be adopted for 'setting of differential tariffs'. The Commission is authorized for determination of tariff under the section 61 and 62 of Electricity act 2003.

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and does not find any changes necessary in the existing structure in this regard.

ISSUE No. 6:Time of Day Rebate

Issue Raised by Stakeholders

To improve the DSM, the off peak hours' incentive should be increased from 20% to 25-30% so as to make load curve straight.

TOD should also be introduced to all LT Industrial consumers so as to shift the load in night hours and also to provide opportunity to LT Industrial consumers of having cheaper power. The off peak timings should be extended to 10 PM – 8 AM from 10 PM – 6 AM. Load factor for off-peak period should be separately worked out. 20% off peak rebate should be given on the concessional rate for increased load factor.

Petitioners' Response

The purpose of having ToD tariff is to ensure economical utilization of electricity. Off-peak period rebate has been increased from 15% to 20% by the Commission in the Tariff order of FY 2016-17. Further the Commission also ordered to not levy any peak period surcharge, keeping in view surplus power in the state. Therefore, increasing off-peak period rebate to 30% within a span of 2 year lacks rationale.

Currently, the off Peak timings are same as prevalent in different states wherein the maximum consumption is desired to be done so that to have a smooth load curve. The Commission has designed the ToD tariff to respective category accordingly..

Commission's views

The Commission has not considered any change in the existing tariff structure in respect of ToD.

ISSUE No. 7:Recovery of FCA Charge

Issue Raised by Stakeholders

The Discoms are recovering the FCA charges on the units which are not consumed and billed as deficit unit i.e. tariff minimum units as the Discoms did not require purchasing any power.

A statement of audited account showing the bills for increased fuel cost paid and the FCA recovered from consumers should be inserted in the Tariff order for showing efficiency of FCA formulae.

Petitioners' Response

FCA is levied for recovery of incremental variable power purchase cost and the present calculation of FCA is well settled by the Commission.

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and appropriately addressed the same in this tariff order.

ISSUE No. 8:Online Bill payment rebate to HT Consumer

Issue Raised by Stakeholders

The rebate to HT consumers for online bill payment should be increased and should be on the basis of contract demand. Stakeholders further submitted that the rebate should be minimum Rs. 100 and Rs. 1 per kVA of Contract demand.

Petitioners' Response

The rebate is to encourage online bill payment in line with the recent policy of the Government of India, so the rebate may not be seen in financial terms.

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and appropriately addressed the same in this tariff order.

ISSUE No. 9:Rebate for Incremental Consumption and New Connection under HV-3

Issue Raised by Stakeholders

The rebate for incremental consumption should be same as per previous year i.e. 10% instead of proposed 50 paisa per unit. The base year for calculation should be FY 2015-16 of same month. The rebate should be given to other categories of HV-3 consumer including the seasonal tariff HV-4.

The rebate for new connection also be given to consumers on pro-rate basis whose contract demand increased form the existing contract demand.

Petitioners' Response

The reason behind such rebate is to encourage consumers for more consumption of power which is being already consumed by consumer at present. Apart from the rebate for new HT connections, Petitioners are also proposing rebate for incremental consumption for existing consumer under entire HV -3 consumers.

The Commission has provided rebate of INR 1/unit or 20% whichever is less for new consumers in HV 3.1 in the Tariff Order of FY 2016-17 to promote industrial growth. They have also proposed a rebate of Rs. 1 per unit for new consumer in entire HV 3 tariff category in ARR and Tariff Petition of FY 2017-18. As the tariff order issued by the Commission is applicable only for one year the rebate for 5 year cannot be granted in the tariff orders. This rebate shall also be provided to new connections issued in HV 3.1 tariff category, during FY 2016-17.

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and appropriately addressed the issues.

ISSUE No. 10: Same tariff for Industrial, Non-industrial & Power Incentive Industries

Issue Raised by Stakeholders

The tariff of industrial, non-industrial and power intensive industries should be equal as it will help consumers and Discom.

Petitioners' Response

Difference in the rates for industrial & Power incentive industries is as per section 62(3) of Electricity act 2003 which is reproduced below for reference-

"The appropriate commission shall not, while determining the tariff under this act show undue preference to any consumer of electricity but may differentiate according to consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or time at which the supply is required or geographical position of any area, the nature of supply and purpose for which supply is required. "

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and does not find any merit in the Stakeholder's suggestion at this point of time.

ISSUE No. 11: Change in terms and condition of tariff in HV-4

Issue Raised by Stakeholders

The off-season period for seasonal consumers should be 4 months in place of 6 months as due to change in Govt. policy, ginning and pressing industries are not able to consume TMM units. The consumers are required to restrict the maximum demand during off season to 30% of the contract demand and in case theb consumer exceeds the limit he will be billed under HV-3.1 industrial schedule for whole year, resulting huge financial loss. Stakeholders further requested to permit 5% load during the off-season as allowed to HV-3.1 industrial consumer..

Petitioners' Response

As proposed by the stakeholder, one cannot compare the seasonal consumer with the industrial consumer. The charges of the seasonal consumer are already lower than the industrial consumer, only on the premise that they consume power in a particular segment of the year and not throughout the year. If it is the submission of the seasonal consumers that the period of the off season is very less, then there would be no need of separate cheaper tariff for the seasonal consumer. In view of this the proposal of the stake holder cannot be accepted.

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and addressed the issue in the tariff schedule.

ISSUE No. 12: Distribution Loss

Issue Raised by Stakeholders

Discoms are having higher losses as per the Commission benchmark. Inspite of meterization and feeder separation, loss level has not come down and burdening consumer due to Discom inefficiency which is not justified. Since the Discoms have different loss level they may have different tariffs.

Petitioners' Response

As far as tariff determination is concerned the same is done by the Commission on the normative loss approved in the Tariff Regulations therefore, any loss over and above the normative loss has not been considered by the Commission.

Commission's views

The Commission considers the losses only to the extent of normative losses as per the Tariff Regulations. The Commission determines the uniform tariff across the State for each category of consumer, as per GoMP advice.

ISSUE No. 13: Rural Area Tariff

Issue Raised by Stakeholders

There is only 15-20 minutes variation in supply hours of urban and rural areas. Therefore, there should not be any difference in tariffs of urban and rural areas. Incentive may be given for incremental consumption and for new connection for boosting rural consumption.

Petitioners' Response

In urban areas consumers get continuous and reliable supply as comparison to rural areas and connected load of rural area consumer is less as comparison to urban area, having same tariff for both areas is injustice to rural consumer.

Commission's views

Though the feeder separation scheme has achieved significant progress, still power quality in rural areas is not comparable with urban areas. Thus, the differential tariff for rural areas is not being abolished as of now. However, in view of increased supply hours in rural areas the difference in the tariffs has been reduced in this tariff order.

ISSUE No. 14: Rebate for new HT Connection

Issue Raised by Stakeholders

The rebate for new HT connection be extended for next 5 years for all new connection at 33 kV and 132 kV.

Petitioners' Response

A rebate of Rs. 1 per unit for new consumer in entire HV 3 tariff category in ARR and tariff petition of FY 2017-18 has been proposed. As the tariff order issued by the Commission is applicable only for one year, the rebate for 5 year cannot be grated in the tariff orders. This rebate shall also be provided to new connections issued in HV 3.1 tariff category, during FY 2016-17.

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and appropriately addressed the issue in this tariff order.

ISSUE No. 15: Power factor Incentive

Issue Raised by Stakeholders

Increase in maximum rebate limit to 12.5% from existing 10% in LT and 9.5% or 10% from existing 7% in HT category.

Petitioners' Response

As per Electricity Act 2003 (Act), the Commission has sole jurisdiction to determine tariff of the consumer. The principle of determination of tariff is mentioned in section 61 and 62 of the Act. Section 62 (3) specifically provides for the factor based on which Commission may differentiate tariff between different category. In an ideal situation every consumer is required to maintain unity power factor. Therefore, the power factor penalty as well as incentive introduced to motivate or force as the case may be to the consumer to improve P.F which is necessary for stability of the system. Further to motivate for more consumption by the consumers Petitioners has proposed various other rebates separately. Therefore proposal of stakeholder to increase PF incentive lacks rationale and hence unacceptable.

Commission's views

The Commission has continued with the existing structure.

ISSUE No. 16: Load factor Incentive

Issue Raised by Stakeholders

The concept of load factor incentive should be abolished as it is out of control of the consumers or provide 50 paise per kWh rebate to all HT consumers.

Petitioners' Response

The reason behind the load factor incentive is to motivate consumers towards the utilization of 100% sanctioned/contracted load. A rebate for incremental consumption has been proposed; therefore the proposal of the stake holder cannot be accepted.

Commission's views

The Commission has noted the submissions of the Stakeholders and response of the Discoms and addressed the issues in this tariff order.

ISSUE No. 17: Increase in Ceiling limit of 33kV Consumers

Issue Raised by Stakeholders

Increase the ceiling limit of 33 kV consumers from 10000 kVA to 15000 kVA since it is costly for a 33kV consumer to shift to 132 kV level.

Petitioners' Response

The proposal pertains to the provision of the supply code.

Commission's views

The Commission has observed that the suggestion is not a part of this tariff process. However, additional charges required to be paid on continuing availing supply on higher voltage level have been reduced in this tariff order.

ISSUE No. 18: Augmenting the limits of Additional Charges towards levy of fixed charges for Excess Demand by HT consumers and LT consumers

Issue Raised by Stakeholders

Discoms have rightly proposed the increase in the limit of excess demand from 105% to 115% which would benefit the consumers having temporary requirement of additional power. This will also increase the consumption of consumers. Further, rate of additional charges on fixed charges may also be reduced from 1.3 to 1.1 times only and no action for issue of notice from Discom should be taken if the demand increases over and above contract demand.

Petitioners' Response

They have proposed to increase the limits of excess demand for levying additional fixed charges on excess demand to encourage the consumers to consume more power. The current proposal is a win-win situation for both Discom and consumer.

Commission's views

The Commission has appropriately addressed the suggestions in this order.

ISSUE No. 19: Scrutiny of other ARR Expenses

Issue Raised by Stakeholders

Proper scrutiny of the proposed expenses like O&M expenses, Capital Investment Plan, Scheme wise capitalization, CWIP, Fixed assets addition etc., should be done. The Discoms have shown O&M expenses as per the Regulations but in real the expenses are less. Actual cost may be allowed at the time of True-up.

Petitioners' Response

The expenses are being claimed by the Petitioners as per the provisions of Regulations. \

Commission's views

The Commission prudently considered the ARR expenses in accordance with the provisions in the Regulations based on previous years audited accounts of the Petitioners.

ISSUE No. 20: Depreciation

Issue Raised by Stakeholders

The Commission should not allow the depreciation on the assets handed over by the consumers as well as by the developers of the colony. The list of such assets should also be submitted.

Discoms have claimed high depreciation charges based on incremental increase in fixed assets which should be allowed on actual capacity added/ assets created.

Petitioners' Response

Depreciation has been worked out and claimed as per the current provision of Tariff Regulations wherein the consumers' contribution has not been accounted. The rates of depreciation taken by Petitioners are also as per the notified rates by Commission.

Commission's views

The Commission agrees with the Petitioners submission. Depreciation, only on the assets capitalized has been considered and on consumer contribution is not allowed.

ISSUE No. 21: Other Income

Issue Raised by Stakeholders

Income from delayed payment surcharge should be considered as a part of other income as this will result in reduction of ARR and tariff hike. Maintenance cost, bad debt and others are added as expenses while income like meter rent, penalty, surplus power sale, advertisement on bills, revenue from scrap sale etc are not shown.

Petitioners' Response

As per provisions of Tariff Regulations the delayed payment surcharge has not been recognized as a part of other income. Hence, the Petitioners have not estimated the same for ensuing year.

Income due to meter rent, wheeling charges, supervision charges, sale of scrap, and misc. charges from consumers has been taken in non-tariff income, whereas the revenue from recovery towards unauthorized use of energy and theft of energy is a deferred income of the licensee.

Commission's views

The Commission has appropriately addressed the issues in the respective section of this order.

ISSUE No. 22: Reduction of Cross Subsidy

Issue Raised by Stakeholders

As per National Tariff Policy, 2006 Cross subsidy should be in the range of +/-20% of the average cost of supply. The tariff of cross-subsidized class of consumers should be brought to 85% of the average cost of supply.

Petitioners' Response

The Commission has been consciously making efforts over the past several years to reduce the cross subsidy levels across all consumer categories. However, while doing so it has also to keep in mind that any category of consumers is not put to tariff shock by a sudden steep hike.

Commission's views

The Commission has consciously made efforts to narrow down the cross-subsidy gap while balancing the revenue of the Petitioners to the extent possible so that no category is put to tariff shock.

ISSUE No. 23: Separate tariff category

Issue Raised by Stakeholders

Requests have been made for following separate tariff categories.

- Cold storage as agro based industry and agricultural tariff should be charged

- Captive Power Plant (CPP)

Petitioners' Response

The matter of deciding tariff falls within the sole jurisdiction of the Commission as per the power delegated by Electricity Act 2003 to the Commission. The proposed change of categories from industrial to agriculture is not tenable because the cold storage works on commercial principle and realizes rent for storage of crop.

The existing CPPs are already being billed in HV-3, HV-6 tariff categories etc as applicable. Further vide the current petition; the Petitioners are proposing rebates for captive consumer which will encourage the captive consumer to avail more power from the Petitioners. The captive consumers are all welcome to reduce meeting their demand from captive generating units and instead taking power from the Petitioners at attractive tariffs.

Commission's views

The Commission finds no merit with regard to creation of separate tariff category at this juncture.

ISSUE No. 24: Terminal Benefits (Pension, Gratuity and Leave Encashment) Provision

Issue Raised by Stakeholders

The Commission may allow some amount towards the provision of terminal benefit in the Trust to begin with.

Petitioners' Response

The contribution to Trust Fund of terminal benefits was not possible since the Commission has not approved any amount towards the same in the past. The Stakeholder is repeating the voices of Petitioners in this regard and is representing the class of employees who will benefit if proper provisioning and contribution towards terminal benefits trust fund is recognized and allowed by Commission.

Commission's views

The Commission has appropriately addressed the issue in this order.

ISSUE No. 25: Addition of apartments/colonies/townships in HV 6.2 Bulk Residential Use

Issue Raised by Stakeholders

HV-6.2 tariff category shall also be made applicable to individual domestic users, old age houses and rescue houses etc. run by charitable trust in addition to proposed changes by the Discoms.

Petitioners' Response

The proposal of Discoms pertains to the premises where multiple consumption centers exist for the consumption of power.

Commission's views

The Commission has appropriately addressed the issue in this order.

ISSUE No. 26: Change in LV-4 Tariff

Issue Raised by Stakeholders

As per Tariff order for FY 2016-17, the consumer up to 25 HP contract demand gets 30% rebate on energy charges and fixed charges, this adversely impacts the consumers who are making same product having load above 25 HP contract demand load. To safeguard the interest of consumers, limit should be reduced to 10% contract demand load.

Petitioners' Response

The small industrial consumer will get tariff shock if the rebate of 30% would be abolished which may be injustice to consumers.

Commission's views

The Commission has noted the suggestion of the Stakeholder and has appropriately addressed the issue in the order.

ISSUE No. 27: LV-1 Terms & Condition

Issue Raised by Stakeholders

In order to avoid the tariff shock due to billing of the fixed charges to the domestic consumers the definition of authorized load may be revised as *"The Authorized Load shall be as defined in the Madhya Pradesh Electricity Supply Code, 2013, as amended from time to time. (Every 75 units of consumption per month or part thereof shall be considered equal to 0.5 kW of authorized load. Example: If consumption during the month is more than 75 units and less than 113 units, then the authorized load will be taken 0.5 KW. In case the consumption is more than 112 units then the authorized load will be taken as 1 kW.)"*

Petitioners' Response

It is true that for marginal consumption of even 1 unit in excess of 150 units, the fixed charge will increase by its slab rate for fixed charge. In any tariff design such impact is attributed to the marginal consumption and unavoidable. However, it would be appropriate to compare per unit average tariff on the basis of both fixed and energy charges as a whole and not on the basis of fixed or energy charges separately.

The proposed definition by the Stakeholder may not be entertained.

Commission's views

The Commission has made no changes in the existing provisions.

ISSUE No. 28: Incentive on Prompt payment

Issue Raised by Stakeholders

The incentive on prompt payment may be increased from 0.25% to 0.50% on the bills.

Petitioners' Response

The incentive is proposed to be maintained at 0.25%. However, the Petitioners have proposed another rebate for online payment of electricity bills.

Commission's views

The Commission has kept the existing provisions unchanged.

ISSUE No. 29: Non-Compliance of Commission's Directions

Issue Raised by Stakeholders

Discoms are not complying with the Commission's directions on

- Technical study of the distribution network to ascertain voltage cost of supply
- Impact assessment of billing of tariff minimum consumption
- Segregation of Technical & Commercial losses

Petitioners' Response

Discoms have submitted compliance of all directives issued by Commission in the tariff order of FY 2016-17 in the ARR petition.

Commission's views

The Commission has appropriately addressed the issue in the order.

ISSUE No. 30: Tariff of Temporary Supply

Issue Raised by Stakeholders

At present tariff of temporary supply is 1.3 times of normal tariff and as per NTP 2016, tariff for temporary supply cannot be more than 1.2 times of normal tariff. The tariff for temporary supply should be 1.1 times of normal tariff.

Petitioners' Response

The National Tariff Policy issued by the Government of India is one of the guiding factors for determination of tariff provided under section 61 of the Electricity Act 2003. Therefore, tariff of temporary category determined by the Commission does not require any modification.

Commission's views

The Commission agrees with the Petitioner submission.

ISSUE No. 31: Sales Projection

Issue Raised by Stakeholders

There is unlikely to be any growth in Domestic category during FY 2017-18 because of energy efficiency measures like efficient LED & Tube light, 5 star pumps, Rooftop solar generation and net metering. Hence there may not be any growth during FY 2017-18.

Petitioners' Response

The sales forecast method adopted by the Petitioners is based on specific consumption. This method tends to capture the growth of consumption and the variations in energy consumption patterns over growth cycles that is gradual increase followed by rapid growth followed by saturation and so on. On the whole, with the accumulation of sufficient historical data and trends, this method would automatically take into account all the impacts like energy conservation measures, efficiency drives, and increase in reliability, continuity and quality of supply etc.

Commission's views

The Commission has appropriately addressed the issue in the respective section of this order.

ISSUE No. 32: Proportionate increase in tariff for Shopping Mall category

Issue Raised by Stakeholders

The shopping mall tariff may be restructured in such a way so as to reduce the gap between the rates at which the shopping mall buy i.e. HT tariff and the rates at which the shopping mall sell power i.e. LT tariff.

Petitioners' Response

In the ARR and Tariff Petition for FY 2017-18, the HV Shopping mall category is proposed to be merged with HV Non-Industrial category. The Commission may take a suitable view on the same.

Commission's views

The Commission has appropriately addressed the issue.

ISSUE No. 33: Tariff of Hostels

Issue Raised by Stakeholders

The State Govt. and Central govt. are providing subsidies and incentives to students. A maximum flat rate of Rs. 5 per unit should be fixed for hostels.

Petitioners' Response

The tariff for any category is reflective of the average cost to supply as per the provisions of National Tariff Policy. The Petitioners has acted in this regard and the proposal of Stakeholder lacks rationale as flat tariff is irrespective of the cost. Further the subsidies are extended by State Governments to protect socio-economic interests. The Petitioners has little role in deciding the same.

Commission's views

The Commission has retained the existing tariff structure as it does find any merit in the suggestions of the Stakeholders.

ISSUE No. 34: Open Access

Issue Raised by Stakeholders

Discoms have not given any details regarding additional surcharge and cross subsidy surcharge. Fixed charges should not be applicable on open access consumers since they are paying surcharge.

Stakeholders submitted that no additional charge should be imposed on Open access consumers as the power purchased by the open access consumers is less than 1% of the total power scheduled by the Discoms.

Petitioners' Response

Proposal of the Petitioners for the levy of Additional Surcharge on Open Access consumers is in accordance with sub-section (4) of section 42 of the Act and the sub clause (g) of clause 13.1 of MPERC (Term & conditions for Open Access in MP) Regulation 2005. Further while calculating the cross subsidy surcharge Petitioner has followed the direction of Hon'ble APTEL in appeal no 103 of 2010 & IA no 137 & 138 of 2010. Further the methodology adopted by the Commission & Petitioners has been approved by the Hon'ble APTEL in the Appeal no 134 of 2015. It is stated that Commission would verify and scrutinize all the relevant data submitted by the Petitioners before approval of ARR.

Their financial position is getting constrained due to eligible consumers opting for open access. There has been an increase in quantum and number of consumers opting for open access over the last few years. With this shift of consumers to open access, the power remains stranded and the Discoms have to bear the additional burden of capacity charges of stranded power to comply with its Universal Supply Obligation. In view of the above, Discoms have already filed a separate Petition before the Commission for calculation of levy of additional surcharge. In other states also, separate orders for levy of additional surcharges have been passed by respective Commission after considering the impact of shift by open access consumers and based on other data with due prudence check.

Commission's views

The Commission has appropriately addressed the issues in the respective chapters of this order.

ISSUE No. 35: Tariff for Synchronization & Startup power

Issue Raised by Stakeholders

Currently power is permitted only for start-up purposes while for shutdown and emergency conditions the consumer has to take temporary supply. Therefore, surplus power should be offered to captive power producer for shut down or for emergency requirement by charging demand charges at 110% of CD and energy charge as normal rate.

Petitioners' Response

The tariff for start-up power is determined by the Commission. Further, the nature of supply to such consumers is temporary. It is to be recognized that when a CPP consumer is connected to a system, the utility has to provide or keep in readiness certain capacity of the system to serve the consumer. Machine capacity, transmission system, certain work force and supervisory staff is kept on the job of monitoring the system, attending to emergency, restoring the supply in the event of outage, routine and periodic maintenance, meter reading, billing, bill delivery, defraying administrative expenses not directly related to the consumption of energy. In case of outages of generator supplying to a consumer on open access, the utility has to provide or keep in readiness certain capacity of the system to serve the consumer around the year. When the captive power plant is not generating power, the licensee is obliged to provide power supply to the generator for start-up. During this period, no wheeling charge is recoverable, as the captive generator is not injecting any power.

Commission's views

The Commission has appropriately addressed the issue in the order.

ISSUE No. 36: Re-classification of Industry

Issue Raised by Stakeholders

Classification of industry into general and power intensive is as per the concept that the industries are considered as power intensive when the cost of power is a major part of total cost of production. Existing classification of industries put some industries into disadvantage as compared to counter part in international market. Aluminum & graphite industry may also be considered as Power intensive industry.

Stakeholders requested to treat Small rolling mills as Mini Steel Plants (MSP), as they get benefit of Power Intensive industry tariff. Stakeholders further submitted that rolling mills are small and have load factor between 8-22% and they consume power for limited to 6-8 hours.

Petitioners' Response

The power intensive and HT industries applicability and the nature of consumers falling into this category has been stated by Commission vide its previous tariff order and the Petitioners has proposed to continue with the same structure for the ensuing year also. Power intensive industries constitute a very low percentage of total consumption. As per latest Tariff Order for FY 2016-17 applicability of power intensive industries (not entitled for load factor incentive) would be "*The tariff HV-3.4 (Power intensive industries) shall apply to Mini Steel Plants (MSP), MSP with rolling mills/ sponge iron plants in the same premises, electro chemical/ electro thermal industry, Ferro alloy industry which shall mean and include all energy consumed for factory and lighting in the offices, main factory building, stores, canteen, residential colonies of industries, compound lighting etc.*"

Commission's views

The Commission has made no changes in the existing provisions.

A6: RETAIL TARIFF DESIGN

Legal Position

6.1 In exercise of the powers vested in it under Section 61 and Section 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, the Commission has determined the Aggregate Revenue Requirement and Tariff for FY 2017-18 for the Petitioners. Due consideration was given to the submissions made by Petitioners, Stakeholders and all other relevant material. While determining tariff for various consumer categories, the Commission has given due consideration to the relevant provisions of the Electricity Act, 2003, Tariff Policy 2016 and relevant Regulations.

Commission's Approach to Tariff Determination

6.2 As per advice of the Energy Department GoMP letter No.1946/R448/2017/13 dated 24.3.2017, uniform retail supply tariffs for each consumer category in all the three Discoms shall be continued for FY 2017-18.

6.3 Aggregate Revenue Requirement is determined on the basis of distribution loss level trajectory specified in the Tariff Regulations.

Linkage to Average Cost of Supply

6.4 The Commission directed Discoms to determine the voltage wise cost of supply in compliance to the directives given in the judgment passed by Hon'ble Appellate Tribunal for Electricity (APTEL) in Appeal No. 103 of 2010 & IA Nos. 137 & 138 of 2010. In this regard, Petitioners have submitted that aforesaid judgement of the Hon'ble Appellate Tribunal for Electricity (APTEL) has been challenged in the Hon'ble Supreme Court of India. However, as per directive of the Commission, Petitioners have submitted the details of calculation of the voltage wise cost of supply as per the methodology provided by the Hon'ble APTEL.

6.5 Petitioners have submitted that the Tariff Regulations do not provide segregation of normative losses for the Distribution Licensees into voltage wise normative losses in respect of technical and commercial losses. Petitioners have further submitted that determination of voltage-wise losses would require detailed technical studies of the Distribution network. Therefore, for the purposes of illustrative computation of voltage-wise cost of supply, the Petitioners have assumed voltage-wise losses; the data therein is not duly verified and so, should not be relied upon.

6.6 In view of the above, the Commission has endeavoured to work out approximate category wise cross subsidy based on voltage wise cost of supply in-spite of constraints in segregation of voltage wise cost of losses and capital expenditure related costs. As can be seen from the foregoing, the Hon'ble APTEL has concluded that the mandate of the Tariff Policy to limit cross subsidies within (+/-) 20% of the overall average cost of supply can be applied to determine the category wise retail tariff. However, determination of voltage wise cost of supply is required to enable the Commission to evaluate cross subsidies prevalent at various voltages. The Commission would thus be guided by the voltage wise cost of supply in seeking to gradually reduce cross subsidies at various voltage levels.

In the absence of requisite data, the Hon'ble APTEL has further advised that the power purchase cost which is the major component of the Discoms' costs can be apportioned to different voltage levels in proportion to the sale and losses at the respective voltage levels. As regards the other costs such as Return on Equity, Interest on Loan, depreciation, Interest on Working Capital and O&M costs, these costs can be pooled and apportioned equitably, on pro-rata basis to all voltage levels.

6.7 The Commission agrees with the Petitioners' submission that determination of voltage-wise losses would require detailed technical studies of the distribution network. As a first step in the direction of working out category wise cross subsidy based on voltage wise cost of supply, the Commission has attempted to determine the same based on the methodology proposed by the Petitioners. The category wise cross subsidy so worked out is indicative in nature and not accurate, as the base data for the same need to be duly culled out on actual. The Commission has adopted following methodology for determination of voltage wise cost of supply:

(i) Voltage wise cost of supply has been computed for above 33 kV and 33 kV and 11 kV (inclusive of LT) categories only.

(ii) Sales as admitted by the Commission for above 33 kV and 33 kV and 11 kV (inclusive of LT) categories have been considered.

(iii) Total technical and commercial losses of the Petitioners have been considered the same as specified in the Tariff Regulations for FY 2017-18.

(iv) Total losses as admitted by the Commission have been segregated voltage wise for above 33 kV, 33 kV and 11 kV (inclusive of LT) in the same proportion as submitted by the Petitioners.

(v) Power purchase costs at the Discom periphery for above 33 kV, 33 kV and 11 kV (inclusive of LT) based on the voltage-wise input energy have been considered. All other costs of the Discom are allocated based on the sales to each voltage-level.

(vi) Voltage wise total cost derived has been divided by voltage wise sales for working out the voltage wise cost of supply

6.8 Based on the above methodology, the Commission has worked out indicative voltage wise cost of supply and commensurate cross-subsidy as shown in the table below:

Table 85: Computation of voltage-wise cost of supply for the State

State	**Units**	**EHT System (400 kV, 220 kV, 132 kV & 66 kV)**	**33 KV System**	**11 KV + LT System**	**Total**
Sales	MU	3,731	6,107	39,887	49,725
Loss%	%	5.36%	5.83%	16.65%	21.23%
Energy input submitted	MU	3,942	6,859	52,546	63,347
Energy input admitted	MU	3,931	6,825	52,327	63,083
Energy lost (Technical up to 33kV voltage & 11 kV + LT technical and commercial)	MU	200	717	12,440	13,358
Commercial loss assumed as 50% of 11kV and LT overall losses	MU			6,220	6,220
Balance 50% commercial losses for all voltage in proportion to sales	MU	467	764	4,989	6,220
Net Energy loss admitted	MU	667	1,481	11,210	13,358
Net energy input 3	MU	4,397	7,589	51,097	63,083
Power Purchase Costs - allocated based on voltage-wise losses	Rs. Crore	1,531	2,666	19,652	23,848
Other costs - allocated based on voltage-wise sales	Rs. Crore	455	701	4,675	5,831
Less: Other income - allocated based on voltage-wise sales	Rs. Crore	63	108	691	861
Less: Saving from Operational Efficiency measures	Rs. Crore	0	0	0	0
Recoveries of Past	Rs. Crore	178	266	1,800	2,244
Total Costs (ARR requirement)	Rs. Crore	2,101	3,526	25,435	31,062
VCoS	**Rs. /unit**	**5.63**	**5.77**	**6.38**	**6.25**

6.9 Consumer category wise approximate cross-subsidy worked out based on voltage wise cost of supply for FY 2017-18 is shown in the table below:

Table 86: Cross-subsidy based on voltage wise cost of supply for FY 2017-18 for the State

Category	**VCoS (Rs /unit)**	**Average billing rate (Rs /unit)**	**Ratio of Average Billing Rate to Voltage-wise Cost of supply (%)**
LV-1: Domestic Consumers	6.38	5.97	94%

Category	VCoS (Rs /unit)	Average billing rate (Rs /unit)	Ratio of Average Billing Rate to Voltage-wise Cost of supply (%)
LV-2: Non Domestic	6.38	8.39	132%
LV-3.1: Public Water Works	6.38	5.72	90%
LV-3.2: Street light	6.38	6.14	96%
LV-4: Industrial	6.38	7.81	122%
LV-5. Agriculture	6.38	5.37	84%
LV			
HV-1: Railway Traction			
HV-2: Coal Mines	5.73	8.14	142%
HV-3.1: Industrial	5.74	7.69	134%
HV-3.2: Non-Industrial	5.97	8.40	141%
HV-3.3: Shopping Mall	5.73	8.50	148%
HV-3.4: Power Intensive	5.73	6.34	111%
HV-4: Seasonal & Non-seasonal	5.88	7.64	130%
HV-5.1: Irrigation, PWW and other than Agriculture	5.75	5.88	102%
HV-6: Bulk Residential Users	5.84	6.37	109%
HV-7: Synchronization Power to Generators	5.87	8.75	149%
HV			
Total	**6.25**	**6.25**	**100%**

6.10 While determining the tariffs for FY 2017-18, the Commission has given due consideration to the requirement of the Electricity Act, 2003 that consumer tariffs should reflect the cost of supply. The average cost of supply for the year FY 2017-18 works out to Rs. 6.25 per unit as against Rs. 5.83 per unit for FY 2016-17. The table below shows the cost coverage on account of tariff for FY 2017-18 as compared to the cost coverage as determined by the Commission in the tariff order for FY 2016-17:

Table 87: Comparison of tariff v/s overall average cost of supply

Category/ sub-category	Average realisation as % of Average CoS	
	FY 2016-17 (as per tariff order)	FY 2017-18 (achieved as per this tariff order)
LV categories		
Domestic	95%	96%
Non-domestic	134%	134%
Public water works & Street Light	88%	94%

Category/ sub-category	Average realisation as % of Average CoS	
	FY 2016-17 (as per tariff order)	FY 2017-18 (achieved as per this tariff order)
Industrial	125%	125%
Agriculture	81%	86%
HV categories		
Railways	116%	-
Coal Mines	130%	130%
Industrial	123%	123%
Non-industrial	135%	134%
Irrigation, PWW and Other than agriculture	92%	94%
Bulk residential users	100%	102%

6.11 The cost structure has undergone a change during the year as explained in previous sections of this order. Further, in compliance to the Hon'ble APTEL judgment dated 9 January, 2017 in the matter of Appeal No. 134 of 2015, the Commission has been required to reconsider to revise the trajectory for bringing the Cross-subsidy within the range of +/- 20% with respect to Average cost of supply. Accordingly a roadmap is being notified considering the cross subsidy as indicated in the table above separately. The Commission has been consciously making efforts over the past several years to reduce the cross subsidy levels across all consumer categories. However, while doing so it has also kept in mind that any category of consumers is not put to tariff shock by a sudden steep hike.

6.12 After giving due consideration to the suggestions/ objections of the Stakeholders and the proposals submitted by the Discoms, the Commission has made some changes in the tariff design for FY 2017-18. These changes are mentioned in following paragraphs:

i). The Commission has not considered providing any assessment norm for unmetered urban domestic connections as Discoms reported 100% meterization in this regard. For unmetered rural domestic connections the Commission has redefined the energy charge and fixed charge on the basis of connected load as shown in the table below

Particulars	**Units and Energy Charge to be billed per month for unmetered connections (paise per unit)**	**Monthly Fixed Charge (Rs.)**

Particulars	**Units and Energy Charge to be billed per month for unmetered connections (paise per unit)**	**Monthly Fixed Charge (Rs.)**
Un-metered connection in rural areas having connected load more than 300 Watts and upto 500 Watts	75 units @ 430 per unit	70 per connection
Un-metered connection in rural areas having connected load above 200 Watts and up to 300Watts (With two rooms and having Television)	60 units @ 417 per unit	50 per connection
Un-metered connection in rural areas up to 200 Watts (up to two rooms and without Television)	50 units @ 310 per unit	45 per connection

ii). **Modification in applicability of HV 6.2 Bulk Residential User:** The Commission has included Old age homes, day care centers for senior citizen, rescue houses and orphanages run by Govt./Charitable Trust.

iii). **Increase in rebate to prepaid consumers for Domestic and Non Domestic categories:** In order to promote prepaid metering, rebate has been increased from 5 paise per unit to 20 paise per unit on the energy charges.

iv). **LV-4 Industrial-** The energy charges and fixed charges shall be billed at a rate 30% less than the charges for tariff category 4.1a for consumers having contract demand up to 20 HP which was previously 25 HP.

v). **Removal of additional charge for energy on account of excess connected load or excess demand in LT and HT tariff categories:** No extra charges are applicable on the energy charges due to the excess connected load or excess demand in case of LT and HT tariff categories. In case of fixed charges for excess connected load/ demand for LT and HT tariff categories above 115% and upto 130% of sanctioned load/contract demand shall be charged at 1.3 times the normal rate of fixed charges. Further fixed charges for excess connected load/

demand exceeds the 130% of sanctioned load/contract demand shall be charged at 2 times the normal rate of fixed charges.

vi). For seasonal consumer of LV-4 & HV-4 Industrial Category, the maximum demand shall now be allowed to the extent of 31.5% of CD (i.e. 105% of 30% of CD), without any additional charges.

vii). Rebate for online bill payment:

a. For LT- Rebate of 0.5% on the total bill amount maximum up to Rs 20 and minimum of Rs 5 will be applicable for making online payment of bill.
b. For HT- Rebate of 0.5% on the total bill amount maximum up to Rs 1000 will be applicable for making online payment of bill.

viii). There shall not be any incentive on account of load factor in respect of HV consumer categories other than the reduced tariff for above 50% load factor.

ix). Rebate to Railway- A rebate of Rs. 2 per Unit in energy charges is provided which shall be applicable for next five years.

x). Rebate on energy charges for HV 3 tariff category consumers:

a. Rebate for existing HT connections: A rebate of 10% in energy charges is applicable for incremental monthly consumption w.r.t consumption of FY 2015-16 same months. In the event of enhancement of contract demand the incremental consumption shall be worked-out proportionately.

b. Rebate for new HT connections: A rebate of Rs 1/Unit or 20% whichever would be less is applicable in energy charges for new connection for the consumption recorded. The rebate shall be allowed for a period of five years from the date of connection for such new projects for which agreements for availing supply from licensee are finalized during FY 2016-17 and FY 2017-18. Provided these connections are served to green field projects only and no rebate is applicable for new connections obtain by virtue of change in ownership in existing connection. The green field project shall be those projects where the consumer invests in the construction of new industry/plant from the ground up and there was no prior construction/structure on that particular land.

xi). Additional Charge to be paid on higher voltage level for 11kV, 33 kV & 132 kV voltage level has been reduced to 3%, 2% & 1% from 5%, 3% & 2% respectively.

xii). **Rebate for Captive power plant consumers:** A Rebate of Rs 2 per Unit on incremental consumption is allowed to consumers presently meeting their demand through Captive power plants (CPP) and would be switching their consumption from CPP to Licensee. The rebate is applicable for a period of five years from the date of issue of this Order on total incremental consumption from Discoms, which the captive consumers have reduced from their captive consumption and has instead taken from the Licensee.

xiii). Charging facilities in respect of batteries utilised for hybrid electric vehicles shall be billed in the respective tariff categories where such facilities are located. Charging of such batteries in residential premises is permitted for charging of consumer’s own vehicles only.

A7: COMPLIANCE ON DIRECTIVES ISSUED IN TARIFF ORDER FOR FY 2016-17

The response submitted by Discoms on the directives issued by the Commission in the Retail Supply tariff order for FY 2016-17 and the Commission's observations/directions thereon are given below:

7.1 Meterization of unmetered connections

Commission's Directives:
The Discoms have submitted following timeline to achieve 100% meterisation targets

Particulars	*Timeline to achieve target of 100% meterisation reported by Discoms*		
	East Discom	*West Discom*	*Central Discom*
100% feeder meterisation of 11 KV	*Already achieved the target*	*Already achieved the target*	*By March' 2016*
100% feeder meterisation of 33 kV	*Already achieved the target*	*No definite time line is provided*	*By March' 2016*
100% meterisation of Rural unmetered domestic connections	*By Sept'16*	*By June'16*	*By March' 2016*
100% meterisation of pre-dominant Agricultural DTRs	*No definite time line is provided*	*No definite time line is provided*	*By March'17*

The Commission has noted that all the Discoms have submitted their definite timeframe to achieve 100% meterisation target in respect of feeder metersiation & rural unmetered domestic connections. The Commission expects that Discoms shall adhere to the timelines without any further slippage.
The Commission however regrets to note that East and West Discoms have not furnished any definite time frame due to paucity of finances in respect of 100% meterisation of pre-dominant Agricultural DTRs although the Commission has been repeatedly directing the Discoms to step up meterisation of agriculture pre-dominant distribution transformers. The agricultural supply in various areas remained un-metered and as such it became difficult to compute accurately the loss reduction level in the utility. The provisions in section 55 of the Act mandating metered supply within a stipulated timeframe and hence cannot be put on hold for indefinite time period. The Commission directs East & West Discom to complete the 100% meterisation target of pre-dominant Agricultural DTRs by March 2017 without any slippage.

East Discom submission:

a) **Feeder Meterization:** - All metering points of 33 KV feeders and 11 KV feeders have been provided with meters.

b) **Meterization of un-metered domestic connections: -** Meters have been provided on all unmetered domestic connections of urban area. The un-metered DLF connections of rural area have reduced from 9,41,085 as on March-13 to 3,24,497 as on Mar-16. Thus total 6,16,588 meters have been provided on un-metered domestic rural connection in last three years. Further in the year 2016-17 up to Sept'16 total 11603 meters have been provided on un-metered domestic connections. The meterisation of un-metered DLF connections has been included in Central sponsored DDUGJY. The NIT has been issued for the same and as soon as the same will be finalized the installation of meters on balance unmetered connections will be taken up.

c) **Meterization of Agricultural DTRs: -** The Company, as on Mar'16, is having 67470 agricultural predominant DTRs out of which 5444 DTRs have been provided with DTR meters. Further meterisation of 20,000 DTRs is being taken up in the year 2016-17. The meterisation of agricultural DTRs is not covered under any scheme. If additional fund is provided to the company under supplementary DDUGJY Scheme, then the same shall be taken up accordingly.

Central Discom submission:

The directive pertains to East & West Discoms.

West Discom submission:

Discom has achieved 100% meterization of 11kV and 33kV feeders. The status of feeder meterization upto 30.09.2016 is given in the table below:

Feeder Existing 33 KV (From EHV)*		**Percentage of total**	**Feeder Existing 11 KV**		**Percentage of total**
Total	**Metered**	**%**	**Total**	**Metered**	**%**
822	822	100%	5457	5457	100%

Out of total 117,618 agriculture dominated distribution transformers 21,076 has been metered till March, 2016. Discom submits that it has made a meterisation plan of agriculturally predominant DTRs which has shear dependency on availability of funds. The company is trying to arrange funds for the meterization work on priority basis. The Company is preparing Detailed Project Report for obtaining financial assistance from other financial Institutions.

The company has made significant progress in meterization of rural domestic connections and only 410 rural domestic connections comprising 0.02% of total domestic connections are unmetered till September 2016. The Company is trying to achieve 100% meterization of domestic connections by November 2016.

Commission's observations/ directions:
The Commission has noted the submission of Discoms. East & West Discoms have still not submitted the definite timeline for 100% meterisation of Agricultural DTRs. The Commission directs them to submit the timeline for 100% meterisation of pre-dominant Agricultural DTRs within 3 months. The Commission also directs all discoms to send the quarterly progress report of meterisation.

7.2 Issue of tariff card with first bill based on new tariff

Commission's directives:

The Commission has noted the submission of Discoms and directs that the practice of providing tariff cards should be continued.

East Discom submission:
East Discom has arranged to print tariff cards for tariff order FY 2016-17 for different categories of the consumers and the same have been provided to the consumers.

Central Discom submission:
Tariff cards were issued to LT consumers. In addition, tariff schedule booklets were provided to all HT consumers.

West Discom submission:
Information related to tariff of different categories for FY 2016-17 was provided to the consumers.

Commission's observations/ directions:
The Commission has noted the submission of Discoms and directs that the practice of providing tariff cards should be continued.

7.3 Accounting of rebates/incentives/surcharge

Commission's directives:

Discoms are directed to submit details of rebates/incentives/surcharge for HT and LT consumers in their next ARR/tariff proposal.

East Discom submission:
The detail of rebates / incentives / surcharge for HT consumers up to Jun'16 submitted in soft copy. The detail for July-16 to Aug-16 is being emailed in soft copy.
Central Discom submission:
The directive of the Commission will be complied.

West Discom submission:
Discom submits that it has included details of rebates / incentives / surcharge for HT consumers and LT consumers of RAPDRP location.

Commission's observations/ directions:
The Commission has noted the submission of Discoms and directs Discoms to submit a comprehensive report to the Commission with the next tariff petition filing.

7.4 Technical studies of the Distribution network to ascertain voltage-wise cost of supply

Commission‘s directives:

Commission is not convinced with the submissions of Discoms and directs them to carry out a detailed technical study on voltage wise losses on Distribution network and furnish report within 3 months.

East Discom submission:
Presently, East Discom is working out the system loss at 33kV level and at 11kV+LT level. The system loss for the period Apr-16 to Oct-16 at 33kV level is 4.25% and at 11kV+LT level is 27.18%. In the absence of meterisation at DTR level the system loss at 11kV and LT Level is difficult to work out separately. Further as per the MoU of Project Uday, the timeline for DTR meterisation is as follows:

Sr. No.	Activity	Sub-activity	Timeline
1	DT Metering	Urban	31/12/2017
		Rural	31/12/2018

Until 100% DTR meterisation is complete, the computation of losses for 11kV and LT system separately is a very cumbersome task.

However it is submitted that for determination of Voltage wise cost of supply, the judgment passed by Appellate Tribunal for Electricity (APTEL) in Appeal No. 103 of 2010 & IA Nos. 137 & 138 of 2010 may please be perused.

The extract of APTEL's order is elaborated as below.

Extract of APTEL's order

"*32. Ideally, the network costs can be split into the partial costs of the different voltage level and the cost of supply at a particular voltage level is the cost at that voltage level and upstream network. However, in the absence of segregated network costs, it would be prudent to work out the voltage-wise cost of supply taking into account the distribution losses at different voltage levels as a first major step in the right direction. As power purchase cost is a major component of the tariff, apportioning the power purchase cost at different voltage levels taking into account the distribution losses at the relevant voltage level and the upstream system will facilitate determination of voltage wise cost of supply,* *though not very accurate, but a simple and practical method to reflect the actual cost of supply.*

33. The technical distribution system losses in the distribution network can be assessed by carrying out system studies based on the available load data. Some difficulty might be faced in reflecting the entire distribution system at 11 KV and 0.4 KV due to vastness of data. This could be simplified by carrying out field studies with representative feeders of the various consumer mix prevailing in the distribution system. However, the actual distribution losses allowed in the ARR which include the commercial losses will be more than the technical losses determined by the system studies. Therefore, the difference between the losses allowed in the ARR and that determined by the system studies may have to be apportioned to different voltage levels in proportion to the annual gross energy consumption at the respective voltage level. The annual gross energy consumption at a voltage level will be the sum of energy consumption of all consumer categories connected at that voltage plus the technical distribution losses corresponding to that voltage level as worked out by system studies. In this manner, the total losses allowed in the ARR can be apportioned to different voltage levels including the EHT consumers directly connected to the transmission system of GRIDCO. The cost of supply of the appellant's category who are connected to the 220/132 KV voltage may have zero technical losses but will have a component of apportioned distribution losses due to difference between the loss level allowed in ARR (which includes commercial losses) and the technical losses determined by the system studies, which they have to bear as consumers of the distribution licensee.

34. Thus Power Purchase Cost which is the major component of tariff can be segregated for different voltage levels taking into account the transmission and distribution losses, both commercial and technical, for the relevant voltage level and upstream system. As segregated network costs are not available, all the other costs such as Return on Equity, Interest on Loan, depreciation, interest on working capital and O&M costs can be pooled and apportioned equitably, on pro-rata basis, to all the voltage levels including the appellant's category to determine the cost of supply. Segregating Power Purchase cost taking into account voltage-wise transmission and distribution losses will be a major step in the right direction for determining the actual cost of supply to various consumer categories. All consumer categories connected to the same voltage will have the same cost of supply. Further, refinements in formulation for cost of supply can be done gradually when more data is available."

In view of the above mentioned order of APTEL, as per the directives of the Hon'ble Commission the Discoms submit the details of calculation of the voltage wise cost of supply as per the methodology provided by the APTEL. Further it is submitted that the assignment of segregation of technical and commercial losses has be entrusted to consultant and after the completion of work, the Discoms will carry out the analysis and will submit the detailed report to the Commission.

Central Discom submission:

Until 100% meterisation is completed, it is very difficult to carry out such type of studies. However the Discom is pursuing the studies.

For ascertaining the LT, 11 KV & 33 KV cost of supply, the loss levels at each voltage are required to be computed. For this purpose, 100% meterisation is required so that correct consumption of energy at each level may be known. The meterisation plan for Central Discom has already been submitted to MPERC. It is to mention here that at the end of Nov.2016, approx. 16% of meterisation was remaining so Hon'ble Commission is requested to grant time upto mid of the financial year 2017-18 i.e. upto September 2017 after which such study may be carried out.

West Discom submission:
The work has been assigned to the consultant for "Loss calculation (with segregation of technical & commercial losses)" accordingly compliance shall be submitted before the Commission soon. It is requested to the Commission to grant some more time in this regard.

Commission's observations/ directions:
The Commission noted the submission of Discoms. The Commission directs the Discoms to submit the report on the subjected study along with the next tariff petition.

7.5 *Impact assessment study for switching from KWh billing to KVAh billing.*

Commission's directives:

The Commission directs the Petitioners to carry out impact assessment study on transition from KWh billing to KVAh billing and submit report within six months.

East Discom submission:
The existing meters installed in the premises of HT consumers have the provisions of recording KVAh consumption in ToD blocks, although the meters have been configured for the same as at present KVAh energy is being recorded for the entire billing period only. As such it is technically feasible to switch over to KVAh billing system. Although there are certain difficulties in implementation of KVAh based billing. Discoms have large numbers of open access consumers in the State. The energy of open access consumers is scheduled in KWh and credit of this energy is to be given in the energy bills of the OA consumers in each 15 minutes block. After switching over of KWh based tariff system to KVAh based tariff system, it is not clear as to how credit would be passed on to partial Open Access consumers.

The Discom has done a preliminary analysis on sample bills of different voltage level wise HT consumers. The working model and resultant outcome has been annexed for your kind perusal.

Central Discom submission:
The Central Discom has already submitted (Page No.174 of Petition) that in case of switching from Kwh to KVAh billing, the calculation of credit of energy fed by open access consumers in the system is very difficult because this energy is scheduled in Kwh and credit to them is given in each 15 minutes block. The existing meters are not having provisions of recording KVAh in each 15 minutes block. These meters record the KVAh for the entire billing period.

As explained above for switching from Kwh billing to KVAh billing, the meters are required to be recalibrated or changed which in turn may cost heavily

West Discom submission:

The existing meters installed in the premises of HT consumers have the provisions of recording KVAh consumption in ToD blocks, although the meters have been configured for the same as at present KVAh energy is being recorded for the entire billing period only. As such it is technically feasible to switch over to KVAh billing system. The following are the effects of implementation of KVAh based billing:

i. The incentive above 95% power factors will be eliminated: At present an incentive is being provided to maintain PF above 95%, in apparent based tariff there would be no such incentive available to the consumer and a charges shall be levied on them even though they maintain PF above 95%. Looking to the present practice some consumer may have made investment to gain such incentive thus it will be an indirect increase in terms of financial burden to the presently disciplined consumers who are maintaining PF at 95% or above and such consumer may protest such transition from KWH to KVAH.

ii. The exemption of penalty above 90% threshold limit will be eliminated: Presently an threshold limit of 90% defined for penalty. The power factors greater than the threshold limit is exempted from penalization. While the power factors less than the threshold limit are levied p.f penalty. Further above 95% power factor incentive motivates the consumers to improve their power factors achieving higher power factors. According to kVAh based tariff, the accepted threshold limit of p.f is just 1, therefore wouldn't be any penalty exemption for power factor within the range of 90% to 95% as available presently this will be an additional tariff burden for such class of consumer.

iii. It may be a possibility that once KVAh billing is introduced, the consumer tends to overcompensate the reactive power requirement to make doubly sure that KWh is as close to KVAh and any over compensation brings the PF to leading and the lead energy will be pumped to the Grid and in turn the DISCOMs may have to introduce reactors to compensate the lead energy. This will increase the fixed cost to the licensee and the system will end up with more losses.

iv. The Discom purchases power in units of KWH if sold energy is measured in KVAh units the energy balance and losses calculation will not be measured accurately.

v. Discoms have large numbers of open access consumers in the State. The energy of open access consumers is scheduled in KWh and credit of this energy is to be given in the energy bills of the OA consumers in each 15 minutes block. After switching over of KWh based tariff system to KVAh based tariff system, it is not clear as to how credit would be passed on to partial Open Access consumers.

vi. In some category of consumers there is a rebate on incremental consumption. In such when the KVAH based tariff will be implemented there will be difficult to calculate such rebate in the first year because the corresponding consumption shall be available in terms of KWH only.

Commission's observations/ directions:
The Commission noted the submission of Discoms. The Commission directs the Discoms to submit the comprehensive study report referring to other States where KVAH billing is prevelent with the next tariff petition.

7.6 ***Impact assessment of billing of tariff minimum consumption.***

Commission's directives:

The Commission directs the Petitioners to carry out impact assessment of billing of tariff minimum consumption for each category of previous two years and submit report within six months.

East Discom submission:
The Petitioner also would like to submit that the HT Billing details already furnished to the Commission also includes the billing of TMM. However the East Discom is of the opinion that fixed expenses of the company are to be recovered through the fixed charges only, but this can result in abnormal increase in the fixed charges. Hence, fixed expenses are recovered by partially embedding them in the energy charges, fixed charges and the tariff minimum charges.
During the year FY 15-16, East Discom has billed Rs. 17.06 Cr as TMM charges in respect of HT Consumers and during FY 16-17 upto June, the billing of TMM charges in respect of HT Consumers is Rs. 9.98 Cr. The Discom agrees with the submission made by West Discom.

Petitioner in additional data gap reply vide letter CGM/RM/1224 dated 20.02.2017 submitted that that as per the Section 42 of Tariff Regulation, 2015
"42 Determination of tariffs for supply to consumers
42.1 The Commission shall determine the charges recoverable from different consumer categories based on the following principles: ....
(d) Tariff minimum: Tariff minimum charges for a class or category of the consumers shall be recoverable from the consumers till the time fixed charges are aligned with recovery of full fixed costs.; ...."
Petitioner further submitted that in view of the above provision of the regulation, billing of tariff minimum charges cannot discontinued until the fixed charges are aligned with recovery of full fixed cost.

The East Discom would like to submit before the Commission that, the two-part Retail tariff in the state of MP is not a true reflection of the fixed and variable cost which DISCOMs have to bear in terms of fixed and variable cost of power purchase and the fixed cost of the establishment. A part of the fixed cost borne by DISCOMs is recovered by the DISCOMs in the form of energy charges from retail consumers.

Analysis of Tariff Order and Revenue Realized for FY 2015-16

As per Tariff Order FY 2015-16 (Whole MP)		
Approved ARR	26555	Rs. Crore
Revenue at Proposed Tariff	26555	Rs. Crore
Power Purchase Cost	20979	Rs. Crore

Fixed Cost of Power Purchase	9906	Rs. Crore
Variable Cost of Power Purchase	11073	Rs. Crore
Other Fixed cost of the Discoms (return on equity, depreciation, interest on loan, interest on working capital and O&M expenses)	5576	Rs. Crore
Total Fixed Cost including fixed component of Power Cost	15482	Rs. Crore
Total Variable Cost	11073	Rs. Crore
As per Actual (Rs-15) (Whole MP)		
Fixed cost recovered (as per R-15)	3407	Rs. Crore
Variable cost recovered (as per R-15)	19311	Rs. Crore

It can be observed that the recovery of fixed charges from consumers is much less than the fixed charges to be paid by the Discoms. Therefore, Tariff minimum charges is a kind of fixed charged being recovered from consumers. Further as per provision of the above quoted clause 42 of the tariff regulation, tariff minimum charges cannot be removed unless the fixed charges are aligned with recovery of full fixed cost. On the other hand there is a need to increase fixed charges in the line of the fixed cost of the Discoms.

As directed by the Commission, detail of amount of tariff minimum billed for the FY 2015-16 and from Apr'16 to June'16 is as below:

HT TMM Information 2015-16			
Sr. No.	**HV Category**	**Actual Units Billed in MU's**	**Amount of TMM billed in Cr.**
1	HV 1	442.60	0
2	HV-2	470.26	1.47
3	HV-3.1	2240.74	7.76
4	HV-3.2	212.89	6.08
5	HV-3.3	7.39	0.09
6	HV-3.4	41.28	0.22
7	HV-4	7.9	0.35
8	HV-5	99.04	1.07
9	HV-6	296.16	0.01
10	HV-7	2.26	0
	Total	3820.52	17.06

HT TMM Information Apr'16 to June'16			
Sr. No.	**HV Category**	**Actual Units Billed**	**Amount of TMM**

		in MU's	billed in Cr.
1	HV 1	0	0
2	HV-2	106.65	0.29
3	HV-3.1	509.30	6.47
4	HV-3.2	63.03	2.46
5	HV-3.3	2.49	0.02
6	HV-3.4	7.25	0.01
7	HV-4	1.31	0.33
8	HV-5	24.39	0.39
9	HV-6	79.52	0
10	HV-7	0.45	0
	Total	794.39	9.98

Central Discom submission:

The details of category-wise tariff minimum received during the year 2014-15 & 2015-16 has already been submitted to MPERC (Page No.175 of Petition) from which it may be observed that there is a huge variation between the category-wise amount received. It is therefore submitted that revenue which is received from the billing of tariff minimum is uncertain and cannot be predicted.

As far as the justification for continuing with TMM is concerned, it is submitted that the fixed expenses of the Company are to be recovered through the fixed charges only but this can result in abnormal increase in the fixed charges. Hence, fixed expenses are recovered by partially embedding them in the energy charges, fixed charges and the tariff minimum charges.

The data of LT consumers is very voluminous. However details of HT consumers have been shown below:-

MPMKVVCL, Bhopal				
Tariff minimum consumption for HT consumers				
(Amount in Lakhs)				
Tariff category	2014-15		2015-16	
	No. of consumer	Amount billed in tariff minimum	No. of consumer	Amount billed in tariff minimum
HV-1.1	0	0.00	3	396.27
HV-3.1	323	668.95	325	961.02
HV-3.2	257	489.79	186	1031.13
HV-3.3	5	14.53	2	11.32
HV-3.5	2	0.99	2	0.66
HV-4.1	1	1.93	2	2.90
HV-5.1	26	113.10	34	109.74
HV-6.1	2	1.25	1	15.72
Total	**616**	**1290.55**	**555**	**2528.75**

Petitioner in additional data gap reply vide letter CGM/RM/1224 dated 20.02.2017 submitted that ***as per*** Tariff Regulation 2015, the relevant clause of the said regulation is read as under:

42 Determination of tariffs for supply to consumers

42.1 The Commission shall determine the charges recoverable from different consumer categories based on the following principles:

....

(d) Tariff minimum: Tariff minimum charges for a class or category of the consumers shall be recoverable from the consumers till the time fixed charges are aligned with recovery of full fixed costs.;

....

In view of the above provision of the regulation, billing of tariff minimum charges cannot discontinued until the fixed charges are aligned with recovery of full fixed cost.

The DISCOMs would also like to submit before the Commission that, the two-part Retail tariff in the state of MP is not a true reflection of the fixed and variable cost which DIS`COMs have to bear in terms of fixed and variable cost of power purchase and the fixed cost of the establishment. A part of the fixed cost borne by DISCOMs is recovered by the DISCOMs in the form of energy charges from retail consumers.

Analysis of Tariff Order and Revenue Realised for FY 2015-16

As per Tariff Order FY 2015-16 (Whole MP)		
Approved ARR	26555	Rs Cr
Revenue at Proposed Tariff	26555	Rs Cr
Power Purchase Cost	20979	Rs Cr
Fixed Cost of Power Purchase	9906	Rs Cr
Variable Cost of Power Purchase	11073	Rs Cr
Other Fixed cost of the Discoms (return on equity, depreciation, interest on loan, interest on working capital and O&M expenses)	5576	Rs Cr
Total Fixed Cost including fixed component of Power Cost	15482	Rs Cr
Total Variable Cost	11073	Rs Cr
As per Actuals (Rs-15) (Whole MP)		
Fixed cost recovered (as per R-15)	3407	Rs Cr
Variable cost recovered (as per R-15)	19311	Rs Cr

It can be observed that the recovery of fixed charges from consumers is much less than the fixed charges to be paid by the Discoms. Therefore Tariff minimum charges is a kind of fixed charged being recovered from consumers. Further as per provision of the above quoted clause 42 of the tariff regulation tariff minimum charges cannot be removed unless the fixed charges are aligned with recovery of full fixed cost on the other hand there is a need to increase fixed charges in the line of the fixed cost of the Discom.

As directed by the Commission, detail study of tariff minimum billed for the FY 2014-15 and FY 2015-16 is as below:

Circle wise & Region wise Tariff Minimum Details for the FY14-15 & FY15-16							
Bhopal Region		**2014-15**			**2015-16**		
Sr. No.	**Circle**	**Tariff category**	**No. of consumer**	**Amount billed in tariff minimum in Lacks**	**Tariff category**	**No. of consumer**	**Amount billed in tariff minimum in Lacks**
1	**Bhopal O&M**	HV-3.1	83	154.88	HV-3.1	104	220.53
		HV-3.2	31	66.95	HV-3.2	34	454.66
		HV-5.1	5	77.80	HV-5.1	9	74.47
					HV-1.1	2	384.75
		Total	119	299.63	Total	149	1134.41
2	Sehore	HV-3.1	4	9.74	HV-3.1	16	24.23
		HV-3.2	5	6.04	HV-3.2	5	11.31
		Total	9	15.78	Total	21	35.54
3	Rajgarh	HV-3.1	5	102.85	HV-3.1	11	100.63
		HV-3.2	5	21.39	HV-3.2	6	57.93
		HV-5.1	1	1.22	HV-5.1	3	4.73
		Total	11	125.46	Total	20	163.29
4	Hoshangabad	HV-3.1	7	10.92	HV-3.1	4	11.33
		HV-3.2	7	5.09	HV-3.2	8	3.92
		HV-4.1	1	1.93	HV-4.1	2	2.90
		HV-5.1	2	2.73	HV-5.1	2	0.27
		Total	17	20.67	Total	16	18.41
5	Betul	HV-3.1	10	27.63	HV-3.1	12	44.68
		HV-3.2	3	6.64	HV-3.2	6	8.21
					HV-5.1	3	2.94
		Total	13	34.27	Total	21	55.83
6	Vidisha	HV-3.1	7	17.59	HV-3.1	13	17.93
		HV-3.2	2	10.02	HV-3.2	3	12.20
		HV-5.1	3	4.11	HV-5.1	3	3.57
		Total	12	31.72	Total	19	33.71
7	Bhopal City	HV-3.1	74	55.60	HV-3.1	44	62.97
		HV-3.2	161	274.97	HV-3.2	81	251.25
		HV-3.3	3	1.42	HV-5.1	10	17.37

		HV-5.1	11	20.04	HV-6.1	1	15.72
		HV-6.1	2	1.25			
		Total	251	353.28	Total	136	347.30
8	Bhopal Region	Grand Total	432	880.80	Grand Total	382	1788.49
Gwalior Region							
1	Gwalior City Circle	HV-3.1	27	72.95	HV-3.1	27	62.53
		HV-3.2	19	41.34	HV-3.2	19	48.95
		HV-3.3	2	13.11	HV-3.3	2	11.32
		HV-3.5	2	0.99	HV-3.5	2	0.66
		Total	50	128.39	Total	50	123.46
2	Gwalior O&M Circle	HV-3.1	35	4.90	HV-3.1	35	123.64
		HV-3.2	9	16.17	HV-3.2	9	12.58
		HV-5.1	2	6.86	HV-5.1	2	4.92
		Total	46	27.93	Total	46	141.14
3	Morena O&M Circle	HV-3.1	25	41.70	HV-3.1	25	46.69
		HV-3.2	1	0.42	HV-3.2	1	0.31
		Total	26	42.12	Total	26	47.00
4	Bhind O&M Circle	HV-3.1	12	0.52	HV-3.1	-	-
		Total	12	0.52	Total	0	0
5	Guna O&M Cirlce	HV-1.1	1	0	HV-1.1	1	11.52
		HV-3.1	20	90.42	HV-3.1	20	141.53
		HV-3.2	6	7.37	HV-3.2	6	16.05
		HV-5.1	2	0.35	HV-5.1	2	1.48
		Total	29	98.14	Total	29	170.58
6	Shivpuri O&M Circle	HV-3.1	14	79.25	HV-3.1	14	104.33
		HV-3.2	8	33.39	HV-3.2	8	153.76
		Total	22	112.64	Total	22	258.09
7	Shoepur O&M Circle	NIL			NIL		
8	Gwalior	Grand	185	409.75	Grand	173	740.27

	Region	Total			Total		

West Discom submission:

Petitioner submitted that as per Tariff Regulation 2015, the relevant clause of the said regulation is read as under:

42 Determination of tariffs for supply to consumers

42.1 The Commission shall determine the charges recoverable from different consumer categories based on the following principles:

....

(d) Tariff minimum: Tariff minimum charges for a class or category of the consumers shall be recoverable from the consumers till the time fixed charges are aligned with recovery of full fixed costs.;

....

In view of the above provision of the regulation, billing of tariff minimum charges cannot discontinued until the fixed charges are aligned with recovery of full fixed cost.

The DISCOMs would also like to submit that, the two-part Retail tariff in the state of MP is not a true reflection of the fixed and variable cost which DISCOMs have to bear in terms of fixed and variable cost of power purchase and the fixed cost of the establishment. A part of the fixed cost borne by DISCOMs is recovered by the DISCOMs in the form of energy charges from retail consumers.

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It can be observed that the recovery of fixed charges from consumers is much less than the fixed charges to be paid by the Discoms. Therefore Tariff minimum charges is a kind of fixed charged being recovered from consumers. Further as per provision of the above quoted clause 42 of the tariff regulation tariff minimum charges cannot be removed unless the fixed charges are aligned with recovery of full fixed cost on the other hand there is a need to increase fixed charges in the line of the fixed cost of the Discom.

Commission's observations/ directions:
Commission is not convinced with the submissions of Discoms and directs them to carry out a detailed study for each category and submit the same within 3 months.

7.7 Segregation of Technical and Commercial losses

Commission's directives:

The commission directs the Petitioners to carry out detailed study of the Distribution system and submit a report on segregated technical and commercial loss level of Discom within six months.

East Discom submission:
In East Discom two feeders in each of the circles have been selected as pilot project for detailed study on Segregation of Technical and Commercial losses. The detail of these feeders is shown in the table below:-

Sr. No.	NAME OF CIRCLE	NAME OF FEEDER
1	JABALPUR CITY CIRCLE	11KV TRIMURTI NAGAR
		11KV VIJAY NAGAR
2	JABALPUR (O&M) CIRCLE	11KV SIHORA TOWN – II
		11KV SIHORA COLLAGE
3	CHHINDWARA CIRCLE	11KV LINGA
		11KV TOWN 5
4	SEONI CIRCLE	11KV GANJ T-5
		11KV TOWN-2
5	MANDLA CIRCLE	11KV MAHARAJPUR
		11KV TOWN-1
6	NARSINGHPUR CIRCLE	11KV JAIL ROAD
		11KV STATION ROAD
7	KATNI CIRCLE	11KV CITY – 4
		11KV KUCHGAWA
8	SAGAR CIRCLE	11KV CITY - 2
		11KV SHASTRI CHOUK
9	DAMOH CIRCLE	11KV TOWN – 1
		11KV TOWN - VI
10	CHHATARPUR CIRCLE	11KV CHHATARPUR NEW BUS STAND-2
		11KV PANNA TOWN - 1
11	TIKAMGARH CIRCLE	11KV DHONGA
		11KV BADAGAON
12	REWA CIRCLE	11KV MAJHILA TOLA
		11KV SHILPI PLAZA
13	SATNA CIRCLE	11KV SATNA TRANSPORT NAGAR
		11KV MAIHAR TOWN - 2
14	SIDHI CIRCLE	11KV SIDHI HOUSING BOARD

		11KV SINGRAULI SARASWAH
15	SHAHDOL CIRCLE	11KV SHAHDOL BUDHAR CHOWK
		11KV SOHAGPUR

The methodology being adopted for segregation of Technical and Commercial losses is first to determine technical loss and then subtract the same from the total loss. There are two methods to calculate the technical losses:-

a) Real time accumulation method – In this method technical loss of the feeder is calculated using average current of each time stamped 30 minute integration period to get average power loss.

b) Peak current method – In this method technical loss is calculated using peak current of feeder and the figures are multiplied by lost load factor to get average power loss.

As it appears from the study carried out by PFC during the period Nov'2015 to Feb'2016, the above given methods have also used in the calculation of technical losses.

Further East Discom has also conducted study of technical loss on 33kV voltage level in 09 feeders of different Circle and the technical losses on 33kV voltage level has been worked out as given below:

Study of Technical Losses on 33kV Feeders			
Sr. no.	**Name of Circle**	**33kV feeder**	**Technical Losses**
1	Narsinghpur	33 kV Themi	3.15%
2	Chhindwara	33 kV Sausar	3.73%
3	Seoni	33 kV Ghansor	3.65%
4	Sidhi	33 kV Madwas	5.98%
5	Rewa	33 kV Baheradabar	5.54%
6	Satna	33 kV Amadara	3.62%
7	Tikamgarh	33 kV Mohangarh	4.95%
8	Shahdol	33 kV Manpur	6.67%
9	Chhatarpur	33 kV Basanapur	2.33%

It has been found that 33kV Umariya - Manpur feeder is having high technical loss i.e.
6.67%. This feeder is approx. 70.0 kms lengthy and loaded 23.2 MVA the conductor is old of size .075 ACSR, hence the losses are high. Similarly in case of 33kV Sidhi-Madwas feeder also the technical loss is high i.e. 5.98%. This feeder is very lengthy i.e. 130 kms. New 132/33kV Sub-stn has been sanctioned at Madwas and on completion of EHV S/S the loss will be reduced.

Study of 02 Circles covering 108 Nos. 33kV feeders have been carried out for technical losses and the detailed report is enclosed. For computation of technical losses the units sent out from EHV S/stn on these 33kV feeders and units received at 33/11kV S/s have been considered. The difference units as feeder loss have been expressed at percentage technical loss on the 33kV feeder.

The month-wise technical losses of 33kV feeders from April'16 to Sept'16 are enclosed as Annexure 15.

Central Discom submission:

The methodology proposed to be adopted for segregation of technical and commercial losses is first to determine technical loss and then subtract the same from the total loss. There are two methods to calculate the technical losses:-

a) Real time accumulation method – In this method technical loss of the feeder is calculated using average current of each time stamped 30 minute integration period to get average power loss.

b) Peak current method – In this method technical loss is calculated using peak current of feeder and the figures are multiplied by lost load factor to get average power loss.

As a first step for segregation, two feeders from each circle have been selected for a pilot project. However implementation of this project may take some more time.

It is submitted that Central Discom vide letter No.436 dtd 16-07-16 has already submitted a report of Pilot Study for Segregation of Commercial losses from overall AT&C losses for Bhopal city. The study was carried out by PFC and the AT&C loss for Bhopal city for the period Nov.15 to Feb.16 was found as 38.21%. This report incorporates concept, methodology and calculation details of losses.

This report also suggests the steps to be taken to reduce the AT&C losses which are under consideration to be followed by Discom.

West Discom submission:

The work has been assigned to the consultant for "Loss calculation (with segregation of technical & commercial losses)" accordingly compliance shall be submitted before Commission soon. It is requested to the Commission to grant some more time in this regards.

Commission's observations/ directions:

The Commission is not convinced with the submissions of Discoms and directs them to carry out a detailed study with representative sample size along with next tariff filing.

7.8 Trading Margin petition

Commission's directives:

The commission has directed MPPMCL to file the petition for determination of Trading Margin with appropriate Commission.

East Discom submission:

The directive pertains to MPPMCL.

Central Discom submission:

The directive pertains to MPPMCL.

West Discom submission:

The directive pertains to MPPMCL.

MPPMCL submission:

As per item No.8 (ii) of State Govt. Notification No.2260-F-3-24-2009-XIII dt. 19/03/2013, M.P. Power Management Company Limited has been supplying power to the Discoms at the tariff determined/approved by MPERC and its own expenses are being distributed on actual basis in proportion to the energy drawn by respective Discoms.

MPPMCL has been operating on "No Profit and No Loss" basis. Therefore, till now at the end of each financial year, all the credits received by MPPMCL which formed the part of income of MPPMCL (shown as "other income" in Form S-1) were being passed on to the Discoms in proportion to the energy drawl by respective Discoms as a part of their Power Purchase Costs. The major components of Annual Revenue Requirement of MPPMCL are detailed in this section.

Petitioner in additional data gap reply vide letter CGM/RM/1224 dated 20.02.2017 submitted that MPPMCL has signed "Management and Corporate Functions Agreement" on 5th June 2012, with the three Discoms of the State, wherein it has been agreed that the MPPMCL shall perform inter alia the following functions of common nature for the Discoms:

- In consultation with Discoms, undertake long-term/ medium-term/short-term planning and assessment of the power purchase requirements for the three Discoms and explore opportunities for power procurement as per the regulations of MPERC;
- The expenses of MPPMCL have been considered to be included as part of power purchase cost of the Discoms.

As per the agreement between MPPMCL and three Discoms on dated 5th June 2012, all expenses of MPPMCL are included as part of power purchase cost of the Discoms. Therefore, till now at the end of each financial year, all the credits received by MPPMCL which formed the part of income of MPPMCL were being passed on to the Discoms in proportion to the energy drawl by respective Discoms. **Thus, MPPMCL has been operating on no profit no loss basis in case of power supply to Discoms.** The copy of audited accounts is also enclosed.

Further it is submitted that, MPPMCL has entered into an agreement with MPAKVN for supply of power of 40 MW at the tariff ascribed to in Article -7 and the terms and conditions thereof as per the Bulk Power Supply Agreement.

Clause 2.6 of Article 2 "Scope of the Agreement" says about the trading margin to be paid to MPPMCL. The clause is reproduced as below:

"2.6 For the services described above, in addition to the tariff the PROCURER shall have the additional obligation for paying a trading margin of four (4) paisa per unit for all the energy supplied by MPPMCL to meet the demand requirement of the PROCURER."

MPPMCL is the holding Company of the three electricity distribution companies (Discoms) of MP State. It is pertinent to state that M. P. Poorv Kshetra Vidyut Vitaran Company Ltd., M. P. Paschim Kshetra Vidyut Vitaran Company Ltd., M. P. Madhya Kshetra Vidyut Vitaran Company Ltd and M. P. Power Management Company Limited were earlier the part of erstwhile Madhya Pradesh State Electricity Board. Therefore, the trading margin is not charged by MPPMCL from its sister companies, however, the expenses/income of MPPMCL are passed on to the Discoms as part of their power purchase cost.

It is by now clear that MPAKVN – SEZ, Indore is a separate entity who is procuring power from MPPMCL as an independent party to meet out its demand. MPPMCL is extending its services to allocate the power to MPAKVN and is liable to recover a trading margin of 4 paisa per unit, to recover the costs it incurs while arranging the power for MPAKVN.

Commission's observations/ directions:
The Commission is not convinced with the submission of MPPMCL and directs them to to file the petition for determination of Trading Margin with appropriate Commission before next filing of the Tariff Petition for FY 2018-19.

7.9 Separate record for increase in consumer-wise sales

Commission's directives:

The Commission directs the Petitioners to keep a separate record of increase in consumer-wise sales and submit the same for FY 2016-17 to the Commission with the next tariff petition filing.

Fresh Directive

7.10 Transfer of funds to Pention and Terminal Benefit Trust Fund

Commission's directives:

The Commission has directed the Petitioners to file within 3 months the mechanism along with detailed conditions with regards to management of funds.

Annexure-1 (List of Stakeholders)

LIST OF OBJECTORS OF EAST DISCOM - TARIFF FY 2017-18

Sl. No.	Name & Designation	Name and Address of the objector
1	Ms. Kavita Pandya	Arun Nagar Rewa
2	Shri Rajendra Prasad Mor, Bhawan Nirman Salahkar	Prabuddhpuri, Gali No. 4, Adarsh Colony, Katni
3	Shri Manish Singh	M/s. Prism Cement Ltd.,Vill. Mankahari, P.O. Bhathi, Distt. Satna
4	Shri Sanjay Singh Sengar Up Sarpanch	Village Panchayat Gosalpur (Sihora)
5	Shri D R Jeswani	M/s. Mahakaushal Udyog Sangh, Industrial Area, Richhai, Jabalpur
6	Shri Akhil Mishra	M/s. Lordganj Vyapari Sangh, 26, S.P. Market, Lordganj, Jabalpur
7	Shri Nikhil Kanaoujiya, Mahanagar Adhyaksh	M/s. Hindu Seva Parishad, 1st Floor, White & Bright Drycleaners,ke upar, Kachhiyana Road, Goalbazar, Jabalpur
8	Shri Ravidatt Singh, Pradesh Mahamantri Shri Om Narayan Singh	Rastriya Kisan Majdur Sangh, Sirmour Road, Near Khutehi Block Office, Panchvati Petrol Pump, Sirmour Road, Rewa
9	Shri D Khandelwal, Advocate	950, Napier Town, Jabalpur
10	Shri Rajendra Agrawal	1995/A, Gyan Vihar Colony, Narmada Road, Jabalpur
11	Shri Himanshu Khare	M/s. Jabalpur Chambers of Commerce & Industry, Moti Building, Ashok Marg Cantt. Jabalpur
12	Shri Ramesh Patel, Adhyaksh	M/s. Bhartiya Kisan Union (Tikat), Near Mahavir Chowk, Ward No. 8, Sihora, Distt. Jabalpur
13	Shri Rajnarayan Bhardwaj	Bharat Krishak Samaj, Shri Shantilal Shah Kisan Karyalaya, Gangotri Apartment, Goal Bazar, Jabalpur

Sl. No.	Name & Designation	Name and Address of the objector
14	Shri K.K. Agrawal	Bharat Krishak Samaj, Shri Shantilal Shah Kisan Karyalaya, Gangotri Apartment, Goal Bazar, Jabalpur
15	Shri V.K. Pandya	Bharat Krishak Samaj, Shri Shantilal Shah Kisan Karyalaya, Gangotri Apartment, Goal Bazar, Jabalpur
16	Shri Shankar Nagdeo, Chairman Shri Ravi Gupta	M/s. Mahakoshal Chamber of Commerce & Industry, Chamber Bhawan, Civic Centre, Marhatal, Jabalpur 482 002
17	Shri Sidharth Gautam S.E. (City Circle)	M/s. Poorv Kshetra Vidyut Vitaran. Co. Ltd. Jabalpur
18	Shri Vinay Kumar Singh Parihar, General Secretary	Madhya Pradesh Vidyut Mandal Abhiyanta Sangh, Shade No.13, Vidyut Nagar P.O., Rampur, Jabalpur
19	Shri Harsh Trivedi & Shri S.C. Sood	M/s. Ramnik Power & Alloys (P) Ltd. C/o. M/s. A.P.Trivedi Sons, Main Road, Balaghat
20	Shri Munna Patel	830, Indira Gandhi Ward, Sajivani Nagar, Garha, Jabalpur
21	Shri Sangram Singh	M/s. Bharat Swabhiman (Nyas), Malgujar Parisar, Amkhera Road, Gohalpur, Jabalpur
22	Shri Shushil Kumar Patel	Village - Bagheli, Teh. Manjholi, Distt. Jabalpur
23	Shri A.K. Sahi, Sanyojak	M/s. Disha Bodh Yug Jagran Manch, Village. Gosalpur, Teh. Sihora, Jabalpur
24	Shri Sourabh Nati Sharma, Secretary	State Congress Committee, 1786, Govind Kunj Colony, Rasal Chowk, Nepier Town, Jabalpur
25	Shri Sunjil Sood, G.M. (E&I)	M/s. Reliance Cement, Pvt. Ltd, Village - Bahruli, Teh. Maihar, Satna
26	Shri Rajendra Kaurav	Sousar, Distt. Chhindwada
27	Mohd. Anees Khan	Aam Aadmi Party, Vidhan Sabha Seoni
28	Shri Ganesh Pandey, Shri Veer Singh Dandi & Others	Datia City

Sl. No.	Name & Designation	Name and Address of the objector
29	Shri Abhishek Ahirwar, Ms. Lalita Ahirwar, Shri Tulsiram Razak, Shri Ramcharan Saini, Smt. Ramkumari Saini & Others	Sagar

LIST OF OBJECTORS OF WEST DISCOM - TARIFF FY 2017-18

Sl. No.	Name & Designation	Name and Address of the objector
1	Shri Hansmukh Jain Gandhi, President	M/s. M.P. Cold Chain Storage Association, Indore
2	Shri S.M. Jain, President M.P. Chapter	M/s. All India Induction Furnaces M.P. Chapter, C/o. Venus Alloys Pvt. Ltd., 67, Industrial Area, Mandsaur
3	Shri Pankaj Bansal	M/s. Shivangi Rolling Mills Pvt. Ltd. 305-306 3rd Floor, Airen Heights, Bnear Pakiza, A.B. Road, Indore
4	Shri S.M. Jain, Director	M/s. Venus Alloys Pvt. Ltd., 67, Industrial Area, Mandsaur
5	Shri Sandeep Jain, Director	1. M/s. Jaideep Ispat & Alloys Pvt. Ltd. (CCD) 2. M/s. Jaideep Ispat & Alloys Pvt. Ltd. Unit-I, 3. M/s. Jaideep Ispat & Alloys Pvt. Ltd. Unit-II, 103, Laxmi Tower, 576, M.G. Road, Indore
		M/s. Sardar Ispat Pvt. Ltd. Tejper Bridge, A.B. Road, Rajendra Nagar, Indore
6	Shri R.D. Kirtani MD & K.K. Kirtani	M/s. Gajra Differential Gears Limited, Lohar Pipaliya, Kshipra, A.B. Road, Dewas
7	Shri M.C. Rawat, Secretary	The Madhya Pradesh Textile Mills Association, Jal Sabhagrah, 56/1, South Tukoganj, Indore

Sl. No.	Name & Designation	Name and Address of the objector
		M/s. Grasim Industries Ltd. (Chemical Div.) Birlagram, Nagda
		M/s. Tirupati Balaji Extrusion Pvt. Ltd., Plot No. 81/A/82C Industrial Area No. 1, AB Road, Dewas
		M/s. Maan Aluminium Limited, Plot No. 67-A, Sector-1, Pithampur, Distt. Dhar
8	Shri R S Goyal	51, Pradesh Nagar, Nemawar Road, Indore
		M/s. Vikash Cott Fiber Pvt. Ltd. Verla Road, Sendhwa, Distt. Barwani
		M/s. Mittal Global Cot Industries, Pansemal Road, Khetia, Distt. Barwani
		M/s. Mittal Oil Industries, Opp. Gayatri Peeth, Pansemal Road, Khetia, Distt. Barwani
		M/s. Shree Durga Khandsari Sugar Mill, Village Mendrana, Khetia, Pansemal Road, Distt. Barwani
		M/s. Sancheti Cotex, Khetia-Pansemal Road, Khetia, Distt. Khargone
		M/s. Navin Ginning Factory, Verla Road, Sendhwa, Distt. Barwani
9	Shri Onkarlal Goyal	M/s. Sunil Oil Mill, Ram Katora, Nalepar, A.B. Road, Sendhwa, Distt. Barwani
		M/s. Gangadas Fibers, Village Sanghvi, Bistan Road, Khargone, Distt. Khargone
		Shri Kaushlya Fibers, Pratapganj, Sendhwa Distt. Barwani
10	Shri Antim Jindal	M/s. Jai Mahakal Oil Mill, Village & Gram Panchayat Sirlai, Teh. Barwaha, Distt. Khargone
11	Rajesh Mittal	M/s. Narmada Oil Industries Sirlai, Village & Gram Panchayat Sirlai, Teh. Barwaha, Distt. Khargone
		M/s. Jai Kisan Udhyog, Village Bhilgaon, Tahsil. Kasarawad, Distt. Khargone
12	Shri Prahlad Tayal, President	M/s. Sendhwa Cotton Association, C/o, Pradeep Cotton Pvt. Ltd., Verla Road, Sendhwa, Distt. Barwani

Sl. No.	Name & Designation	Name and Address of the objector
13	Shri Kailash Chandra Khandelwal	M/s. M.P. Cotton Processors and Traders Association, C/o. Vikash Cott Fiber Pvt. Ltd. Verla Road, Sendhwa, Distt. Barwani
14	Shri R C Somani	67 CH Scheme No. 74 C, Vijaynagar Indore
15	Shri Satish Sood	M/s. Oasis Distillries Limited, H No. 102, B-2 Metro Towers, Vijay Nagar, Indore
16	The Director	M/s. Kataria Wires Pvt. Ltd. 304, Jhabua Tower Block No. W-43rd Floor, R.N. Tagore Marg, Indore
17	Shri Ram Airen, President	M/s. Madhya Pradesh Ginning & Pressing Factories Association, 504, Chetak Center, 12/2, R.N.T. Marg, Indore
18	The Director	M/s. Kataria Industries Pvt. Ltd., 34-38 & 44 Industrial Area, Ratlam
19	The Director	M/s. Ratlam Wires Pvt. Ltd., Plot No. 3, Industrial Estate, Ratlam
20	Shri M.U. Nagori	M/s. Vippy Industries Ltd., 28, Industrial Area No. 1, A.B. Road, Dewas
		M/s. Dhanlaxmi Solvex Pvt. Ltd. Dewas, 201, Bansi Plaza, 581, M.G. Road, Indore
		M/s. Kasyap Sweetners Limited, Chetanya Gram, Badnawar, Dist. Dhar
21	The Secretary	M/s. Vidut Mandal Pensioner Association, Indore
22	Shri Sushil Sharma	Vidyut Mandal Karmchari Union, 197, K Sector A, Scheme No. 71, Gumasta Nagar Main Road, Indore
23	Dr. Gautam Kothari , President	M/s. Pithampur Audyogik Sangthan, 231, Saket Nagar, Indore
		State Advisory Committee, MP Electricity Regulatory Commission
		M/s. Electricity Consumer Society, C/o. All India Manufacturers Organisation, Industrial Estate, Pologround, Indore
24	Shri Satish Verma	M/s. All India Consumer Protection Organisation, 5, Datt Gali Rasmadal, Dhar

Sl. No.	Name & Designation	Name and Address of the objector
25	Shri Trilokchand S/o, Shri Puransingh Patidar(Gothhi)	M/s. Rastriya Kisan Majdur Sangh, Babai Teh. Sonkaksh, Distt. Dewas
26	Shri Kalyan Mundra Adhyaksh	M/s. Rastriya Upbhokta Parishad, 45, Sradhanand Marg, Indore
27	Shri Ashok Khandelia, President & Shri R.K.Agrawal	M/s. Association of Industrties, Dewas, 1/B/1, 1B/2A, I.S. Gajra Industria Area, No. 1, A.B. Road, Dewas
28	Shri Brajmohan Agrawal, Adhyaksh	M/s. Agrawal Parishad, 18, Vaibhav Chamber, 1st Floor, 7/1, Ushaganj, Indore
29	Shri Om Dhoot, President	M/s. Association of Industries Madhya Pradesh, Udyog Bhawan, Pologround, Industrial Estate, Indore
30	Shri Satish Mittal/ Shri Dangi	M/s. Iron & steel re-rollers Association of M.P., Indore
32	Shri Dhannalal Pavecha	60, Amar Tekari, Indore
33	Smt. Bharti Joshi, Koshadhyaksh	Bharstachar Nirodhak Prachar, Jeela, Indore
34	Shri Kishore Deepak Kodwani	Vikas Mitra Drishti, Pushpdip Apartment, 14, Sarvodaya Nagar, Sapna Sangeeta Road, Indore
35	Shri Vijendra Kumar Jain	29 B, Tiwari Colony, Ujjain
36	Shri R.C. Jain	Vidyut Upbhokta Jgriti Samiti, 23/2, Shanku Marg, Freeganj, Ujjain
37	Shri Bhawarlal Tufan Rastriya Adhyaksh	Akhil Bhartiya Kisan Majdur Sena, Near Shitla Mata Mandir, Sanjay Nagar, Aagar Road, Ujjain
38	Shri Harishankar Suryavanshi & Shri Rakesh Pancholi	M/s. Indore Electric Contractor Association, 236, Sector B, Slice 2, Scheme No. 78, Near Ujala Electric, Indore
39	Shri Mahesh Varun	M/s. Mahesh Electricals, Sanjay Chowk, Mahakal Marg, Ujjain
40	Mohd. Souyeb Ali Lauha Wala	7/4, Shri Pal Marg, Gali No. 1, Lohe ka Pul, Ujjain

Sl. No.	Name & Designation	Name and Address of the objector
41	Shri Anil Kumar Chhajed	1, Tatyatope Marg, Ujjain
42	Khatik Shri Naresh Singh Mahavariya	62, Nehru Nagar, Malwa, Indore
43	Shri Sanjay Agrawal	Mhow
44	Shri Laxmi Narayan Patel	Bhartiya Kishan Sangh
45	Shri Virendra Chouhan	Aam Aadmi Party, Madhya Pradesh, Indore
46	Shri Jitendra (Jeetu) Patwari (MLA (Raw), Indore	Main Road, Bijalpur, Rajenra Nagar Thane ke Samne, A.B. Road, Indore
47	Shri Manak Chand Badjatiya (B.E)	63, Nemi Nagar, Indore

LIST OF OBJECTORS OF CENTRAL DISCOM - TARIFF FY 2017-18

S. No.	Name & Designation	Name and Address of the objectors
1	Shri Gopal Krishnan	M/s. D B Malls Pvt. Ltd. Block 1A, 5th Floor, D B Corporate Park, Arera Hills, Bhopal
2	Shri S. Pal., Director	M/s. Vardhman Yarns, Vardhman Textile Limited, A1-A6, Ind. Area-II, Mandideep Distt. Raisen
3	Shri S.C. Sood	C/o, Lieutenant Colonel Arun Sood, 202/1, Tom Enclave, SI Lines, Near BTSI, Army Cantt, Bhopal
4	Shri Alok Agrawal, Sanyojak	Aam Aadmi Party, Madhya Pradesh, Bhopal
5	Shri P.C. Sharma, Adhyaksh	Bhopal District Congress Committee (City), Office, Jawahar Bhawan, Roshanpura, Bhopal
6	Shri Sanjeev Singh Rajput, Member, Rajya Parishad	Bhartiya Communist Party, Dabra, Gwalior
7	Shri S.K. Tiwari	Dr. Raha Gali, Ekta Chowk, Hoshangabad
8	Shri R.B. Shrivastava Jila Mantri	BMS Hoshangabad

S. No.	Name & Designation	Name and Address of the objectors
9	Shri M.C. Bansal	Justices for Public Cause Foundation, E-5/85, 1st Floor, Arera Colony, Bhopal
10	Shri Kailash Agrawal, Adhyaksh	M/s. Chamber of Commerce & Industries, M.P. Association of Cotton Processing & Traders
11	Shri Vinay Kumar Singh Parihar, General Secretary	Madhya Pradesh Vidyut Mandal Abhiyanta Sangh, Shade No.13, Vidyut Nagar P.O., Rampur, Jabalpur
12	Shri Kuldeep Singh Gautam	Halalpur, Post Bairagarh, Bhopal
13	Shri L.M. Sharma	
14	Shri Abhinav Sharma	C-83, Vidhya Nagar, Hoshangabad Road, Bhopal
15	Shri Vipin Kumar Jain	M/s. Small Scale Industries Organisation, E-2/30, Arera Colony, Bhopal
16	Shri B.L. Jonwar	EWS-108, A Sector, Ayodhya Nagar, Bhopal
17	Shri K.N. Mathur	M/s. HEG Limited, Mandideep, Distt. Raisen
18	Dr. Praveen Agrawal	M/s. Madhya Pradesh Chamber of Commerce & Industry, Chember Bhawan, Sanatan Dharm Mandir Marg, Gwalior
19	Suhas Virani	M/s. Bhopal Hostel Owner's Association, C/o. Virsons Hostel, B-93, Kasturba Nagar, Bhopal
20	Shri Rohit Kumar	M/s. Mittal Processors P. Ltd., 1002,1004 Antriksh Bhawan, 22, KG Marg, New Delhi
21	Shri Azad Singh Dabas, Adhyaksh	M/s. System Parivartan Abhiyan, A338, New Minal Residency, J.K. Road, Bhopal
22	Shri Bhawani Prajapati	R.T.I and Samajik Karyakarta, 494, Samar Law Chamber, Old Vidhansabha, Bhopal
23	Shri Jai Ram Lohiya	M/s. Laghu Udyog Association, 19, Kamleshwar Colony, Dabra, Distt. Gwalior (MP)
24	Shri Paras Saklech	Ratlam
25	Shri Manmohan Raghuvanshi	Rastriya Kisan Mazdur Sangh, Madhya Pradesh
26	Shri Naresh Jain	Plot No. 10, Deepak Society, Chuna Bhatti, Kolar Road, Bhopal
27	Shri Ashish Dubey	M/s. Madhya Kshetra Electric Contactor Association, E-2/159, Arera Colony, Bhopal
28	Shri Rahul, Shri Sikarwar, Shri Badam Singh Rajput & Others	Goal Pahadiya, Gwalior

TARIFF SCHEDULES

Annexure-2 (Tariff Schedules for Low Tension Consumers)

ANNEXURE TO THE TARIFF ORDER PASSED BY MPERC FOR FINANCIAL YEAR 2017-18

MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION

TARIFF SCHEDULES FOR LOW TENSION CONSUMERS

Table of Contents

Tariff Schedule- LV-1

DOMESTIC:

Applicability:

This tariff is applicable for light, fan and power for residential use only. Dharamshalas, Gaushalas, old age homes, day care centres for senior citizens, rescue houses, orphanages, places of worship and religious institutions will also be covered under this category.

Tariff:

LV 1.1 (Consumers having sanctioned load not more than 100 watts (0.1 kW) and consumption not more than 30 units per month)

(a) Energy Charge and Fixed Charge – For metered connection

Monthly Consumption (units)	Energy Charge (paise per unit) Urban/ Rural areas	Monthly Fixed Charge (Rs.)
Up to 30 units	310	NIL

(b) Minimum Charges: Rs. 40 per connection per month as minimum charges is applicable to this category of consumers.

LV 1.2

(i) Energy Charge and Fixed Charge – For metered connection

Monthly Consumption Slab (units)	Energy Charge with telescopic benefit (paise per unit) Urban/ Rural areas	Monthly Fixed Charge (Rs.)	
		Urban areas	Rural areas
Up to 50 units	385	50 per connection	35 per connection
51 to 100 units	470	90 per connection	65 per connection

Monthly Consumption Slab (units)	**Energy Charge with telescopic benefit (paise per unit)** **Urban/ Rural areas**	**Monthly Fixed Charge (Rs.)**	
101 to 300 units	600	100 for each 0.5 kW of authorised	85 for each 0.5 kW of authorised
Above 300 units	630	110 for each 0.5 kW of authorised	105 for each 0.5 kW of authorised

Minimum Charges: <u>Rs. 60 per connection</u> per month as minimum charges towards energy charges are applicable for above categories.

<u>**Note:**</u> The Authorized Load shall be as defined in the Madhya Pradesh Electricity Supply Code, 2013, as amended from time to time. (Every 75 units of consumption per month or part thereof shall be considered equal to 0.5 kW of authorised load. Example: If consumption during the month is 125 units, then the authorised load will be taken as 1 kW. In case the consumption is 350 units then the authorised load will be taken as 2.5 kW.)

Temporary/ DTR meter connection	**Energy Charge (paise per unit)** **Urban/ Rural areas**	**Monthly Fixed Charge (Rs.)**	
		Urban areas	**Rural areas**
Temporary connection for construction of own house (max. up to one year).	830	390 for each one kW of sanctioned or connected or recorded load, whichever is the highest	350 for each one kW of sanctioned or connected or recorded load, whichever is the highest

Temporary/ DTR meter connection	**Energy Charge (paise per unit)** **Urban/ Rural areas**	**Monthly Fixed Charge (Rs.)**	
		Urban areas	**Rural areas**
Temporary connection for social/ marriage purposes and religious functions.	830	70 for each 1 kW of sanctioned or connected or recorded load, whichever is highest, for each 24 hours duration or part thereof.	55 for each 1 kW of sanctioned or connected or recorded load, whichever is highest, for each 24 hours duration or part thereof.
Supply through DTR meter for clusters of Jhuggi/Jhopadi till individual meters are provided	330	NIL	NIL

Minimum Charges: Rs. 1000/- per connection per month is applicable towards energy charges for temporary connection and no minimum charges are applicable for supply through DTR meter for clusters of Jhuggi/Jhopadi.

(ii) Energy Charge and Fixed Charge for un-metered rural domestic connections having connected load upto 500 watts:

Particulars	**Units and Energy Charge to be billed per month for unmetered connections (paise per unit)**	**Monthly Fixed Charge (Rs.)**
Un-metered connection in rural areas having connected load more than 300 Watts and upto 500 watts	75 units @ 430 per unit	75 per connection
Un-metered connection in rural areas having connected load above 200 Watts and up to 300Watts(With two rooms and having Television)	60 units @ 417 per unit	50 per connection

Particulars	**Units and Energy Charge to be billed per month for unmetered connections (paise per unit)**	**Monthly Fixed Charge (Rs.)**
Un-metered connection in rural areas up to 200 Watts (upto two rooms and without Television)	50 units @ 310 per unit	45 per connection

Note: 1. Minimum charges: No minimum charges are applicable to this category of consumers.

<u>Specific Terms and Conditions for LV-1 category:</u>

a) The Energy Charges corresponding to consumption recorded in DTR meter shall be equally divided amongst all consumers connected to that DTR for the purpose of billing. The Distribution Licensee will obtain consent of such consumers for billing as per above procedure.

b) In case Energy Charges for actual consumption are less than minimum charges, minimum charges shall be billed towards energy charges. All other charges, as applicable, shall also be billed.

c) Other terms and conditions shall be as specified under General Terms and Conditions for Low Tension Tariff.

d) In case of prepaid consumers, a rebate of 20 paise per unit is applicable on the basic energy charges, all other charges should be calculated on the Tariff applicable after rebate. A consumer opting for prepaid meter shall not be required to make any security deposit for the energy charge.

e) In case of temporary requirement, 10% of sanctioned load is allowed to be used from the existing metered permanent domestic connection on the same tariff applicable for permanent connection.

Tariff Schedule – LV-2

NON-DOMESTIC:
LV 2.1

Applicability:
This tariff is applicable for light, fan and power to Schools / Educational Institutions including workshops and laboratories of Engineering Colleges / Polytechnics/ITIs (which are registered with /affiliated/ recognized by the relevant Govt. body or university), Hostels for students or working women or sports persons (run either by Govt. or individuals)

Tariff:
Tariff shall be as given in the following table:

Sub category	**Energy Charge (paise/unit)** **Urban/ Rural areas**	**Monthly Fixed Charge (Rs.)**	
		Urban areas	Rural areas
Sanctioned load based tariff (only for connected load up to 10 kW)	610	130 per kW	100 per kW
Mandatory demand based tariff for Connected load above 10 kW	610	240 per kW or 192 per kVA of billing demand	200 per kW or 160 per kVA of billing demand

LV 2.2
Applicability:
This tariff is applicable for light, fan and power to Railways (for purposes other than traction and supply to Railway Colonies/water supply), Shops/showrooms, Parlors, All Offices, Hospitals and medical care facilities including Primary Health Centers, clinics, nursing homes belonging to either Govt. or public or private organisations, public buildings, guest houses, Circuit Houses, Government Rest Houses, X-ray plant, recognized Small Scale Service Institutions, clubs, restaurants, eating establishments, meeting halls, places of public entertainment, circus shows, hotels, cinemas, professional's chambers (like Advocates, Chartered Accountants, Consultants, Doctors etc.), bottling plants, marriage gardens, marriage houses, advertisement services, advertisement boards/ hoardings, training or coaching institutes, petrol pumps and service stations, tailoring shops, laundries, gymnasiums, health clubs, telecom towers for mobile communication and any other establishment (except those which are covered in LV 2.1), who is required to pay Commercial tax/service tax/value added tax (VAT)/entertainment tax/luxury tax under any Central/State Acts.

Tariff:

Tariff shall be as given in the following table:

Sub category	Energy Charge (paise/unit) Urban/ Rural areas	Monthly Fixed Charge (Rs.)	
		Urban areas	Rural areas
On all units if monthly consumption is not more than 50 units	620	70 per kW	55 per kW
On all units in case monthly consumption exceeds 50 units	740	115 per kW	100 per kW
Mandatory demand based tariff for Connected load above 10 kW	640	260 per kW or 208 per kVA of billing demand	190 per kW or 152 per kVA of billing demand
Temporary connections including Multi point temporary connection at LT for Mela*	850	220 per kW or part thereof of sanctioned or connected or recorded load, whichever is the highest	190 per kW or part thereof of sanctioned or connected or recorded load whichever is the highest

Sub category	Energy Charge (paise/unit) Urban/ Rural areas	Fixed Charges (Rs.)	
		Urban areas	Rural areas
Temporary connection for marriage purposes at marriage gardens or marriage halls or any other premises covered under LV 2.1 and 2.2 categories	850 (Minimum consumption charges shall be billed @ 6 Units per kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part there of subject to a minimum of Rs.500/-)	85 for each kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part thereof	65 for each kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part thereof
For X-Ray plant	Additional Fixed Charge (Rs. per machine per month)		
Single Phase	540		
Three Phase	760		
Dental X-ray machine	120		

* In case permission for organizing Mela is granted by Competent Authorities of the Government of Madhya Pradesh.

Specific Terms and Conditions for LV-2 category:

a) **Minimum consumption:** The consumer shall guarantee a minimum annual consumption of 240 units per kW or part thereof in urban areas and 180 units per kW or part thereof in rural areas of **sanctioned load or contract demand (in case of demand based charges) .** However, the load of X-Ray unit shall be excluded while considering the load of the consumer for calculation of minimum consumption. The method of billing minimum consumption shall be as given in General Terms and Conditions of Low Tension tariff.

b) **Additional Charge for Excess demand:** Shall be billed as given in General Terms and Conditions of Low Tension tariff.

c) Other terms and conditions shall be as specified under General Terms and Conditions of Low Tension Tariff.

d) For LV-2.1 and LV-2.2: For the consumers having connected load in excess of 10 kW, demand based tariff is mandatory. The Distribution Licensee shall provide Trivector /Biverctor Meter capable of recording Demand in kVA/kW, kWh, kVAh.

e) In case of prepaid consumers, a rebate of 20 paise per unit is applicable on the basic energy charges, all other charges should be calculated on the Tariff applicable after rebate. A consumer opting for prepaid meter shall not be required to make any security deposit for the energy charge.

Tariff Schedule – LV-3

PUBLIC WATER WORKS AND STREET LIGHTS

Applicability:

The tariff **LV-3.1** is applicable for Public Utility Water Supply Schemes, Sewage Treatment Plants, Sewage Pumping Installations run by P.H.E. Department or Local Bodies or Gram Panchayats or any other organization authorised by the Government to supply/ maintain public water works / sewerage installations and shall also be applicable to electric crematorium maintained by local bodies/trusts.

Note: Private water supply scheme, water supply schemes run by institutions for their own use/employees/townships etc. shall not fall in this category. These shall be billed under the appropriate tariff category to which such institution belongs. In case water supply is being used for two or more different purposes then entire consumption shall be billed for purpose for which the tariff is higher.

The tariff **LV-3.2** is applicable to traffic signals and lighting of public streets or public places including parks, town halls, monuments and its institutions, museums, public toilets, public libraries, reading rooms run by the Government or Local Bodies, and Sulabh Shochalaya**.**

Tariff:

Category of consumers/area of applicability	**Energy Charge (paise per unit)**	**Monthly Fixed Charge (Rs. per kW)**	**Minimum Charges (Rs)**
LV 3.1 Public Water Works			
Municipal Corporation/ Cantonment board	520	240	No Minimum Charges
Municipality/ Nagar Panchayat	500	230	
Gram Panchayat	490	100	
Temporary supply	1.3 times the applicable tariff		
LV 3.2 Street light			
Municipal Corporation/ Cantonment board	520	350	No Minimum Charges
Municipality/ Nagar Panchayat	500	320	
Gram Panchayat	490	100	

Specific Terms and Conditions for LV-3 category:

(a) Incentives for adopting Demand Side Management:

An **incentive** equal to 5 % of Energy Charges shall be given on installation and use of energy saving devices (such as ISI energy efficient motors for pump sets and programmable on-off/ dimmer switch with automation for street lights). **Incentive** will be admissible only if full bill is paid within due dates failing which all consumed units will be charged at normal rates. Such incentive will be admissible from the month following the month in which energy saving devices are put to use and are verified by a person authorized by the Distribution Licensee. This incentive will continue to be allowed till such time these energy saving devices remain in service. The Distribution Licensee is required to arrange wide publicity of above incentive.

(b) Other terms and conditions shall be as specified under General Terms and Conditions of Low Tension Tariff.

Tariff Schedule – LV-4

LT INDUSTRIAL

Applicability:

Tariff **LV-4** is applicable to light, fan and power for operating equipment used by printing press and any other industrial establishments and workshops (where any processing or manufacturing takes place including tyre re-treading). These tariffs are also applicable to cold storage, gur (jaggery) making machines, flour mills, Masala Chakkies, hullers, khandsari units, ginning and pressing units, sugar cane crushers (including sugar cane juicing machine), power looms, dal mills, besan mills, and ice factories and any other manufacturing or processing units (excluding bottling plant) producing/processing food items or processing agriculture produce for preservation/increasing its shelf life and Dairy units (where milk is processed to produce other end products of milk other than chilling, pasteurization etc.)

Tariff:

	Category of consumers	**Monthly Fixed Charge (Rs.)**		**Energy Charge (paise per unit) – Urban / Rural Area**
		Urban Areas	**Rural Areas**	
4.1	**Non seasonal consumers**			
4.1 a	Demand based tariff***** (Contract demand up to 150 HP/112kW)	285 per kW or 228 per kVA of billing demand	180 per kW or 144 per kVA of billing demand	630
4.1 b	Temporary connection	1.3 times of the applicable tariff		

*** In case of consumers having contract demand up to 20 HP, the energy charges and fixed charges shall be billed at a rate 30% less than the charges shown in above table for tariff category 4.1a.**

4.2 Seasonal Consumers (period of season shall not exceed 180 days continuously). If the declared season or off-season spreads over two tariff periods, then the tariff for the respective period shall be applicable.				
4.2 a	**During season**	Normal tariff as for Non seasonal consumers	Normal tariff as for Non seasonal consumers	Normal tariff as for Non seasonal consumers
4.2 b	**During Off - season**	Normal tariff as for Non-seasonal consumers on 10 % of contract demand or actual recorded demand, whichever is more	Normal tariff as for Non-seasonal consumers on 10 % of contract demand or actual recorded demand, whichever is more	120 % of normal tariff as for Non-seasonal consumers

Terms and Conditions:

(a) The maximum demand of the consumer in each month shall be reckoned as four times the largest amount of kilovolt ampere hours delivered at the point of supply of the consumer during any continuous fifteen minutes in that month.

(b) Demand based tariff is mandatory for all the LT industrial consumers and the licensee shall provide Tri vector/ Bi vector Meter capable of recording Demand in kVA/ kW, kWh, kVAh and Time of Use consumption..

(c) **Minimum Consumption:** Shall be as per following:

- **i.** **For LT Industries in rural areas:** The consumer shall guarantee a minimum annual consumption (kWh) based on 180 units per HP or part thereof of contract demand irrespective of whether any energy is consumed or not during the year.

- **ii.** **For LT Industries in urban areas:** The consumer shall guarantee a minimum annual consumption (kWh) based on 360 units per HP or part thereof of contract demand irrespective of whether any energy is consumed or not during the year.

- **iii.** The consumer shall be billed monthly minimum 15 units per HP per month in rural area and 30 units per HP per month in urban area in case the actual consumption is less than above specified units.

- **iv.** Method of billing of minimum consumption shall be as given in the General Terms and Conditions of Low Tension tariff.

(d) **Additional Charge for Excess Demand:** Shall be billed as given in the General Terms and Conditions of Low Tension Tariff.

(e) Other terms and conditions shall be as specified under General Terms and Conditions of Low Tension Tariff.

(f) Other Terms and conditions for **seasonal consumers**:

- **i.** The consumer has to declare months of season and off season for the financial year 2017-18 within 60 days of issue of tariff order and inform the same to the Distribution Licensee. If the consumer has already declared the period of season and off-season during this financial year prior to issue of this order, same shall be taken into cognizance for the purpose and accepted by the Distribution Licensee.
- **ii.** The seasonal period once declared by the consumer cannot be changed during the financial year.

iii. This tariff is not applicable to composite units having seasonal and other category of loads.

iv. The consumer will be required to restrict his monthly off season consumption to 15% of the highest of average monthly consumption during the preceding three seasons. In case this limit is exceeded in any off season month, the consumer will be billed under Non seasonal tariff for the whole financial year as per the tariff in force.

v. The consumer will be required to restrict his maximum demand during off season up to 30 % of the contract demand. In case the maximum demand recorded in any month of the declared off season exceeds 31.5% of CD (105% of 30% of CD), the consumer will be billed under Non seasonal tariff for the whole financial year as per the tariff in force.

Tariff Schedule – LV - 5

AGRICULTURE AND ALLIED ACTIVITIES

Applicability:

The tariff **LV-5.1** shall apply to connections for agricultural pump, chaff cutters, threshers, winnowing machines, seeding machines and irrigation pumps of lift irrigation schemes including water drawn by agriculture pumps for use by cattle.

The tariff **LV-5.2** shall apply to connections for nurseries, farms growing flowers/ plants/ saplings/ fruits, mushroom and grasslands.

The tariff **LV-5.3** shall apply to connections for fisheries ponds, aquaculture, sericulture, hatcheries, poultry farms, cattle breeding farms and those dairy units only where extraction of milk and its processing such as chilling, pasteurization etc. is done.

The tariff **LV- 5.4** shall apply to connections for permanent agricultural pump, chaff cutters, threshers, winnowing machines, seeding machines and irrigation pumps of lift irrigation schemes including water drawn by agriculture pumps for use by cattle to whom flat rate tariff is applicable.

Tariff:

S. No.	**Sub-Category**	**Monthly Fixed charges (Rs. per HP)**	**Energy charges (paise per unit)**
LV- 5.1			
a) (i)	First 300 units per month	35	430
(ii)	Above 300 units up to 750 units in the month	45	515
(iii)	Rest of the units in the month	45	545
b)	Temporary connections	45	559
c)	DTR metered group consumers	Nil	390
LV-5.2			
a) (i)	First 300 units per month	35	430
(ii)	Above 300 units up to 750 units in the month	45	515
(iii)	Rest of the units in the month	45	545
b)	Temporary connections	45	559

S. No.	Sub-Category	Monthly Fixed charges (Rs.)	Energy charges (paise per unit)
LV-5.3			
a)	Up to 25 HP in urban areas	90 per HP	490
b)	Up to 25 HP in rural areas	70 per HP	470
c)	Demand based tariff (Contract demand and connected load up to 100 HP) in urban areas	230 per kW or 184 per kVA of billing demand	580
d)	Demand based tariff (Contract demand and connected load up to 100 HP) in rural areas	110 per kW or 88 per kVA of billing demand	580

LV-5.4	Agriculture flat rate tariff exclusive of subsidy*.	Charges payable by the consumer in Rs per HP (for period of 6 months) from April to September	Charges payable by the consumer in Rs per HP (for period of 6 months) from October to March
a)	Three phase- urban	700	700
b)	Three phase- rural	700	700
c)	Single phase urban	700	700
d)	Single phase rural	700	700

*****see para 1.2 of terms and conditions

Terms and Conditions:

1.1 **Billing of consumers under tariff schedule LV 5.1:** Billing to the consumers covered under tariff schedule LV 5.1 shall be done on a monthly basis based on the consumption recorded in the meter. Unmetered temporary connection under this schedule shall be billed on the basis of assessment of consumption provided under condition 1.3 (iii) of this schedule.

1.2 **Billing of consumers under tariff schedule LV 5.4:**

Rates payable by the consumer under tariff schedule LV 5.4 are exclusive of subsidy. The bill for the consumer covered under the tariff schedule LV 5.4 shall be calculated at the rates specified under the tariff schedule LV 5.1 based on norms for assessment of units per HP specified under condition 1.3 of this schedule. The consumer shall be required to pay at the rates specified under tariff schedule LV 5.4 and the balance amount of the bill shall be paid by the State Govt. in accordance with Energy Department GoMP letter No.1946/R448/2017/13 dated 24.3.2017, as advance subsidy to the Distribution licensee.

1.3 **Basis of energy audit and accounting for categories LV 5.1 and LV 5.4**:

i) For energy audit and accounting purposes, actual billed consumption of metered consumers covered under tariff schedule LV 5.1 and LV 5.4 shall be considered.

ii) For unmetered agriculture consumers under LV 5.4 category, assessed consumption shall be as per following norms:

Particulars	**No. of units per HP of sanctioned load per month**			
	Urban Area		**Rural Area**	
Type of Pump Motor	**April to Sept**	**Oct to March**	**April to Sept**	**Oct to March**
Three Phase	**90**	**170**	**80**	**170**
Single Phase	**90**	**180**	**90**	**180**

iii) For unmetered temporary agriculture consumers under LV 5.1 category, assessed consumption shall be as per following norms:

Particulars	**No. of units per HP of sanctioned load per month**	
Type of Pump Motor	**Urban Area**	**Rural Area**
Three Phase	**220**	**195**
Single Phase	**230**	**205**

1.4 Agricultural consumers opting for temporary supply shall have to pay the charges in advance for three months including those who request to avail connection for one month only subject to replenishment from time to time for extended period and adjustment as per final bill after disconnection. Regarding temporary connection for the purpose of threshing the crops, temporary connection for a period of one month can be served at the end of Rabi and Kharif seasons only with payment of one month's charges in advance.

1.5 Following **incentive*** shall be given to the metered agricultural consumers on installation of energy saving devices –

S. No.	Particulars of Energy Saving Devices	Rate of rebate
1.	ISI / BEE star labeled motors for pump sets	15 paise per unit
2.	ISI / BEE star labeled motors for pump sets and use of frictionless PVC pipes and foot valve	30 paise per unit
3.	ISI / BEE star labeled motors for pump sets and use of frictionless PVC pipes and foot valves along with installation of shunt capacitor of appropriate rating	45 paise per unit

* Incentive shall be allowed on the consumer's contribution part of the normal tariff (full tariff minus amount of Govt. subsidy per unit, if any) for installation of energy saving devices under demand side management. This incentive will be admissible only if full bill is paid within due dates failing which all consumed units will be charged at normal rates. Incentive will be admissible from the month following the month in which Energy Saving Devices are put to use and its verification by a person authorized by the Distribution Licensee. The Distribution Licensee is required to arrange wide publicity to above incentive in rural areas. The licensee is required to place quarterly information regarding incentives provided on its web site.

1.6 **Minimum consumption**

(i) **For Metered agricultural consumers (LV-5.1 and LV-5.2):** The consumer shall guarantee a minimum consumption of 30 units per HP or part thereof of connected load per month for the months from April to September and 90 units per HP or part thereof of connected load per month for the months from October to March irrespective of whether any energy is consumed or not during the month.

(ii) **For other than agricultural use (LV-5.3) :**

a) The consumer will guarantee a minimum annual consumption (kWh) based on 180 units/HP or part thereof of contract demand in notified rural areas and

360 units/HP or part thereof of contract demand in urban areas irrespective of whether any energy is consumed or not during the year.

b) The consumer shall be billed monthly minimum 15 units per HP per month in rural area and 30 units per HP per month in urban area in case the actual consumption is less than monthly minimum consumption (kWh).

c) **Method of billing of minimum consumption** shall be as given in the General Terms and Conditions of Low Tension Tariff.

1.7 **Additional Charge for Excess Demand:** Shall be billed as given in the General Terms and Conditions of Low Tension Tariff.

1.8 **Delayed payment surcharge** in case of agriculture consumers on LV - 5.4 flat rate tariff shall be levied @ of Rs 1 every month for each block or part thereof of arrears of Rs.100/-. For other sub categories of this Tariff Schedule, the delayed payment surcharge shall be billed as specified under General Terms and Conditions of Low Tension Tariff.

1.9 **Specific conditions for DTR metered consumers:**

a. All the consumers connected to the DTR shall pay the energy charges for the units worked out based on their actual connected load.

b. The Distribution Licensee will obtain consent of such connected consumers for billing as per procedure specified in (a) above.

1.10 One CFL/ LED lamp up to 20W is permitted at or near the pump in the power circuit.

1.11 The use of three phase agriculture pump by installing external device during the period when the supply is available on single phase, shall be treated as illegal extraction of energy and action as per prevailing rules and Regulations shall be taken against the defaulting consumer.

1.12 Other terms and conditions shall be as specified under General Terms and Conditions of Low Tension Tariff.

GENERAL TERMS AND CONDITIONS OF LOW TENSION TARIFF

1. **Rural Areas** mean those areas notified by the GoMP vide notification no. 2010/F13 /05/13/2006 dated 25th March 2006 as may be amended from time to time. **Urban areas** mean all areas other than those notified by the GoMP as Rural Areas.

2. Rounding off: All bills will be rounded off to the nearest rupee i.e. up to 49 paisa shall be ignored and 50 paisa upwards shall be rounded off to next Rupee.

3. Billing Demand: In case of demand based tariff, the billing demand for the month shall be the actual maximum kVA demand of the consumer during the month or 90% of the contract demand, whichever is higher. The billing demand shall be rounded off to the nearest integer number i.e. fraction of 0.5 or above will be rounded to next higher integer and the fraction of less than 0.5 shall be ignored.

4. Fixed charges billing: Unless specified otherwise, fractional load for the purposes of billing of fixed charges shall be rounded off to nearest integer i.e. fraction of 0.5 or above will be rounded to next higher integer and the fraction of less than 0.5 shall be ignored. However for loads less than one kW/HP, it shall be treated as one kW/HP.

5. **<u>Method of billing of minimum consumption:</u>**

   A. **For metered agricultural consumers and other than agricultural consumers horticulture activity - LV 5.1 and LV 5.2**: The consumer shall be billed minimum monthly consumption (kWh) specified for his category for the month in which his actual consumption is less than prescribed minimum consumption.

   B. **For other consumers where applicable** :

   a. The consumer shall be billed one twelfth of guaranteed annual minimum consumption (kWh) specified for his category each month in case the actual consumption is less than above mentioned minimum consumption.

   b. During the month in which actual cumulative consumption equals or is greater than the annual minimum guaranteed consumption, no further billing of monthly minimum consumption shall be done in subsequent months of the financial year and only actual recorded consumption shall be billed.

   c. Tariff minimum consumption shall be adjusted in the month in which cumulative actual or billed monthly consumption exceeds cumulative monthly prorated minimum annual guaranteed consumption. If actual cumulative consumption does not get fully adjusted in that month, adjustment shall continue to be provided in subsequent months of the financial year. The following example illustrates the procedure for monthly billing of consumption where prorated monthly minimum consumption is 100 kWh based on annual consumption of 1200 kWh.

Month	Actual cumulative consumption (kWh)	Cumulative minimum consumption (kWh)	Higher of 2 and 3 (kWh)	Already billed in the year (kWh)	To be billed in the month = (4-5) (kWh)
1	2	3	4	5	6
April	95	100	100	0	100
May	215	200	215	100	115
June	315	300	315	215	100
July	395	400	400	315	85
Aug	530	500	530	400	130
Sept	650	600	650	530	120
Oct	725	700	725	650	75
Nov	805	800	805	725	80
Dec	945	900	945	805	140
Jan	1045	1000	1045	945	100
Feb	1135	1100	1135	1045	90
March	1195	1200	1200	1135	65

6. **Additional Charge for Excess connected load or Excess Demand:** Shall be billed as per following procedure:

   a) **For demand based tariff:** The consumers availing supply at demand based tariff shall restrict their actual maximum demand within the contract demand. However, in case the actual maximum demand recorded in any month exceeds 115% of the contract demand, the tariff in this schedule shall apply to the extent of 115 % of the contract demand only. The consumer shall be charged for demand recorded in excess of 115% of contract demand (termed as Excess Demand) at the following rates: -

      i. **Energy charges for Excess Load**: No extra charges are applicable on the energy charges due to the excess demand or excess connected load

      ii. **Fixed Charges for Excess Demand:** These charges shall be billed as per following:

         1. **Fixed Charges for Excess Demand when the recorded maximum demand is up to 130% of the contract demand**: Fixed Charges for Excess Demand over and above the 115 % of contract demand shall be charged at 1.3 times the normal rate of Fixed Charges.

         2. **Fixed Charges for Excess Demand when the recorded maximum demand exceeds 130% of contract demand**: In addition to Fixed Charges in 1 above, recorded demand over and above 30 % of the contract demand shall be charged at 2 times the normal rate of Fixed Charges.

b) For connected load based tariff: The consumers availing supply at connected load based tariff shall restrict their actual connected load within the sanctioned load. However, in case the actual connected load in any month exceeds 115% of the sanctioned load, the tariff in this schedule shall apply to the extent of 115 % of the sanctioned load only. The consumer shall be charged for the connected load found in excess of 115% of the sanctioned load (termed as Excess Load) at the following rates:-

i. **Energy charges for Excess Load**: No extra charges are applicable on the energy charges due to the excess demand or excess connected load

ii. **Fixed Charges for Excess load:** These charges shall be billed as per following, for the period for which the use of excess load is determined in condition i) above:

1. **Fixed Charges for Excess load when the connected load is found up to 130% of the sanctioned load**: Fixed Charges for Excess load over and above the 115 % of sanctioned load shall be charged at 1.3 times the normal rate of Fixed Charges.

2. **Fixed Charges for Excess load when the connected load exceeds 130% of sanctioned load**: In addition to Fixed Charges in 1 above, connected load found over and above 30 % of the sanctioned load shall be charged at 2 times the normal rate of Fixed Charges.

c) The above billing for Excess connected Load or Excess Demand, applicable to consumers is without prejudice to the Distribution Licensee's right to ask for revision of agreement and other such rights that are provided under the Regulations notified by the Commission or under any other law.

The maximum demand of the consumer in each month shall be reckoned as four times the largest amount of kilovoltampere hours delivered at the point of supply of the consumer during any continuous fifteen minutes in that month.

7. Incentives/Rebates:

(a) **Rebate on advance payment**: For advance payment made before commencement of consumption period for which bill is prepared, a rebate of 1 % per month on the amount (excluding security deposit) which remains with the Distribution Licensee at the end of calendar month shall be credited to the account of the consumer after adjusting any amount payable to the Distribution Licensee.

(b) **Incentive for prompt payment**: An incentive for prompt payment @0.25% of the bill amount (excluding arrears, security deposit, meter rent and Government levies viz. Electricity Duty and Cess etc.) shall be given in case the payment is made at least 7 days in advance of the due date of payment where the current month billing amount is equal to or greater than Rs. One Lakh. The consumers in arrears shall not be entitled for this incentive.

(c) **Rebate for online bill payment:** Rebate of 0.5% on the total bill amount maximum up to Rs 20 and minimum of Rs 5 will be applicable for making online payment of bill.

(d) **Load Factor incentive:** Following slabs of incentive shall be allowed for consumers billed under demand based tariff:

Load factor	Concession in energy charges
For load factor above 25% and up to 30 % load factor on contract demand	12 paise per unit concession on the normal energy charges for all energy consumption over and above 25% load factor during the billing month
For load factor above 30% and up to 40 % load factor on contract demand	In addition to load factor concession available up to 30% load factor , concession at the rate of 24 paise per unit on the normal energy charges for all energy consumption over and above 30 % load factor during the billing month
For load factor above 40% load factor on contract demand	In addition to load factor concession available up to 40% load factor, concession at the rate of 36 paise per unit on the normal energy charges for all energy consumption over and above 40% load factor during the billing month

The **load factor** shall be calculated as per the following formula:

$$\text{Load factor (\%)} = \frac{\text{Monthly consumption X 100}}{\text{No. of hours in the billing month X Demand (KW)}}$$

i. Monthly consumption shall be units (kWh) consumed in the month excluding those received from sources other than Licensee.

ii. No. of Hours in billing month shall exclude period of scheduled outages in hours.

iii. Demand shall be maximum demand recorded or contract demand whichever is higher.

Note: The Load Factor (%) shall be rounded off to the nearest lower integer. The billing month shall be the period in number of days between the two consecutive dates of meter readings taken for the purpose of billing to the consumer for the period under consideration as a month.

(e) Power Factor Incentive:

If the average monthly power factor of the consumer is equal to or more than 85%, incentive shall be payable as follows:

Power Factor	Percentage incentive payable on billed energy charges
Above 85% up to 86%	0.5
Above 86% up to 87%	1.0
Above 87% up to 88%	1.5
Above 88% up to 89%	2.0
Above 89% up to 90%	2.5
Above 90% up to 91%	3.0
Above 91% up to 92%	3.5
Above 92% up to 93%	4.0
Above 93% up to 94%	4.5
Above 94% up to 95%	5.0
Above 95% up to 96%	6.0
Above 96% up to 97%	7.0
Above 97% up to 98%	8.0
Above 98% up to 99%	9.0
Above 99%	10.0

For this purpose, the “average monthly power factor” is defined as the ratio in percentage of total kilowatthours to the total kilovoltampere hours recorded during the month.

8. Other Terms and Conditions:

(a) The Sanctioned Load or Connected Load or Contract Demand should not exceed 112kW / 150 HP except where a higher limit is specified or the category is exempted from the ceiling on connected load. If the consumer exceeds his connected load or contract demand beyond this ceiling on more than two occasions in two billing months during the tariff period, the Distribution Licensee may insist on the consumer to avail HT supply.

(b) Metering Charges shall be billed as per schedule of Metering and Other Charges as prescribed in MPERC (Recovery of Expenses and other Charges for providing Electric Line or Plant used for the purpose of giving supply), Regulations (Revision-I), 2009. Part of a month will be reckoned as full month for purpose of billing.

(c) In case the cheque presented by the consumer is dishonoured, without prejudice to Distribution Licensee’s rights to take recourse to such other action as may be available under the relevant law, a service charge of Rs. 200 per cheque shall be levied in addition to delayed payment surcharge

(d) Other charges as stated in Schedule of Miscellaneous Charges shall also be applicable.

(e) **Welding Surcharge** is applicable to installations with welding transformers, where the connected load of welding transformers exceeds 25% of the total connected load and where suitable capacitors of prescribed capacity have not been installed to ensure power factor of not less than 0.8 (80%) lagging. Welding Surcharge of 75 (seventy five) paisa per unit shall be levied for the consumption of the entire installation during the month. However, no welding surcharge shall be levied when recorded power factor is 0.8 or more.

(f) For purposes of computing the connected load in kW of the welding transformers, a power factor of 0.6 (60%) shall be applied to the maximum current or kVA rating of such welding transformers.

(g) Existing LT power consumer shall ensure that LT capacitor of proper rating is provided. In this regard, the Madhya Pradesh Electricity Supply Code, 2013, as amended from time to time may be referred for guidance. It shall be the responsibility of the consumer to ensure that overall average power factor during any month is not less than 0.8 (80%) failing which the consumer shall be liable to pay low power factor surcharge on the entire billed amount against energy charges during the month at the rates given below:

1. **For the consumer whose meter is capable of recording average power factor**:

   a. Surcharge @ 1 % of energy charges for every 1% fall in power factor below 80% up to 75 %.

   b. Surcharge of 5% plus 1.25% of energy charges for every 1% fall in power factor below 75% up to 70%.

   The maximum limit of surcharge will be 10 % of the energy charges billed during the month.

2. **For LT consumer having meter not capable of recording average power factor**: The consumer shall ensure that LT capacitors of proper rating are provided and are in good working condition. In this regard, the Madhya Pradesh Electricity Supply Code, 2013, as amended from time to time may be referred for guidance. In case of failure to meet the above criteria, the consumer would be levied a low power factor surcharge of 10% on the entire billed amount against energy charges during the month and would be continued to be billed till such time the consumer meets the above criteria .

(h) Levy of welding / power factor surcharge as indicated hereinabove shall be without prejudice to the rights of the Licensee to disconnect the consumer's installation, if steps are not taken to improve the power factor by installing suitable shunt capacitors.

(i) In case of any dispute on applicability of tariff on a particular LT category, the decision of the Commission shall be final.

(j) The tariff does not include any tax, cess or duty, etc. on electrical energy that may be payable at any time in accordance with any law then in force. Such charges, if any, shall also be payable by the consumer in addition to the tariff charges and applicable miscellaneous charges.

(k) **Delayed payment Surcharge for all categories:** Surcharge at the rate of 1.25 % per month or part thereof on the amount outstanding (including arrears) will be payable if the bills are not paid up to due date subject to a minimum of Rs.5/- per month for total outstanding bill amount up to Rs. 500/- and Rs 10/ per month for amount of bill more than Rs.500/. The part of a month will be reckoned as full month for the purpose of calculation of delayed payment surcharge. The delayed payment surcharge will not be levied for the period after supply to the consumer is permanently disconnected. This provision shall not be applicable to that category where the levy of delayed payment surcharge has been prescribed separately.

(l) In case of conversion of LT connection into HT connection, it is mandatory on the part of both the consumer and the licensee to get the HT agreement executed before availing supply at HT.

(m) Use of mix loads in one connection: Unless otherwise permitted specifically in the tariff category, the consumer requesting for use of mix loads for different purposes shall be billed for the purpose for which the tariff is higher.

(n) Consumers in the notified Industrial Growth Centres area receiving supply under urban discipline shall be billed urban tariff.

(o) Charging facilities in respect of batteries utilised for electric/hybrid electric vehicles shall be billed in the respective tariff categories where such facilities are located. Charging of such batteries in residential premises is permitted for charging of consumer's own vehicles only.

(p) No change in the tariff or the tariff structure including minimum charges for any category of consumer is permitted except with prior written permission from the Commission. Any action taken without such written permission of the Commission shall be treated as null and void and shall also be liable for action under relevant provisions of the Electricity Act, 2003.

(q) All conditions prescribed herein shall be applicable to the consumer notwithstanding if any contrary provisions exist in the agreement entered into by the consumer with the licensee.

(r) If any difficulty arises in giving effect to any of the provisions of this order, the Commission may, by general or special order, direct the Licensees to do or undertake things, which in the opinion of the Commission is necessary or expedient for the purpose of removing the difficulties.

9. Additional conditions for Temporary Supply at LT:

(a) Temporary supply cannot be demanded by a prospective/ existing consumer as a matter of right but will normally be arranged by the Distribution Licensee when a requisition giving due notice is made. The temporary additional supply to an existing consumer also shall be treated as a separate service and charged subject to following conditions. However service under Tatkal Scheme shall be made available within 24 hours according to the charges specified in the order of the Commission regarding Schedule of Miscellaneous Charges.

(b) Fixed Charge and Energy Charge for temporary supply shall be billed at **1.3** times the normal charges as applicable to relevant category if not specified otherwise specifically.

(c) Estimated bill amount is payable in advance before serving the temporary connection subject to replenishment from time to time and adjustment as per final bill after disconnection. No interest shall be given to consumers for this advance payment.

(d) The Sanctioned load or connected load shall not exceed 112kW / 150 HP.

(e) The month for the purpose of billing of charges for temporary supply shall mean 30 days from the date of connection. Any period less than 30 days shall be treated as full month for the purpose of billing.

(f) Connection and disconnection charges and other miscellaneous charges shall be paid separately as may be specified in the Schedule of Miscellaneous Charges.

(g) Load factor concession shall not be allowed on the consumption for temporary connection.

(h) Power factor incentive/penalty shall be applicable at the same rate as applicable for permanent connection.

Annexure-3 (Tariff Schedules for High Tension Consumers)

ANNEXURE TO THE TARIFF ORDER PASSED BY MPERC FOR FINANCIAL YEAR 2017-18

MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION

TARIFF SCHEDULES FOR HIGH TENSION CONSUMERS

Table of Contents

Tariff Schedule- HV-1

RAILWAY TRACTION:

Applicability:

This Tariff shall apply to the Railways for Traction loads only.

Tariff:

S. No.	Category of consumer	Monthly Fixed Charge (Rs. per kVA of billing demand per month)	Energy Charge (paise / unit)
1	Railway Traction on 132 kV / 220 kV	310	590

Note: A rebate of Rs. 2 per Unit in energy charges is applicable. This rebate shall be applicable for next five years.

Specific Terms and Conditions:

(a) In order to give impetus to electrification of Railway network in the State, a rebate of 10% in energy charges for new Railway traction projects shall be allowed for a period of five years from the date of connection for such new projects for which agreements for availing supply from licensee are finalized during FY 2016-17. The rebate provided in earlier orders shall remain in force at the rate and for the duration as mentioned in those tariff orders.

(b) The dedicated feeder maintenance charges shall not be applicable.

(c) Guaranteed Annual Minimum Consumption shall be 1500 units (kWh) per kVA of Contract Demand. The method of billing of minimum consumption shall be as given in General Terms and Conditions of High Tension Tariff.

(d) The consumer shall at all times restrict their actual maximum demand within the contract demand. In case the actual maximum demand in any month exceeds 115% of the contract demand, the tariffs given in various schedules shall apply to the extent of the 115% of the contract demand only. The consumer shall be charged for excess demand computed as difference of recorded maximum demand and 115% of contract demand on fixed charges and while doing so, the other terms and conditions of tariff, if any, shall also be applicable on the said excess demand.

(e) **Energy charges for excess demand**: No extra charges are applicable on the energy charges due to the excess demand or excess connected load.

(f) The excess demand so computed as per above, if any, in any month shall be charged at the following rates:

(a) When the recorded maximum demand is up to 130% of contract demand- Excess Demand over and above 115 % of the contract demand—at the rate of Rs. 341 per kVA

(b) When the recorded maximum demand exceeds 130% of contract demand: - In addition to fixed charges in (a) above, recorded demand over and above 30 % of the contract demand shall be charged—at the rate of Rs. 465 per kVA

While doing so, other provisions of electricity tariff (such as tariff minimum charge etc.) will also be applicable on aforesaid excess demand.

(g) Power Factor Penalty:

i. If the average monthly power factor of the consumer falls below 90 percent, penalty will be levied at the rate of one percent of total energy charges for the month for each one percent fall in the average monthly power factor below 90 percent. **For determination of power factor, lag only logic shall be used and no power factor penalty shall be levied if leading power factor is recorded.**

ii. If the average monthly power factor of the consumer falls below 85 percent, the consumer shall be levied a penalty of 5% (five percent) plus @ 2% (two percent) for each one percent fall in his average monthly power factor below 85 percent, on the total amount of bill under the head of "Energy Charge". This penalty shall be subject to the condition that overall penalty on account of low power factor does not exceed 35%.

iii. For this purpose, the "average monthly power factor" is defined as the ratio expressed in percentage of total kilowatthours recorded to the total kilovoltampere hours recorded during the billing month. This ratio (%) shall be rounded off to the nearest integer figure and the fraction of 0.5 or above will be rounded to next higher integer and the fraction of less than 0.5 shall be ignored.

iv. Notwithstanding what has been stated above, if the average power factor of a new connection of the consumer is found to be less than 90% in any month during the first 6 (six) months from the date of connection, the consumer shall be entitled to a maximum period of six months to improve it to not less than 90% subject to following conditions:

- This period of six months shall be reckoned from the month in which the average power factor was found for the first time to be less than 90%.

- In all cases, the consumer will be billed penal charges for low power factor, but in case the consumer maintains the average power factor in subsequent three months (thus in all four months) to not less than 90%, the charges on account of low power factor billed during the said six months period, shall be withdrawn and credited in next monthly bills.

- The facility, as mentioned herein, shall be available not more than once to new consumer whose average power factor is less than 90% at any time during 6 months from the date of connection. Thereafter, the charges on account of low average power factor, if found less than 90%, shall be payable as by any other consumer.

(h) Emergency feed extension: Provided that if as a result of the emergency in the traction substation or in the transmission line supplying load or part thereof is transferred to an adjacent traction substation, the M.D. for the month for that adjacent traction substation shall be as the average of M.D. for previous three months during which no emergency had occurred.

(i) Other terms and conditions shall be as mentioned in the General Terms and Conditions of High Tension Tariff.

Tariff Schedule – HV - 2

COAL MINES:

Applicability:

This Tariff shall apply to the Coal Mines for power, ventilation, lights, fans, coolers, etc. which shall mean and include all energy consumed for coal mines and lighting in the offices, stores, canteen, compound lighting etc. and the consumption for residential use therein.

Tariff:

S. No.	Sub category	Monthly Fixed Charge (Rs./kVA of billing demand per month)	Energy Charge for consumption up to 50% load factor (paise / unit)	Energy Charge for consumption in excess of 50% load factor (paise / unit)
	Coal Mines			
	11 kV supply	620	670	580
	33 kV supply	630	650	570
	132 kV supply	640	630	560
	220 kV supply	650	600	530

Specific Terms and Conditions:

a. **Guaranteed Minimum Consumption** shall be on the following basis :

Supply Voltage	Guaranteed annual minimum consumption in units (kWh) per kVA of contract demand
For supply at 220 / 132 kV	1620
For supply at 33 / 11 kV	1200

Note: The method of billing of minimum consumption shall be as given in General Terms and Conditions of High Tension Tariff.

b. Time of Day Surcharge / Rebate: This surcharge/ rebate shall be as specified in General Terms and Conditions of High Tension Tariff.

c. Other terms and conditions shall be as specified under General Terms and Conditions of High Tension Tariff.

Tariff Schedule – HV - 3

INDUSTRIAL, NON-INDUSTRIAL AND SHOPPING MALLS

Applicability:

The **tariff HV-3.1(Industrial)** shall apply to all HT industrial consumers including mines (other than coal mines) for power, light and fan etc. which shall mean and include all energy consumed for factory and lighting in the offices, main factory building, stores, canteen, residential colonies of industries, compound lighting, common and ancillary facilities such as Banks, General purpose shops, Water supply, Sewage pumps, Police Stations etc. in the premises of the industrial units and Dairy units where milk is processed (other than chilling, pasteurization etc.) to produce other end products of milk.

The **tariff HV-3.2 (Non Industrial)** shall apply to establishments like Railway Stations, Offices, Hotels, Hospitals, Institutions etc. (excluding group of consumers) having mixed load for power, light and fan etc. which shall mean and include all energy consumed for lighting in the offices, stores, canteen, compound lighting etc. This shall also cover all other categories of consumers, defined in LT non-domestic category subject to the condition that the HT consumer shall not redistribute/sub-let the energy in any way to other person.

The **tariff HV-3.3 (Shopping malls)** shall apply to establishments of shopping malls having group of non-industrial consumers subject to the specific terms and conditions specified in (e) of this schedule.

Shopping Mall shall be a multi-storeyed shopping centre in an urban area having a system of enclosed walkways with collection of independent retail stores, services and parking areas constructed and maintained by a management firm/ developer as a unit.

The **tariff HV-3.4 (Power intensive industries)** shall apply to Mini Steel Plants (MSP), MSP with rolling mills/ sponge iron plants in the same premises, electro chemical/ electro thermal industry, Ferro alloy industry which shall mean and include all energy consumed for factory and lighting in the offices, main factory building, stores, canteen, residential colonies of industries, compound lighting etc.

Tariff:

S. No.	Sub-Category of consumer	Monthly Fixed Charge (Rs./kVA of billing demand per month)	Energy Charge for consumption up to 50% load factor (paise / unit)	Energy Charge for consumption in excess of 50% load factor (paise / unit)
3.1	**Industrial**			
	11 kV supply	330	660	600
	33 kV supply	510	650	550
	132 kV supply	610	605	525
	220/400 kV supply	620	565	500
3.2	**Non-Industrial**			
	11 kV supply	300	680	630
	33 kV supply	430	670	610
	132 kV supply	540	620	550
3.3	**Shopping Malls**			
	11 kV supply	270	680	625
	33 kV supply	375	660	590
	132 kV supply	510	600	540
3.4	**Power intensive industries**			
	33 kV supply	530	500	500
	132 kV supply	640	480	480
	220 kV supply	660	450	450

Specific Terms and Conditions:

(a) **Guaranteed Minimum Consumption** for all the above categories shall be on following basis :

Supply Voltage	Sub- category	Guaranteed annual minimum consumption in units (kWh) per kVA of contract demand
For supply at 220/132 kV	Rolling Mills	1200
	Educational institutions	720
	Others	1800
For supply at 33 / 11 kV	Educational institutions	600
	Contract demand up to 100 kVA	600
	Others	1200

Note: The method of billing of minimum consumption shall be as given in General Terms and Conditions of High Tension Tariff.

(b) **Time of Day Surcharge / Rebate:** This surcharge/ rebate shall be as specified in General Terms and Conditions of High Tension Tariff.

(c) **Rebate for supply through feeders feeding supply to predominantly rural areas**: HT consumers of this category receiving supply through rural feeders shall be entitled to 5 % rebate on Fixed Charges and 20 % reduction in Minimum Consumption (kWh) as specified above for respective voltage levels.

(d) **Rebate for existing HT connections:** A rebate of 10% in energy charges is applicable for incremental monthly consumption w.r.t consumption of FY 2015-16 same month.

Note: *In the event of enhancement of contract demand the incremental consumption shall be worked-out proportionately.*

(e) **Rebate for new HT connections:** A rebate of Rs 1/Unit or 20% whichever would be less is applicable in energy charges for new connection for the consumption recorded. The rebate shall be allowed for a period of five years from the date of connection for such new projects for which agreements for availing supply from licensee are finalized during FY 2016-17 and FY 2017-18. Provided these connections are served to **green field projects** only and no rebate is applicable for new connections obtain by virtue of change in ownership in existing connection.

Note: *the green field project shall be those projects where the consumer invests in the construction of new industry/plant from the ground up and there was no prior construction/structure on that particular land.*

(f) **Rebate for Captive power plant consumers:**

Applicability: The rebate shall be applicable to consumers

i. Who have been meeting their demand either fully or partially through their captive power plants during the last financial year.

ii. Who have recorded an incremental consumption i.e an increase in the units consumed from the Petitioners in any month of the current year (FY 2017-18) compared to the same month in last year (FY 2016-17).

iii. The rebate shall be applicable for a period of five years from the date of request submitted by the consumer to the Licensee during FY 2017-18

iv. The consumer shall be required to apply with the Licensee for the rebate indicating that he would be willing to avail supply from Licensee by switching consumption from his existing captive power plant.

v. A rebate of Rs 2 per unit shall be applicable on incremental units of the consumer subject to reduction in captive consumption as per the methodology given below.

	FY 2016-17		**FY 2017-18**		**Incremental Consumption from Discom**	**Reduction in Captive Generated**	**10% rebate in energy charges as per Para (d) of specific terms & conditions**	**Rs 2/ Unit rebate on incremental unit**
					Unit	**Units**		
	Consumption from Discom (Units)	Captive Generation Units	Consumption from Discom (Units)	Captive Generation (Units)	X= A2-A1	Y = B1-B2		
	(A1)	(B1)	(A2)	(B2)				
Scenario 1	100	90	110	90	10	0	10	0
Scenario 2	100	90	110	80	10	10	0	10
Scenario 3	100	90	110	70	10	20	0	10
Scenario 4	100	90	100	80	0	10	0	0
Scenario 5	100	90	120	80	20	10	10	10

X = the incremental consumption recorded by the captive consumer in any month of the current year compared to the same month of previous year.
And
Y = the quantum of reduction in units consumed from captive plant (self-consumption) achieved by the captive consumer in any month of the year compared to the same month in the last year.

For all other cases of incremental consumption i.e when X>Y, the existing rebate of 10% in energy charges per unit will be applicable on X-Y units (as per the rebate for incremental consumption given in para d in the Specific Terms & Conditions for HV-3).

Scenario 1: There seems to be no reduction in Captive Generation but only incremental consumption from Discom, hence a rebate of 10% in energy charges per unit is applicable on incremental consumption from Discom (as per the rebate for incremental consumption given in para d in the Specific Terms & Conditions for HV-3).

Scenario 2: The incremental consumption from Discom is due to the reduction of captive consumption by same quantum of units hence it will attract a rebate of Rs 2 per unit on incremental units.

Scenario 3: There is higher reduction in Captive Generation as compared to incremental Consumption from Discom hence difference of units as shown in the table, shall qualify for a Rebate of Rs 2.00 per unit.

Scenario 4: There shall not be any rebate due to absence of incremental Consumption from Discom irrespective of reduction in Captive Generation.

Scenario 5: This scenario depicts incremental consumption from Discom (X) and reduction in Captive Generation (Y) hence units corresponding to (X-Y) shall qualify for rebate of 10% in energy charges per unit (as per the rebate for incremental consumption given in para d in the Specific Terms & Conditions for HV-3) while units Y shall qualify for Rebate of Rs 2.00 per unit.

(g) Additional specific terms and conditions for shopping mall

(i) Individual end user shall not be levied a rate which is exceeding non-domestic-commercial tariff (LV 2.2) in case of LT connection and HT non-industrial tariff (HV 3.2) in case of HT connection, as determined by the Commission.

(ii) All end-users shall enter into a tripartite agreement with the Management Firm /developer of the shopping mall and the licensee for availing supply of electricity in the shopping mall in order to get the benefit of the tariff under this category.

(h) Other terms and conditions shall be as specified under General Terms and Conditions of High Tension Tariff.

Tariff Schedule – HV - 4

SEASONAL:-

Applicability:

This tariff shall be applicable to such seasonal industries / consumers requiring energy for the production purposes for maximum continuous one hundred eighty days and for a minimum period of three months. **If the declared season/off-season spreads over two tariff periods, then the tariff for the respective period shall be applicable.**
The licensee shall allow this tariff to any industry having seasonal use only.

This tariff shall also be applicable to mini/micro and small hydel plants to meet the essential requirement of power to maintain the plants without any ceiling as to the period for which supply shall be taken.

Tariff:

Category of consumers	**Monthly Fixed Charge (Rs./kVA of billing demand per month)**	**Energy Charge for consumption up to 50% load factor (paise / unit)**	**Energy Charge for consumption in excess of 50% load factor (paise / unit)**
During Season			
11 kV supply	340	630	570
33 kV supply	370	620	540
During Off-Season			
11 kV supply	Rs. 340 on 10% of contract demand or actual recorded demand during the season, whichever is higher	756 i.e. 120% of seasonal Energy Charge	Not applicable
33 kV supply	Rs. 370 on 10% of contract demand or actual recorded demand during the season, whichever is higher	744 i.e. 120% of seasonal Energy Charge	Not applicable

Specific Terms and Conditions:

a) **Guaranteed Annual Minimum Consumption** shall be 900 units (kWh) per kVA of contract demand. The method of billing of minimum consumption shall be as given in General Terms and Conditions of High Tension Tariff

b) **Time of Day Surcharge / Rebate:** This surcharge/ rebate shall be as specified in General Terms and Conditions of High Tension Tariff.

c) The consumer has to declare months of season and off season for the tariff year 2017-18 within 60 days of issue of tariff order and inform the same to the licensee. If the consumer has already informed the Licensee of his season/off-season months during this financial year prior to issue of this order, same shall be accepted and shall be valid for this tariff order.

d) The seasonal period once declared by the consumer cannot be changed during the year.

e) This tariff schedule is not applicable to composite units having seasonal and other category loads.

f) The consumer will be required to restrict his monthly off season consumption to 15% of highest of the average monthly consumption of the preceding three seasons. In case this limit is exceeded in any off season month, the consumer will be billed under HV-3.1 Industrial Schedule for the whole tariff year.

g) The consumer will be required to restrict his maximum demand during off season up to 30 % of the contract demand. In case the maximum demand recorded in any month of the declared off season exceeds 31.5% of CD (105% of 30% of CD), the consumer will be billed under HV 3.1 Industrial tariff for the whole financial year as per the tariff in force.

h) Other terms and conditions shall be as per the General Terms and Conditions of High Tension Tariff.

Tariff Schedule – HV - 5

IRRIGATION, PUBLIC WATER WORKS AND OTHER THAN AGRICULTURAL

Applicability:

The Tariff Category HV-5.1 shall apply to supply of power to lift irrigation schemes, group irrigation, Public Utility Water Supply schemes, sewage treatment plants /sewage pumping plants and for energy used in lighting pump house.
Note: Private water supply scheme, water supply schemes run by institutions for their own use/employees/townships etc. will not fall in this category but billed under the appropriate tariff category to which such institution belongs. In case water supply is being used for two or more different purposes then the highest tariff shall be applicable.

The tariff category HV-5.2 shall apply to supply of power to other than agriculture pump connections i.e. the connection for hatcheries, fisheries ponds, poultry farms, cattle breeding farms, grasslands, vegetables/ fruits/ floriculture/ mushroom growing units etc. and dairy (for those dairy units where only extraction of milk and its processing such as chilling, pasteurization etc. is done). However, in units where milk is processed to produce other end products of milk, billing shall be done under HV-3.1 (Industrial) category.

Tariff:

No.	Sub-Category	Monthly Fixed Charge (Rs. / kVA of billing demand per month)	Energy Charge (paise per unit)
5.1	**Public Water Works, Group Irrigation and Lift Irrigation Schemes**		
	11 kV supply	250	550
	33 kV supply	270	530
	132 kV supply	300	500
5.2	**Other than agricultural use**		
	11 kV supply	260	555
	33 kV supply	280	535
	132 kV supply	310	505

Specific Terms and Conditions:

(a) **Guaranteed Annual Minimum Consumption** shall be 720 units (kWh) per kVA of contract demand. The method of billing of minimum consumption shall be as given in General Terms and Conditions of High Tension Tariff.

(b) **Time of Day Surcharge / Rebate:** This surcharge/ rebate shall be as specified in General Terms and Conditions of High Tension Tariff.

(c) **Incentive for adopting Demand Side Management**

An **incentive** equal to 5 % energy charges shall be given on installation and use of energy saving devices (such as ISI energy efficient motors for pump sets). **Incentive** will only be admissible if full bill is paid within due dates failing which all consumed units will be charged at normal rates as the case may be. Such incentive will be admissible from the month following the month in which energy saving devices are put to use and its verification by a person authorized by the licensee. The incentive will continue to be allowed till such time these energy saving devices remain in service. The Distribution Licensee is required to arrange wide publicity for above incentive. The Distribution Licensee is required to place quarterly information regarding incentives provided on its web site.

(d) Other terms and conditions shall be per the General Terms and Conditions of High Tension Tariff.

Tariff Schedule – HV - 6

BULK RESIDENTIAL USERS

Applicability:

The tariff category **HV-6.1** is applicable for supply to industrial or any other township (e.g. that of University or academic institutions, hospitals, MES and Border villages etc.) for domestic purpose only such as lighting, fans, heating etc. provided that the connected load for essential common facilities such as Non-domestic supply in residential area, street lighting shall be within the limits specified hereunder:-

(i) Water supply and Sewage pumping, Hospital - **No limit**

(ii) Non-domestic/Commercial and other General purpose put together - **20 % of total connected load.**

The tariff category **HV-6.2** is applicable for supply to Registered Cooperative Group Housing Societies as per the Ministry of Power's notification no. S.O.798 (E) dated 9th June, 2005 and also to other Registered Group Housing Societies and individual domestic user, old age homes, day care centres for senior citizens, rescue houses and orphanages run by Govt./charitable trust**.** The Terms and Conditions to this category of consumers shall be applicable as per relevant provisions of the Madhya Pradesh Electricity Supply Code, 2013 as amended from time to time.

Tariff:

S. No.	**Category of consumers**	**Monthly Fixed Charge (Rs. / kVA of billing demand per month**	**Energy Charge for consumption up to 50% load factor (paise / unit)**	**Energy Charge for consumption in excess of 50% load factor (paise / unit)**
1	**For Tariff Sub-Category 6.1**			
	11 kV supply	290	585	530
	33 kV supply	310	570	510
	132 kV supply	340	530	480
2	**For Tariff Sub-Category 6.2**			
	11 kV supply	180	580	520
	33 kV supply	185	560	500
	132 kV supply	195	520	470

Specific Terms and Conditions:

(a) **Guaranteed Annual Minimum Consumption** shall be 780 units (kWh) per kVA of contract demand. The method of billing of minimum consumption shall be as given in General Terms and Conditions of High Tension Tariff.

(b) All individual end-users shall enter into a tripartite agreement with the Management of the Group Housing Society and the licensee for availing supply of electricity in the Society in order to get the benefit of the tariff under this category. The individual end user shall not be levied a rate exceeding the tariff applicable to the corresponding LT category.

(c) Other terms and conditions shall be as specified under General Terms and Conditions of High Tension Tariff.

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Tariff Schedule – HV - 7

SYNCHRONIZATION OF POWER FOR GENERATORS CONNECTED TO THE GRID

Applicability:

This Tariff shall apply to those generators who are already connected to the gridand seek to avail power for synchronization with the grid.

Tariff for all voltages:

Category	Energy Charge (Paise/unit)
Generators synchronization with Grid	875

Terms and Conditions:

(a) The supply for synchronization with the grid shall not exceed 15% of the capacity of unit of highest rating in the Power Plant.

(b) The condition for minimum consumption shall not be applicable to the generators including CPP. Billing shall be done for energy recorded on each occasion of availing supply during the billing month.

(c) The supply shall not be allowed to the CPP for production purpose for which they may avail stand-by support under the relevant Regulations.

(d) The synchronization with the grid shall only be made available after commissioning of the plant.

(e) For the synchronization with the grid, power shall be provided for a maximum period of 2 hours on each occasion.

(f) The generator including CPP shall execute an agreement with the Licensee for meeting the requirement of synchronization with the grid incorporating the above terms and conditions.

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GENERAL TERMS AND CONDITIONS OF HIGH TENSION TARIFF

The following terms and conditions shall be applicable to all HT consumer categories subject to Specific Terms and Conditions for that category as mentioned in the Tariff Schedule of respective category:

1.1 The contract demand shall be expressed in whole number only.

1.2 Character of Service: The character of service shall be as per the Madhya Pradesh Electricity Supply Code, 2013 as amended from time to time.

1.3 Point of Supply:

(a) The power will be supplied to the consumer ordinarily at a single point for the entire premises.

(b) In case of Railway Traction, the supply at each sub-station shall be separately metered and charged.

(c) In case of coal mines, the power will be supplied ordinarily at a single point for the entire premises. The power may, however, be supplied, on the request of the consumer, at more than one point subject to technical feasibility. In such cases, metering and billing will be done for each point of supply separately.

1.4 **Determination of Demand:** The **maximum demand** of the supply in each month shall be four times the largest number of kilovolt ampere hours delivered at the point of supply during any continuous 15 minutes during the month as per sliding window principle of measurement of demand.

1.5 **Billing demand:** The billing demand for the month shall be the actual maximum kVA demand of the consumer during the month or 90% of the contract demand, whichever is higher. In case power is availed through open access, the billing demand for the month shall be the actual maximum kVA demand during the month excluding the demand availed through open access for the period for which open access is availed or 90% of the contract demand, whichever is higher, subject to clause 3.4 of the M.P.Electricity Supply Code, 2013.

Note: The billing demand shall be rounded off to the nearest integer number i.e. the fraction of 0.5 or above will be rounded off to next integer figure and the fraction of less than 0.5 shall be ignored

1.6 **Tariff minimum consumption shall be billed** as follows :

1) The consumer shall be billed for guaranteed annual minimum consumption (kWh) based on number of units per kVA of contract demand specified for his category, irrespective of whether any energy is consumed or not during the year.

2) The consumer shall be billed one twelfth of guaranteed annual minimum consumption (kWh) specified for his category each month in case the actual consumption is less than above mentioned minimum consumption.

3) During the month in which actual cumulative consumption equals or greater than the annual minimum guaranteed consumption, no further billing of monthly minimum consumption shall be done in subsequent months of the financial year.

4) Tariff minimum consumption shall be adjusted in the month in which cumulative actual or billed monthly consumption exceeds cumulative monthly prorated minimum annual guaranteed consumption. If actual cumulative consumption does not get fully adjusted in that month, adjustment shall continue to be provided in subsequent months of the financial year. The following example illustrates the procedure for monthly billing of consumption where prorated monthly minimum consumption is 100 kWh based on annual consumption of 1200 kWh.

Month	Actual cumulative consumption (kWh)	Cumulative minimum consumption * (kWh)	Higher of 2 and 3 (kWh)	Already billed in the year (kWh)	To be billed in the month = (4-5) (kWh)
1	2	3	4	5	6
April	95	100	100	0	100
May	215	200	215	100	115
June	315	300	315	215	100
July	395	400	400	315	85
Aug	530	500	530	400	130
Sept	650	600	650	530	120
Oct	725	700	725	650	75
Nov	805	800	805	725	80
Dec	945	900	945	805	140
Jan	1045	1000	1045	945	100
Feb	1135	1100	1135	1045	90
March	1195	1200	1200	1135	65

1.7 **Rounding off:** All bills will be rounded off to the nearest rupee i.e. up to 49 paisa shall be ignored and 50 paisa upwards shall be rounded off to next Rupee.

Incentive/ Rebate / penalties

1.8 **Power Factor Incentive:**

Power factor incentive shall be payable as follows:

Power Factor	**Percentage incentive payable on billed energy charges**
Above 95% and up to 96%	1.0 (one percent)
Above 96% and up to 97%	2.0 (two percent)
Above 97% and up to 98%	3.0 (three percent)
Above 98 % up to 99%	5.0 (five percent)
Above 99 %	7.0 (seven percent)

1.9 **Load factor calculation**

1) The **Load Factor** shall be calculated as per the following formula:

$$\text{Load Factor (\%)} = \frac{\text{Monthly consumption X 100}}{\text{No. of hours in the billing month X Demand (KVA) X PF}}$$

i. Monthly consumption shall be units (kWh) consumed in the month excluding those received from sources other than Licensee.

ii. No. of Hours in billing month shall exclude period of scheduled outages in hours.

iii. Demand shall be maximum demand recorded or contract demand whichever is higher.

iv. Power factor shall be 0.9 or actual monthly power factor whichever is higher

Note: The load factor (%) shall be rounded off to the nearest lower integer. In case the consumer is getting power through open access, units set off from other sources, the net energy (after deducting units set off from other sources, from the consumed units) billed to consumer shall only be taken for the purpose of working out load factor. The billing month shall be the period in number of days between the two consecutive dates of meter readings taken for the purpose of billing to the consumer.

1.10 **Incentive for advance payment:** For advance payment made before commencement of consumption period for which bill is prepared, an incentive of 1 % per month on the amount which remains with the licensee at the end of calendar month (excluding security deposit) shall be credited to the account of the consumer after adjusting any amount payable to the licensee.

1.11 **Rebate for online bill payment:** Rebate of 0.5% on the total bill amount maximum up to Rs 1000 will be applicable for making online payment of bill.

1.12 **Prompt payment incentive**: An incentive for prompt payment @0.25% of bill amount (excluding arrears, security deposit, meter rent and Government levies viz. Electricity Duty and Cess) shall be given in case the payment is made at least 7 days in advance of the due date of payment where the current month billing amount is equal to or greater than Rs. One Lakh. The consumers in arrears shall not be entitled for this incentive.

1.13 **Time of Day (ToD) Surcharge / Rebate:** This scheme is applicable to the categories of consumers where it is specified. This is applicable for different periods of the day i.e. normal period, peak load and off-peak load period. The surcharge / rebate on energy charges according to the period of consumption shall be as per following table:

Sr. No.	**Peak / Off-peak Period**	**Surcharge / Rebate on energy charges on energy consumed during the corresponding period**
1.	Evening peak load period (6 PM to 10 PM)	Normal rate of Energy Charge
2.	Off peak load period (10 PM to 6 AM next day)	20 % of Normal rate of Energy Charge as Rebate

Note: Fixed charges shall always be billed at normal rates i.e. ToD Surcharge / Rebate shall not be applied on Fixed Charges

1.14 **Power Factor Penalty (For consumers other than Railway Traction HV-1)**

(i) If the average monthly power factor of the consumer falls below 90 percent, the consumer shall be levied a penalty @ 1% (one percent), for each one percent fall in his average monthly power factor below 90 percent, on total amount of bill under the head of "Energy Charges".

(ii) If the average monthly power factor of the consumer falls below 85 percent, the consumer shall be levied a penalty of 5% (five percent) plus @ 2% (two percent) for each one percent fall in his average monthly power factor below 85 percent. , on the total amount of bill under the head of "Energy Charges". This penalty shall be subject to the condition that overall penalty on account of low power factor does not exceed 35%.

(iii) Should the average monthly power factor fall below 70%, the Distribution Licensee reserves the right to disconnect the consumer's installation till steps are taken to improve the same to the satisfaction of the Distribution Licensee. This is, however, without prejudice to the levy of penalty charges for low power factor in the event of supply not being disconnected.

(iv) For this purpose, the "average monthly power factor" is defined as the ratio expressed in percentage of total kilowatthours to the total kilovoltampere hours recorded during the billing month. This ratio (%) shall be rounded off to the nearest integer figure and the fraction of 0.5 or above will be rounded to next higher integer and the fraction of less than 0.5 shall be ignored.

(v) Notwithstanding what has been stated above, if the average monthly power factor of a new consumer is found to be less than 90% in any month during the first 6 (six) months from the date of connection, the consumer shall be entitled to a maximum period of six months to improve it to not less than 90% subject to following conditions:

a) This period of six months shall be reckoned from the month following the month in which the average power factor was found for the first time to be less than 90%.

b) In all cases, the consumer will be billed the penal charges for low power factor, but in case the consumer maintains the average monthly power factor in subsequent three months (thus in all four months) to not less than 90%, the charges on account of low power factor billed during the said six months period, shall be withdrawn and credited in next monthly bills.

c) The facility, as mentioned herein, shall be available not more than once to new consumer whose average monthly power factor is less than 90% in any month during 6 months from the date of connection. Thereafter, the charges on account of low average power factor, if found less than 90%, shall be payable as applicable to any other consumer.

1.15 **Additional Charges for Excess Demand**

i. The consumer shall at all times restrict their actual maximum demand within the contract demand. In case the actual maximum demand in any month exceeds 115% of the contract demand, the tariffs given in various schedules shall apply to the extent of the 115% of the contract demand only. The consumer shall be charged for excess demand computed as difference of recorded maximum demand and 115% of contract demand on fixed charges and while doing so, the other terms and conditions of tariff, if any, shall also be applicable on the said excess demand. The excess demand so computed, if any, in any month shall be charged at the following rates from all consumers except Railway Traction.

ii. **Energy charges for excess demand**: No extra charges are applicable on the energy charges due to the excess demand or excess connected load.

iii. **Fixed charges for Excess Demand: -** These charges shall be billed as per following:

1. **Fixed charges for Excess Demand when the recorded maximum demand is up to 130% of the contract demand:** Fixed charges for Excess Demand over and above the 115 % of contract demand shall be charged at 1.3 times the normal fixed charges.

2. **Fixed charges for Excess Demand when the recorded maximum demand exceeds 130% of contract demand**: In addition to fixed charges in 1 above, recorded demand over and above 30 % of the contract demand shall be charged at 2 times the normal fixed charges.

   Example for fixed charges billing for excess demand: If the contract demand of a consumer is 100 kVA and the maximum demand recorded in the billing month is 140 kVA, the consumer shall be billed towards fixed charges as under:-

   a) Up to 115 kVA at normal tariff.

   b) Above 115 kVA up to 130 kVA i.e. for 15 kVA at 1.3 times the normal tariff.

   c) Above 130 kVA up to 140 kVA i.e. for 10 kVA at 2 times the normal tariff.

iv. The excess demand computed in any month will be charged along with the monthly bill and shall be payable by the consumer.

v. The billing of excess demand at higher tariff is without prejudice to the Licensee's right to discontinue the supply in accordance with the provisions contained in the Madhya Pradesh Electricity Supply Code, 2013.

1.16 **Delayed Payment Surcharge:** Surcharge at the rate of 1.25 % per month or part thereof on the amount outstanding (including arrears) will be payable if the bills are not paid up to due date. The part of a month will be reckoned as full month for the purpose of calculation of delayed payment surcharge. The delayed payment surcharge will not be applicable after supply to the consumer is permanently disconnected.

1.17 **Service Charge for Dishonoured Cheques:** In case the cheque(s) presented by the consumer are dishonoured, a service charge at the rate of Rs. 1000/- per cheque shall be levied in addition to delayed payment surcharge as per rules. This is without prejudice to the Distribution Licensee's rights to take action in accordance with any other applicable law.

1.18 **Temporary supply at HT:** The character of temporary supply shall be as defined in the M.P. Electricity Supply Code, 2013. If any consumer requires temporary supply then it shall be treated as a separate service and charged subject to the following conditions:

(a) Fixed Charges and Energy Charges shall be charged at 1.3 times the normal tariff. The fixed charges shall be recovered for the number of days for which the connection is availed during the month by prorating the monthly fixed charges. Month shall be considered as the number of total days in that calendar month.

(b) The consumer shall guarantee minimum consumption (kWh) as applicable to the permanent consumers on pro-rata basis based on number of days as detailed below:

$$\text{Minimum consumption for additional supply for temporary period} = \frac{\text{Annual minimum consumption as applicable to permanent supply X No. of days of temporary connection}}{\text{No. of days in the year}}$$

(c) The billing demand shall be the demand requisitioned by the consumer or the highest monthly maximum demand during the period of supply commencing from the month of connection ending with the billing month, whichever is higher. For example:

Month	Recorded Maximum Demand (kVA)	Billing Demand (kVA)
April	100	100
May	90	100
June	80	100
July	110	110
August	100	110
September	80	110
October	90	110
November	92	110
December	95	110
January	120	120
February	90	120
March	80	120

(d) The consumer shall pay the estimated charges in advance, before serving the Temporary Connection subject to replenishment from time to time and adjustment as per final bill after disconnection. No interest shall be given on such advance payment.

(e) The consumer shall pay rental for the metering system.

(f) Connection and Disconnection Charges shall also be paid.

(g) In case of existing HT consumer, the temporary connection may be given through existing permanent HT connection on following methodology of assessment:

i. Fixed Charges shall be charged at 1.3 times the normal tariff

ii. Deemed contract demand (DCD) = CD for permanent connection + sanctioned demand for temporary connection.

iii. Billing demand and fixed charges for the month shall be worked out in the following manner :

1. When recorded MD in the month is found to be less than deemed CD for the month, fixed charges for the month shall be sum of fixed charges at temporary tariff on 100% temporary sanctioned demand + fixed charge at normal tariff on highest of **a** or **b**,

   where **a** is Recorded MD minus temporary sanctioned demand and **b** is 90% CD of permanent connection.

2. When recorded MD in the month is found to be equal to deemed CD for the month, fixed charges for the month shall be sum of fixed charges at normal tariff on 100% CD for permanent connection + fixed charges at temporary tariff on 100% temporary sanctioned demand.

3. When recorded MD in the month is found to be in excess of deemed CD for the month, fixed charges for the month shall be sum of fixed charges at normal tariff on 100% CD for permanent connection + fixed charges at temporary tariff on 100% temporary sanctioned demand + fixed charges on 100% excess demand over and above deemed CD at 1.5 times of temporary tariff.

4. The fixed charges shall be recovered for the number of days for which the connection is availed during the month by prorating the monthly fixed charges. Month shall be considered as the number of total days in that calendar month.

iv. The consumption corresponding to Permanent connection i.e. (A)

during the month shall be billed in the following manner:

$$A = \frac{\text{Contract demand (Permanent)}}{\text{Deemed contract demand or actual demand whichever is higher}} \times \text{Total consumption}$$

v. The consumption corresponding to temporary sanctioned demand during the month i.e. (B) shall be billed at 1.3 times the normal energy charges and shall be billed in the following manner:

sanctioned demand for temporary connection

B= -- x total consumption

Deemed contract demand or actual demand

recorded whichever is higher.

vi. Consumption during the month corresponding to excess demand i.e. (C), if any, shall be calculated in the following manner:

C= total recorded consumption minus (consumption corresponding to permanent connection i.e. A + consumption corresponding to temporary sanctioned demand i.e. B)

vii. The demand recorded in excess of deemed contract demand shall be treated as Excess Demand. For billing purposes such Excess demand, if any, in any month shall be treated as pertaining to temporary connection load and shall be charged at 1.5 times the normal fixed charges and energy charges of temporary connection. Additional charges for excess demand recorded during the period of temporary connection shall be calculated as given below :

Fixed charges for excess demand = fixed charges per kVA for temporary connection * excess demand* 1.5 (one and half)

Energy charges for consumption corresponding to excess demand = energy charges per unit for temporary connection * 1.5(one and half)*(consumption corresponding to excess demand i.e. C)

(h) Load factor incentive shall not be allowed on the consumption for temporary connection.

(i) Power factor incentives/penalties and the condition for Time of Day Surcharge/ rebate shall be applicable at the same rate as for permanent connection.

Other Terms and Conditions for permanent connections:

1.19 The existing 11 kV consumer with contract demand exceeding 300 kVA who want to continue to avail supply at 11 kV at his request, shall be required to pay additional charge at 3 % on the total amount of Fixed Charges and, Energy Charges billed in the month.

1.20 The existing 33 kV consumer with contract demand exceeding 10,000 kVA who want to continue to avail supply at 33 kV at his request, shall be required to pay additional charge at 2% on the total amount of Fixed Charges and Energy Charges billed in the month.

1.21 The existing 132 kV consumer with contract demand exceeding 50,000 kVA who want to continue to avail supply at 132 kV at his request, shall be required to pay additional charge at 1% on the total amount of Fixed Charges and Energy Charges billed in the month.

1.22 Metering Charges shall be billed as per schedule of Metering and Other Charges as prescribed in MPERC (Recovery of Expenses and other Charges for providing Electric Line or Plant used for the purpose of giving Supply), Regulations (Revision-I), 2009 as amended from time to time. Part of a month will be reckoned as full month for purpose of billing.

1.23 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 then in force. Such charges, if any, shall be payable by the consumer in addition to the tariff charges.

1.24 In case any dispute arises regarding interpretation of this tariff order and/or applicability of this tariff, the decision of the Commission will be final and binding.

1.25 No changes in the tariff or the tariff structure including minimum charges for any category of consumer are permitted except with prior written permission of the Commission. Any order without such written permission of the Commission will be treated as null and void and also shall be liable for action under relevant provisions of the Electricity Act, 2003.

1.26 In case a consumer, at his request, avails supply at a voltage higher than the standard supply voltage as specified under relevant category, he shall be billed at the rates applicable for actually availed supply voltage and no extra charges shall be levied on account of higher voltage.

1.27 All consumers to whom fixed charges are applicable are required to pay fixed charges in each month irrespective of whether any energy is consumed or not.

1.28 If any difficulty arises in giving effect to any of the provisions of this order, the Commission may, by general or special order, direct the Licensees to do or undertake things, which in the opinion of the Commission is necessary or expedient for the purpose of removing the difficulties.

1.29 All conditions prescribed herein shall be applicable notwithstanding if any contrary provisions, exist in the agreement entered into by the consumer with the licensee.
