



Approval of Business Plan, MYT ARR and Tariff for State Discoms for FY
2017-18 to FY 2019-20 and True-up of FY 2014-15



UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION

LUCKNOW

Petition No. 1203 / 2017, 1204 / 2017, 1205 / 2017, 1206 / 2017 and 1207 / 2017

**APPROVAL OF BUSINESS PLAN, DETERMINATION OF MULTI YEAR AGGREGATE REVENUE
REQUIREMENT (ARR) AND TARIFF FOR THE FIRST CONTROL PERIOD (FINANCIAL YEAR 2017-18
TO FINANCIAL YEAR 2019-20)**

AND

TRUE-UP OF ARR AND REVENUE FOR FY 2014-15

FOR

Madhyanchal Vidyut Vitran Nigam Ltd., Lucknow (MVVNL) – (Petition No. - 1203 / 2017)

Purvanchal Vidyut Vitran Nigam Ltd., Varanasi (PuVVNL) – (Petition No. - 1204 / 2017)

Pashchimanchal Vidyut Vitran Nigam Ltd., Meerut (PVVNL) – (Petition No. - 1205 / 2017)

Dakshinanchal Vidyut Vitran Nigam Ltd., Agra (DVVNL) – (Petition No. - 1206 / 2017)

Kanpur Electricity Supply Company Ltd., Kanpur (KESCO) – (Petition No. - 1207 / 2017)

ORDER UNDER SECTION 62 & 64 OF

THE ELECTRICITY ACT, 2003

_____, 2017



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Before

UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION

Petition No. 1203 / 2017, 1204 / 2017, 1205 / 2017, 1206 / 2017 and 1207 / 2017

IN THE MATTER OF:

APPROVAL OF BUSINESS PLAN, DETERMINATION OF MULTI YEAR AGGREGATE REVENUE REQUIREMENT (ARR) AND TARIFF FOR THE FIRST CONTROL PERIOD (FINANCIAL YEAR 2017-18 TO FINANCIAL YEAR 2019-20) AND TRUE UP FOR FY 2014-15.

And

IN THE MATTER OF:

Madhyanchal Vidyut Vitran Nigam Ltd., Lucknow (MVVNL) – (Petition No. - 1203 / 2017)
Purvanchal Vidyut Vitran Nigam Ltd., Varanasi (PuVVNL) – (Petition No. - 1204 / 2017)
Pashchimanchal Vidyut Vitran Nigam Ltd., Meerut (PVVNL) – (Petition No. - 1205 / 2017)
Dakshinanchal Vidyut Vitran Nigam Ltd., Agra (DVVNL) – (Petition No. - 1206 / 2017)
Kanpur Electricity Supply Company Ltd., Kanpur (KESCO) – (Petition No. - 1207 / 2017)

Before

UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION

ORDER

The Commission having deliberated upon the above Petitions and the subsequent filings by the Petitioners, the Petitions thereafter being admitted on September 4, 2017 and having considered the views / comments / suggestions / objections / representations received during the course of the above proceedings and also in the public hearings held, in exercise of power vested under Sections 61, 62, 64 and 86 of the Electricity Act, 2003, hereby passes this Order signed, dated and issued on _____, 2017. The Licensees, in accordance with Regulation 13.3 of the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014, shall publish within three days, the Tariffs and Regulatory Surcharge etc. approved herein by the Commission in at least two (2) English and two (2) Hindi daily newspapers having wide circulation in the area of supply and shall put up the approved tariff / rate schedule on its internet website and make available for sale, a booklet both in English and Hindi containing such approved tariff / rate schedule, as the case may be, to any person upon payment of reasonable



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reproduction charges. The tariff so published shall be in force after seven days from the date of such publication of the tariffs and shall, unless amended or revised, continue to be in force for such period as may be stipulated therein. The Regulatory surcharge shall be applicable as detailed in this Order. The Commission may issue clarification / corrigendum / addendum to this Order as it deems fit from time to time with the reasons to be recorded in writing



1. BACKGROUND AND BRIEF HISTORY

1.1 BACKGROUND:

1.1.1 The Uttar Pradesh Electricity Regulatory Commission (UPERC) was formed under U.P. Electricity Reforms Act, 1999 by Government of Uttar Pradesh (GoUP) in one of the first steps of reforms and restructuring process of the power sector in the State. Thereafter, in pursuance of the reforms and restructuring process, the erstwhile Uttar Pradesh State Electricity Board (UPSEB) was unbundled into the following three separate entities through the first reforms Transfer Scheme dated January 14, 2000:

- Uttar Pradesh Power Corporation Limited (UPPCL): vested with the function of Transmission and Distribution within the State.
- Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL): vested with the function of Thermal Generation within the State
- Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL): vested with the function of Hydro Generation within the State.

1.1.2 Through another Transfer Scheme dated January 15, 2000, assets, liabilities and personnel of Kanpur Electricity Supply Authority (KESA) under UPSEB were transferred to Kanpur Electricity Supply Company Limited (KESCO), a company registered under the Companies Act, 1956.

1.1.3 After the enactment of the Electricity Act, 2003 (EA 2003) the need was felt for further unbundling of UPPCL (responsible for both Transmission and Distribution functions) along functional lines. Therefore, the following four new Distribution companies (hereinafter collectively referred to as 'Discoms' / 'Distribution Licensees') were created vide Uttar Pradesh Transfer of Distribution Undertaking Scheme, 2003 dated August 12, 2003 to undertake distribution and supply of electricity in the areas under their respective zones specified in the scheme:

- Dakshinanchal Vidyut Vitran Nigam Limited (Agra Discom or DVVNL)
- Madhyanchal Vidyut Vitran Nigam Limited (Lucknow Discom or MVVNL)
- Paschimanchal Vidyut Vitran Nigam Limited (Meerut Discom or PVVNL)
- Purvanchal Vidyut Vitran Nigam Limited (Varanasi Discom or PuVVNL)

1.1.4 Under this scheme, the role of UPPCL was specified as "Bulk Supply Licensee" as per the license granted by the Commission and as "State Transmission Utility" under sub-section (1) of Section 27-B of the Indian Electricity Act, 1910.



- 1.1.5 Subsequently, the Uttar Pradesh Power Transmission Corporation Limited (UPPTCL), a Transmission Company (Transco), was incorporated under the Companies Act, 1956 by an amendment in the 'Object and Name' clause of the Uttar Pradesh Vidyut Vyapar Nigam Limited. The Transco is entrusted with the business of transmission of electrical energy to various utilities within the State of Uttar Pradesh. This function was earlier vested with UPPCL. Further, Government of Uttar Pradesh (GoUP), in exercise of power under the Section 30 of the EA 2003, vide notification No. 122/U.N.N.P/24-07 dated July 18, 2007 notified Uttar Pradesh Power Transmission Corporation Limited as the "State Transmission Utility" of Uttar Pradesh. Subsequently, on December 23, 2010, the Government of Uttar Pradesh notified the Uttar Pradesh Electricity Reforms (Transfer of Transmission and Related Activities Including the Assets, Liabilities and Related Proceedings) Scheme, 2010, which provided for the transfer of assets and liabilities from UPPCL to UPPTCL with effect from April 1, 2007.
- 1.1.6 Thereafter, on January 21, 2010, as the successor Distribution companies of UPPCL (a deemed Licensee), the Distribution Companies, which were created through the notification of the UP Power Sector Reforms (Transfer of Distribution Undertakings) Scheme, 2003 were issued fresh Distribution Licenses which replaced the UP Power Corporation Ltd (UPPCL) Distribution, Retail & Bulk Supply License, 2000.

1.2 DISTRIBUTION TARIFF REGULATIONS

- 1.2.1 Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2006 (hereinafter referred to as the "Distribution Tariff Regulations, 2006") were notified on October 6, 2006. These Regulations were applicable for the purposes of ARR filing and Tariff determination of all the Distribution Licensees within the State of Uttar Pradesh from FY 2007-08 onwards.
- 1.2.2 Further the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 (hereinafter referred to as the "Distribution MYT Regulations, 2014") were notified on May 12, 2014. These Regulations are applicable for determination of Tariff in all cases covered under these Regulations from April 1, 2015 to March 31, 2020, unless extended by an Order of the Commission. Embarking upon the MYT framework, the Commission has divided the period of five years (i.e. April 1, 2015 to March 31, 2020) into two periods namely –
- a) Transition period (April 1, 2015 to March 31, 2017)



b) Control period (April 1, 2017 to March 31, 2020)

1.2.3 The transition period being of two years ended in FY 2016-17. The Distribution Tariff Regulations, 2006 shall remain applicable during the Truing Up for the transition period (FY 2014-15 to FY 2016-17) whereas, the first control period of the MYT Period (FY 2017-18 to FY 2019-20), shall be governed in accordance to the Distribution MYT Regulations, 2014.



2. PROCEDURAL HISTORY

2.1 BUSINESS PLAN, MULTI YEAR ARR & TARIFF AND TRUE UP PETITION BY THE LICENSEES

- 2.1.1 As per the provisions stipulated in Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014, the Licensees under Regulation 12.1 were required to file before this Commission a Petition for approval of Business Plan for the first control period i.e. FY 2017-18 to FY 2019-20 complete in all respect on or before June 1, 2016. Further, as per the provisions stipulated in Regulation 12.2 the Licensees were required to file before this Commission a Petition for approval of Aggregate Revenue Requirement (ARR) and Multi Year Tariff for the first control period i.e. Financial Year 2017-18 to Financial Year 2019-20 and for Annual Performance Review and Truing Up, complete in all respect on or before November 1, 2016.
- 2.1.2 The Distribution Licensees namely KESCO filed the Petition for Approval of Business Plan, determination of Aggregate Revenue Requirement and Multi Year Tariff (MYT) for the first control period i.e. Financial Year 2017-18 to Financial Year 2019-20 on November 30, 2016. The Commission observed that the Petition was not maintainable on grounds of incomplete information and the same was returned vide Commission's Letter No. UPERC / Secy / D (Tariff) / 16 - 1794 dated December 22, 2016.
- 2.1.3 The Distribution Licensees (herein referred as 'Petitioners' or 'Licensees') namely PuVVNL, PVVNL, MVVNL, DVVNL filed their petitions for Business Plan along with the ARR / Tariff petition for Control Period i.e. Financial Year 2017-18 to Financial Year 2019-20 and True Up Petitions for FY 2014-15 on June 21, 2017, whereas KESCO (herein referred as 'Petitioner' or 'Licensee') filed the revised Petition on June 23, 2017. The Petitions filed did not contain any Tariff Proposal (Rate Schedule) to bridge the revenue gap through tariff hike or through any other mechanism. Further, the Rate Schedule was submitted later on August 8, 2017.
- 2.1.4 The Commission observed that none of the Licensees submitted their petitions as per the timeline provided in the UPERC MYT Distribution Regulations, 2014, i.e. Business Plan on or before June 1, 2016 and their ARR / Tariff Petitions for the MYT control period incorporating the trajectories for the specific variables approved in the Business Plan latest by 1st November, 2016. As the Business Plan Petition and the MYT ARR Petitions have been submitted at the same time, the Commission is of the view that in case the Petition for Business Plan is processed first, and approved by the Commission and then the Petitioner is



asked to submit the revised MYT Petition based on the approved Business Plan, it would cause undue delay to the already delayed Tariff determination process for the first Control Period by around 6-8 months.

- 2.1.5 The Hon'ble ATE in its Judgment in OP No. 1 of 2011 dated November 11, 2011 has directed the State Commissions to ensure the timely determination of Tariff for the utilities. The relevant extracts from the mentioned Judgement are reproduced below:

“65. In view of the analysis and discussion made above, we deem it fit to issue the following directions to the State Commissions:

... (ii) It should be the endeavour of every State Commission to ensure that the tariff for the financial year is decided before 1st April of the tariff year. For example, the ARR & tariff for the financial year 2011-12 should be decided before 1st April, 2011. The State Commission could consider making the tariff applicable only till the end of the financial year so that the licensees remain vigilant to follow the time schedule for filing of the application for determination of ARR/tariff. (iii) In the event of delay in filing of the ARR, truing-up and Annual Performance Review, one month beyond the scheduled date of submission of the petition, the State Commission must initiate suo-moto proceedings for tariff determination in accordance with Section 64 of the Act read with clause 8.1 (7) of the Tariff Policy.

....”

- 2.1.6 In view of the above Judgment, and to ensure the timely Tariff Determination, the Commission, considered it appropriate to process the Business Plan Petition and MYT Petition simultaneously and, accordingly, the Commission decided to club the Petitions for approval of Business Plan and Multi Year Tariff and hence the Commission is issuing this single Order on approval of Business Plan and Multi Year Tariff. However, Commission would like to caution the Petitioner that such delays in future in filing of truing up Petition during this control period would be dealt with as per Hon'ble APTEL's directions. Furthermore, this would be treated as non-compliance of relevant provisions of various Regulations and may entail appropriate punitive action against the Petitioner.

2.2 PRELIMINARY SCRUTINY OF THE PETITIONS

- 2.2.1 A preliminary analysis of the Petitions was conducted by the Commission wherein it was observed that the ARR Petition did not propose any mechanism



to bridge the revenue gap, which was in contravention to the stipulation of Regulation 12.3 of the Distribution MYT Regulations, 2014.

- 2.2.2 In this regard, the first Deficiency Note was issued by the Commission on July 18, 2017 directing the Licensees to submit its proposal for bridging the revenue gap. Such deficiency note also sought clarifications on other issues in regard to the ARR Petition filed by the Licensees. The Commission had granted a time of 10 days to respond on the deficiency note, i.e., by July 27, 2017. Further, the Commission on August 16, 2017 sent an email to UPPCL / State Discoms / RAU for additional information / clarification pertaining to Petitions.
- 2.2.3 The Distribution Licensees submitted the Rate schedule on August 8, 2017. Based on the Rate schedule submitted by the Licensees, the Commission issued a second deficiency note on August 8, 2017 which included queries mainly related to the Rate schedule proposed by the Licensees for FY 2017-18. The Commission also directed the Licensees to submit its replies within 7 days.
- 2.2.4 The Distribution Licensees submitted their replies to the first and second deficiency notes on August 18, 2017 & August 24, 2017 respectively.
- 2.2.5 The Hon'ble ATE, in its Judgment dated October 21, 2011 in Appeal No. 121 of 2010 has ruled that if the audited accounts for the previous year are not available for some reasons then the audited accounts for the year just prior to the previous year along with the provisional accounts for the previous year may be considered. Thus, based on the above, the audited accounts for FY 2014-15 (i.e., year just prior to the previous year) have been considered for true-up of FY 2014-15. Further, the provisional accounts for FY 2015-16 (previous year) and numbers of FY 2016-17 have been considered for the current proceedings in the matter of approval of Aggregate Revenue Requirement and Tariff Determination for the first Control Period of FY 2017-18 to FY 2019-20 in terms of Distribution MYT Regulations, 2014.

2.3 ADMITTANCE OF THE TRUE-UP, BUSINESS PLAN AND ARR / TARIFF PETITIONS FOR MYT CONTROL PERIOD

- 2.3.1 The Commission through its Admittance Order dated September 4, 2017 directed Distribution Licensees (MVVNL, DVVNL, PuVVNL, PVVNL & KESCO) to publish within 3 days from the issue of this Order, the Public Notice detailing the summary and highlights of the proposed Business Plan for the first control period i.e. Financial Year 2017-18 to Financial Year 2019-20, proposed Aggregate Revenue Requirement, Multi Year Tariff (MYT) for the first control period i.e. Financial Year 2017-18 to Financial Year 2019-20 and True up Petition for FY 2014-15 and the proposed Rate Schedule for FY 2017-18 (Tariff Proposed



for different categories / sub-categories of consumers) along with their website address, in at least two (2) English and two (2) Hindi daily newspapers having wide circulation in the area of supply for two successive days inviting views / comments / suggestions / objections / representations within 15 days from the date of publication of the Public Notice(s) by all stakeholders and public at large. The Commission also directed that the Public Notice should also contain the details of the cumulative revenue gap (regulatory asset) and its treatment, proposed 'Regulatory Surcharge', Distribution losses, average power purchase cost, average cost of supply, average retail Tariff realised from each category / sub-category of consumers and the % of average Tariff rise for each category / sub-category of consumers and the increase required to cover the revenue gap. The Public Notice should also contain the directions / observations of the Commission regarding power purchase, etc.

The Commission had also directed the Petitioners to put all details on its internet websites, in PDF format, showing detailed computations, the applications made to the Commission along with all regulatory filings, information, particulars and documents, clarification and additional information on inadequacies etc. and all subsequent events and material placed on record if any, made before the issuance of final Order subject to confidentiality of information which requires prior approval of the Commission.

2.4 PUBLICITY OF THE PETITION

2.4.1 The Public Notice detailing the salient features of the True-up Petition for FY 2014-15, Business Plan, Determination of Multi Year Aggregate Revenue Requirement (ARR) and Tariff for the First Control Period (Financial Year 2017-18 to Financial Year 2019-20) was made available by UPPCL on behalf of the Petitioners. This information appeared in daily newspapers as detailed below, inviting objections from the public at large and all stakeholders:

- Times of India (English) : September 7, 2017
- Hindustan (Hindi) : September 7, 2017
- Hindustan Times (English) : September 7, 2017
- Amar Ujala (Hindi) : September 7, 2017
- Pioneer (English) : September 8, 2017
- Amar Ujala (Hindi) : September 8, 2017
- Dainik Jagaran (Hindi) : September 8, 2017
- Times of India (English) : September 8, 2017



3. PUBLIC HEARING PROCESS

3.1 OBJECTIVE:

- 3.1.1 The Commission, to achieve the twin objective i.e. to observe transparency in its proceedings and functions and to protect interest of consumers has always attached importance to the views / comments / suggestions / objections / representations of the public. The process gains significant importance in a “cost plus regime”, where the entire cost allowed to the Licensee gets transferred to the consumer. The consumers therefore have a locus-standi to comment on the True-up and ARR & Tariff Petitions filed by the Licensees.
- 3.1.2 The comments of the consumers play a key role in the determination of Tariff and the design of the Rate Schedule. Factors such as quality of electricity supply and the service levels need to be considered while determining the Tariff. The Commission takes into consideration the submissions of the consumers before it embarks upon the exercise of determining the Tariff.
- 3.1.3 The Commission, by holding public hearings, has provided the various stakeholders as well as the public at large, a platform where they were able to share their views / comments / suggestions / objections / representations for determination of the retail Tariff for FY 2017-18 and Mutli Year Aggregate Revenue Requirement from FY 2017-18 to FY 2019-20. This process also enables the Commission to adopt a transparent and participative approach in the process of Tariff determination

3.2 PUBLIC HEARING:

- 3.2.1 To provide an opportunity to all sections of the population in the State to express their views and to also obtain feedback from them, public hearings for were held by the Commission at various places in the State. The public hearings were conducted on September 20, 2017, September 22, 2017, October 5, 2017 and October 12, 2017 as per details given below:

Table 3-1: SCHEDULE OF PUBLIC HEARING AT VARIOUS LOCATIONS OF THE STATE

Sl. No	Date	Place of Hearing	Hearings in the matter of
1	September 20, 2017	Kanpur	DVVNL & KESCO
2	September 22, 2017	Noida	PVVNL & NPCL
3	October 5, 2017	Varanasi	PuVVNL
4	October 12, 2017	Lucknow	MVVNL & UPPTCL



- 3.2.2 Consumer representatives, industry associations as well as several individual consumers participated actively in the public hearing process.
- 3.2.3 The views / suggestions / comments / objections / representations on the True-up / Business Plan/MYT ARR / Tariff Petitions received from the public were forwarded to the Licensees for their comments / response. The Commission considers these submissions of the consumers and the response of the Licensees before it embarks upon the exercise of determining the final True-up / ARR / Tariff.
- 3.2.4 Besides this, the Commission, while disposing the True-up / Business Plan/MYT ARR / Tariff Petitions filed by the Petitioners, has also taken into consideration the oral and written views / comments / suggestions / objections / representations received from various stakeholders during the public hearings or through post or by e-mail.
- 3.2.5 The Commission has taken note of the views and suggestions submitted by the various stakeholders who provided useful feedback on various issues and the Commission appreciates their participation in the entire process.
- 3.2.6 The Commission has also taken into consideration the following petitions: -
- (i) Petition No. 1042 / 2016 filed by Uttar Pradesh Rajya Vidyut Pensioner Parishad in the matter of “Review Petition under Regulation 150 of the UPERC (Conduct of Business) Regulations, 2004 against Rate Schedule LMV-10 applicable from 28.6.2015 and from 1.1.2016”
 - (ii) Petition No. 1061 / 2015 filed by Uttar Pradesh Rajya Vidyut Parishad Abhiyanta Sangh Parishad in the matter of “Review Petition under Regulation 150 of the UPERC (Conduct of Business) Regulations, 2004 against the determination of Aggregate Revenue Requirement (ARR) and Tariff for the year 2015-16 vide Order dated 18.6.2015 (in regard to rate schedule LMV-10 applicable from 29.6.2015 and from 1.1.2016”
 - (iii) Review Petition (Petition No. 1142 / 2016) filed by State owned DISCOMs against Commission’s Order for FY 2016-17 dated August 1 2016, on October 21, 2016 and
 - (iv) Petition No. 1264 of 2017 filed by the State owned DISCOMs regarding various issues with respect to (i) cross-subsidy surcharge & (ii) additional surcharge and have been dealt in this order



3.3 VIEWS / COMMENTS / SUGGESTIONS / OBJECTIONS / REPRESENTATIONS ON TRUE-UP, BUSINESS PLAN, MYT ARR / TARIFF PETITIONS

3.3.1 The Commission has taken note of the various views / comments / suggestions / objections / representations made by the stakeholders and would like to make specific mention of the following stakeholders for their valuable inputs:

- Mr. Avadhesh Kumar Verma, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad (UPRVUP)
- Mr. Rama Shanker Awasthi, Lucknow

3.3.2 The Commission has attempted to capture the summary of comments / suggestions / observations in this section. However, in case any comment / suggestion / observation is not specifically elaborated, it does not mean that the same has not been considered. The Commission has considered all the issues raised by the stakeholders and Petitioner's response on these issues while carrying out the detailed analysis of the True Up for FY 2014-15 and Multi Year ARR (FY 2017-18 to FY 2019-20) and approving the Business Plan and Tariffs.

3.3.3 The list of the consumers, who have submitted their views / comments / suggestions / objections / representations, is appended as Annexure 11.5 to this Order. The major issues raised therein, the replies given by the Licensees and the views of the Commission have been summarised as detailed below:

3.4 SINGLE POINT SUPPLY

A) Comments / Suggestions of the Public

3.4.1 Shri Umang Agarwal, FITA (Facilitation for Industries & Traders Association) submitted that providing individual meters for consumers residing in multi – storeyed buildings is not justified which results in disputes amongst the residents on account of individual consumption.

3.4.2 Shri Amit Gupta and Shri Sachin Goyal, consumer, submitted that additional charge of 5% allowed to deemed franchisee must be removed as there is hardly any Distribution loss in group housing societies, wherein all consumers have prepaid electricity meters. Further, the deemed franchisee does not provide detailed computation of the amounts collected from all the individual consumers and no audit of accounts is conducted by the Chartered Accountant (CA). The consumer further stated that individual electricity connections should be provided to consumers residing in group housing / multi storied apartments.



- 3.4.3 Ansal API submitted that as per the Tariff Petition, a developer / association seeking supply at single point for bulk loads cannot charge more than 5% additional charge on the specified rate for LMV- 1 & HV-1 category. It is submitted that no study has been conducted to substantiate and justify the methodology for calculation of Additional Charge of 5%. As a result, the developers / associations are facing severe losses as they are unable to recover the cost of maintaining the network and line losses while supplying to the end consumers.

It is requested that calculation of additional charge must be provided and ceiling rate of 10% additional charge must be allowed. It is further submitted, that as an alternative option to ceiling rate of additional charge, a rebate of 10% to 12% to single point consumers on the consumed units must be provided. This method is being followed in Punjab and Haryana State.

It is requested that a specific order or Regulation providing clarity to the scheme of single point supply should be provided.

- 3.4.4 Vinay Kandelwal, consumer submitted that consumers residing in multi –storied buildings are also domestic consumers and thereby slab wise tariff must applicable and individual electricity connections should be provided to consumers residing in group housing / multi story apartments.

It is further submitted that levy of additional charges on account of line losses, shall be allowed only if such line losses exist and the deemed franchisee must be directed to provide complete details of the amounts collected from all the individual consumers.

- 3.4.5 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that loss on Rural supply may be regulated by making Gram Panchayat a Single Point Consumer to grant connection and manage collection in villages.

- 3.4.6 Shri Kumar Alok Shroff, Group Housing Association for Residents (GHAR) submitted that apartment owners should be given electricity bills post usage on monthly basis. Further, consumers should be given the benefits of slab system on consumption of electricity and vending charges should not be levied.

- 3.4.7 Shri G.C. Khana, Electrical Advisor & Representative, submitted that there is a provision of multi – point connection under Electricity Supply Code, 2005.



However, the licensees are providing connection on multi - point basis. It is requested that Commission may take necessary action in this regard.

- 3.4.8 Shri P.S. Jain and Shri Vinay Gupta, Confederation of NCR Residents Welfare Associations submitted that individual electricity connections should be provided to consumers residing in group housing / multi storied apartments.

B) Petitioner's Response

- 3.4.9 The Licensees submitted that in multi-storied buildings, single point connection is provided as per the provisions of Tariff Order and Supply Code issued by the Commission. However, individual connection as applied by the consumer can be provided, if it is technically feasible.

- 3.4.10 The Licensees submitted that Clause 4.9 (a) of Electricity Supply Code, 2005 and its amendments provides as follows:

"Electricity Connection at single point of supply with single point metering shall be provided to a new domestic/ non-domestic Multistoried Buildings/ Multiplex / Marriage Halls/ Cooperative Group Housing Societies / Colonies, with load exceeding 25 KW."

The Licensees submitted that it is clear from above that for domestic / non-domestic Multi-storied Buildings / Multiplex / Marriage Halls / Cooperative Group Housing Societies / Colonies, with load exceeding 25 kW connections has to be released on single point as sentence provides "connection shall be released".

The use of word "shall" raise a presumption that the particular provision is imperative as has been held by Hon'ble Supreme Court in State of UP v. Manbodhan Lal Srivastava. Such an interpretation that "when a statute uses the word shall, prima facie it is mandatory" has been adopted by Hon'ble Supreme Court in catena of cases such as State of UP vs. Babu Ram Upadhyya, Sainik Motors, Jodhpur v. State of Rajasthan, Govindlal Chagganlal Patel v. Agriculture Produce Market Committee. The Licensees added that accordingly, the spirit of Electricity Supply Code, 2005 and its amendments have been implemented as per legal provisions and no doubt it helped us to a certain extent, in mitigating our problem of scanty meter-reading and billing resources. Further it is submitted that wherever it is technically feasible to provide individual connection same may be provided. Also, the Commission is formulating a detailed methodology to provide connections to individual consumers in multi storied building.



The Licensees submitted that tariff is in line with the Tariff Policy and Tariff has been proposed linking rates to the cost of supply.

The Licensees submitted that Commission in its Tariff Order for FY 2016-17 dated August 1, 2016 has reduced additional charges to 5% after detailed deliberation and suggestions from the public hearing.

The 5% additional charges are justified and there is no need to further increase the same under this head.

C) The Commission's view:

- 3.4.11 The Commission has taken note of the objections / suggestions made by the stakeholders and will take appropriate steps to mitigate the problem of residents of multi-storeyed buildings. The necessary changes will be made in the Electricity Supply Code 2005 and its amendments. The applicable Tariffs for all the consumer categories have been designed in accordance to the Electricity Act, 2003 and the Distribution MYT Regulations, 2014. The details of all the aspects related to Tariff design have been covered subsequently in Chapter on Tariff Philosophy and Rate Schedule as provided in this Order.

3.5 TIME OF DAY TARIFF

A) Comments / Suggestions of the Public

- 3.5.1 Shri S.P. Sharma, Chairman, Indian Industries Association – Greater Noida Chapter submitted that the ToD system was introduced to overcome the non-availability of power in peak hours and to discourage the industrial consumer to use power during peak hours. However, now surplus power is available in the Power Grid network, so why higher tariff is charged from industrial consumers during peak hours. It is requested that ToD billing system should be scrapped and single tariff must be made applicable.
- 3.5.2 Shri Vishnu Bhagwan Agarwal, Chairman. Agra Chapter, ASSOCHAM, U.P. submitted that ToD charges may be made more consumer / Industry friendly and peak hours should be from 17:00 PM to 22:00 PM and off-peak hours should be between 22:00 PM to 7:00 AM. Further, the discount / rebate in ToD should be made equivocal.
- 3.5.3 Shri Ankur Jalan, Ankur Udyog Limited submitted that the facility of concessional ToD rates of (-) 20% in place of (-) 7.5% for 22:00 hours - 6:00 hours time period available to Induction Furnaces, Rolling / Re-rolling mill industrial consumers of HV-2 category should also be extended to Textile / Spinning mills industrial consumers of HV- 2 category.



- 3.5.4 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that the existing ToD Tariff for HV -2 & LMV-6 must be retained instead of the proposed ToD tariffs for summer and winters.
- 3.5.5 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that to support the industrial establishment and improve their productivity, a rebate for 22:00 hours to 06:00 hours under TOD tariff may be revised from (-) 7.5% to (-) 15%.
- 3.5.6 Shri Vishal Dixit, Advocate (Representative of industries namely M/s Shamli Steels (P) Limited, M/s Amba Shakti (P) Limited, M/s Tehri Iron & Steels Casting (P) Limited, M/s Panem Steels (P) Limited, M/s Jai Jagdamba Malleable (P) Limited, M/s Sidhali Steels (P) Limited, M/s Premier Metacast (P) Limited, M/s Sarottam Rolling Mills (P) Limited and M/s Nawla Ispat (P) Limited) submitted that the Commission in the last tariff order dated August 1st, 2016 in respect to applicability of ToD on HV – 2 category has provided the following:

Quote

The ToD rate applicable to the Induction Furnace / Arc furnace, Rolling / Re- Rolling Mill industrial consumers will be (-)20% in place of (-)7.5% for 22: 00 hours and 06: 00 hours time period.

Unquote

It is submitted that the proposed withdrawal of 20% ToD concession from 22:00 hours to 06:00 hours time should not be accepted. Also, the existing press public notice issued by the Chairman, UPPCL as well as its Discoms dated September 7th / 8th, 2017 and the proposed amendment in ToD hours be quashed.

It is further submitted that the existing ToD structure must be continued in the incoming two years for FY 2017-18 & FY 2018-19 and the time for 20% ToD concession from 22:00 hours to 06:00 hours should be changed to 20% ToD concession from 22:00 hours to 08:00 hours.

B) Petitioner's Response

- 3.5.7 The licensees submitted that in the present tariff proposal for FY 2017-18, they have proposed the new TOD structure differently for winter and summer seasons keeping in mind the present supply scenario and overall benefits of its consumers.
- 3.5.8 It is further submitted in the TOD structure, rebate has been increased from 7.5% to 15%.
-



- 3.5.9 The Licensees submitted that the ToD structure has been proposed keeping in mind to balance the electricity demands in day and night hours. Due to increased demand in night hours, licensees have to purchase costlier electricity to meet this demand. Hence the proposed ToD structure has been prepared to reduce the average cost of supply and therefore, under the present circumstances the proposed ToD is in the overall interest of largest section of consumers.

C) The Commission's view:

- 3.5.10 The Commission has taken note of the above objections / suggestions given by the stakeholders in this regard. The detailed design for TOD Tariff has been further, discussed in Chapter on Tariff Philosophy and the Rate Schedule provided subsequently in this Order.

3.6 REGULATORY SURCHARGE

A) Comments / Suggestions of the Public

- 3.6.1 Shri Sushil Agarwal & Shri A N Dhawan, Federation of Noida Residents Welfare Associations and Shri Vipin Kumar Malhan, President, Noida Entrepreneurs Association submitted that Regulatory Charge was supposed to be phased out and now the same should be abolished.
- 3.6.2 Shri S.P. Sharma, Chairman, Indian Industries Association – Greater Noida Chapter submitted that since tariffs are decided based on cost of power, expenditure, line losses and profit, it is requested that additional surcharge should not be levied from the customers.
- 3.6.3 Shri P.S. Jain, Shri Rajesh Bhatia and Shri Vinay Gupta, Confederation of NCR Residents Welfare Associations submitted that levying of Regulatory Charge was again revived on 01.08.2016 and the same must now be abolished.
- 3.6.4 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that the regulatory surcharge should be a non- repetitive temporary surcharge and to be imposed in extra ordinary circumstances only. This regulatory surcharge has become permanent feature of ARR and Discoms are deliberately taking advantage of this.
- 3.6.5 Shri K.L. Aggarwal, Chairman, Industrial Development Forum, Muzaffarnagar submitted that regulatory surcharge should be waived off particularly for the industrial consumers.



Further, realization of the total amount of Regulatory Surcharge upto the end of March 2017, should be provided by the individual licensees.

- 3.6.6 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that allowing regulatory surcharge encourages inefficiency in the Discoms and putting the burden of previous years' losses of Discoms is not justified. Such losses, if at all are to be compensated, should be done by the Government directly.
- 3.6.7 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that as per UDAY scheme launched by GOI, net loss for UPPCL is Rs.70738 Crore out of which bank loan is Rs. 53211 Crore. As per UDAY scheme guidelines 75% of the loan will be taken over by GoUP, so it's not justified to levy Regulatory Surcharge i.e. 4.28%. It is requested that the Regulatory Surcharge must be abolished as the losses are being taken over by the Govt and the T&D loss targets are not being achieved by the Licensees as highlighted in the CAG report.

It is further submitted that approx. 1.85 Crore existing consumers are paying 4.28% regulatory surcharge. Under the 'Power for all', 23 Crore new consumers will be added to the system and levy of Regulatory Surcharge on them is unjustified on account of past losses. It is submitted that due to the increased consumer base, the regulatory surcharge must be reduced from 4.28%.

- 3.6.8 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that actual amount of the Regulatory surcharge recovered is to be ascertained and audited before further continuing with Regulatory Surcharge.
- 3.6.9 Shri Vishal Dixit, Advocate (Representative of industries namely M/s Shamli Steels (P) Limited, M/s Amba Shakti (P) Limited, M/s Tehri Iron & Steels Casting (P) Limited, M/s Panem Steels (P) Limited, M/s Jai Jagdamba Malleable (P) Limited, M/s Sidhali Steels (P) Limited, M/s Premier Metacast (P) Limited, M/s Sarottam Rolling Mills (P) Limited and M/s Nawla Ispat (P) Limited) submitted that the claim of regulatory surcharge should be quashed because there are no asset loss to UPPCL in any manner.

B) Petitioner's Response

- 3.6.10 The Licensees submitted that the regulatory asset had been created by the Commission towards unrecovered gap pursuant to the final true ups based on audited accounts. Thus, the regulatory surcharge is valid in law and is in



accordance with the Distribution Tariff Regulations, 2006 and is being charged subsequent to the Orders of the Commission.

3.6.11 Clause 6.12 of the UPERC (Terms and Conditions of Distribution Tariff) Regulations, 2006 provides:

“1. Creation of Regulatory Asset only for the purposes of avoiding tariff increase shall not be allowed and it shall only be created to take care of natural causes or force majeure conditions or major tariff shocks. The Commission shall have the discretion of providing regulatory asset.

2. The use of the facility of Regulatory Asset shall not be repetitive.

3. Depending on the amount of Regulatory Asset accepted by the Commission, the Commission shall stipulate the amortization and financing of such assets. Regulatory Asset shall be recovered within a period not exceeding three years immediately following the year in which it is created.”

3.6.12 The Licensees submitted that the conversion of loans into Bonds under the UDAY scheme is being done towards the short-term loans outstanding in the discom books which were taken to fund the in-efficiency of the Discoms including higher distribution losses, reduced collection efficiency and other uncontrollable factors. Thus, the applicability of regulatory surcharge is governed by the Commission’s order in line with the Distribution Tariff Regulations, 2006.

3.6.13 The licensees submitted that they are commercial organization, and UPERC regulations have made specific provisions for accepting Aggregate Revenue Requirement on the principle that this revenue requirement would be met with the tariff approved by Hon’ble Commission. In the past years, Commission had approved regulatory surcharge under following criteria:

1) To recover any gap in the approved ARR and the projected revenue from the tariff approved by the Commission.

2) To recover the actual gap as per true-up of a particular financial year

The Regulatory Assets approved in the previous year Tariff Orders of the Commission were partly recovered through regulatory surcharge as per the rates approved by the Commission. The true-up of the period FY 2000-01 to FY 2007-08 could not be submitted to the Commission due to various reasons including non-availability of audited balance sheet of the Licensees of the respective years. This true-up was submitted to the Commission in June, 2012 and the approved gap was converted into the regulatory assets by the Commission. Subsequently true-ups were submitted along with ARR and tariff



proposal before the Commission. It is evident that a large amount of earlier approved regulatory assets is still pending to be recovered.

The tariff for the FY 2017-18 and the true-up of FY 2014-15 is under consideration for approval of the Commission. The submitted true-up is mainly due to the difference of energy approved in the ARR of FY 2014-15 and actual purchase of energy from different generation sources as per balance sheet of relevant year. This situation may continue in the true-up of subsequent years also and can only be controlled if the energy approved by the Commission in the ARR proposals is very close to the actual energy procured in every financial year. Licensees are committed to act as per the guidelines of the Commission in this regard considering the 24x7 energy availability plan to the consumers.

As regard to recovery of any gap in the approved ARR and the projected revenue from the tariff approved by the Commission, National Tariff policy 2016 and Distribution MYT Tariff Regulations, 2014 have specified as below:

National Tariff Policy, 2016:

“8.2.2 The facility of a regulatory asset has been adopted by some Regulatory Commissions in the past to limit tariff impact in a particular year. This should be done only as a very rare exception in case of natural calamity or force majeure conditions and subject to the following:

- a. Under business as usual conditions, no creation of Regulatory Assets shall be allowed;
- b. Recovery of outstanding Regulatory Assets along with carrying cost of Regulatory Assets should be time bound and within a period not exceeding seven years. The State Commission may specify the trajectory for the same.”

Distribution Tariff Regulation, 2006:

“6.12 Regulatory Asset:

1. Creation of Regulatory Asset only for the purposes of avoiding tariff increase shall not be allowed and it shall only be created to take care of natural causes or force majeure conditions or major tariff shocks. The Commission shall have the discretion of providing regulatory asset.
2. The use of the facility of Regulatory Asset shall not be repetitive.

Depending on the amount of Regulatory Asset accepted by the Commission, the Commission shall stipulate the amortization and financing of such assets. Regulatory Asset shall be recovered within a period not exceeding three years immediately following the year in which it is created.”



Distribution MYT Tariff Regulation, 2014

“35. Treatment of Regulatory Assets

a) Regulatory assets shall not be created against cost/loss incurred in normal course of business.

Provided that in such a case, financing arrangement or capital restructuring shall be deployed to cover the gap.

b) The amortization schedule corresponding to the regulatory asset shall be prepared and put in effect along with creation of the regulatory asset.

c) The carrying cost of the regulatory asset shall be in line with the State Bank Advance Rate (SBAR) for the tenure for which regulatory asset has been created.

d) There shall not be a long gap in truing up of accounts of the Distribution Licensees so as to prevent the need for creation of the regulatory asset. “

It will be of advantage to the licensees if somehow regulatory surcharge is not imposed on the consumers and all gaps of true-up and approved tariff could be realized in the current tariff of different categories of consumer, as licensees will not face shortage of financial resources for the purchase of energy and other infrastructure improvements as required for 24x7 power supply to all consumers of the State and will also be free from maintaining the accounts related to regulatory surcharge. The consumer will also gain from the removal of burden of carrying charges of the regulatory assets. However, as it is difficult to charge ACOS from all categories of consumers straight forward in the tariff of FY 2017-18 considering the Tariff shock impact to the weaker sections of the society, the Commission may provide a mechanism for achieving this goal in the remaining two years of 1st MYT control period. Till then the imposition of regulatory surcharge on the consumers appears to be unavoidable.

The licensees very humbly submit that they had taken a leap forward in the spirit of above policy and regulatory provisions in their tariff proposal for FY 2017-18 and it is under consideration of UPERC. The causes of regulatory surcharge have been discussed above. Therefore, the amount of regulatory assets and resultant regulatory surcharge will depend upon the tariffs approved by UPERC.



C) The Commission's view:

- 3.6.14 The Commission has taken note of the above objections / suggestions given by the stakeholders in this regard. It is clarified that the recovery of Regulatory Surcharge allowed is towards the unrecovered gap allowed based on truing up carried out after prudence check and not towards the entire losses of the Distribution Licensees.
- 3.6.15 The matter of accounting of Regulatory surcharge is of great concern and accordingly, the **Licensees must submit details regarding Regulatory Surcharge collected from the consumers, deemed and due**. The Commission has also discussed this issue in detail subsequently in this Order.

3.7 HIGH COST OF ELECTRICITY

A) Comments / Suggestions of the Public

- 3.7.1 M/s Rimjhim Ispat Limited submitted that higher industrial tariff and uncertain power availability in Uttar Pradesh is adversely affecting the commercial viability of industries, particularly power intensive steel industry.
- 3.7.2 Shri Vipin Kumar Malhan, President, Noida Entrepreneurs Association submitted that average cost of power purchase has been reducing year – on – year and is Rs. 3.90 / kWh for FY 2017-18 and the cost of power purchase from solar is also available at a lesser rate. However, the proposed cost of power purchase from solar is Rs. 7.00 / kWh, resulting into total power purchase cost at Rs. 10.00 / kWh. It is requested that the Commission shall take note of the same.
- 3.7.3 Shri P.S. Jain and Shri Vinay Gupta, Confederation of NCR Residents Welfare Associations submitted that the power purchase cost for FY 2016-17 was decided at Rs. 4.04 / kWh. However, for FY 2017-18, FY 2018-19 & FY 2019-20, the power procurement cost is Rs. 4.46 / kWh, Rs. 4.65 / kWh and Rs. 4.85 / kWh respectively. It is submitted that if 25% of power required is met through Short Term power procurement, the total cost of power purchase will come down below Rs. 4.04 / kWh.
- 3.7.4 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that as per the ARR filed by the Distribution Companies, total power purchase quantum will be 1,28,908 MUs at an average rate of Rs. 4.11 / kWh. It is submitted that this power purchase quantum includes purchase of 2456 MUs from Bajaj Energy Generating Station at an average rate of Rs. 7.22 / unit. However, the Power Corporation has cancelled the power purchase from



Bajaj, and thereafter revised power purchase quantum and cost has not been submitted.

- 3.7.5 It is submitted that other States are surrendering the High Cost power of Central generating station to ensure cheaper power to the consumers in their State. It is requested that Uttar Pradesh shall also take similar steps in this regards.

B) Petitioner's Response

- 3.7.6 The Licensees submitted that most of the power purchase is being done under long term PPA from generators which have been duly approved by the Commission. The short-term power purchase is being done under competitive bid route after due approval of the Commission. The power from exchanges is being procured to ensure that the scheduled roster is maintained and the consumers are provided quality power. The Licensees in recent few months have taken some crucial decisions including termination of Bajaj Energy PPA, surrendering share of NTPC's costly power plants, keeping costly power plants of the State Generating Company UPRVUNL under reserve and providing support for generators in the state in obtaining cheaper coal linkages to ensure reduction in power purchase cost. The Licensees further commit to take additional and crucial measures to reduce their power purchase cost to provide cheaper power to the State Consumers.
- 3.7.7 The Licensees submitted that they have already submitted their revised proposal in regard with the MYT petition, wherein they have reduced the Power Purchase Cost, rationalised other cost components and have also further reduced the Tariff Hike proposed in the instant petition. Further for BPL consumers with connected load of 1KW and consumption upto 100 units per month, the Licensees have not proposed any increase in the tariff.

C) The Commission's view:

- 3.7.8 The Commission has taken note of the objections / suggestions made by the stakeholders in this regard. The applicable Tariffs for all the consumer categories have been designed in accordance with the Electricity Act, 2003 and the Distribution MYT Tariff Regulations 2014. The details of all the aspects related to Tariff design have been covered subsequently in Tariff Philosophy and Rate Schedule chapters of this Order. Further, the year wise Power Purchase Cost claimed have been analysed subsequently while approving the ARR.



3.8 LOAD FACTOR REBATE

A) Comments / Suggestions of the Public

3.8.1 Shri K.L. Aggarwal, Chairman, Industrial Development Forum, Muzaffarnagar submitted that load factor rebate should be restored.

B) Petitioner's Response

3.8.2 Load Factor rebate was approved by the Commission in the Tariff Order for FY 2001-02 with a view to encourage better load utilisation to HV-2 consumers above 50% utilisation, lower system losses and better system operation. At that point of time, theft in industries was rampant.

In the current context, the situation has changed. Load factor rebate had been introduced earlier in large and heavy consumers to curb the theft of electricity. But, now licensees have installed high precision meters to monitor the trend and other parameters and as such it appears that there is no need to provide incentive for consumption. Hence, the licensees are of the view that there is no necessity to provide load factor rebate.

C) The Commission's view:

3.8.3 The Commission after detailed deliberation on this issue has abolished the Load Factor Rebate in the Tariff Order for FY 2014-15 and finds no merit in the suggestions to restore the same.

3.9 OVER LOAD PENALTY

A) Comments/Suggestions of the Public

3.9.1 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P and Shri Rajesh Bhatia submitted that double penalty i.e. charging fixed charge on enhanced load plus overload penalty is unreasonable. It is submitted that no double penalty should be charged.

3.9.2 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that the proposed revision in charges for exceeding contracted demand equal to 200% of the normal rate on the excess demand is harsh. It is submitted that:

- On the first excess demand upto 10% of the contracted load, the penalty should not be imposed and demand charges be levied equal to the normal rate.
- For excess demand of 10% to 20%, such excess load / demand may be levied equal to 1.5 times of the normal rate.



- Excess demand of more than 20% may be levied equal to twice of the normal rate.

B) Petitioner's Response

3.9.3 The Licensees has not made any submission in this regard.

C) The Commission's view:

3.9.4 The Commission would like to clarify that each Licensee has to plan and make arrangements of infrastructure for supply of power based on the overall contracted demand of the consumers. When the consumers exceed their contracted demand, it burdens the system ad a lot of efforts and resources go into managing it. Hence, to restrain the consumers from exceeding their contracted demand the penalty is imposed.

3.10 TARIFF HIKE

A) Comments/Suggestions of the Public

3.10.1 Shri Ladali Prasad, Laghu Udyog Bharti – Kanpur, submitted that Tariff for industries should not be increased to cover up the losses on account of theft or line losses on supply to non-industrial feeders and further the distribution engineers should be held responsible for heavy line losses.

It is further submitted that to improve the efficiency of electricity supply companies, it should be obligatory on them to periodically bring down their losses and improve recovery of old dues, without which they must not be allowed to increase the tariffs.

3.10.2 Shri Sushil Agarwal and Shri A. N. Dhawan, Federation of Noida Residents Welfare Associations submitted that average power purchase cost has reduced from Rs. 4.52 / kWh in FY 2014-15 to Rs. 3.90 / kWh in FY 2017-18. Hence, tariff should accordingly be reduced or no tariff hike will be justifiable.

3.10.3 Shri Amit Gupta & Shri Sachin Goyal, consumer submitted that proposed Tariff Hike for consumer at Single point for Bulk Loads is approx. 11 %, which is not justified and will affect lakhs of consumer staying in flats/ group housing societies. Further, there is no slab wise tariff for such category of consumer. It is requested that the tariff hike must be rejected by the Commission and slab wise tariff should be provided to such consumers.

3.10.4 Shri P.S. Jain and Shri Vinay Gupta, Confederation of NCR Residents Welfare Associations submitted that in the proposed Tariff proposal, there is no change



in Rural Tariff and 12% tariff hike is proposed for urban domestic consumers. It is submitted that with reduced line losses, reduced power procurement cost, reduced employee cost, and controlled un-metered supply, the tariff shall be reduced for consumers.

- 3.10.5 Shri Kuldeep Kumar, President, Bhartiya Kishan Andolan submitted that tariff for rural domestic and tubewell consumer should not be increased and free electricity shall be supplied to Laghu Farmers.

Shri Rajveer Singh, Bhartiya Kishan Union submitted that farmers are already suffering from financial stress and the proposed 350% hike for rural domestic consumers and 60% hike for agricultural tubewells should not be accepted.

- 3.10.6 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that the proposed increase of 27% in fixed charges of LMV-2 metered category is exorbitantly high. Further, the proposal of having fixed and energy charges increase with the load / consumption is irrational and unjustified and hence should not be accepted.

- 3.10.7 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that the proposed Tariff will result into a Tariff shock to the rural domestic consumers, the same is unconstitutional.

It is submitted that in UDAY scheme, the proposed Tariff Hike is 6.95% for FY 2017-18, however the Discoms have submitted Tariff Hike proposal of 22.66% for FY 2017-18. It is requested that such proposal should not be accepted.

It is submitted that even after the revised & reduced ARR submission made by the Discoms, the proposed Retail tariff hike has not changed significantly.

It is submitted that under the National Civil Aviation Policy, 2016 it is provided that the upcoming airports in the State will be given subsidized electricity @ Rs. 4 / kWh upto 30,000 kWh. In this reference, it is submitted that on one side, the hike of 350% is proposed for farmers and on the other side subsidized electricity is being provided to airports, which are for commercial purpose.

It is further submitted that there are approx. 84 lacs rural consumers in the State, for whom Rs. 3760 Crore subsidies is being proposed, resulting into Rs. 373 subsidy / month / consumer. It is submitted that the electricity bill of a 1kW consumers comes out to be Rs. 600 / month (Rs. 180 – tariff for 1 kW consumers + Rs. 373 – subsidy + 4.28% Regulatory Surcharge + 5% electricity duty) after including the subsidy, electricity duty and regulatory surcharge.



Further, it is requested the Commission to reject the Tariff petition, as the entire Tariff Hike is focused on rural domestic and agricultural consumers, which is a huge Tariff Hike shock to such consumers.

3.10.8 Shri Satish Goel, President, Association of Steel Rolling Mills and Furnaces submitted that the Industrial Tariff in Uttar Pradesh is higher as compared to the adjoining States like Madhya Pradesh, Bihar, Jharkhand, Chattisgarh, Uttarakhand, Himachal Pradesh, etc. It is requested that the Tariff for Industrial Consumers in UP must be made similar to the adjoining States and must be kept at approx. Rs. 5/ kWh. It is further submitted that due to increased tariffs in past 5 years, lot of industrial units have stopped operating.

3.10.9 Shri Prem Singh Chauhan, President, Laghu Udyog Bharti – G.B. Nagar submitted that demand charges of LMV-6 & HV-2 consumers shall be reduced, as during low demand, the industries get sick on payment of heavy fixed charges. As an alternative, energy charges may be increased.

3.10.10 Shri Ajit Singh Bagga & Shri Pramod Gupta, Varanasi Vyapar Mandal submitted that industrial, commercial and other consumers are facing problems due to continuous increase in their tariff. Despite, the Govt. has said that Electricity will be available at a cheaper rate.

It is submitted that electricity at a cheaper rate shall be made available to Laghu Udyog and small commercial consumers.

3.10.11 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that tariff for the MSME segment (LMV 2 category consumer) has been proposed to be increased exorbitantly. It is submitted that this will have direct negative impact on their establishment and make their business unviable. It is requested that such abnormal tariff hike may be rejected.

It is submitted that Tariff hike of 141.36% for Rural Domestic and 70.24% for rural agriculture has been proposed on the pretext that rural supply has been achieved for more than 18 hours per day. However, the actual supply hours are less than 12 hours per day. It is requested that such abnormal tariff hike may be rejected.

Similar stand on Tariff hike for LMV- 4(b), LMV-9 (b) Metered – Others, HV- 1(b) has been submitted and it is requested that such abnormal tariff hike may be rejected.



- 3.10.12 Shri Shivakant Tripathi, President, Uttar Pradesh Jan Kalyan Samiti submitted that tariff must be decreased, instead of increasing the same. In view of this, the following points are being submitted:
- Theft of electricity must be stopped.
 - Electricity Dues must be recovered specifically from Govt. Offices.
 - 100% metering should be done and proper meter must be installed at all the connections.
 - Line losses must be reduced, in some areas the line losses are more than 50%.
 - Fixed Charges and Regulatory Surcharge should be abolished.
- 3.10.13 Shri Vishal Dixit, Advocate (Representative of industries namely M/s Shamli Steels (P) Limited, M/s Amba Shakti (P) Limited, M/s Tehri Iron & Steels Casting (P) Limited, M/s Panem Steels (P) Limited, M/s Jai Jagdamba Malleable (P) Limited, M/s Sidhali Steels (P) Limited, M/s Premier Metacast (P) Limited, M/s Sarottam Rolling Mills (P) Limited and M/s Nawla Ispat (P) Limited) submitted that in the proposed Tariff Order of FY 2017-18 & FY 2018-19 rate of electricity should not be increased for industries.

B) Petitioner's Response

- 3.10.14 The Licensees submitted that no tariff hike has been proposed for Small and Medium and large and Heavy consumers for FY 2017-18.
- 3.10.15 The Licensees submitted that most of the power purchase is being done under long term PPA from generators which have been duly approved by the Commission. The short-term power purchase is being done under competitive bid route after due approval of the Commission. The power from exchanges is being procured to ensure that the scheduled roster is maintained and the consumers are provided quality power. The Licensees in recent few months have taken some crucial decisions including termination of Bajaj Energy PPA, surrendering share of NTPC's costly power plants, keeping costly power plants of the State Generating Company UPRVUNL under reserve and providing support for generators in the state in obtaining cheaper coal linkages to ensure reduction in power purchase cost. The Licensees further committed to take additional and crucial measures to reduce their power purchase cost to provide cheaper power to the State Consumers.
- 3.10.16 The Licensees submitted that the Aggregate Revenue Requirement is being determined in accordance with the Tariff Regulations framed by the Commission. The tariff is being proposed to recover the gap between the Aggregate Revenue Requirement and the revenue at current tariffs. As there is a significant gap between the ARR and the Revenue Assessment, hence a



marginal tariff hike is being proposed to mitigate a portion of the revenue gap. Further Tariff Policy mandate that rates should be aligned with the cost of service. Rates has been proposed in line with the Tariff Policy.

3.10.17 The Licensees submitted that the tariff is being proposed to recover the gap between the Aggregate Revenue Requirement and the revenue at current tariffs. Different states have different cost of service, subsidy levels, different power procurement costs, etc., and hence while fixing tariffs all these issues must be considered.

3.10.18 The Licensees submitted that the UP DISCOMs have proposed a Tariff Hike of 20.48% for FY 2017-18 against a Tariff Hike of 6.95% committed under the 'UDAY' Scheme. In this regard, instead of forming any opinion from the face of the Tariff Proposal, it would also be essential to analyse the following facts:

- First and foremost, though the Tariff Hike for FY 2017-18 has been proposed at 20.48%, the effective hike would only be 9.44%, considering that the Commission issues the Tariff Order by October 2017 and New Tariff gets implemented by November, 2017. Further in a scenario, if the Tariff Order gets delayed and is issued by December 2017, the effective tariff hike for 2017-18 would only be 5.67%, which would be even below the Tariff Hike of 6.95% committed under the 'UDAY' Scheme.
- For FY 2016-17, under the 'UDAY' Scheme the Tariff Hike was proposed to be at 5.75% for the full year, against which the UPERC approved, an effective Tariff Hike 3.18% in its Tariff Order dated August 01st, 2016, resulting in an under-assessment of revenue of the Licensees by 2.57% for FY 2016-17 and 2.75% (considering the proposed tariff hike of 6.95%) in FY 2017-18.
- The 'UDAY' scheme did not speak about 24 hours' power supply to all sectors and class of consumers, whereas the Govt. of Uttar Pradesh entered into agreement with Govt. of India on March 26th, 2017 committing round the clock power to all the households of Uttar Pradesh by FY 19, under the '24x7 Power for All' document. Thus, the DISCOMs are now committed to supply 24hours power to all its retail consumers by FY 19 which was not envisaged in the UDAY scheme. Also, the 'Power for All' document emphasis on connecting the all unconnected households and providing access to electricity in a time bound manner in the next two years i.e. by FY 19, which translates into a large consumer addition in rural areas



i.e 1.97 crore rural consumer are to be added in the distribution network by FY 19, which would also require huge capital investment and financial stability of the UP Discoms.

- In the existing Tariff Structure, the tariff for rural consumers has been largely subsidised considering the lower electricity supply hours for rural domestic, rural commercial and rural agriculture consumers. However, with a vision to supply round the clock power to all rural consumers of the state, it would also be necessary to commensurate the electricity tariff with the supply hours. Considering the huge gap between the Average Cost of Supply and Average Billing Rate for rural consumers, it would result in only increasing the cash losses of the distribution licensees, if only the supply hours are increased solely.
- In consideration with the above, the UP Govt. and DISCOMs are committed to supply round the clock power to all consumers of the state by FY 19 and have already implemented several schemes to enhance their distribution network and capacity involving huge capital investment in upcoming 2 years. Further to maintain financial stability of UP DISCOMs it is essential to increase the rural tariff and accordingly the Tariff Proposal for FY 2017-18 has been prepared and submitted before the Commission.

3.10.19 The Licensees submitted that as per the Power for All Document, UP Govt. is committed to deliver 24hours quality power to all its Consumers by October 2018. Keeping the above in mind, Tariff has been proposed for FY 2017-18 only, further Licensees' are making it best efforts for simplification of Tariff and aligning the same with the provisions of the National Tariff Policy (NTP) during the term of MYT period. As per basic principles of tariff design, tariff for different category of consumers' needs to be gradually aligned around the average cost of supply. The projected cost of supply for FY 2017-18 has increased to Rs. 6.97/kWh from the average cost of supply Rs. 6.35/kWh as approved by Commission in its Tariff Order dated August 1, 2016 for FY 2016-17. In the recent past, the supply to rural area has been increased from 8-10 hours to 18 hours, which is an increase of almost 80%. Total projected sales to Rural Consumers for FY 2017-18 is 18,636 MU's including the increase in supply hours, constituting 20% of the total sales. In past 10 years the Rural Tariffs have hardly increased from Rs.150 / month to Rs.180 / kW / month, resulting in substantial Cash losses to UP Discoms. Increase in losses, results in adverse cash positions for Discoms, ceasing the capital investment for strengthening of



Distribution Network and calling for low quality supply. Instead additional loans are required to fund cash gaps, thus increasing the Interest burden cost and untimely payment to Generators, affecting Long-term tie-ups. In the absence of adequate Cash Flow, Discoms would not be able to procure sufficient power to fulfil 24x7 power commitment. At Existing Tariff, the Average Billing Rate for Rural Domestic Consumers is Rs.1.99/kWh which accounts for recovery of only 29.54% of the Average Cost of Supply, thus Discoms would have to bear a loss of Rs. 9,283 Crore for FY 2017-18 against which GoUP subsidy of only Rs. 3,760 Crore is available. The Corporation is committed to provide 24x7 quality and reliable supply to all households including rural areas w.e.f. October 2018. Therefore, with same hours of supply to both urban & rural area, there will be no rationale to have different tariff for urban & rural consumers, accordingly Tariff hike has been proposed for rural consumers.

C) The Commission's view:

3.10.20 The Commission has taken note of the objections / suggestions made by the stakeholders in this regard. The applicable Tariffs for all the consumer categories have been designed in accordance with the Electricity Act, 2003 and the Distribution MYT Tariff Regulations 2014. The details of all the aspects related to approval of ARR and Tariff design have been covered subsequently in Multi Year Aggregate Revenue Requirement from FY 2017-18 to FY 2019-20, Tariff Philosophy and Rate Schedule chapters of this Order.

3.11 T&D LOSSES AND AT&C LOSSES

A) Comments/Suggestions of the Public

- 3.11.1 Shri Sushil Agarwal and Shri A N Dhawan, Federation of Noida Residents Welfare Associations submitted that upon reduction in T & D Losses, the consumer tariff was expected to be reduced. However, the tariff has been gradually and steadily being revised upwards.
- 3.11.2 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that in many parts of the State the AT & C losses are more than 50%, which clearly depicts the incapability of the Power Corporation. It is submitted that the burden of such losses should not be put on the consumers of the State.
- 3.11.3 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that T & D losses and AT & C losses are putting heavy tariff burden to the consumers and gives direct impact on the availability of power supply. It is further submitted that:



- The line loss data needs scrutiny by independent agency appointed by Commission before its acceptance.
- Strict measures should be taken to prevent theft and pilferage of power. LT lines may be converted to underground lines to prevent hooking, the transformers should not be in capacity excess of 20% of the contracted load and inbuilt audit meters should be provided to identify theft.
- The licensees should implement Aerial Bunch Conductors (ABC), strengthening and repair and maintenance.

B) Petitioner's Response

- 3.11.4 The Licensees submitted that it has planned and proposed a gradual reduction in distribution losses up to FY 2021-22 in line with the directives of the Ministry of Power, Govt. of India.
- 3.11.5 The Licensees admit that there are certain rural divisions which have high line losses; however, the licensees are making rigorous efforts in improving the position of Distribution losses in High-loss areas. Further it would be also being imperative to note that no impact because of high losses in some of the division is been passed upon the consumer in terms of Tariff as same is been formulated at the loss levels approved by the Commission. It is further to submit that the average line loss of the discoms is close to achieving target set in the UDAY scheme.
- 3.11.6 All efforts are being made to reduce the losses as the same is beneficial to the utility as well. Tariff revision exercise is done based on normative loss level. It may be noted that when losses are assumed on lower side then tariff will automatically be lesser. Hence, loss level projection is not against the interest of the consumers.
- 3.11.7 The Licensees submitted that the infrastructure is sufficient to cater for supply to all consumers. However, to cater for future growth, action is being taken for addition of matching infrastructure.
- 3.11.8 The Licensees submitted that the Commission has already issued directions to the Licensees to initiate base line loss estimation studies for assessment of technical and commercial losses. The Licensees would be appointing consulting firms for undertaking the said studies.
- 3.11.9 The Licensees submitted that various steps are being taken to curb theft which is widely prevalent across the State. Some of t Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that the ARR



proposal made by the Discoms does not consider the audited he steps are listed below:

- For proper accounting of energy & reducing chances of theft, double metering system is being implemented which is yielding encouraging results.
- For speedy redressal of consumer grievances, call centre has been established and Control rooms have been set up.
- In all theft prone areas overhead conductor are being replaced with ABC (Aerial Bunched Conductor). This has helped in the reduction of line losses and break-downs and has resulted in better quality of supply & consumer satisfaction.
- Provision of periodic checking of all static and trivector meters installed in high value consumers premises.
- Special drive to check the cases of theft/unauthorized use of electricity/checking of excess load being carried out in different distribution divisions by officers of the licensees.
- Special team of departmental engineers and Vigilance teams comprising of licensee's officers and Police personnel's have been formed in each circle. Surprise raids are conducted to curb direct theft of energy/Katiya connections.

C) The Commission's view:

3.11.10 The Commission recognizes the fact that the Licensees have been taking measures to reduce T&D losses by implementing schemes such as laying Aerial Bunch Conductors (ABC), APDRP, R-APDRP, etc., but these efforts are yet to yield satisfactory results. On the aspect of T&D losses, the Licensees should undertake necessary strengthening and R&M of the distribution networks to reduce losses which would result in higher availability of power for sale to consumers.

3.11.11 In this regard, the Commission directes the Licensees to conduct the base line loss estimation studies for assessment of technical and commercial losses. The Commission stresses that the Distribution Licensees may act speedily upon the directives and report the status on a quarterly basis to the Commission as losses play a very crucial role in the entire process. Further, the Commission for truing up of ARR for FY 2014-15 and determination of Multi Year Tariff from FY 2017-18 to FY 2019-20 have judiciously approved the distribution loss as discussed subsequently in the Order.



3.12 PRE-PAID METERING

A) Comments/Suggestions of the Public

- 3.12.1 Shri Shri Ladali Prasad, Laghu Udyog Bharti – Kanpur, submitted that the procedure for getting a temporary connection is cumbersome and motivates the consumer to take electricity by unfair means or by hiring gensets. It is suggested that the same should be simplified by providing prepaid cards for the value required by the consumers.
- 3.12.2 Shri K.L. Aggarwal, Chairman, Industrial Development Forum, Muzaffarnagar submitted that pre-paid meters of 45kW & above must be made available to the industrial consumers.
- 3.12.3 G.C. Khana, Electrical Advisor & Representative submitted that necessary arrangements for installation of prepaid meters must be made.
- 3.12.4 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that the proposed discount of 1.25% for consumers opting for prepaid meters must be increased to 2%.

B) Petitioner's Response

- 3.12.5 The Licensees submitted that Prepaid meters are being procured and will be installed at consumers' premise as and when consumers apply for that.

C) The Commission's view:

- 3.12.6 The Commission in its earlier Orders has repeatedly directed the Distribution Licensees regarding expedition of the process of introduction of Pre-paid meters.

3.13 METERING AND BILLING FOR LMV-10 CATEGORY

A) Comments/Suggestions of the Public

- 3.13.1 Shri M. Ahmed, Juhilal Colony – Kanpur submitted that Commission's Order of metering of LMV-10 category consumers has not being complied.
- 3.13.2 K. L. Aggarwal chairman Associate Chambers of Commerce & Industries of U. P submitted that time frame must be decided by the Commission for installation of 100% meters on departmental employees as this shall enable complete check on wasteful use of electricity and actual figures of energy consumption.
- Further, till such connections are not metered, such un-metered connections be billed on the different rates by creating new category for such consumers.



- 3.13.3 Shri Prem Pal Singh, UP Gramin Vidyut Upbhokta Kalyan Parishad submitted that the electricity provided to LMV- 10 consumers is being mis- used and thereby resulting into huge losses. It is requested that metering must be done at such connections.
- 3.13.4 Shri Vishnu Bhagwan Agarwal, Chairman - National Chamber of Industries and Commerce, Uttar Pradesh submitted that discoms have continued giving unmetered supply on fixed charges basis to retired employees, same issues are there in PTW connections. It is submitted that these losses are accrued and are charged from Commercial and Industrial consumers.
- 3.13.5 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that LMV -10 category consumer should be 100% metered and licensees must be asked to provide time bound action plan for installation of energy meters for LMV -10 category.

B) Petitioner's Response

- 3.13.6 The Licensees submitted it has proposed a massive tariff hike of around 53% for the LMV-10 consumers in proposed tariff structure while no tariff increase has been proposed in LMV-6 category and a very marginal increase in LMV-2 category.

C) The Commission's view:

- 3.13.7 The Commission has taken note of the above objections / suggestions made by the stakeholders in this regard and has dealt with this issue while designing the Tariff as detailed in the Tariff Philosophy and Rate Schedule provided subsequently in this Order.

3.14 MINIMUM CONSUMPTION CHARGES AND FIXED CHARGES

A) Comments/Suggestions of the Public

- 3.14.1 Shri Umang Agarwal, FITA (Facilitation for Industries & Traders Association) submitted that applicability of minimum demand in the Tariff of commercial and industrial consumers is not justified. Further, such consumers must be charged based on their consumption.
- 3.14.2 Shri Ladali Prasad, Laghu Udyog Bharti – Kanpur, submitted that KESCO is not able to supply electricity on 24*7 basis, however the demand charges (per kVA) are being charged based on 24*7 basis. It is submitted that demand charges should also be taken proportionately to the duration of supply.



- 3.14.3 Shri Sushil Agarwal and Shri A N Dhawan, Federation of Noida Residents Welfare Associations submitted that total sanctioned load of Uttar Pradesh is 47,000 MW which is far more than the available power supply of around 11,000 MW. However, UPPCL have been levying Fixed Charges based on connected load which is more than the available power supply, thus there is no justification to charge Fixed Charges.
- 3.14.4 Shri Vipin Kumar Malhan, President, Noida Entrepreneurs Association submitted that in Noida the total contracted load is twice the power supply. However, fixed charges are being levied on total contracted load, which is unjustifiable and therefore the fixed charges must be abolished.
- 3.14.5 Shri Amit Gupta & Shri Sachin Goyal, consumer submitted that consumer residing in group housing / multi story apartments should be given 25% rebate in the fixed charges / tariff, if consumption is less than 75% of total load.
- 3.14.6 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that after charging system loading charge there is no justification to charge fixed charge and minimum charge.
- 3.14.7 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that fixed charges should be applicable on actual recorded demand in the billing cycle upto the limit of sanctioned load.
- 3.14.8 Shri Shamsuddoha, AIMIM submitted that considering the hardship of LMV-1, LMV-2 & LMV-6 category of consumer, there fixed charges should be abolished and they must be charged on energy charge basis and the energy charges should be in line with the charges in other States.
- 3.14.9 Shri Prayag Tiwari, Vidyut Upbhokta Kalyan Samiti submitted that applicability of minimum charge discourages the consumer in optimum consumption of electricity. It is requested that minimum charge in the electricity bills of the consumer shall be abolished.
- 3.14.10 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that Govt. of India has introduced GST w.e.f July 1st, 2017 and this will result in reduction of Equipment Cost and thereby power generation cost will be lowered. It is submitted that enhancement in fixed costs should be rejected.

It is further submitted that the proposed increase in Minimum Charges from Rs. 500 / kW / month to Rs. 575 / kW / month (from April to September) and Rs. 375 / kW / month to Rs. 425 / kW / month (from October to March) is unjustified



due to non – availability of sufficient power to consumers. It is requested that proposed increase in Minimum Charges should be rejected.

B) Petitioner's Response

3.14.11 The Licensees submitted that minimum charges are part of tariff and are levied for developing the required infrastructure and to meet the expenses incurred to maintain the supply at all the times. These charges cannot be withdrawn, as they are levied as per provisions of Electricity Act, 2003. The Licensees submitted that the minimum charges have been designed to ensure minimum recovery from the consumers considering that they get electricity for about 3-4 hours only during the day. The Licensees added that at the minimum of 8-10 hours of electricity supply, is being given to rural consumers and all other categories of consumers are getting supply for more than the above-mentioned duration and this is despite of vast demand-supply gap. Industries are given top priority and scheduled for getting maximum supply but sometimes system condition and availability of power effects the schedule adversely.

In respect to minimum charges for commercial categories, the Licensees clarified that the minimum consumption guarantee is required where a consumer must pay every month a certain bill amount which is levied to recover the fixed expenses since the Licensees have to incur some expenditure to keep supply always ready for the consumer to the extent of their contracted demand.

It has been further mentioned in the said order that:

“the minimum charges are recovered as Licensee keeps in readiness of energy for the consumer to the extent of contracted demand. If the consumer does not avail of it, energy cannot be stored or preserve. The consumer is therefore, required to pay a fixed sum for energy generation/purchase, even if he does not consume electricity at the contractual level. The levy of minimum charges has been upheld legally, and is being used in several states to enable the utility to recover a part of fixed cost. The difference between levy of fixed charges and minimum charges is that while fixed charges are charged from consumer irrespective of consumption the minimum charges comes into effect only when the bill amount is less than certain prescribed amount. If the minimum charges are not levied than there will be increase in some other charges as the utility has to recover on its prudently incurred cost from consumer.”

Therefore, the charges are logical and necessary.



- 3.14.12 The Licensees submitted that fixed charges are part of tariff and are levied for developing the required infrastructure and to meet the expenses incurred to maintain the supply at all the times. These charges cannot be withdrawn, as they are levied as per provisions of Electricity Act, 2003. The Licensees further adds that in the Tariff Order for FY 2002-03, the Commission has defined the said charges as below :-

“Fixed / Demand Charge is meant to defray the capital related and other fixed costs while Energy Charges is meant to meet the running expenses i.e. fuel cost / variable portion of power purchase cost, etc. A Licensee requires machinery, plant equipment, sub-stations, and transmission lines, etc., all of which need a large capital outlay. For this purpose it has to raise funds by obtaining loans. The loans have to be repaid with interest. In the total cost, provision is also to be made for depreciation on machinery, equipment and buildings, plants, machines, sub-stations and lines that must be maintained. All these activities require large staff and their related cost. These costs are largely fixed in nature and are levied as a part of tariff to recover such costs.”

Therefore, these charges are logical and necessary.

C) The Commission’s view:

- 3.14.13 The Commission has taken note of the objections / suggestions made by the Stakeholders in this regard. The Licensees in its submission have provided the justification towards the rationale for imposition of such charges.

3.15 REBATE ON PAYMENT/ OTHER REBATES

A) Comments/Suggestions of the Public

- 3.15.1 Shri P.S. Jain and Shri Vinay Gupta, Confederation of NCR Residents Welfare Associations submitted that rebate on payment done before due date is not being given to the consumers.
- 3.15.2 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that honest consumer shall get rebate of 5% in their electricity bills if the variance between pole meter and meter installed at consumer premises is within 2%.

It is submitted that interest is being charged at 15% to 24% on delayed payment and bank rate is given for delay in refund is unjustified. Further, same interest should be applicable on delayed payment and delayed refund.



- 3.15.3 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that every year OTS scheme is launched wherein 50% to 100% surcharge waiver is allowed. Due to this scheme, the honest consumers feel betrayed. It is submitted that existing rebate should be increased to 2.0% for encouraging honest consumers.

B) Petitioner's Response

- 3.15.4 The Licensees has not made any submission in this regard.

C) The Commission's view:

- 3.15.5 The Commission has taken note of the objections / suggestions made by the stakeholders in this regard.

3.16 ELECTRICITY DUTY AND SECURITY DEPOSIT

A) Comments/Suggestions of the Public

- 3.16.1 Shri Ladali Prasad, Laghu Udyog Bharti – Kanpur, submitted that KESCO is taking 2 months bill amount as security deposit from consumers. It is submitted that now the billing systems are computerized, so the security deposit amount should not be more than 1 month average bill over a six month period.

Also, security deposit amount from industrial consumers should be through Bank Guarantee to avoid blocking of working capital of industries.

- 3.16.2 Shri Sushil Agarwal and Shri A N Dhawan, Federation of Noida Residents Welfare Associations submitted that interest on security deposit are still not being paid to all categories of consumers. It is requested that the process of payment of interest on security deposit shall be enforced.

- 3.16.3 Shri Vipin Kumar Malhan, President, Noida Entrepreneurs Association submitted that as per the Uttar Pradesh Govt. Order dated 21.01.2010, electricity duty was waived off for new industrial units and the same has not being implemented. It is requested that necessary Orders may be passed in this regard.

It is further submitted that due to manual billing in the past, security deposit amount for 2 months was required. However, now billing systems are online and billing has also been reduced to 35 days, it is requested that system of security deposit should be abolished, if required the security deposit amount should not be more than 1-month bill of industrial consumer.



- 3.16.4 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that Electricity duty has been waived on units operational from 2004 as per Court Order. It is submitted that modalities be drawn to secure the refund of Excess Duty Collected. Also, Electricity Duty must be waived after introduction of GST.

It is submitted that the Electricity Act was operative in 2003, as per provision the interest on security deposit was made payable at bank rate prevailing on 1st April of the ensuing year. UPPCL started paying interest at bank rate w.e.f 2007. The differential interest amount from 2003 to 2007 has to be refunded to the consumer.

- 3.16.5 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that security deposit for industrial consumers should be reduced to 1-month average bill.
- 3.16.6 Shri JyotiBir Singh Sethi, Plant Head, Gripwell Fasteners Pvt. Ltd., submitted that Electricity Duty should be exempted to industrial units (set up in special economic zone) for first 10 years under State Infrastructure & Industrial Policy and the amount should not be charged from us in future electricity bills.
- 3.16.7 Shri Shamsuddoha, AIMIM submitted that interest on security deposit should be adjusted in the electricity bills on monthly basis.

Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that electricity duty is imposed @ 7.50% on the amount of rate charges (amount of Energy Charges and Demand Charges). It is submitted that a roadmap is required to define productive use of recovered Electricity duty in the best interest of the electrical consumer. Alternatively, the old mode of collecting Electricity Duty @ Re 0.09 per consumption of energy units may be fixed.

B) Petitioner's Response

- 3.16.8 The Licensees submitted interest on consumer security deposit is being given to consumer as per Orders of the Commission. The provisions related to security deposit and the interest payable on the same are amply clear and are dealt with in detail in the Distribution Tariff Regulations. Such provisions are being followed in letter and spirit by the Licensees.

However, in case any specific discrepancy is brought to the knowledge of the licensees, it is immediately rectified and consumer is credited with the interest on consumer security deposit.



- 3.16.9 The Licensees submitted that electricity duty is payable to the State Government and its chargeability and rates are not governed by the Tariff Order.
- 3.16.10 The Licensees further submitted that Security amount is charged as per the provision of Cost Data Book issued by the Commission. Petition for the Cost Data Book is separately filed before the Commission and separate hearing is conducted by the Commission.

C) The Commission's view:

- 3.16.11 Matters related to electricity duty relate to GoUP and the stakeholders requiring any such clarifications may approach the GoUP.
- 3.16.12 The provisions related to security deposit and the interest payable on the same are amply clear and are dealt with in detail in the Electricity Supply Code, 2005 and its amendments. It needs to be followed in the same spirit by both, the Licensees as well as the consumers.
- 3.16.13 The Commission in its earlier Orders has directed the Licensees on the above matter and it once again directs the Licensees to pay the applicable interest on security deposit as per the Electricity Supply Code, 2005 and its amendments and orders of the Commission. Licensees are directed to ensure the timely payment of the interest on security deposit to the consumers.

3.17 SUBSIDY FROM GoUP

A) Comments/Suggestions of the Public

- 3.17.1 Shri Ladali Prasad, Laghu Udyog Bharti – Kanpur, submitted that billing to all sectors should be done as per normal applicable tariff and the subsidy amount should be separately provided to compensate the electricity supply company. This will ensure better financial discipline and will provide the data regarding the extent of subsidy being given.
- 3.17.2 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that as per UDAY, subsidy of Rs. 5500 crore will be given to Discoms, wherein Rs. 240 crore is for farmers, Rs. 3760 crore is for rural consumers and Rs. 1500 crore is towards electricity duty. However, it is not clear how Rs. 1500 crore subsidy towards electricity duty will be treated among all the consumers. Therefore, it is submitted that 1500 crore subsidy should be used for rural consumer and thereby their tariff must not be increased significantly.



B) Petitioner's Response

3.17.3 The Licensees submitted that to provide the subsidy to any category is in the domain of the State Government and tariff for that category is proposed according to the policy of Govt and provision of the tariff policy.

C) The Commission's view:

3.17.4 The Commission has taken note of the objections / suggestions made by the stakeholders in this regard and the details of GoUP subsidy considered are discussed in detail in subsequent sections of this Order.

3.18 PRICE AND QUANTUM OF POWER PURCHASE

A) Comments/Suggestions of the Public

3.18.1 Shri P.A. Dixit, Consumer submitted that costlier power is being procured from private companies.

B) Petitioner's Response

3.18.2 The Licensees submitted that most of the power purchase is being done under long term PPA from generators which have been duly approved by the Commission. The short-term power purchase is being done under competitive bid route, after due approval of the Commission. The power from exchanges is being procured to ensure that the scheduled roster is maintained and the consumers are provided quality power.

3.18.3 The Licensees in recent few months have taken some crucial decisions including termination of Bajaj Energy PPA, surrendering share of NTPC's costly power plants, keeping costly power plants of the State Generating Company UPRVUNL under reserve and providing support for generators in the state in obtaining cheaper coal linkages to ensure reduction in power purchase cost. The Licensees further commit to take additional and crucial measures in order to reduce their power purchase cost in order to provide cheaper power to the State Consumers.

C) The Commission's view:

3.18.4 As regards to high power purchase cost, the Commission has taken the matter and directed the Licensees to furnish source wise actual power purchase and cost data for FY 2017-18 (till August'2017) and due diligence has been followed for allowing price variation to the generator on account of escalation in the cost of fuel to which the Petitioner has made partial submission. The methodology



adopted by the Commission for projecting power purchase cost from FY 2017-18 to FY 2019-20 is discussed in ARR for FY 2017-18 to FY 2019-20 section.

3.19 METERING AND BILLING

A) Comments/Suggestions of the Public

- 3.19.1 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad and Shri Pratap Chandra Chairman Rastravadi Sangthan, submitted that in rural areas consumers should be billed as per rural tariff and in urban areas consumers should be billed as per urban tariff. They further requested the Commission to Order the Licensees to charge rural consumer on rural tariff in place of urban tariff and should return the excess money collected.
- 3.19.2 Shri Pawan Tiwari R.T.I. and Social worker submitted that urban tariff is charged for rural consumer. It is requested that either supply hours be increased as per urban schedule or billing shall continue as per rural schedule in rural areas.
- 3.19.3 Shri G.C. Khanna, Electrical Adviser & representative submitted that Discoms are releasing PTW connections without meter. Maximum PTW connections are running without meter so that Discoms can take advantage of regulatory surcharge by claiming loss. Hence, necessary action is required by the Commission in this regard.

B) Petitioner's Response

- 3.19.4 The Licensees submitted that the bills of PTW consumer are prepared based on Tariff order issued by the Commission. The Rates depend upon supply schedule, such as Rural Schedule and Urban Schedule.

C) The Commission's view:

- 3.19.5 The Commission has taken note of the objections / suggestions made by the objectors. 100% metering and billing is a must for all the Licensees and they must put sincere efforts to achieve the same at the earliest.

3.20 OPEN ACCESS

A) Comments/Suggestions of the Public

- 3.20.1 M/s Rimjhim Ispat Limited submitted that distribution losses between 11kV and 132 kV voltages need to be identified for computation of cross subsidy charges. It is submitted that the Commission may adopt the distribution losses projected for FY 2017-18 for determination of cross subsidy charges as considered for FY 2013-14 and before. Further, transmission losses and distribution losses need



to be considered towards system losses for determination of cross subsidy charges.

It is further submitted that cross subsidy surcharge for subsequent financial years under MYT may be determined on the basis of actual parameters of respective years.

- 3.20.2 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that HV -1 & HV-2 consumers shall be allowed to make direct purchase on behalf of Discoms from Power Exchange.

Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that the process of adopting open access is very cumbersome and there is a need of favorable wheeling charges and improvement in distribution network, as this will be beneficial both for the consumer as well as licensees in having power to other consumers.

B) Petitioner's Response

- 3.20.3 The Licensees submitted that cross subsidy surcharge is levied as per Tariff Order of the Commission. Formula used in calculation in cross subsidy surcharge is as provided Distribution Tariff Regulations.

C) The Commission's view:

- 3.20.4 The Commission has taken note of the above objections / suggestions made by the stakeholders in this regard. The details of the charges applicable to Open Access consumers along with the wheeling losses approved by the Commission have been discussed in subsequent Chapter titled Open Access Charges.

3.21 AUDIT OF ACCOUNTS

A) Comments/Suggestions of the Public

- 3.21.1 Shri Ladali Prasad, Laghu Udyog Bharti – Kanpur, submitted that audited financial data must be considered by the Commission and any proposal or tariff change should be based on the audited accounts only.
- 3.21.2 Shri M. Ahmed, Juhilal Colony – Kanpur submitted that CAG audit of all Discoms of UPPCL is not being done.
- 3.21.3 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that the ARR proposal made by the Discoms does not consider the audited figures for the latest years.



B) Petitioner's Response

3.21.4 The Licensees submitted that all the accounts of the licensees are audited by CAG and put before public account committee of Govt. of Uttar Pradesh. Therefore, it is erroneous to say that account is not audited. Further, it is submitted that the submissions made by the licensees are duly vetted by the Commission and once the Commission is satisfied with the data submitted is correct, it admits the licensee's petitions. The Present Petition has already been admitted by the Commission post detailed scrutiny process.

3.21.5 The Licensees stated that it has already submitted the audited balance sheets along with supplementary audit reports of the Accountant General of Uttar Pradesh (AGUP) for the period up to FY 2014-15. Such audited accounts and AGUP reports have already been published on the website of the Licensees.

Further, the ARR / Tariff would be determined by the Commission based on audited accounts of (n-2)th year which reflect true and fair view of the financial transaction. Further this exercise will be carried on yearly basis which will take care of the concern of the stakeholders.

The tariff of the Licensees is determined on accrual basis. The past dues cannot be treated as income of the Distribution Licensees. Thus, it will have no effect on determination of tariff. The electricity charges are recognised as income once the bills are raised on accrual basis. Hence, they cannot be recognised as income source when arrears are collected. The Hon'ble Commission fixes the tariff on accrual basis and not on the cash basis. Treating the realization of arrears as income would amount to double counting of income. Therefore, it cannot be treated as income again on realization.

C) The Commission's view:

3.21.6 The Licensees have submitted the audited accounts for FY 2014-15 and provisional accounts for FY 2015-16. The Petitions of the Licensees were admitted only after the receipt of the above documents and the same is as per the provisions of the UPERC Distribution Tariff Regulation 2006, Distribution MYT Tariff Regulations, 2014 and in line with the Hon'ble APTEL order in the Appeal no. 121 of 2010 dated October 21, 2011.

3.22 TARIFF STRUCTURE

A) Comments/Suggestions of the Public

3.22.1 Shri Vinod Pandit, Kanpur Udyog Vyapar Mandal and Shri Umang Agarwal, FITA (Facilitation for Industries & Traders Association) submitted that consumers must be charged on single part Tariff basis instead of various charges provided



in the bill. Further, to ensure continuous supply of electricity, street light Lines must be separated from Traffic Signal Lines and Domestic supply must also be separated.

It is further submitted that rostering must be informed through various channels like SMS / newspapers.

- 3.22.2 Shri Umang Agarwal, FITA (Facilitation for Industries & Traders Association) submitted that separate Tariff must be decided for different categories of consumers based on their usage.
- 3.22.3 Shri Shesh Narayan Trivedi, Shree Devnagar Dharamsala Samiti – Kanpur, submitted that their institution is engaged in social services for poor section of the society and requested that the domestic tariff should be made applicable on the institution instead of commercial tariff.
- 3.22.4 Shri Sushil Agarwal and Shri A N Dhawan, Federation of Noida Residents Welfare Associations submitted that Electricity Act, 2003 provided that separate tariff has to be fixed for each profit centers. However, uniform tariff increase is being proposed for all profit centers, which is grossly unjustified. In case of Noida, the line losses are minimum and per unit realization is also very high. Hence, separate tariff may be fixed for Noida and tariff may be significantly reduced.
- 3.22.5 Shri Vipin Kumar Malhan, President, Noida Entrepreneurs Association submitted that in case of Noida, the line losses are minimum Hence, separate tariff may be fixed for Noida.
- 3.22.6 Shri P.S. Jain and Shri Vinay Gupta, Confederation of NCR Residents Welfare Associations submitted that line losses in Ghaziabad are in the range of 8 -10% and in case of Noida, the line losses are even less. Hence, tariff for Noida may be fixed in accordance with the line losses.
- 3.22.7 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that Power should be available at uniform rate throughout India as like other commodities to ensure equal opportunity to all. Multi Tariff System is unhealthy and disadvantageous for practical reasons.

It is further submitted that a discount should be given for extra consumption as an incentive to bulk and honest consumers.

It is further submitted that slab rate may be charged on increased consumption i.e. reduced rate must be charged upto first slab and thereafter excess charge must be levied only on the increased consumption and not on whole consumption.



- 3.22.8 Shri K.L. Aggarwal, Chairman, Industrial Development Forum, Muzaffarnagar submitted that three slabs of Energy Charges fixed for LMV-6 category consumer for the entire consumption are irrational & un-reasonable. It is requested that the rate of slabs for LMV – 6 categories must be re-looked into.
- 3.22.9 G.C. Khana, Electrical Advisor & Representative submitted that rural areas are being provided with a rebate of 7.50%. However, the institutes, etc. that are coming in rural areas and being covered under LMV - 4 & LMV – 9 categories are not provided any rebate.
- It is submitted that the rural rebate must be increased from 7.50% to 10.00% as the supply hours are only limited to 8-10 hours.
- It is further submitted that no connection shall be released without a meter. Further, Departmental consumption should also be metered.
- 3.22.10 Shri Udayraj Singh, Nagar Ayukt, Nagar Nigam Lucknow submitted that LMV-3 (unmetered) tariff for street lighting under Nagar Nagam must be re-looked into as the same is very high.
- 3.22.11 Shri Pawan Tiwari, Advocate submitted that Tariff of Nagar Panchyat, Nagar Palika must be designed based on the supply hours. It is submitted that the supply hours are different for various parts of the State, however the Tariff is same. It is requested that Tariff of Nagar Panchyat, Nagar Palika must be designed based on the supply hours (i.e. urban / rural supply hours)
- 3.22.12 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that for LMV-6 category consumers, different consumption ranges should be removed as provided in the existing mechanism, with this the higher consumption of electricity within the contracted load is being discouraged. Further, the charges for LMV-6 consumers should not be more than the average cost of supply (i.e. Rs. 6.35 / kWh at present) and fixed charges should be kept in the middle range of Rs. 255 / kW per month irrespective of the load ranges.
- It is further submitted that rate schedule proposal for FY 2017-18 proposes that burden of cross subsidy will be put on LMV- 6 & HV-2 consumers. It is requested that cross- subsidization should not be done to make the industries globally competitive.
- 3.22.13 Shri Rajveer Singh, Bhartiya Kishan Union submitted that kolhu must be removed from industrial category and must be brought under Domestic / Agricultural category.
- 3.22.14 Shri Rohit Dua, Chairman – CIRC, Agra submitted that electricity connection sanctioned in the offices used by Chartered Accountants are of commercial



nature and thereby commercial tariff is applicable on them. The Commercial connection is being sanctioned irrespective of the size of the office. It is requested that commercial tariff may not be applicable on offices having less than 500 sq.ft of area, so that young professionals can set up their own office and contribute towards growth of the nation.

- 3.22.15 Shri Sushil Gupta, Secretary, Progressive School Association of Agra & GD Goenka Public School submitted that schools under charitable trust are required to pay fixed charges for the entire year. It is requested that they may be treated under seasonal units (like cold storage units) and necessary action may be taken in this regard.

M/s ACME Cleantech Solutions Pvt. Ltd. submitted that for determination and adoption of special category tariff for battery swapping infrastructure to service E- vehicle.

B) Petitioner's Response

- 3.22.16 The Licensees submitted that two-part tariff structure is as per Electricity Act, 2003. Two-part tariff structure comprises fixed charge (meant to defray the capital related and other fixed costs) and energy charge (meant to meet the running expenses). Licensees must pay fixed charges to generating units and incur cost for expansion and strengthening of the infrastructure to provide regular supply to the consumer. As per the economic principal fixed cost must be recovered from the fixed charges received from the consumers. So fixed charges are justified.
- 3.22.17 The Licensees submitted that separation of street light and signal light are not related to the MYT and Tariff Petition for FY 2017-18.
- 3.22.18 The Licensees submitted that tariff is designed for various categories of consumers in line with the provisions of Electricity Act, 2003 and tariff policy. Electricity Act, 2003 mandates charging of different tariff from the different category keeping in view use and geographical position of the consumer.
- 3.22.19 The Licensees submitted that Dharamshalas run by the charitable trust are covered under LMV-4 category. It is a commercial activity, and cannot be provided the benefit of LMV-1 category.
- 3.22.20 The Licensees submitted that tariff proposal has been submitted keeping in view the interest of licensees as well as consumers. Further reduction / rebate is not desirable as it will adversely affect the financial position of the licensees. It is imperative to mention that the genuine costs incurred by the licensees



should be allowed to be recovered in a reasonable manner as per the terms of the UPERC Tariff Regulations, 2006 and the Electricity Act, 2003.

- 3.22.21 The Licensees submitted that the Tariff Charged to LMV-4 and LMV-9 category is being done in line with the Tariff Order approved by the Commission. Further the rural rebate allowed is after considering the cost of service of the Licensees and the same cannot be further increased. Also it would be correct to ensure higher Surcharge / Penalty, in order to ensure timely payment of electricity dues from the consumer.
- 3.22.22 The licensees submitted that in the matter of Tariff for LMV-3, Nagar Panchyat and Nagar Palika, the Commission may make necessary provisions in the Tariff Schedule.
- 3.22.23 The licensees submitted that seasonal tariff is not applicable to educational institutions. Seasonal tariff is only applicable for LMV-2 and LMV-6 Categories. The demand of educational institution cannot be related with cold storage.
- 3.22.24 The licensees submitted that the matter of simplification of tariff structure and uniformity of the tariff throughout of country can be considered in the tariff structure of next years. The licensees have already commented on other points in the previous submission to the Commission.
- 3.22.25 The licensees submitted that if and when the activity of consumers is commercial in nature. Therefore, the category and tariff proposed for this category is justified and hence request of the stakeholder need not be considered.
- 3.22.26 The Licensees submitted that the consumers request to provide electricity to MSME consumers at cheaper rates can be considered at the Commission Level, since the Licensees has already submitted its Tariff Proposal which is at disposal with the Commission.
- 3.22.27 The Licensees submitted that tariff proposal has been submitted keeping in view the interest of licensees as well as consumers. Further reduction / rebate are not desirable as it will adversely affect the financial position of the licensees. It is imperative to mention that the genuine costs incurred by the licensees should be allowed to be recovered in a reasonable manner as per the terms of the Distribution MYT Tariff Regulations, 2014, and the Electricity Act, 2003.

C) The Commission's view:

- 3.22.28 The Commission has taken note of the objections / suggestions made by the stakeholders in this regard. The applicable Tariffs for all the consumer categories have been designed in accordance with the Electricity Act, 2003 and



the Distribution MYT Tariff Regulations, 2014. The details of all the aspects related to Tariff design have been covered subsequently in Chapter of Tariff Philosophy and Rate Schedule provided in this Order.

3.23 LATE PAYMENT SURCHARGE

A) Comments/Suggestion of the public

3.23.1 G.C. Khana, Electrical Advisor & Representative submitted that surcharge / penalty must be reduced from 2% per month to 1.25% or 1.50% as RBI has been reducing the loan rate.

B) Petitioner's Response

3.23.2 The Licensees submitted it would be correct to ensure higher Surcharge/Penalty, to ensure timely payment of electricity dues from the consumer.

C) The Commission's view:

3.23.3 The Commission has taken note of the suggestions made by the stakeholder and is of the opinion that the same is more in the form of a penalty than it being linked to the bank rates.

3.24 PUBLIC HEARING PROCESS

A) Comments/Suggestion of the public

3.24.1 Shri D.S .Verma Executive Director, Indian Industries Association submitted that the Public Notice for inviting objection on ARR & Tariff Petitions filed by various Discoms was published in few selected newspapers, hence, large numbers of consumers were not aware of Public Notice.

B) Petitioner's Response

3.24.2 The subject issue is within the preview of the Commission.

C) The Commission's view:

3.24.3 The Commission in its Admittance Order dated September 4, 2017 directed Licensees to publish the Public Notice detailing the salient information and facts of the ARR / Tariff Petition along with its website address in at least two daily newspapers (two English and two Hindi) for two successive days inviting views / comments / suggestions / objections / representations within 15 days from the date of publication of the Public Notice(s) by all stakeholders and public at large. The same was as per the provisions of the Distribution MYT Tariff



Regulations, 2014. Public hearings were also held at various locations of the State.

3.25 SUB STATION CAPACITY / INFRASTRUCTURE ENHANCEMENT

A) *Comments/Suggestions of the Public*

3.25.1 Shri Ladali Prasad, Laghu Udyog Bharti – Kanpur, submitted that preventive maintenance of infrastructure both at generation and distribution level should be focused upon to avoid sudden breakdown and heavy expenditure and loss of revenue during breakdown time.

3.25.2 Shri S.P. Sharma, Chairman, Indian Industries Association – Greater Noida Chapter submitted that multiple power cuts, tripping, service line's faults and scheduled cuts results in hampering of productivity. It is submitted that overhead cables system are 20 years old and must be converted into underground lines so that frequency of faults is reduced.

Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that audit meters be installed in transformer to locate line losses

B) *Petitioner's Response*

3.25.3 The Licensees submitted that complaints of quality of supply, turnaround time for fault repair, etc. are not related to present Tariff Petition. However, it assured that these issues are in the jurisdiction of the concerned local field units of the concerned Discoms.

C) *The Commission's view:*

3.25.4 The Commission has taken note of the objections / suggestions made by the stake holders. The Licensees must expedite the work of increasing the capacity of various sub-stations and power distribution network, distribution lines and network have to be ungrounded in theft prone areas and electrical infrastructure must be improved to avoid electrical accidents in accordance with the Capital Investment Plan so that above issues are resolved at the earliest. Further, the Licensees are also directed to plan the distribution network expansion and capacity augmentation to cater to the current and future load requirements and to meet the establish standards of power system design and control the power theft. **Further as pointed out by the stakeholders, in Noida and Ghaziabad area, where loss levels are low and has one of the highest ABR, undergrounding of cables and network must be done to further reduce to losses and frequent breakdowns during bad weather conditions. The Commission directs the petitioner to do underground cabling works in Noida and Ghaziabad and must apprise the Commission about the**



progress of the same on periodic basis. These undergrounding works of at least 11kV and below network must be completed in one-year time. Further, the Licensees should explore similar areas where underground cabling should be done and must execute the same.

3.26 ENCOURAGING RENEWABLE ENERGY

A) Comments/Suggestions of the Public

3.26.1 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that consumers installing Roof Top solar system with Net Metering should be given exemption from the fixed charges to the extent of minimum 50% of the solar capacity installed.

3.26.2 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that rebate of Rs. 100 / month for installation of solar water heating system of 100 Ltr. Capacity shall be increased to Rs. 250 / month as this will help in promoting renewable source of energy.

It is further submitted that a rebate of 10% both on fixed and energy charges should be given to encourage Grid connected solar power plant and this will help in achieving the targeted capacity in National Solar Mission and will also give relief to licensees in arranging power to consumers.

3.26.3 Shri Rakesh Goel, Consumer submitted that GoI and State have formulated an attractive rooftop grid policy to encourage consumers to generate part of the energy, reduce burden on the lines and decrease losses. But none of the Discoms are properly aware of this, nor promoting it. Getting net meter is botheration which discourages potential installers.

B) Petitioner's Response

3.26.4 The Licensees have not made any submission in this regard.

C) The Commission's view:

3.26.5 The Commission has taken note of the objections / suggestions made by the stakeholders in this regard. The Commission is of the view that use of renewable sources at the consumer level must be encouraged. This is essential for State like Uttar Pradesh. In view of this, the Commission has already introduced rebate on the monthly bill for all consumers using solar water heaters as detailed further in Rate Schedule.



3.27 OTHER GENERAL ISSUES

A) Comments/Suggestions of the Public

3.27.1 Shri Ladali Prasad, Laghu Udyog Bharti – Kanpur, submitted that no transparency is there in system and procedures and ISO certification should be made compulsory for distribution, billing and administration centers.

It is further submitted that definition of 'theft' should be amended to include only tampering of meter, by pass of meter, direct unauthorized connections, etc whereas cases involving use and billing of electricity under distinct categories should not be included under 'theft'.

3.27.2 Shri S.P. Sharma, Chairman, Indian Industries Association – Greater Noida Chapter submitted that electricity safety awareness program must be conducted by Discoms on regular interval.

3.27.3 Shri P.S. Jain and Shri Vinay Gupta, Confederation of NCR Residents Welfare Associations submitted that O & M expenses in FY 2014-15 were 17 paisa per unit. However, for FY 2017-18 the O & M expenses are 37 paisa per unit, which is double as compared to previous year.

3.27.4 Shri Vishnu Bhagwan Agarwal Chairman, Agra Chapter, ASSOCHAM, U.P submitted that cost of Capital goods is recovered from consumers as per the Cost Data book at the time of installation. It is submitted that after surrendering the connection, the same must be returned or as an alternative depreciated value be refunded to the consumer.

It is further submitted that RMU charges should be claimed only when the supply is made from 2 or more feeders. It is also submitted that purchase and sale of all Capital Assets should be through open and transparent tendering system.

3.27.5 Shri P.A. Dixit, Consumer submitted that theft of electricity is not being controlled and meters are not being installed at transformers and un-metered consumers.

3.27.6 Shri K.L. Aggarwal, Chairman, Industrial Development Forum, Muzaffarnagar submitted that the details of % metering achieved in regard to following category of consumers must be provided:

- Serving Staff & pensioners (LMV - 10)
- Urban un-metered consumers
- Rural un-metered consumers
- Govt., semi –govt. offices, official residential premises & other govt. & private institutions.



It is requested that all necessary measures must be taken to ensure 100% metering of all the above-mentioned categories.

It is further submitted that distribution companies are treating the late payment surcharge (LPS) in the category of arrears and thereby the rebate to the consumers is not provided, even if the bill is paid on or before its due date. It is requested that clarification whether LPS fall under the category of arrears or not must be provided.

3.27.7 Shri D.S. Verma, Executive Director- Indian Industries Association submitted that option of migration from LMV-6 to HV-2 should be allowed free of charge.

It is further submitted that to encourage cashless transactions, transactions charges for online payments should be exempted without any upper limit for the bill amount. Also, the system loading charges should be abolished.

It is submitted that unmetered electricity supply should not be allowed to any category of consumers.

3.27.8 Shri Prem Singh Chauhan, President, Laghu Udyog Bharti – G.B. Nagar submitted that to reduce the electricity theft, industrial units must be given a permanent connection instead of a temporary connection.

3.27.9 Shri Rajveer Singh, Bhartiya Kishan Union submitted that farmers should be given connection under the dark zone.

Further, the supply hours in rural areas must be a minimum of 18 hours (9hours day time, 9 hours night time).

3.27.10 M/s PVS Multiplex India Pvt. Ltd. submitted that as per the film policy 1999 of GoUP, for promotion of multiplexes, the multiplexes were given the status of industry. However due to non-clarity in the Tariff Order, rates of non- industrial bulk loads are applicable on Multiplexes. It is requested to take necessary action in this regard.

3.27.11 Shri Hemendra Bhardwaj, Cyfuture submitted that clarity on applicability of HV-1 / HV-2 tariff category on Special Economic zone created for IT / ITes / Software development domain must be provided.

3.27.12 Shri Avadhesh Kumar, Chairman, Uttar Pradesh Rajya Vidyut Upbhoktha Parishad submitted that UPPCL has proposed 24 hours electricity supply in the rural areas, therefore the Tariff for rural consumer will be same as that of urban consumer. It is submitted that Standard of Performance for Rural areas is not as good as that of Urban areas, therefore tariff cannot be same for rural and urban consumer. It is observed that petitioner has not proposed any tariff hike



for lifeline consumers. However the consumption range has been decreased from 150 units to 100 units.

It is further submitted that RoE should not be allowed, as UPPCL does not follow the Standard of Performance and there is no improvement in consumer services. In view of this, the load of Rs. 1628 Crore on account of RoE in the ARR should be disallowed.

It is submitted that figures of Benchmarking studies, UDAY and 'Power for All' does not match. Hence it is difficult to arrive at the correct figures.

It is submitted that apart from four Public Hearings, at least four more public hearing must be conducted in rural areas of the individual Discoms.

It is submitted that Discoms have proposed increase in tariff due to increased hours of supply. However, their supply system is not capable of supplying 18 hours or 24hours of electricity. It is submitted that discoms must increase their system capacity.

It is submitted that tariff should be increased only after the DISCOMs are able to cater the electricity demand.

It is submitted that the decision was taken in the Tariff simplification committee and still minimum charge is being levied on the commercial consumers. It is submitted that levying of minimum charge is unconstitutional. Further, it is requested that minimum charge must be abolished for LMV -2 consumers in FY 2017-18.

It is further submitted that Rs. 686 Crore & Rs. 530 Crore asked by Distribution Companies under the Bad & Doubtful Debt head for FY 2017-18 & FY 2014-15 is completely unjustified and must be disallowed as the sample cases are not submitted by them.

It is submitted that during the initial filing of the petition, the petitioner purposefully increased the ARR projection in order to increase tariff of rural and agricultural consumers by 350%.

It is further submitted that CAG audit of all the financial parameters of Torrent Power Ltd. must be done.

It is further submitted that Distribution companies in order to increase their revenue have started levying Re-connection disconnection charges on consumers with electricity bill due for more than 1 month.

It is submitted that under the OTS scheme, Crores of rupees have been waived off. Further, under the free connection scheme, Crores of rupees have been



spent. In view of the above the distribution companies could have asked for subsidy from the Govt., instead of passing on the above expenses through Tariff Hike.

It has submitted that UP has 68 lakh unmetered consumers and to cater this, PUVNL and PuVVNL has ordered 350 to 400 crore meters and MVVNL has also floated a tender. Simultaneously, Discoms have ordered 40 lakh smart meters. Accordingly, present O & M expense has reached to Rs. 7622 Crore (from the previously level of Rs. 3300 Crore), and thereby an additional Rs .3000 Crore O & M expenses shall not be allowed. It is submitted that electricity dues on various dept. amounts to more than Rs. 9000 Crore and no action is being taken against them. It is submitted that if the Govt. wants then one -time settlement scheme for such dept. can be done.

Further, it has submitted that as per Census 2011 total 167826730 rural households are there and only 55.30% are electrified. Discoms have not formulated any plan to electrify remaining households.

It has also submitted that the Discoms are harassing the LMV-5 consumers by wrongful billing and not as per tariff approved by the Commission.

It is submitted that the safety devices are not fully functional; thereby electrical accidents have increased from 500 to 723.

It is submitted that Electricity Duty is being levied on Fixed / Demand Charges, which is completely wrong and it is requested that the Commission shall take note of the same.

It is submitted that segregation of Wheeling and Retail Supply Business need to be initiated.

It is submitted that the expenses of Public Hearing shall not be borne by the Licensees in order to reduce the burden on the retail consumers.

It is submitted that tariff hike could have been avoided if the pending payments from the Govt. institutions were fully recovered.

It is submitted that currently consultants are appointed for all the works of Govt. organizations, be it for UDAY or in PFC. As a result, none of the experts appointed in these Govt. institutions or power corporations are put to use.

It has submitted that the Commission must take appropriate time of 120 days as per Act to finalize the tariff order and not come under the pressure of the Licensees.



3.27.13 Shri Vikram Singh, TRAP submitted his suggestion in the matter of billing of private tube wells, the suggestions are as follows:

- Bills of Private tube wells (used by farmers) must be computed on yearly basis.
- Farmers opting for onetime payment of annual bills, shall be charged for 11 months, as the same is also being followed in the telecom department.
- OTS scheme shall be abolished, as this motivates the farmers for non-payment of bills.

3.27.14 Shri Vishnu Bhagwan Agarwal, Chairman - National Chamber of Industries and Commerce, Uttar Pradesh submitted that imposing a penalty for non-availability of reading at Rs. 50 is unjustified until any advance intimation or fixed schedule for reading is given.

It is further submitted that a reading slip should be made mandatory to have a copy of reading and evidence of visit of meter reader.

3.27.15 Shri Ajit Singh Bagga & Shri Pramod Gupta, Varanasi Vyapar Mandal submitted that industrial and commercial consumers must suffer hardships due to unawareness of public hearing being conducted.

3.27.16 Shri Surendra Kumar Yadav, RJD – Varanasi submitted that PuvVNL is replacing the old electronic meters of the consumers with new meters, even though the previous meters were fully functional. It is further submitted that quality certificate of new meters is also not being provided.

It is requested that necessary action may be taken to ensure that quality of new meters is checked in the laboratories and the report must be made available in the public domain.

3.27.17 Shri Virendra Nath Gupta, Secretary General, Associated Chamber of Commerce and Industry, UP submitted that the Licensees have proposed to bear the transaction charges for bill payment up to Rs. 400 but the software installed is not supporting the same. The transaction charges are debited from the consumers account. It is submitted that in view of the GoI initiative to promote digital transactions, the transactions charges should be waived off, irrespective of any amount.

It is submitted that Commerce and Industry, UP submitted that there is a need for time bound implementation of world bank supported APDRP and RAPDRP scheme. It is submitted that implementation of APDRP Project and adoption of SCADA will sharply reduce the establishment expenditure and will support in quality power supply, corruption free and effective service to the consumer.



It is further submitted that the time slot allotted in holding public meeting at various places in the State is very short in comparisons to the number of participants wish to join.

3.27.18 Shri Rakesh Goel, Consumer submitted that ARR is based on estimated figures without any basis and the terms and conditions agreed between GoI and DISCOMs for restructuring package in regard to improvement in performance, measured as on cut off dates has been violated. It is submitted that ARR must be rejected.

3.27.19 Shri Rajveer Singh Jadoon, Bhartiya Kishan Union submitted that camps must be organized in rural areas and free connection must be given.

It is submitted that levy of capacitor charge is unjustified and the same must be stopped.

3.27.20 Shri Vishal Dixit, Advocate (Representative of industries namely M/s Shamli Steels (P) Limited, M/s Amba Shakti (P) Limited, M/s Tehri Iron & Steels Casting (P) Limited, M/s Panem Steels (P) Limited, M/s Jai Jagdamba Malleable (P) Limited, M/s Sidhali Steels (P) Limited, M/s Premier Metacast (P) Limited, M/s Sarottam Rolling Mills (P) Limited and M/s Nawla Ispat (P) Limited) submitted that in Uttar Pradesh, all induction furnace, arc furnace, rolling mill and re-rolling mill are in great trouble and almost 50% of the industry have closed their units and subsequent 30% units have reduced their contracted load and only 20% of the units are existing in the State of Uttar Pradesh in comparison of last 3-5 years due to higher rates of electricity in Uttar Pradesh.

It is further submitted that in the adjoining States like MP, Jharkhand, Chhattisgarh, Uttarakhand & Rajasthan, rates of electricity for heavy industries are cheaper in comparison to State of Uttar Pradesh and generally the tariff in the range of Rs. 4 - 5 / kWh.

B) Petitioner's Response

3.27.21 The Licensees submitted that the Employee cost in the Tariff Petition has been proposed as per the Provision of MYT Regulation. In the Regulation, Employee cost is linked with the No. of sub-station and consumer numbers.

3.27.22 The Licensees submitted that it has planned and proposed a gradual reduction in distribution losses up to FY 2021-22 in line with the directives of the Ministry of Power, Govt. of India.

3.27.23 All efforts are being made to reduce the losses as the same is beneficial to the utility as well. Tariff revision exercise is done based on normative loss level. It may be noted that when losses are assumed on lower side then tariff will



automatically be lesser. Hence, loss level projection is not against the interest of the consumers.

- 3.27.24 The Licensees submitted that the infrastructure is sufficient to cater for supply to all consumers. However, to cater for future growth, action is being taken for addition of matching infrastructure.
- 3.27.25 The Licensees submitted that the Commission has already issued directions to the Licensees to initiate base line loss estimation studies for assessment of technical and commercial losses. The Licensees would be appointing consulting firms for undertaking the said studies.
- 3.27.26 The Licensees submitted that various steps are being taken to curb theft which is widely prevalent across the State. Some of the steps are listed below:
- For proper accounting of energy & reducing chances of theft, double metering system is being implemented which is yielding encouraging results.
 - For speedy redressal of consumer grievances, call centre has been established and Control rooms have been set up.
 - In all theft prone areas overhead conductor are being replaced with ABC (Aerial Bunched Conductor). This has helped in the reduction of line losses and break-downs and has resulted in better quality of supply & consumer satisfaction.
 - Provision of periodic checking of all static and trivector meters installed in high value consumers premises.
 - Special drive to check the cases of theft/unauthorized use of electricity/checking of excess load being carried out in different distribution divisions by officers of the licensees.
- 3.27.27 Special team of departmental engineers and Vigilance teams comprising of licensee's officers and Police personnel's have been formed in each circle. Surprise raids were conducted to direct theft of energy/Katiya connections.
- 3.27.28 The Licensees submitted that metering plan has been submitted to Commission and it is submitted that all unmetered connection will be metered by FY 2019. Further, it is submitted that to disincentive wise unmetered connection rates for this category has been increased more than metered connections.
- 3.27.29 The licensees submitted that meter on distribution transformer are continuously been installed for monitoring of line losses. Further in relation to the applicability of various charges on electricity consumption by the Consumers in line with the Tariff Order approved by the Commission.
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- 3.27.30 The Licensees submitted that separation of Street light and signal light are not related to the MYT and Tariff Petition for FY 2017-18.
- 3.27.31 The Licensee's submitted that the Commission hold the discretionary power to decide the place of public hearing for the MYT / ARR Petition. The Licensees are bound to comply with the directions of the Commission in this regard.
- 3.27.32 The Licensees submitted that it has been extensively working on strengthening its Transmission and Distribution system in order to cater the power demand with projected increase in supply hours to all sections of the society. Further it would be imperative to inform that the Licensee's in recent past have met the peak demand of around 19,000 MW at the State Level and is further committed to meet the increase in demand with parallel augmentation of its Transmission and Distribution system.
- 3.27.33 The Licensees submitted that the UDAY scheme was prepared in January 2016 based on the provisional balance sheets of FY 2014-15 and mid-year data available for FY 2015-16 and after accounting for the actual cash flows for the Discoms, whereas the MYT petition has to be prepared in line with the provisions of the MYT Regulations, wherein most of the cost side details are projected on normative basis as per the methodology finalised by the Commission. The MYT petition has been filed based on the audited accounts of FY 2014-15, provisional accounts of FY 2015-16 and provisional data available for FY 2016-17, which seems to be more realistic and true. However other than the change in the cost factors the projected distribution losses in the MYT Petition for all Discoms has been kept sacrosanct with the UDAY scheme.
- 3.27.34 The Licensees submitted that the Distribution Licensees are putting in their best efforts to improve the quality of its Distribution system with a vision to supply 24x7 power to all of its consumers by October, 2018, which was also help in improving in the financial conditions of the Discoms making them economically viable. Further it would be imperative to note that the burden of accumulated losses on account of any inefficiency of Discoms in terms of High Distribution Losses, lower collection efficiency or any other controllable factor is not passed on to the consumers of the State and the Discoms have to fund the same at their own cost. Thus, these accumulated losses do not have impact on the ARR/MYT Petition.
- 3.27.35 The Licensees submitted that the UDAY scheme was prepared in January, 2016 based on the provisional balance sheets of FY 2014-15 and mid-year data available for FY 2015-16 and after accounting for the actual cash flows for the Discoms, whereas the MYT petition has to be prepared in line with the



provisions of the MYT Regulations, wherein most of the cost side details are projected on normative basis as per the methodology finalised by the Commission. Further, the MYT petition has been filed based on the audited accounts of FY 2014-15, provisional accounts of FY 2015-16 and provisional data available for FY 2016-17, which seems to be more realistic and true. However other than the change in cost factors, the projected distribution losses in the MYT Petition for all discoms has been kept sacrosanct with the UDAY scheme. Further in reference to the monitoring of the UDAY Scheme, it is submitted that the Consultants have been recently appointed for a period of 2 years and quick results in terms of reduction of cost, improvement in metering, reduction of AT&C losses is expected in upcoming 2 years.

3.27.36 The Licensees submitted that the information for conducting public hearing has been duly published in the leading Newspapers and special announcements were also made for the common public to be present in large nos. during the public hearing.

3.27.37 The Licensees submitted that it is making several efforts to improve its Billing Quality, Billing efficiency, curbing Electricity Theft and addressing complaints in order to provide best services to its consumers. We assure that in future the consumers won't have grievances in this regard.

3.27.38 The Licensees submitted that the Employee Cost, A&G Cost, R&M Cost, Interest & Finance in the Tariff Petition has been proposed as per the Provision of MYT Regulation. As per Regulation the Employee Cost, A&G Cost, R&M Cost are to be worked out based upon the increase in No. of sub-station and consumers.

The licensees submitted in its Tariff Proposal it has already included the rebate to Power Loom consumers and the same shall be applicable in accordance with the Government order dated June 14, 2006 and the Commission's order dated July 11, 2006 subject to adherence of provision of advance subsidy.

3.27.39 The Licensees submitted that the comments of stakeholder (represented by Shri Vishal Dixit) are based on older tariff rates of various states. The tariff comparison of Large and Heavy industry consumer category based on a typical 1000kW load, 500000 kWh at 11Kv as per latest approved tariffs of different states is as below which highlights that the tariff of this category is more than or comparable with U.P. except the states which have largely renewable source of energy and very cheap cost of coal etc. As far as Uttrakhand and Jharkhand states are concerned, the ACOS of these states is much lower than U.P. because Uttrakhand ACOS is based on mainly Hydro-power energy and Jharkhand ACOS



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is based on the cheaper cost of coal in that state. Further, no increased has been proposed in the tariff of this category for FY 2017-18.

State	Year	Total Fixed Charges	Total Energy Charges	Total Charges	Avg. Thru Tariff	ED	Regulatory Surcharge	Total Per Unit Charges (including ED & Surcharge)
		Rs.	Rs.	Rs.				Rs/kwh
UP (Existing)	FY2016-17	2,94,118	39,11,765	42,05,882	7.15	0.54	0.31	7.99
Madhya Pradesh	FY2017-18	3,88,235	35,29,412	39,17,647	6.66	1.00	0.00	7.66
Punjab	FY2016-17	2,21,176	35,47,059	37,68,235	6.41	0.83	0.00	7.24
Haryana	FY2016-17	2,00,000	36,17,647	38,17,647	6.49	0.10	0.00	6.59
Maharashtra	FY2017-18	2,94,118	46,47,059	49,41,176	8.40	0.76	0.00	9.16
Andhra Pradesh	FY2017-18	5,58,824	37,23,529	42,82,353	7.28	0.06	0.00	7.34
Chhattisgarh	FY2017-18	4,41,176	30,50,000	34,91,176	6.98	1.40	0.00	8.38
Jharkhand	FY2017-18	5,76,471	23,52,941	29,29,412	4.98	0.05	0.00	5.03
Karnataka	FY2017-18	2,35,294	39,80,000	42,15,294	7.17	0.43	0.00	7.60
Rajasthan	FY2015-16	2,17,647	42,94,118	45,11,765	7.67	0.40	0.00	8.07
Uttarakhand	FY2017-18	4,05,882	23,52,941	27,58,824	4.69	0.25	0.00	4.94
Gujarat	FY2017-18	5,58,824	24,70,588	30,29,412	5.15	0.77	0.00	5.92

C) The Commission's view

3.27.40 The Commission has taken note of issues raised by the stakeholders and has addressed the issues related to Truing Up for FY 2014-15, Multi Year Aggregate Revenue Requirement from FY 2017-18 to FY 2019-20 and tariff design for FY 2017-18 in the relevant sections of this Order.



4. TRUING UP OF AGGREGATE REVENUE REQUIREMENT FOR FY 2014-15

4.1 INTRODUCTION

4.1.1 The Petitioners have sought the final truing up of expenditure and revenue for FY 2014-15 based on actual expenditure and revenue as per audited accounts. In this section, the Commission has analysed all the elements of actual revenue and expenses for FY 2014-15 and has undertaken the truing up of expenses and revenue after prudence check of the data made available by the Petitioner.

4.2 POWER PURCHASE EXPENSES

4.2.1 The Commission, in the Tariff Order for FY 2014-15, had approved the power purchase quantum of 87178.35 MU and total power purchase expenses of Rs. 31668.16 Crore at UPPCL level. The Petitioners, in their True-up Petition, has submitted that the actual power purchase expenses for FY 2014-15 are Rs. 37031.72 Crore towards power procurement of 87571.23 MU at UPPCL level.

4.2.2 The Petitioners submitted that they have considered the following philosophy for computing the allowable power purchase cost:

- The allowable power purchase input has been calculated by grossing up the actual energy received at the Discoms end by the approved / actual transmission losses, whichever is lower.
- The allowable power purchase cost has been computed by multiplying the revised bulk supply Tariff with allowable power purchase input to derive the allowable power purchase cost for truing up.

4.2.3 As per the above philosophy, the Bulk Supply Tariff as worked out by the Petitioners is shown in the Table below:

Table 4-1: BULK SUPPLY TARIFF AS COMPUTED BY THE PETITIONERS FOR FY 2014-15

Particulars	Unit	True-up Petition
Power Purchase at Generator Bus	MU	83,045.51
Transmission Loss	MU	5,352.98
Transmission Loss	%	6.45
Energy available at Discom End	MU	77,692.53
Allowable Power Purchase Cost at Discom end (including PGCIL Charges and UPPCL O&M expenses)	Rs Crore	35,117.70
Power Purchase Cost per unit at Discom end (BST)	Rs/kWh	4.52



4.2.4 The Petitioners submitted that they have calculated the allowable power purchase input at Discom end by grossing up the actual energy sales by the approved distribution loss target or actual Distribution losses, whichever is lower. Thereafter, the allowable power purchase input has been multiplied by the Trued-Up Bulk Supply rate to derive the allowable power purchase cost for FY 2014-15 as shown in the Table below:

Table 4-2: POWER PURCHASE COST AS COMPUTED BY PETITIONERS FOR FY 2014-15:

Particulars	Sales (MU)	Distribution Losses Target (%)	Allowable Power Purchase (MU)	Trued-up Bulk Supply Tariff (Rs./kWh)	Allowable Power Purchase Cost Payable to UPPCL on Truing-up (Rs. Crore)
DVVNL	11,429.29	28.00%	15,874.01	4.52	7,175.19
MVVNL	11,665.40	21.03%	14,772.16	4.52	6,677.14
PVVNL	20,845.35	19.65%	25,944.58	4.52	11,727.17
PuVVNL	13,893.33	21.72%	17,748.48	4.52	8,022.47
KESCO	2,582.04	23.00%	3,353.29	4.52	1,515.72
Total Allowable Power Purchase Cost eligible for Truing-up at Discom level					35,117.70

4.2.5 The Commission asked the Petitioners to submit the breakup of the Transmission Losses between Intra-State and Inter-State. The Petitioners submitted the Intra-State transmission loss to be 3.67% and Inter-State transmission loss to be 2.88% for FY 2014-15. Further, in reply to the query raised by the Commission regarding bifurcated details of power purchase cost and PGCIL charges for FY 2014-15, the Petitioners submitted the following details.

Table 4-3: DETAILS OF POWER PURCHASE COST AND PGCIL CHARGES SUBMITTED BY THE PETITIONERS FOR FY 2014-15

Particulars	Amount (Rs. Crore)
Power Purchase Cost	35307.27
PGCIL Charges	1,548.03
UPPCL O&M Charges	176.41
Total Power Purchase Cost	37031.71

4.2.6 The Commission has computed the BST based on the same philosophy as adopted in its Order dated August 1, 2016. The Commission has been considering Distribution losses as controllable parameter and there-upon the power purchase cost consequent to under-achievement of Distribution loss is disallowed. For truing up of ARR for FY 2014-15, the allowable power purchase quantum has been computed by grossing up the actual energy sales by the approved distribution loss target or actual loss level whichever is lower. The



power purchase cost is then computed by considering the allowable power purchase thus derived and the bulk supply tariff computed at Discoms periphery which is in line with the approach followed by the Commission in its earlier Orders.

4.2.7 Regulation 4.2 (11) of Distribution Tariff Regulations, 2006 specifies as below:

“4.2 Power Purchase Cost:

11. In the regime of Availability Based Tariff (ABT), the cost of power purchase through UI shall be allowed to be passed through in tariff of the subsequent year subject to the following conditions:

a) The average rate for power purchased through UI should not exceed the maximum rate for power purchased under the Merit Order of the licensee as approved by the Commission.

b) The total cost of electricity units purchased through UI shall be restricted to 10% of total power purchase cost approved by the Commission.

Provided that where the average rate for power purchased under UI exceeds the maximum specified rate of power purchase under the Merit Order of the licensee, the cost of such power purchase shall be allowed to be passed through in tariffs of the subsequent year at the maximum rate for power purchase under the Merit Order of the licensee as approved by the Commission whether the ceiling limit of 10% as stated in 11 (b) above has reached or not.”

4.2.8 The Commission has obtained the rates and energy procured through unscheduled interchange (UI). It has been observed that the Petitioners for FY 2014-15 has sold 125.18 MUs through UI. In view of the above, the Commission has allowed the power sold through UI.

4.2.9 The Petitioners have claimed Rs. 176.41 Crore towards allocation of O&M Expenses of UPPCL. In reply to the query raised by the Commission the Petitioners submitted that the said expenses are for procuring the power on behalf of Discoms and accordingly such O&M expense for Truing up has been considered as a part of Bulk Supply Tariff. The Commission has verified the above amount from the Audited Accounts of UPPCL. However, it is observed that the Commission in Tariff Orders dated October 1, 2014, had directed that the petitioners to manage the O&M Expenses incurred by UPPCL (for procuring the power) from the O&M Expenses allowed to it. The relevant extract of the Commission’s Order dated October 01, 2014 in the matter of Determination of



Aggregate Revenue Requirement and Tariff for FY 2014-15 and True up for FY 2008-09 to FY 2011-12 of Dakshinanchal Vidyut Vitran Nigam Limited (DVVNL) has been quoted below:

Quote

4.2.14 The Commission has verified the above amount from the Audited Accounts of UPPCL and has allowed such expenses based on actual for FY 2014-15. As the above expenses have been incurred by UPPCL, which is mostly for procuring the power for the Discoms, the above expenses for the purpose of Truing up has been considered as a part of Bulk Supply Tariff. It may further be noted that the procurement of power is the responsibility of the Distribution Licensee for which the Commission allows considerable amount of O&M Expenses and interest on working capital to the Licensee. The Commission has allowed such expenses for the past years, however, for future years, i.e., from FY 2014-15 onwards, the Licensee is directed to manage such O&M Expenses for procuring the power from the O&M Expenses allowed to it.

Unquote

4.2.10 In view of the above, it is clear that the Commission had allowed such expenses in the previous order giving clear directions that from FY 2014-15 onwards the Licensees should manage such O&M Expenses for procuring the power from the O&M Expenses allowed to it. Accordingly, the O&M expenses of Rs. 176.41 Crore claimed by the Petitioners towards allocation of O&M Expenses of UPPCL are not allowed. The Commission again retreats that the procurement of power is the responsibility of the Distribution Licensees for which the Commission allows considerable amount of O&M Expenses and interest on working capital to the Licensees.

4.2.11 The Commission in its previous order has states as under

Quote

“4.2.13.....

.....It is noted that the Distribution Licensees book the cost of power purchase in their Audited Accounts as per the BST approved by the Commission, while UPPCL procure power at the actual rates from the Generating Companies. Further, the Licensees during Truing up of FY 2013-14 have claimed the power purchase cost higher than the cost incurred as per their audited accounts, which is due to the



fact that the actual power purchase cost incurred by UPPCL while procuring power from the generating companies is more than the power purchase cost paid by the Licensees to UPPCL, which is as per the BST approved by the Commission. Thus, in order to have greater clarity the Commission directs the Licensees that, from trueing up of FY 2014-15 and onwards it should clearly depict the total power purchase cost incurred at UPPCL level based on actual power purchase cost, total power purchase cost billed by the UPPCL to the Distribution Licensees and power cost payable to UPPCL in its true-up petitions for future years.”

- 4.2.12 In view of the above directions of the Commission, UPPCL in its balance sheet for FY 2014-15 has provided that total power purchased at UPPCL level is 87571.75 MUs, total power purchase sold by UPPCL is 81927.02 MU. The Balance Sheet further provides that the rate of sale of energy sold to Discoms and billed to Discoms is Rs. 4.50 / kWh.
- 4.2.13 The Commission observes that the actual Distribution Losses of the Licensees for FY 2014-15 are higher than the Distribution Loss targets approved by the Commission as depicted in the table below:

Table 4-4: ACTUAL DISTRIBUTION LOSSES FOR FY 2014-15 AS PER LICENSEES SUBMISSION

Name of Discoms	Energy Input (MUs)	Energy Sold (MUs)	Actual Distribution loss
DVVNL	19,128.87	11,429.29	40.25%
MVVNL	15,116.74	11,665.40	22.83%
PVVNL	25,944.58	20,845.35	19.65%
PuVVNL	18,224.46	13,893.33	23.77%
KESCO	3,500.59	2,582.04	26.24%
Consolidated 5	81,915.24	60,415.41	26.25%

- 4.2.14 Further, the Commission in its deficiency enquiry required the petitioners about the difference in the energy input to Discoms as per UPPCL balance (i.e. 81927.02 MU) and the total of energy input as per balance sheet of each Discoms (i.e. 81915.24). The petitioner in reply provided the reconciliation of the above as per table below:

FY 2014-15 (Audited)	Unit	DVVNL*	MVVNL	PVVNL	PuVVNL	KESCO	Extra State	UPPCL	Total
Power Purchase Input	MU							87,571.23	87,571.23
Transmission Losses	MU							5,644.22	5,644.22



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FY 2014-15 (Audited)	Unit	DVVNL*	MVVNL	PVVNL	PuVVNL	KESCO	Extra State	UPPCL	Total
Transmission Loss	%								6.45%
Energy Input into Discoms	MU	19,128.87	15,116.74	25,944.58	18,224.46	3,500.59	11.78		81,927.02
Distribution Losses	MU	7,699.58	3,451.34	5,099.23	4,331.13	918.55	0.00		21,499.83
Distribution Losses	%	40.25%	22.83%	19.65%	23.77%	26.24%	0.00%		26.24%
Energy Sales by Discoms	MU	11,429.29	11,665.40	20,845.35	13,893.33	2,582.04	11.78		60,427.18

**After considering retail sales of Torrent*

4.2.15 Accordingly, the Commission has computed the BST based on the UPPCL Balance sheet for FY 2014-15. The Table below summarises the energy balance, power purchase quantum and cost submitted by the Petitioner and as approved by the Commission at UPPCL level and the Bulk Supply Tariff for FY 2014-15:

Table 4-5: ENERGY BALANCE AND BULK SUPPLY TARIFF APPROVED FOR FY 2014-15

Particulars	Unit	Tariff Order	Petition	Actual / Audited	Approved upon Truing up
Power Purchase by UPPCL at Generator Bus	MU	87,178.35	83,045.51	87,571.23	87,571.75
Inter-State Transmission Losses	MU	1,385.65	2,304.74	2,429.86	2,429.85
Inter-State Transmission Losses	%	1.65%	2.88%	2.88%	2.88%
Intra-State Transmission Losses	MU	3,199.94	3,048.24	3,214.36	3,214.36
Intra-State Transmission Losses	%	3.67%	3.67%	3.67%	3.67%
Energy available at Discom End	MU	82,592.76	77,692.53	81,927.02	81,927.02
Power Purchase Cost (including PGCIL charges) for UPPCL	Rs. Crore	31,668.16	34,941.29	36,855.31	36,855.31
Power Purchase Cost per unit at Generator Bus	Rs./kWh	3.63	4.21	4.21	4.21
O&M Expenses of UPPCL	Rs. Crore		176.41		0.00
Allowable Power Purchase Cost at Discom end after transmission losses	Rs. Crore		35,117.70		36,855.31
Power Purchase Cost per unit at Discom end (BST) after transmission losses	Rs./kWh	3.83	4.52	4.50	4.50

4.2.16 It can be seen from the above that, power purchase approved by the Commission in Tariff Order for FY 2014-15 was Rs. 3.83 / kWh. The Petitioners have claimed the BST as Rs. 4.52 / kWh, against which while undertaking the Truing up of FY 2014-15, the Commission has allowed the BST as Rs. 4.50 / kWh.

4.2.17 Accordingly, the Commission has approved and computed the allowable power purchase quantum by grossing up the actual energy sales by the approved Distribution loss target / Actual Loss Level (whichever is lower) for FY 2014-15. The power purchase cost is then computed by considering the allowable power purchase thus obtained and the bulk supply tariff computed at Discoms periphery in line with the approach followed by the Commission in its earlier Orders. The Table below provides the allowable power purchase cost for the Licensees for FY 2014-15:

Table 4-6: ALLOWABLE POWER PURCHASE COST FOR FY 2014-15

Particulars	Sales (MU)	Distribution Losses Target (%)	Allowable Power Purchase (MU)	Trued-up Bulk Supply Tariff (Rs./kWh)	Allowable Power Purchase Cost Payable to UPPCL on Truing -up (Rs. Crore)
DVVNL	11,429.29	28.00%	15,874.01	4.50	7,141.01
MVVNL	11,665.40	21.03%	14,772.16	4.50	6,645.34
PVVNL	20,845.35	19.65%	25,944.58	4.50	11,671.31
PuVVNL	13,893.33	21.72%	17,748.48	4.50	7,984.25
KESCO	2,582.04	23.00%	3,353.29	4.50	1,508.50
Total	60,415.41		77,692.53		34,950.40

4.3 TRANSMISSION CHARGES

4.3.1 The Petitioners submitted that in the Tariff Order for FY 2014-15, the Commission had approved the Transmission Charges for DVVNL, MVVNL, PVVNL, PuVVNL & KESCO of Rs. 366.81 Crore, Rs. 290.54 Crore, Rs. 519.48 Crore, Rs. 360.80 Crore and Rs. 62.25 Crore respectively. The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO have submitted that as per the audited accounts, they have incurred Rs. 303.64 Crore, Rs. 232.49 Crore, Rs. 396.15 Crore, Rs. 409.77 Crore and Rs. 53.39 Crore respectively towards transmission charges. The Petitioners have submitted that the allowable power purchase input for FY 2014-15 works out to 15874.01 MU, 14772.16 MU, 25944.58 MU, 17748.48 MU and 3353.29 MU for DVVNL, MVVNL, PVVNL, PuVVNL & KESCO respectively and therefore, for claiming the trued-up transmission charges, the allowable power purchase input has been taken into consideration. The Petitioners further submitted that the per unit rate of Transmission Charge of Rs. 0.1764 per kWh has been considered which is the rate submitted by UPPTCL in its True-up Petition for FY 2014-15 filed before the Commission. The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO further submitted that the allowable Transmission Charges for FY 2014-15



works out to be Rs.280.02 Crore, Rs. 260.58 Crore, Rs. 457.66 Crore, Rs. 313.08 Crore and Rs. 59.15 Crore respectively.

4.3.2 It is observed that the Petitioners have considered the Transmission Charge equivalent to the rate submitted by UPPTCL in its true-up Petition for FY 2014-15. Thus, to derive the allowable transmission charges, allowable power purchase input has been multiplied by the trued-up transmission tariff as approved by the Commission in its True-up Order for FY 2014-15.

4.3.3 Accordingly, the table below provides the allowable transmission charges for the Petitioners for FY 2014-15:

Table 4-7: ALLOWABLE INTRA STATE TRANSMISSION CHARGES FOR FY 2014-15

Particulars	Approved in Tariff Order			True up Petition			Approved upon Truing Up		
	Units Wheeled (MU)	Transmission Charge (Rs/kwh)	Transmission Charges (Rs Crore)	Units Wheeled (MU)	Transmission Charge (Rs/kwh)	Transmission Charges (Rs Crore)	Units Wheeled (MU)	Trued Up Transmission Charge (Rs/kwh)	Transmission Charges (Rs Crore)
DVVNL	18,936.18	0.1937	366.81	15,874.01	0.1764	280.02	15,874.01	0.1764	280.02
MVVNL	14,998.80	0.1937	290.54	14,772.16	0.1764	260.58	14,772.16	0.1764	260.58
PVVNL	26,817.79	0.1937	519.48	25,944.58	0.1764	457.66	25,944.58	0.1764	457.66
PuVVNL	18,626.14	0.1937	360.80	17,748.48	0.1764	313.08	17,748.48	0.1764	313.08
KESCO	3,213.85	0.1937	62.25	3,353.29	0.1764	59.15	3,353.29	0.1764	59.15
Total	82,592.76		1,599.88	77,692.53		1,370.50	77,692.53		1,370.50

4.4 O&M EXPENSES

4.4.1 Operation and Maintenance (O&M) expenses comprise of employee related costs, A&G expenses and R&M expenditure.

4.4.2 The Petitioners' submissions on each of the heads of O&M expenditure for FY 2014-15, and the Commission's analysis on the truing up of the O&M expenditure heads has been discussed in the subsequent paragraphs.

4.4.3 Regulation 4.3 of Distribution Tariff Regulations, 2006 stipulates the methodology for consideration of the O&M Expenses, wherein such expenses are linked to the inflation index determined under these Regulations. The relevant provisions of the Distribution Tariff Regulations, 2006 are reproduced below:

"4.3 Operation & Maintenance Expenses (O&M):



1. The O&M expenses comprise of employee cost, repairs & maintenance (R&M) cost and administrative & general (A&G) cost. The O&M expenses for the base year shall be calculated on the basis of historical/audited costs and past trend during the preceding five years. However, any abnormal variation during the preceding five years shall be excluded. For determination of the O&M expenses of the year under consideration, the O&M expenses of the **base year shall be escalated at inflation rates notified by the Central Government for different years. The inflation rate for above purpose shall be the weighted average of Wholesale Price Index and Consumer Price Index in the ratio of 60:40. Base year, for these regulations means, the first year of tariff determination under these regulations.....**”[Emphasis added]

4.4.4 The Commission, in accordance with the above Regulation, has calculated the inflation index for FY 2014-15 based on the weighted average index of WPI and CPI. The Commission has considered the WPI and CPI as available on the website of Economic Advisor, Ministry of Commerce and Industry, Ministry of Labour, respectively. Accordingly, the Commission has calculated the inflation index for approval of O&M expenses as shown in Table below:

ESCALATION INDEX FOR FY 2014-15

Month	Wholesale Price Index				Consumer Price Index				Consolidated Index			
	FY 14	FY 15	FY 16	FY 17	FY 14	FY 15	FY 16	FY 17	FY 14	FY 15	FY 16	FY 17
April	171	181	176	178	226	242	256	271	193	205	208	215
May	171	182	178	180	228	244	258	275	194	207	210	218
June	173	183	179	183	231	246	261	277	196	208	212	221
July	176	185	178	184	235	252	263	280	199	212	212	223
August	179	186	177	183	237	253	264	278	202	213	212	221
September	181	185	177	183	238	253	266	277	204	212	212	221
October	181	184	177	184	241	253	269	278	205	211	214	221
November	182	181	178	184	243	253	270	277	206	210	215	221
December	180	179	177	183	239	253	269	275	203	208	214	220
January	179	177	175	185	237	254	269	274	202	208	213	221
February	180	176	174	186	238	253	267	274	203	207	211	221
March	180	176	175	185	239	254	268	275	204	207	212	221
Average	178	181	177	183	236	251	265	276	201	209	212	220
Calculation of Inflation Index (CPI-40%, WPI-60%)												
Weighted Average of Inflation									7.69%	4.02%	1.41%	3.89%

4.4.5 The Commission had determined the trued-up O&M expenses of FY 2013-14, in the Order dated August 1, 2016. The approved O&M expenses for FY 2013-14 have been escalated using the inflation index of FY 2014-15 to derive the



normative O&M Expenses for FY 2014-15. The Commission while computing the normative O&M Expenses in this Order has considered the escalation rates as shown in the above Table.

- 4.4.6 Further, in addition to the normative O&M expenses based on inflation, the Distribution Tariff Regulations, 2006 provide for incremental O&M expenses at 2.50% on addition to asset during the previous year. Regulation 4.3 (3) of the Distribution Tariff Regulations, 2006 specifies as follows:

“4.3 Operation & Maintenance Expenses (O&M):

...

3) Incremental O&M expenses for the ensuing financial year shall be 2.5% of capital addition during the current year. O&M charges for the ensuing financial year shall be sum of incremental O&M expenses so worked out and O&M charges of current year escalated on the basis of predetermined indices as indicated in regulation 4.3(1).”

- 4.4.7 It is observed that the actual audited O&M expenses of DVVNL, PVVNL and MVVNL for FY 2014-15 are higher than the normative O&M expenses computed based on the above Regulations. Since, the Licensees have to restrict its O&M expenses within the normative level, the expenses beyond normative level have not been allowed by the Commission. The Commission has therefore, approved the normative O&M expenses for FY 2014-15 in case of DVVNL, PVVNL and MVVNL. Further, in case of PuVVNL and KESCO, it is observed that the actual audited O&M expenses are less than the normative O&M computed as per Regulations and the same has been claimed by the petitioners. Since, the Licensees restricted their O&M expenses within the normative level, the Commission has therefore, approved the actual O&M expenses for FY 2014-15 in case of PuVVNL and KESCO. Further, the Commission has allowed the efficiency gains to PuVVNL and KESCO in accordance with the provision of Regulations.

- 4.4.8 In reply to the Commission’s query regarding whether CGRF expenses have been included in O&M expenses, the Petitioners submitted that the CGRF expenses are part of the O&M expenses claimed by it. The Petitioners submitted that such expenses are not separately accounted for and hence, details of such expenses are not available with it. The Petitioners requested the Commission to allow an ad-hoc allowance towards the CGRF expenses



considering the remuneration norms and associated costs in the CGRF framework approved by the Commission.

4.4.9 As the account for CGRF expenses is not separately maintained by the Licensees, no additional allowance towards this head has been considered by the Commission.

4.4.10 The summary of O&M expenses approved in the Tariff Order, claimed by the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO and as approved by the Commission in this Order for truing up of ARR for FY 2014-15, is shown in the Table below:

Table 4-8: O&M EXPENSES AS APPROVED BY THE COMMISSION FOR DVVNL FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Normative	Approved upon Truing up
Employee Expenses	399.36	309.77	383.56	382.15	382.15
Repair & Maintenance Expenses	227.11	316.19	217.79	219.03	219.03
Administrative and General Expenses	62.82	100.86	60.08	59.42	59.42
Gross Operation and Maintenance Expenses	689.29	726.82	661.44	660.60	660.60
Less: Capitalisation					
Employee Cost Capitalized	59.90	147.40	147.40	147.40	147.40
A&G Expenses Capitalized	9.42	41.33	41.33	41.33	41.33
Total Capitalization	69.33	188.74	188.74	188.74	188.74
Net Operation and Maintenance Expenses	619.96	538.09	472.70	471.86	471.86
Efficiency Gain			-		-

Table 4-9: O&M EXPENSES AS APPROVED BY THE COMMISSION FOR MVVNL FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Normative	Approved upon Truing up
Employee Expenses	530.58	481.34	500.23	498.68	498.68
Repair & Maintenance Expenses	172.58	284.03	161.40	162.26	162.26
Administrative and General Expenses	98.02	232.89	92.46	92.14	92.14
Gross Operation and Maintenance Expenses	801.18	998.25	754.09	753.08	753.08
Less: Capitalisation					
Employee Cost Capitalized	79.59	167.20	167.20	167.20	167.20



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Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Normative	Approved upon Truing up
A&G Expenses Capitalized	14.70	32.25	32.25	32.25	32.25
Total Capitalization	94.29	199.46	199.46	199.46	199.46
Net Operation and Maintenance Expenses	706.89	798.80	554.63	553.62	553.62
Efficiency Gain			-		-

Table 4-10: O&M EXPENSES AS APPROVED BY THE COMMISSION FOR PVVNL FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Normative	Approved upon Truing up
Employee Expenses	455.76	377.56	442.04	436.75	436.75
Repair & Maintenance Expenses	191.03	306.96	186.06	188.82	188.82
Administrative and General Expenses	58.26	150.16	56.35	57.78	57.78
Gross Operation and Maintenance Expenses	705.05	834.68	684.44	683.35	683.35
Less: Capitalisation					
Employee Cost Capitalized	68.36	163.49	163.49	163.49	163.49
A&G Expenses Capitalized	8.74	31.21	31.21	31.21	31.21
Total Capitalization	77.10	194.70	194.70	194.70	194.70
Net Operation and Maintenance Expenses	627.95	639.98	489.74	488.65	488.65
Efficiency Gain			-		-

Table 4-11: O&M EXPENSES AS APPROVED BY THE COMMISSION FOR PuVVNL FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Normative	Approved upon Truing up
Employee Expenses	484.16	458.26	507.79	757.23	458.26
Repair & Maintenance Expenses	281.12	343.30	364.14	198.73	343.30
Administrative and General Expenses	63.76	99.37	132.36	62.69	99.37
Gross Operation and Maintenance Expenses	829.03	900.94	1,004.29	1,018.64	900.94
Less: Capitalisation					
Employee Cost Capitalized	72.62	167.78	167.78	167.78	167.78
A&G Expenses Capitalized	9.56	22.23	22.23	22.23	22.23
Total Capitalization	82.19	190.01	190.01	190.01	190.01



Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Normative	Approved upon Truing up
Net Operation and Maintenance Expenses	746.84	710.93	814.28	828.63	710.93
Efficiency Gain			-		58.85

Table 4-12: O&M EXPENSES AS APPROVED BY THE COMMISSION FOR KESCO FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Normative	Approved upon Truing up
Employee Expenses	121.14	99.42	108.27	129.45	99.42
Repair & Maintenance Expenses	42.78	46.00	48.25	53.32	46.00
Administrative and General Expenses	15.37	21.75	23.70	6.44	21.75
Gross Operation and Maintenance Expenses	179.29	167.17	180.21	189.20	167.17
Less: Capitalisation					
Employee Cost Capitalized	18.17	1.41	1.41	1.41	1.41
A&G Expenses Capitalized	2.31	0.03	0.03	0.03	0.03
Total Capitalization	20.48	1.44	1.44	1.44	1.44
Net Operation and Maintenance Expenses	158.81	165.73	178.77	187.76	165.73
Efficiency Gain					11.02

4.5 INTEREST AND FINANCE CHARGES

Interest on Long Term Loans

- 4.5.1 The Petitioners' namely DVVNL, MVVNL, PVVNL, PuVVNL have claimed the net Interest on long term loan for FY 2014-15 as Rs. 143.64 Crore, Rs. 125.32 Crore, Rs. 169.52 Crore and Rs. 191.72 Crore respectively, against the approved expenses of Rs. 154.86 Crore, Rs. 181.32 Crore, Rs. 144.56 Crore and Rs. 170.72 Crore respectively. The Petitioner has capitalized interest as Rs. 25.02 Crore, Rs. 19.92 Crore, Rs. 5.42 Crore and Rs. 25.71 Crore respectively for FY 2014-15 against Rs. 46.26 Crore, Rs. 54.16 Crore, Rs. 43.18 Crore and Rs. 51.00 Crore respectively approved by the Commission in the Tariff Order.
- 4.5.2 The Petitioners submitted that the Commission in its previous Tariff and True-up Orders had considered a normative approach for financing the capital expenditure with a normative debt equity ratio of 70:30. Considering this approach, 70% of the capital expenditure undertaken in any year was financed



through loan and balance 30% was been financed through equity contributions. The portion of capital expenditure financed through consumer contributions, capital subsidies and grants were separated and the depreciation and interest thereon were not charged to the consumers & beneficiaries. The amounts received as consumer contributions, capital subsidies and grants were traced from the audited accounts. Subsequently, the financing of the capital investment was worked out based on the gearing ratio of 70:30 and allowable depreciation was considered as normative loan repayment.

- 4.5.3 The Petitioners submitted that considering the Capital Work in Progress balances (CWIP) and Gross Fixed Asset (GFA) balances as per audited accounts, it has derived the actual capital investments undertaken by it in FY 2014-15.
- 4.5.4 In line with the approach adopted by the Commission in its previous Orders, interest expenses have been considered as an uncontrollable cost as the interest rates are determined by various external factors and the actual loans taken are consequential to the capital expenditure undertaken by the licensees.
- 4.5.5 For the above purpose, the Commission has derived the actual capital investments undertaken by the Licensees namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO in FY 2014-15, based on the audited accounts. The details are provided in the Table below:

Table 4-13: CAPITAL INVESTMENTS IN FY 2014-15 of DVVNL (Rs. Crore)

Particulars	Derivation	FY 2014-15			
		Tariff Order	Audited	Petition	Approved upon Truing up
Opening WIP as on 1st April	A	1036.50	287.62	287.62	287.62
Investments	B	984.55	1,260.75	1,260.75	1,260.75
Employee Expenses Capitalisation	C	59.90	147.40	147.40	147.40
A&G Expenses Capitalisation	D	9.42	41.33	41.33	41.33
Interest Capitalisation on Interest on long term loans	E	46.26	25.02	25.02	25.02
Total Investments	F= A+B+C+D+E	2136.64	1,762.13	1,762.13	1,762.13
Transferred to GFA (Total Capitalisation)	G	854.65	1,464.91	1,464.91	1,464.91
Closing WIP	H= F-G	1281.98	297.22	297.22	297.22



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Table 4-14: CAPITAL INVESTMENTS IN FY 2014-15 of MVVNL (Rs. Crore)

Particulars	Derivation	FY 2014-15			
		Tariff Order	Audited	Petition	Approved upon Truing up
Opening WIP as on 1st April	A	1,464.46	418.86	418.86	418.86
Investments	B	1,400.00	1,416.30	1,416.30	1,416.30
Employee Expenses Capitalisation	C	79.59	167.20	167.20	167.20
A&G Expenses Capitalisation	D	14.70	32.25	32.25	32.25
Interest Capitalisation on Interest on long term loans	E	54.16	19.92	19.92	19.92
Total Investments	F= A+B+C+D+E	3,012.91	2,054.54	2,054.54	2,054.54
Transferred to GFA (Total Capitalisation)	G	1,205.16	1,457.95	1,457.95	1,457.95
Closing WIP	H= F-G	1,807.75	596.59	596.59	596.59

Table 4-15: CAPITAL INVESTMENTS IN FY 2014-15 of PVVNL (Rs. Crore)

Particulars	Derivation	FY 2014-15			
		Tariff Order	Audited	Petition	Approved upon Truing up
Opening WIP as on 1st April	A	773.96	307.49	307.49	307.49
Investments	B	1,720.60	1,371.10	1,371.10	1,371.10
Employee Expenses Capitalisation	C	68.36	163.49	163.49	163.49
A&G Expenses Capitalisation	D	8.74	31.21	31.21	31.21
Interest Capitalisation on Interest on long term loans	E	43.18	5.42	5.42	5.42
Total Investments	F= A+B+C+D+E	2,614.84	1,878.72	1,878.72	1,878.72
Transferred to GFA (Total Capitalisation)	G	1,045.94	1,594.37	1,594.37	1,594.37
Closing WIP	H= F-G	1,568.90	284.34	284.34	284.34

Table 4-16: CAPITAL INVESTMENTS IN FY 2014-15 of PuVVNL (Rs. Crore)

Particulars	Derivation	FY 2014-15			
		Tariff Order	Audited	Petition	Approved upon Truing up
Opening WIP as on 1st April	A	1325.52	165.73	165.73	165.73
Investments	B	739.20	628.07	628.07	628.07
Employee Expenses Capitalisation	C	72.62	167.78	167.78	167.78
A&G Expenses Capitalisation	D	9.56	22.23	22.23	22.23



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Particulars	Derivation	FY 2014-15			
		Tariff Order	Audited	Petition	Approved upon Truing up
Interest Capitalisation on Interest on long term loans	E	51.00	25.71	25.71	25.71
Total Investments	F= A+B+C+D+E	2197.91	1,009.52	1,009.52	1,009.52
Transferred to GFA (Total Capitalisation)	G	897.17	846.29	846.29	846.29
Closing WIP	H= F-G	1318.75	163.22	163.22	163.22

Table 4-17: CAPITAL INVESTMENTS IN FY 2014-15 of KESCO (Rs. Crore)

Particulars	Derivation	FY 2014-15			
		Tariff Order	Audited	Petition	Approved upon Truing up
Opening WIP as on 1st April	A	67.49	24.55	24.55	24.55
Investments	B	59.50	21.56	21.56	21.56
Employee Expenses Capitalisation	C	18.76	1.41	1.41	1.41
A&G Expenses Capitalisation	D	2.17	0.03	0.03	0.03
Interest Capitalisation on Interest on long term loans	E	-	-	-	-
Total Investments	F= A+B+C+D+E	147.93	47.55	47.55	47.55
Transferred to GFA (Total Capitalisation)	G	59.17	20.30	20.30	20.30
Closing WIP	H= F-G	88.76	27.25	27.25	27.25

- 4.5.6 The Commission has followed the same approach as in previous Orders and therefore, considered the funding of capital expenditure in the ratio of 70:30. Considering this approach, 70% of the capital expenditure undertaken in any year has been financed through loan and balance 30% has been financed through equity contributions.
- 4.5.7 The Consumer Contributions, capital grants and subsidies as submitted by the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO and as allowed by the Commission are shown in the Table below:



Table 4-18: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES RECEIVED AS ALLOWED BY THE COMMISSION FOR FY 2014-15 for DVVNL (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	1,046.01	1,185.10	1,185.10	1,185.10
Additions during the year	162.74	342.32	342.32	342.32
Less: Amortisation	56.42	53.12	53.12	53.12
Closing Balance	1,152.33	1,474.30	1,474.30	1,474.30

Table 4-19: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES RECEIVED AS ALLOWED BY THE COMMISSION FOR FY 2014-15 for MVVNL (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	878.16	1,003.99	1,003.99	912.79
Additions during the year	140.00	260.38	260.38	260.38
Less: Amortisation	54.78	47.69	47.69	47.69
Closing Balance	963.38	1,216.68	1,216.68	1,125.49

Table 4-20: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES RECEIVED AS ALLOWED BY THE COMMISSION FOR FY 2014-15 for PVVNL (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	1,293.65	1,329.47	1,329.47	1,329.47
Additions during the year	175	336.04	336.04	336.04
Less: Amortisation	82.6	142.43	142.43	142.43
Closing Balance	1,386.05	1,523.08	1,523.08	1,523.08



Table 4-21: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES RECEIVED AS ALLOWED BY THE COMMISSION FOR FY 2014-15 for PuVVNL (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	1,026.74	1108.86	1,108.86	1,108.86
Additions during the year	105.00	223.62	223.62	223.62
Less: Amortisation	60.39	88.20	88.20	88.20
Closing Balance	1,071.35	1,244.28	1,244.28	1,244.28

Table 4-22: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES RECEIVED AS ALLOWED BY THE COMMISSION FOR FY 2014-15 for KESCO (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	194.75	150.59	150.59	150.59
Additions during the year	17.5	101.73	101.73	101.73
Less: Amortisation	15.24	82.85	82.85	82.85
Closing Balance	197.01	169.48	169.48	169.48

- 4.5.8 The portion of capital expenditure financed through consumer contributions, capital subsidies and grants has been separated as the depreciation and interest thereon would not be charged to the consumers. The Commission has also verified the above amounts as per the audited accounts of the Petitioner.
- 4.5.9 Thus, based on the above, the approved financing of the capital investment for the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO is depicted in the Table below:

Table 4-23: FINANCING OF THE CAPITAL INVESTMENTS AS APPROVED BY THE COMMISSION FOR DVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15				
	Derivation	Tariff Order	Audited	Petition	Approved upon Truing up
Investment	A	984.55	1,260.75	1,260.75	1,260.75
Less:					
Consumer Contribution	B	162.74	342.32	342.32	342.32
Investment funded by debt and equity	C=A-B	821.81	918.43	918.43	918.43



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Particulars	FY 2014-15				
	Derivation	Tariff Order	Audited	Petition	Approved upon Truing up
Debt Funded	70%	575.26	642.90	642.90	642.90
Equity Funded	30%	246.54	275.53	275.53	275.53

Table 4-24: FINANCING OF THE CAPITAL INVESTMENTS AS APPROVED BY THE COMMISSION FOR MVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15				
	Derivation	Tariff Order	Audited	Petition	Approved upon Truing up
Investment	A	2,000.00	1,416.30	1,416.30	1,416.30
Less:					
Consumer Contribution	B	140.00	260.38	260.38	260.38
Investment funded by debt and equity	C=A-B	1,260.00	1,155.92	1,155.92	1,155.92
Debt Funded	70%	882.00	809.15	809.15	809.15
Equity Funded	30%	378.00	346.78	346.78	346.78

Table 4-25: FINANCING OF THE CAPITAL INVESTMENTS AS APPROVED BY THE COMMISSION FOR PVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15				
	Derivation	Tariff Order	Audited	Petition	Approved upon Truing up
Investment	A	1,720.60	1,371.10	1,371.10	1,371.10
Less:					
Consumer Contribution	B	175.00	336.04	336.04	336.04
Investment funded by debt and equity	C=A-B	1,545.60	1,035.06	1,035.06	1,035.06
Debt Funded	70%	1,081.92	724.54	724.54	724.54
Equity Funded	30%	463.68	310.52	310.52	310.52

Table 4-26: FINANCING OF THE CAPITAL INVESTMENTS AS APPROVED BY THE COMMISSION FOR PuVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15				
	Derivation	Tariff Order	Audited	Petition	Approved upon Truing up
Investment	A	739.20	628.07	628.07	628.07
Less:					
Consumer Contribution	B	105.00	223.62	223.62	223.62



Particulars	FY 2014-15				
	Derivation	Tariff Order	Audited	Petition	Approved upon Truing up
Investment funded by debt and equity	C=A-B	634.20	404.45	404.45	404.45
Debt Funded	70%	443.94	283.11	283.11	283.11
Equity Funded	30%	190.26	121.33	121.33	121.33

Table 4-27: FINANCING OF THE CAPITAL INVESTMENTS AS APPROVED BY THE COMMISSION FOR KESCO FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15				
	Derivation	Tariff Order	Audited	Petition	Approved upon Truing up
Investment	A	59.50	21.56	21.56	21.56
Less:					
Consumer Contribution	B	17.50	101.73	101.73	101.73
Investment funded by debt and equity	C=A-B	42.00	-	-	-
Debt Funded	70%	29.40	-	-	-
Equity Funded	30%	12.60	-	-	-

- 4.5.10 From the above tables, it is seen that out of the total investments made in distribution segment in FY 2014-15, some has been through the consumer contributions, capital subsidies and grants received during the corresponding period and the balance have been funded through debt and equity. Considering a debt equity ratio of 70:30, 70% of the capital investment is approved to be funded through debt and balance 30% through equity. Allowable depreciation for the year has been considered as normative loan repayment.
- 4.5.11 In reply to the Commission's query regarding detailed computation of the weighted average interest rate, the Petitioners have submitted the detailed computation with due reconciliation with the audited accounts of FY 2014-15 for the loans used to fund the capital expenditure. Accordingly, the weighted average rate has been considered for computing the interest on long term loan.
- 4.5.12 The Commission has considered the closing loan balance of FY 2013-14 as the opening loan balance of FY 2014-15.
- 4.5.13 Considering the above, the gross interest on long term loan for the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO has been worked out as



shown in the Table below. The interest capitalisation has been considered at the same rate as per audited accounts.

Table 4-28: INTEREST ON LONG TERM LOAN FOR DVVNL FOR FY 2014-15 (Rs Crore)

Particulars	FY 2014-15		
	Tariff Order	Petition	Approved upon Truing Up
Opening Loan	1,657.61	1,506.06	1,506.03
Loan Additions (70% of Investments)	575.26	642.90	642.90
Less: Repayments (Depreciation allowable for the year)	392.09	336.51	336.58
Closing Loan Balance	1,840.78	1,812.45	1,812.36
Weighted Average Rate of Interest	11.50%	10.16%	10.16%
Interest on long term loan	201.12	168.66	168.66
Less: Interest Capitalized	46.26	25.02	25.02
Net Interest Charged	154.86	143.64	143.64
Interest Capitalisation Rate	23.00%		14.83%

Table 4-29: INTEREST ON LONG TERM LOAN FOR MVVNL FOR FY 2014-15 (Rs Crore)

Particulars	FY 2014-15		
	Tariff Order	Petition	Approved upon Truing Up
Opening Loan	1,674.32	1,416.81	1,416.81
Loan Additions (70% of Investments)	882.00	809.15	809.15
Less: Repayments (Depreciation allowable for the year)	385.71	312.85	312.84
Closing Loan Balance	2,170.61	1,913.11	1,913.11
Weighted Average Rate of Interest	11.50%	8.72%	8.72%
Interest on long term loan	235.48	145.24	145.24
Less: Interest Capitalized	54.16	19.92	19.92
Net Interest Charged	181.32	125.32	125.32
Interest Capitalisation Rate	23.00%		13.72%

Table 4-30: INTEREST ON LONG TERM LOAN FOR PVVNL FOR FY 2014-15 (Rs Crore)

Particulars	FY 2014-15		
	Tariff Order	Petition	Approved upon Truing Up
Opening Loan	1,473.99	1,619.41	1,619.42
Loan Additions (70% of Investments)	1,081.92	724.54	724.54
Less: Repayments (Depreciation allowable for the year)	490.71	490.90	490.90



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Particulars	FY 2014-15		
	Tariff Order	Petition	Approved upon Truing Up
Closing Loan Balance	2,065.20	1,853.05	1,853.06
Weighted Average Rate of Interest	10.61%	10.08%	10.08%
Interest on long term loan	187.73	174.93	174.94
Less: Interest Capitalized	43.18	5.42	5.42
Net Interest Charged	144.56	169.52	169.52
Interest Capitalisation Rate	23.00%		3.10%

Table 4-31: INTEREST ON LONG TERM LOAN FOR PuVVNL FOR FY 2014-15 (Rs Crore)

Particulars	FY 2014-15		
	Tariff Order	Petition	Approved upon Truing Up
Opening Loan	1,884.52	2,319.93	2,319.93
Loan Additions (70% of Investments)	443.94	283.11	283.11
Less: Repayments (Depreciation allowable for the year)	385.01	427.34	427.38
Closing Loan Balance	1,943.45	2,175.70	2,175.66
Weighted Average Rate of Interest	11.58%	9.67%	9.67%
Interest on long term loan	221.72	217.42	217.42
Less: Interest Capitalized	51.00	25.71	25.71
Net Interest Charged	170.72	191.72	191.72
Interest Capitalisation Rate	23.00%	11.82%	11.82%

Table 4-32: INTEREST ON LONG TERM LOAN FOR KESCO FOR FY 2014-15 (Rs Crore)

Particulars	FY 2014-15		
	Tariff Order	Petition	Approved upon Truing Up
Opening Loan	0.00	0.00	0.00
Loan Additions (70% of Investments)	29.40	0.00	0.00
Less: Repayments (Depreciation allowable for the year)	29.40	0.00	0.00
Closing Loan Balance	0.00	0.00	0.00
Weighted Average Rate of Interest	11.99%	---	----
Interest on long term loan	0.00	0.00	0.00
Less: Interest Capitalized	0.00	0.00	0.00
Net Interest Charged	-	0.00	0.00
Interest Capitalisation Rate	0.00%	---	---



Finance Charges

- 4.5.14 The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO have claimed Rs. 33.07 Crore, Rs. 23.36 Crore, Rs. 83.66 Crore, Rs. (-95.36) Crore and Rs. 9.17 Crore respectively against Rs. 29.88 Crore, Rs. 25.29 Crore, Rs. 83.98 Crore, Rs. 43.08 Crore and Rs. 8.96 Crore respectively approved by the Commission towards total finance charges during FY 2014-15.
- 4.5.15 The bank charges and interest on consumer security deposits and finance charges have been allowed at actual based on audited accounts.
- 4.5.16 Thus, the approved finance charges for the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO for FY 2014-15 is shown in the table below.

Table 4-33: ALLOWABLE FINANCE CHARGES FOR DVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Audited	Petition	Approved upon Truing Up
Interest to Consumers	29.41	32.90	32.90	32.90
Bank Charges	-	-	-	-
Discount to Consumers	-	-	-	-
Finance Charges	0.47	0.17	0.17	0.17
Total Finance Charges	29.87	33.07	33.07	33.07

Table 4-34: ALLOWABLE FINANCE CHARGES FOR MVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Audited	Petition	Approved upon Truing Up
Interest to Consumers	25.16	23.25	23.25	23.25
Bank Charges	-	-	-	-
Discount to Consumers				
Finance Charges	0.13	0.11	0.11	0.11
Total Finance Charges	25.29	23.36	23.36	23.36

Table 4-35: ALLOWABLE FINANCE CHARGES FOR PVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Audited	Petition	Approved upon Truing Up
Interest to Consumers	83.63	83.64	83.64	83.64
Bank Charges	-	-	-	-
Discount to Consumers	-	-	-	-
Finance Charges	0.13	0.02	0.02	0.02
Total Finance Charges	83.85	83.66	83.66	83.66

Table 4-36: ALLOWABLE FINANCE CHARGES FOR PuVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Audited	Petition	Approved upon Truing Up
Interest to Consumers	42.97	(95.39)	(95.39)	(95.39)
Bank Charges	0.11	0.04	0.04	0.04
Discount to Consumers	-	-	-	-
Finance Charges	-	-	-	-
Total Finance Charges	43.08	(95.36)	(95.36)	(95.36)

Table 4-37: ALLOWABLE FINANCE CHARGES FOR KESCO FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Audited	Petition	Approved upon Truing Up
Interest to Consumers	8.96	9.17	9.17	9.17
Bank Charges				
Discount to Consumers				
Finance Charges	0.001	-	0.00	0.00
Total Finance Charges	8.96	9.17	9.17	9.17

Interest on Working Capital:

4.5.17 The Petitioners have submitted that the Tariff Regulations provide for normative interest on working capital based on the principles outlined in the Distribution Tariff Regulations, 2006. The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO have claimed the normative interest on working capital as Rs. 99.54 Crore, Rs. 95.83 Crore, Rs. 104.55 Crore, Rs. 107.27 Crore and Rs. 23.87 Crore respectively against the approved expenses of Rs. 104.99 Crore, Rs 103.80 Crore, Rs. 121.15 Crore, Rs. 92.42 Crore and Rs. 21.36 Crore respectively.

4.5.18 Regulation 4.8(2) of the Distribution Tariff Regulations, 2006 specifies as follows:

“2. Interest on working capital

(a) Working capital shall be worked out to cover

(i) Operation and Maintenance expenses, which includes Employee costs, R&M expenses and A&G expenses, for one month;

(ii) One-twelfth of the sum of the book value of stores, materials and supplies at the end of each month of such financial year.



(iii) Receivables equivalent to 60 days average billing of consumers less security deposits by the consumers minus amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from consumers and Distribution System Users.

(b) Rate of interest on working capital shall be the Bank Rate as specified by Reserve Bank of India for the relevant year plus a margin as decided by the Commission.”

4.5.19 Based on the methodology specified in the above Regulations, the Commission in its Tariff Order for FY 2014-15 had allowed normative interest on working capital for DVVNL, MVVNL, PVVNL, PuVVNL & KESCO respectively. Following the similar approach and in accordance with the Regulations, the Commission in this Order has assessed the working capital and interest thereon based on the trued up ARR of the Petitioners.

4.5.20 In reply to the query raised by the Commission regarding exorbitantly high interest on working capital as per audited accounts against approved interest on working capital as approved in the Tariff Orders for FY 2014-15, the Petitioners submitted that they have claimed the interest on working capital as per the normative methodology prescribed by the Tariff Regulations and adopted by the Commission’s approach in the previous True-up and tariff orders without imposing any additional burden on the consumers.

4.5.21 The summary of the interest on working capital approved by the Commission in the Tariff Order for FY 2014-15, claimed by the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO and that approved by the Commission in the present True - Up Order is shown in the Table below:

Table 4-38: INTEREST ON WORKING CAPITAL FOR DVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
One month's O & M Expenses	51.66		55.12	39.32
One-twelfth of the sum of the book value of materials in stores at the end of each month of such financial year.	9.77		6.97	6.97
Receivables equivalent to 60 days average billing on consumers	1114.66		1124.84	1109.43
Grand Total	1176.09		1186.93	1155.72



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Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
Less: Total Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003	336.14		390.61	390.61
Net Working Capital	839.95		796.32	765.11
Rate of Interest on Working Capital	12.50%		12.50%	12.50%
Interest on Working Capital	104.99	1269.47	99.54	95.64

Table 4-39: INTEREST ON WORKING CAPITAL FOR MVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
One month's O & M Expenses	58.91		62.84	46.20
One-twelfth of the sum of the book value of materials in stores at the end of each month of such financial year.	13.89		0.20	0.20
Receivables equivalent to 60 days average billing on consumers	1044.56		1059.12	1044.62
Grand Total	1117.36		1122.17	1091.02
Less: Total Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003	286.94		355.55	355.55
Net Working Capital	830.42		766.62	735.47
Rate of Interest on Working Capital	12.50%		12.50%	12.50%
Interest on Working Capital	103.80	576.29	95.83	91.93

Table 4-40: INTEREST ON WORKING CAPITAL FOR PVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
One month's O & M Expenses	52.33		57.04	40.72
One-twelfth of the sum of the book value of materials in stores at the end of each month of such financial year.	17.07		3.31	3.31
Receivables equivalent to 60 days average billing on consumers	1859.72		1728.37	1704.69
Grand Total	1929.12		1788.71	1748.72



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Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
Less: Total Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003	959.93		952.31	952.31
Net Working Capital	969.19		836.40	796.41
Rate of Interest on Working Capital	12.50%		12.50%	12.50%
Interest on Working Capital	121.15	550.04	104.55	99.55

Table 4-41: INTEREST ON WORKING CAPITAL FOR PuVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
One month's O & M Expenses	62.24		83.69	59.24
One-twelfth of the sum of the book value of materials in stores at the end of each month of such financial year.	7.33		4.48	4.48
Receivables equivalent to 60 days average billing on consumers	1164.17		1054.54	1040.09
Grand Total	1233.74		1142.71	1103.82
Less: Total Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003	494.42		284.52	284.52
Net Working Capital	739.32		858.20	819.30
Rate of Interest on Working Capital	12.50%		12.50%	12.50%
Interest on Working Capital	92.42	1269.47	107.27	102.41

Table 4-42: INTEREST ON WORKING CAPITAL FOR KESCO FOR FY 2014-15 (Rs. Crore)

Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
One month's O & M Expenses	13.23		15.02	13.81
One-twelfth of the sum of the book value of materials in stores at the end of each month of such financial year.	0.59		0.23	0.23
Receivables equivalent to 60 days average billing on consumers	258.71		281.54	277.69
Grand Total	272.00		296.79	291.73



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Particulars	FY 2014-15			
	Tariff Order	Audited	Petition	Approved upon Truing up
Less: Total Security Deposits by the Consumers reduced by Security Deposits under section 47(1)(b) of the Electricity Act 2003	101.14		105.81	105.81
Net Working Capital	170.85		190.98	185.92
Rate of Interest on Working Capital	12.50%		12.50%	12.50%
Interest on Working Capital	21.36		23.87	23.24

4.5.22 The following table summarises the interest and finance charges approved by the Commission in the Tariff Order, interest and finance charges claimed by the Petitioner namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO and that approved by the Commission in this Order:

Table 4-43: ALLOWABLE INTEREST AND FINANCE CHARGES FOR DVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
<i>A: Interest on Long Term Loans</i>				
Gross Interest on Long Term Loan	201.12	405.00	168.66	168.66
Less: Interest Capitalisation	46.26	25.02	25.02	25.02
Net Interest on Long Term Loans	154.86	379.98	143.64	143.64
<i>B: Finance and Other Charges</i>				
Finance Charges	0.47	0.17	0.17	0.17
Bank Charges				
Interest on Consumer Security Deposits	29.41	32.90	32.90	32.90
Total Finance Charges	0.47	33.07	33.07	33.07
<i>C: Interest on Working Capital</i>	104.99	1,269.47	99.54	95.64
Total (A+B+C)	289.73	1,682.52	276.25	272.34

Table 4-44: ALLOWABLE INTEREST AND FINANCE CHARGES FOR MVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
<i>A: Interest on Long Term Loans</i>				
Gross Interest on Long Term Loan	235.48	291.72	145.24	145.24



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Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Less: Interest Capitalisation	54.16	19.92	19.92	19.92
Net Interest on Long Term Loans	181.32	271.80	125.32	125.32
<i>B: Finance and Other Charges</i>				
Finance Charges	0.13	0.11	0.11	0.11
Bank Charges				
Interest on Consumer Security Deposits	25.16	23.25	23.25	23.25
Total Finance Charges	-	23.36	23.36	23.36
<i>C: Interest on Working Capital</i>	103.80	576.29	95.83	91.93
Total (A+B+C)	310.28	871.45	244.51	240.62

Table 4-45: ALLOWABLE INTEREST AND FINANCE CHARGES FOR PVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
<i>A: Interest on Long Term Loans</i>				
Gross Interest on Long Term Loan	187.73	388.02	174.93	174.94
Less: Interest Capitalisation	43.18	5.42	5.42	5.42
Net Interest on Long Term Loans	144.56	382.60	169.52	169.52
<i>B: Finance and Other Charges</i>				
Finance Charges	0.22	0.02	0.02	0.02
Bank Charges				
Interest on Consumer Security Deposits	83.63	83.64	83.64	83.64
Total Finance Charges		83.66	83.66	83.66
<i>C: Interest on Working Capital</i>	121.15	550.04	104.55	99.55
Total (A+B+C)	349.55	1,016.30	357.73	352.73

Table 4-46: ALLOWABLE INTEREST AND FINANCE CHARGES FOR PuVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
<i>A: Interest on Long Term Loans</i>				
Gross Interest on Long Term Loan	221.72	405.00	217.42	217.42
Less: Interest Capitalisation	51.00	25.02	25.71	25.02
Net Interest on Long Term Loans	170.72	379.98	191.72	192.40
<i>B: Finance and Other Charges</i>				

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Finance Charges	-	-	-	-
Bank Charges	0.11	0.04	0.04	0.04
Interest on Consumer Security Deposits	42.97	(95.39)	(95.39)	(95.39)
Total Finance Charges	43.08	(95.36)	(95.36)	(95.36)
<i>C: Interest on Working Capital</i>	92.42	778.30	107.27	102.41
Total (A+B+C)	306.22	1,062.93	203.64	199.46

Table 4-47: ALLOWABLE INTEREST AND FINANCE CHARGES FOR KESCO FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
<i>A: Interest on Long Term Loans</i>	-	-	-	-
Gross Interest on Long Term Loan	-	-	-	-
Less: Interest Capitalisation	-	-	-	-
Net Interest on Long Term Loans	-	-	-	-
<i>B: Finance and Other Charges</i>	-	-	-	-
Finance Charges	-	-	-	-
Bank Charges	-	-	-	-
Interest on Consumer Security Deposits	0.00	0.00	0.00	0.00
Total Finance Charges	8.96	9.17	9.17	9.17
<i>C: Interest on Working Capital</i>	21.36	-	23.87	23.24
Total (A+B+C)	30.32	9.17	33.04	32.41

4.6 DEPRECIATION

4.6.1 The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO have submitted that the actual depreciation expense as per audited accounts are Rs. 336.51 Crore, Rs. 312.85 Crore, Rs. 490.90 Crore, Rs. 427.34 Crore and Rs. 42.37 Crore respectively. However, the same depreciation has been accounted for considering the depreciation rates prescribed by the Companies Act, 1956. The Petitioner further submitted that for the purpose of Truing up, it has computed the depreciation expense on the actual GFA base and at the regulatory rates applicable for FY 2014-15.

4.6.2 As regards the Commission's query regarding source-wise funding of capitalization, the Petitioner submitted that the Commission in the True Up



Order for FY 2013-14 and ARR Order for FY 2016-17 had considered a normative approach wherein it had considered a normative gearing of 70:30. Considering this approach, 70% of the capital expenditure undertaken in any year was considered to be financed through loan and balance 30% has been considered to be financed through equity contributions. The portion of capital expenditure financed through consumer contributions, capital subsidies and grants were separated as the depreciation and interest thereon would not be charged to the consumers.

- 4.6.3 In reply to the Commission's query regarding claimed depreciation rate of 7.84%, the Licensees have submitted that a weighted average depreciation rate of 7.84% for the truing up in respect of FY 2014-15 has been considered, which is in line with the rate considered by the Commission in its Tariff Order for FY 2014-15. However, in case of KESCO, the petitioner has considered the rate of 7.84% whereas the Commission has approved the rate of 6.89% in the order dated 1st October 2014 for FY 2014-15. Accordingly, the depreciation rate of 6.89% has been considered for KESCO for FY 2014-15 truing up.
- 4.6.4 The Commission asked the Petitioners' to confirm that the cumulative depreciation in FY 2014-15 is less than 90% of GFA for all assets, since assets cannot be depreciated beyond 90% of GFA in accordance with the Distribution Tariff Regulations, 2006, which the Petitioners' confirmed in the reply to deficiency note.
- 4.6.5 The Petitioners' in the True petition for FY 2014-15 has submitted the fixed asset registers till FY 2014-15 and requested the Commission to allow the recovery of withheld depreciation amount in previous years ARR and True-up Orders for DVVNL, MVVNL, PVVNL & PuVNNL. The petitioner has not claimed any withheld depreciation for FY 2013-14 & FY 2014-15 for KESCO. The relevant extract in case of DVVNL is stated as under:

Quote

In compliance to the Hon'ble Commission's directive, the Licensee has put in its best efforts to prepare the Fixed Assets Register from FY 2012-13 to FY 2014-15, duly matching with the audited accounts of the discom upto FY 2014-15. It is further submitted that the Fixed Assets Register from FY 2012-13 to FY 2014-15 have been prepared and maintained as specified in the Distribution Tariff Regulations, 2006. The complete compilation of Fixed Assets Register from FY 2012-13 to FY 2014-15 is attached herewith the Petition for the perusal of the Hon'ble Commission.



Further, the Petitioner by means of this Petition requests the Hon'ble Commission to kindly allow the Petitioner to recover the withheld depreciation amount's being disallowed in previous years ARR and True-up Orders. The summary of the depreciation amount withheld on account of non-maintenance of fixed assets register is detailed in the table below:

Table 1: Summary of Depreciation withheld by the Hon'ble Commission (RsCrore)

Financial Year	Ref Order	Allowable Depreciation	Withheld Depreciation	Allowed Depreciation	Remarks
2013-14	True-up Order Dated August 1 st , 2016	327.04	65.41	261.63	Claimed in the instant Petition
2014-15	ARR and Tariff Order Dated October 1 st , 2014	392.09	98.02	294.07	Part of the True-up Gap claimed for FY 2014-15
2015-16	ARR and Tariff Order Dated June 18 th , 2015	375.56	112.67	262.89	Claimed in the instant Petition
2016-17	ARR and Tariff Order Dated August 1 st , 2016	419.76	125.93	293.83	Claimed in the instant Petition
Total		1514.45	402.03	1112.42	

Thus as discernible from the table above, the Hon'ble Commission till FY 2016-17 has disallowed a total sum of Rs. 400.44 crore on account of depreciation being withheld due non-maintenance of fixed assets registers. Now since the discom has put in its best efforts to prepare the Fixed Assets Register from FY 2012-13 to 2014-15, it requests the Hon'ble Commission to kindly allow the depreciation been withheld to the tune of Rs. 98.02 crore as claimed in the True-up Petition filed for FY 2014-15 and the balance withheld depreciation of Rs. 302.42 crore shall be allowed as a part of total revenue gap upto FY 2017-18. The Fixed Assets Registers for FY 2015-16 to 2016-17 will be submitted by the Petitioner at the time of filing of True-up petition for FY 2015-16 to 2016-17, once the financial statements are being audited and available for submission before the Hon'ble Commission.

Unquote

- 4.6.6 The Commission has repeatedly given several directions to the Licensees to ensure that proper and detailed Fixed Assets Registers are maintained at the field offices. Further, the Hon'ble APTEL in Appeal No. 121 of 2010 & I.A. No. 83 of 2011 has also reinforced Commission's views and has directed the Licensees to comply with the regulations and directions issued by the Commission. In view of the same the Commission in its previous orders had withheld depreciation



equivalent to 20% in FY 2013-14, 25% in FY 2014-15, 30% in FY 2015-16 & FY 2016-17 of the percentage of net allowable depreciation from FY 2013-14 to FY 2016-17 on account of non-submission of Fixed Asset Registers (FAR) by the DISCOMs (DVVNL, MVVNL, PuVVNL and PVVNL). The relevant extract in Tariff Order dated August 1st 2016 for trueing up of FY 2013-14 and tariff for FY 2016-17 is stated as below:

Quote

4.6.6 The Commission has repeatedly given several directions to the Licensee to ensure that proper and detailed Fixed Assets Registers are maintained at the field offices. Further, the Hon'ble APTEL in Appeal No. 121 of 2010 & I.A. No.83 of 2011 has also reinforced Commission's views and has directed the Licensee to comply with the regulations and directions issued by the Commission. In view of the same the Commission in its Tariff Order for FY 2013-14 had withheld 20% of the allowable depreciation for FY 2013-14 and directed the Licensee that same would be released to be recovered through tariff upon submission of fixed asset registers up to FY 2012-13. The relevant extract of the Tariff Order for FY 2013-14 has been reproduced below:

*"As a first step towards reprimanding the Licensee over the issue of non-maintenance of fixed asset registers, the Commission has withheld 20% of the allowable depreciation for FY 2013-14. **The same would be released for recovery through tariff, upon submission of fixed asset registers up to the current year i.e. FY 2012-13 by 30th November, 2013.**" (Emphasis added)*

Further the Commission in all its subsequent Tariff Orders has been repeatedly directing the Licensee to submit the fixed asset register, but the Licensee has not been able to submit the same. In reply to the Commission's deficiency note dated January 29, 2016, the Petitioner in its reply dated March 9, 2016 submitted that it has not been able to finalize the preparation of the fixed asset registers due to the huge backlog of previous financial years and due to the fact that the transfer scheme has still not been finalized and requested the Commission that depreciation may be allowed to the Petitioner based on the GFA balance as per audited accounts as it has been duly certified by the statutory auditors and by the CAG.

4.6.7 The Commission has observed that even after repeated direction of the Commission DVVNL has not submitted the detailed fixed asset register.

Therefore, the Commission has withheld 20% of the allowable depreciation for FY 2013-14 as directed in Tariff Order for FY 2013-14 dated May 31, 2013.

Unquote

4.6.7 Further, in view of the above, the Commission in its Tariff Order for FY 2014-15 had withheld 25% of the allowable depreciation for FY 2014-15 for all the Licensees except KESCO and directed the Licensees that same would be released to be recovered through tariff upon submission of fixed asset registers up to FY 2012-13. The relevant extract of the Tariff Order for FY 2014-15 has been reproduced below:

“9.20.15 Hence, in line with the approach adopted by the Commission in its earlier Order over the issue of non-maintenance of fixed asset registers, the Commission has withheld a higher percentage as compared to previous year i.e. 25% of the allowable depreciation for FY 2014-15. The Licensee is further directed to submit the complete details pertaining to Fixed Asset Register for FY 2013-14 along with the ARR Petition for FY 2015-16, otherwise the withheld amount may not be allowed by the Commission.”

4.6.8 The Commission observes that the petitioners' have submitted the fixed asset registers upto FY 2014-15 on June 21st, 2017. With regards, to the claim of the Petitioners for allowing the depreciation withheld during FY 2013-14, it is observed that, the petitioners were directed to submit the fixed asset registers up to FY 2012-13 by November 30th, 2013, however the Petitioners' have not submitted the same till the truing up of FY 2013-14 and at the time of Tariff Order dated August 1st, 2016 for truing up of FY 2013-14 and tariff for FY 2016-17. The Commission had withheld the 20% of the allowable depreciation for FY 2013-14. The Commission is of the view that enough opportunity was given to the petitioners for submission of fixed asset registers, however the petitioners failed to do the same on time. The Commission has already trued up the depreciation for FY 2013-14 in Tariff Order dated August 1st, 2016 by disallowing the 20% of allowable depreciation and the same stands affirmed. As for the allowance of the withheld 25% of the allowable depreciation for FY 2014-15 during truing up, the Commission is of the view that since the fixed asset registers have been submitted before truing up, the same have been considered for the truing up purpose and the withheld depreciation of 25% has been allowed during truing up of FY 2014-15. As for the allowance of the withheld depreciation of FY 2015-16 and FY 2016-17, the same shall be dealt with at the time of truing up of FY 2015-16 and FY 2016-17 subject to the submission of the fixed asset Registers.

4.6.9 Thus, the approved depreciation for FY 2014-15 for Petitioners' namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO are as shown in the Table given below:



Approval of Business Plan, MYT ARR and Tariff for State Discoms for FY 2017-18 to FY 2019-20 and True-up of FY 2014-15

Table 4-48: DEPRECIATION EXPENSES FOR DVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Depreciation	448.52	170.52	433.80	433.86
Less: Equivalent amount of depreciation on assets acquired out of the consumer contribution and GoUP Subsidy	56.42	97.28	97.28	97.28
Gross Allowable Depreciation	392.09	73.24	336.51	336.58
Less: Depreciation withheld due to non-maintenance of Fixed Asset Register @20%	98.02	-	-	-
Net Allowable Depreciation	294.07	73.24	336.51	336.58

Table 4-49: DEPRECIATION EXPENSES FOR MVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Depreciation	440.49	157.15	360.54	360.53
Less: Equivalent amount of depreciation on assets acquired out of the consumer contribution and GoUP Subsidy	54.78	47.69	47.69	47.69
Gross Allowable Depreciation	385.71	109.46	312.85	312.84
Less: Depreciation withheld due to non-maintenance of Fixed Asset Register @20%	96.43			
Net Allowable Depreciation	289.28	109.46	312.85	312.84

Table 4-50: DEPRECIATION EXPENSES FOR PVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Depreciation	573.31	212.99	567.75	567.75
Less: Equivalent amount of depreciation on assets acquired out of the consumer contribution and GoUP Subsidy	82.60	76.85	76.85	76.85
Gross Allowable Depreciation	490.71	136.14	490.90	490.90
Less: Depreciation withheld due to non-maintenance of Fixed Asset Register @20%	122.68			
Net Allowable Depreciation	368.03	136.14	490.90	490.90

Table 4-51: DEPRECIATION EXPENSES FOR PuVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Depreciation	445.40		500.84	500.88
Less: Equivalent amount of depreciation on assets acquired out of the consumer contribution and GoUP Subsidy	60.39		73.50	73.50
Gross Allowable Depreciation	385.01		427.34	427.38
Less: Depreciation withheld due to non-maintenance of Fixed Asset Register @20%	96.25			
Net Allowable Depreciation	288.75	164.95	427.34	427.38

Table 4-52: DEPRECIATION EXPENSES FOR KESCO FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Depreciation	45.34		49.09	43.14
Less: Equivalent amount of depreciation on assets acquired out of the consumer contribution and GoUP Subsidy	15.24		6.72	6.72
Gross Allowable Depreciation	30.11		42.37	36.42
Less: Depreciation withheld due to non-maintenance of Fixed Asset Register @20%	-		-	-
Net Allowable Depreciation	30.11	13.08	42.37	36.42

4.7 PRIOR PERIOD EXPENSES

- 4.7.1 The Petitioners submitted that the financial statements of the Petitioners are prepared in compliance with Generally Accepted Accounting Principles (GAAP) and Accounting Standards issued by Accounting Standards Board of Institute of Chartered Accountants of India. There are certain prior period items, which have been identified and incorporated in the audited financial statements for FY 2014-15. Accounting Standard (AS 5) (Revised) on 'Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies' states:

“Prior period items are income or expenses which arise in the current period as a result of errors or omissions in the preparation of the financial statements of one or more prior periods”



4.7.2 The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO have not claimed any of prior period expenses for FY 2014-15. Hence, the Commission has not allowed any amount towards the same.

4.8 PROVISION FOR BAD AND DOUBTFUL DEBTS

4.8.1 The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO submitted that the Commission has not allowed any amounts towards Provision for Bad and Doubtful Debts in the Tariff Order for FY 2014-15. The Petitioners submitted that such expenses are legitimate business expenses and are accepted accounting principle even in a sector like banking where the provisioning of un-collectable dues is considered as a normal commercial practice.

4.8.2 The Petitioners submitted that it has computed the entitlement towards provision for bad and doubtful debts as 2% of the closing revenue receivables as per audited accounts of the relevant financial year for Distribution business.

4.8.3 The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO have claimed Rs. 132.64 Crore, Rs. 105.33 Crore, Rs. 72.49 Crore, Rs. 184.72 Crore and Rs. 35.70 Crore respectively towards provision for bad and doubtful debts for FY 2014-15.

4.8.4 As regards provision for bad and doubtful debts, the Commission in its previous Orders had directed as follows:

True up Order for FY 2000-01 to FY 2007-08 dated 21st May, 2013

“The Commission directs the Petitioner to formulate a policy for identifying and writing off fictitious arrears and submit a copy of such report before the Commission.” (within six months from the date of issue of True-up Order).

Tariff Order for FY 2013-14 dated 31st May, 2013

“As lack of approved transparent policy on identifying and writing off bad debts is hindering allowance of bad debts as an ARR component; the Commission directs the Licensee to submit ten sample cases of LT & HT consumers where orders have been issued for writing off bad debts, clearly depicting the procedure adopted for writing off bad debts along with policy framework for managing bad debts for the Commission’s perusal.” (within one month from the date of issuance of the Order.)



Tariff Order for FY 2014-15 dated October 1, 2014

*“The Commission, further in its deficiency note, has enquired from the Petitioner about the policy followed by it to identify and write off bad debts. In its reply, the Petitioner has submitted that the entitlement towards provision for bad and doubtful debts has been computed at 2% of the closing revenue receivables as per audited accounts of FY 2008-09. **However, it was observed that the Petitioner has submitted the approach for creation of provision of bad debts instead of the policy followed by it for identification of actual bad debts and writing off the same.** The Commission, in its additional queries, reiterated that the Petitioner is required to submit the policy followed by it for identification and writing off actual bad debts at the earliest. In reply to the same, the Petitioner submitted that it has recently framed a policy for identifying and writing off old arrears, which has been provided to the Commission along with the replies and appropriate directions have been issued to the field units to compile the sample cases based on this recently issued order of the licensee. However, from the Regulations it is amply clear that the Petitioner is required to submit its policy for identifying and writing off doubtful debts to the Commission for prior approval, which the Petitioner has not done.”(Emphasis added)*

Tariff Order for FY 2015-16 dated June 18, 2015

“4.8.8 Thus, in accordance with the Distribution Tariff Regulations, 2006 proper guidelines and procedures for identifying, physically verifying and writing off the bad debts is a must for approval of provision for bad debts. Since, the Petitioner is yet to satisfy the Commission of the sincere and concerted efforts to comply with the Commission’s directives; the Commission is not giving any allowance for bad debts for FY 2012-13 during the final truing up exercise for FY 2012-13.

4.8.9 Therefore, in the absence of proper policy in place for identifying and writing off receivables and non submission of sample cases of LT & HT consumer where orders have been issued for writing off debts, the Commission disallows the claims towards provision for bad and doubtful debts.”

- 4.8.5 In reply to the query raised by the Commission regarding provision for bad and doubtful debts, the Petitioners have submitted that it has framed a policy for



identifying and writing off old arrears and a copy of the same was submitted to the Commission during the proceedings in respect of ARR and Tariff Petition for FY 2015-16. It is also submitted by the Licensees that appropriate directions have been issued to the field units to compile the sample cases based on such order. The Commission, in its deficiency note, reiterated that the Petitioners have not submitted any such sample data of the consumer indicating the policy framework for managing bad debts for the Commission's perusal. Further, in reply to the query the Petitioners requested the Commission to approve the policy it has framed for identifying and writing off old arrears which it has submitted during the proceedings of ARR and Tariff for FY 2015-16 and also during the current proceedings.

4.8.6 Regulation 4.4 of the Distribution Tariff Regulations, 2006 specifies as follows:

"4.4 Bad and Doubtful Debts:

*Bad and Doubtful Debts shall be allowed as a legitimate business expense with the ceiling limit of 2% of the revenue receivables provided the distribution licensee actually identifies and writes off bad debts **as per the transparent policy approved by the Commission**. In case there is any recovery of bad debts already written off, the recovered bad debt will be treated as other income."*(Emphasis supplied)

4.8.7 The submission made by Petitioners comprises of the approach for creation of provision of bad debts instead of the policy followed by it for identification of actual bad debts and writing off the same. Further, the Commission in the Tariff Order for FY 2014-15 had disallowed the claims towards provision for bad and doubtful debts due to the absence of a clear policy and procedure for identifying and writing off receivables. Any provisioning towards bad and doubtful debts needs to be backed up with processes to identify consumers who are not paying up and then making adequate attempts to collect from such consumers.

4.8.8 Thus, in accordance with the Distribution Tariff Regulations, 2006 proper guidelines and procedures for identifying, physically verifying and writing off the bad debts is a must for approval of provision for bad debts. Since, the Petitioners are yet to satisfy the Commission of the sincere and concerted efforts to comply with the Commission's directives; the Commission is not giving any allowance for bad debts for FY 2014-15 during the final trueing up exercise for FY 2014-15.



4.8.9 Therefore, in the absence of proper policy in place for identifying and writing off receivables and non-submission of sample cases of LT & HT consumer where orders have been issued for writing off debts, the Commission disallows the claims towards provision for bad and doubtful debts.

Table 4-53: PROVISION FOR BAD AND DOUBTFUL DEBT FOR DVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Provision for Bad and Doubtful Debts	0.00	71.56	132.64	0.00

Table 4-54: PROVISION FOR BAD AND DOUBTFUL DEBT FOR MVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Provision for Bad and Doubtful Debts	0.00	98.18	105.33	0.00

Table 4-55: PROVISION FOR BAD AND DOUBTFUL DEBT FOR PVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Provision for Bad and Doubtful Debts	0.00	415.38	72.49	0.00

Table 4-56: PROVISION FOR BAD AND DOUBTFUL DEBT FOR PuVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Provision for Bad and Doubtful Debts	0.00	88.09	184.72	0.00

Table 4-57: PROVISION FOR BAD AND DOUBTFUL DEBT FOR KESCO FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Provision for Bad and Doubtful Debts	0.00	19.33	35.70	0.00



4.9 RETURN ON EQUITY

4.9.1 The Petitioners have not claimed any return on equity for the year under review. Hence, the Commission has also not allowed any amount towards return on equity for FY 2014-15.

4.10 REVENUE SUBSIDY FROM GOUP

4.10.1 The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL have claimed that the revenue subsidy received from GoUP was Rs. 973.91 Crore, Rs. 902.60 Crore, Rs. 1702.45 Crore and Rs. 1838.04 Crore respectively during FY 2014-15 as against Rs. 904.86 Crore, Rs. 744.12 Crore, Rs. 1657.72 Crore and Rs. 1683.30 Crore respectively approved in the Tariff Order.

4.10.2 The Commission has accepted the submission of the Petitioners under this head.

4.11 ADDITIONAL SUBSIDY REQUIREMENT

4.11.1 The Distribution Tariff Regulations, 2006 are effective from FY 2007-08. Clause 6.10 of the Distribution Tariff Regulations, 2006 specifies:

“6.10 Provision of Subsidy

1. The Commission, while determining the tariff, shall see that the tariff progressively reflects the cost of supply of electricity and the cross subsidy is reduced or eliminated.

2. If the State Government decides to subsidize any consumer or class of consumers, the State Government shall pay the amount to compensate the affected licensee by grant of such subsidy in advance.

Provided that no such direction of the State Government to grant subsidy shall be operative if the payment is not made in accordance with the relevant provisions contained in these Regulations and the Act. In such a case, the tariff of the applicable categories may be revised excluding the subsidy.

3. The Government shall, by notification, declare the consumers or class of consumers to be subsidized.

4. Tariff of the subsidized category shall be designed taking into account the subsidy allocated to that category.



5. The Distribution Licensee shall furnish details of power consumed by the subsidized category to the State Government and the Commission.

The Distribution Licensee shall provide meters on all rural distribution transformers and shall also furnish the power consumption details in respect of agricultural and rural domestic consumption based on readings from such meters and normative distribution losses on a monthly basis.”

(Emphasis supplied)

- 4.11.2 The Commission, in its Tariff Orders for FY 2013-14 and FY 2014-15, regarding additional subsidy requirement has stipulated as under:

“The Commission in the true up Order dated 21st May, 2013 had computed the additional subsidy requirement from GoUP as the difference between actual cost of sales to subsidised categories and the revenue assessment to the subsidised categories of LMV-1 (a): Consumer getting supply as per “Rural Schedule” and LMV-5: Private Tube wells (PTW). Similarly, the Commission in this Order also, has computed the additional subsidy requirement from GoUP which ensures that commensurate subsidy from GoUP is factored in the ARR being approved for FY 2013-14.”

- 4.11.3 With regard to the above matter, the Distribution Licensees have filed an Appeal before the Hon’ble APTEL on applicability of additional subsidy. The matter has been decided by the Hon’ble APTEL in its Judgment dated November 23, 2015 which is in line with the approach followed by the Commission in its earlier Tariff Orders and wherein it gave the following decision.

“In case the amount of subsidy assured by the State Government for a particular class of consumers is not released, then it may lead to cross subsidizing that particular class of consumers by another class of consumers as the tariff is fixed by the State Commission for different class of consumers taking into account the amount of subsidy assured by the State Government for that particular class of consumers which would be against the principles of law laid down by this Appellate Tribunal. We, after considering these rival contentions of the parties do not find force in the contentions of the appellants. The contentions raised by the respondent Commission appear to be reasonable, legal and correct one. It appears from the Impugned Order and other material on record that the State Commission has been consistent in its approach on the said issue because the State Commission has approved the amount of subsidy in a just and legal way. The State Commission has trued up the amount of subsidy given

by the State Government on taking into consideration the amount of subsidy approved in the tariff order of the respective FY and actual amount of subsidy received as per audited accounts in the respective FY and as claimed in the true up petitions for the respective FYs. **Further, the State Commission has correctly and legally allowed the subsidy approved in the respective tariff order** where the actual subsidy received from the State Government was less and in some years the actual subsidy where the amount received from the Government was more...

8.8) Hence, we hold that the State Commission is legally justified in directing the appellants to recover the subsidy/additional subsidy from Government of Uttar Pradesh instead of giving the same as a pass through in the appellants aggregate revenue requirement. If proper datas and details in true sense were not available with the appellants, then for that lapse or failure of the appellants, the consumers cannot be allowed to suffer. Hence, this issue is decided against the appellants.”[Emphasis supplied]

- 4.11.4 The Commission has considered the actual sales of the subsidised categories, namely LMV-1 (a): Consumer getting supply as per "Rural Schedule" and LMV-5: Private Tube wells (PTW) for computing the actual subsidy requirement, which is also same as submitted by the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO. Further, the through rate for the LMV-1 (a) Consumer getting supply as per "Rural Schedule" and LMV-5: Private Tube wells (PTW) has been considered as submitted by the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO.
- 4.11.5 As per the table provided below, the additional subsidy has been considered for reduction from the ARR being tried up.

Table 4-58: COMPUTATION OF SUBSIDY REQUIREMENT FOR DVVNL FY 2014-15 (Rs Crore)

Particulars	Sales	Cost of Service	Thru Rate	Loss	Loss
	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs/ kWh)	(Rs Crore)
LMV-1: (a) Consumer getting supply as per "Rural Schedule"	2157.08	7.40	2.63	4.77	1029.50
LMV-5: PTW	2755.72	7.40	1.30	6.11	1683.10
Total Loss	4,912.80				2,712.60
Subsidy Available					815.10
Additional Subsidy Requirement					1,897.50

Table 4-59: COMPUTATION OF SUBSIDY REQUIREMENT FOR MVVNL FY 2014-15 (Rs Crore)

Particulars	Sales	Cost of Service	Thru Rate	Loss	Loss
	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs/ kWh)	(Rs Crore)
LMV-1: (a) Consumer getting supply as per "Rural Schedule"	1816.64	6.84	1.91	4.93	895.94
LMV-5: PTW	890.19	6.84	1.27	5.57	496.24
Total Loss	2,706.83				1,392.18
Subsidy Available					718.94
Additional Subsidy Requirement					673.24

Table 4-60: COMPUTATION OF SUBSIDY REQUIREMENT FOR PVVNL FY 2014-15 (Rs Crore)

Particulars	Sales	Cost of Service	Thru Rate	Loss	Loss
	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs/ kWh)	(Rs Crore)
LMV-1: (a) Consumer getting supply as per "Rural Schedule"	3329.50	6.45	1.55	4.90	1632.85
LMV-5: PTW	3194.71	6.45	1.28	5.17	1651.06
Total Loss	6,524.21				3,283.91
Subsidy Available					1366.74
Additional Subsidy Requirement					1,917.17

Table 4-61: COMPUTATION OF SUBSIDY REQUIREMENT FOR PuVVNL FY 2014-15 (Rs Crore)

Particulars	Sales	Cost of Service	Thru Rate	Loss	Loss
	(MU)	(Rs/kWh)	(Rs/kWh)	(Rs/ kWh)	(Rs Crore)
LMV-1: (a) Consumer getting supply as per "Rural Schedule"	3788.78	6.96	1.64	5.32	2015.17
LMV-5: PTW	1297.38	6.96	1.11	5.85	758.64
Total Loss	5,086.16				2,773.81
Subsidy Available					1666.22
Additional Subsidy Requirement					1,107.59

4.12 REVENUE SIDE TRUING UP

NON-TARIFF INCOME

4.12.1 The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO have submitted that the actual non-tariff income during FY 2014-15 was Rs. 38.47 Crore, Rs. 33.84 Crore, Rs. 14.61 Crore, Rs. 27.78 Crore and Rs. 8.05 Crore



respectively as compared to Rs. 12.34 Crore, Rs. 20.45 Crore, Rs. 14.75 Crore, Rs. 16.21 Crore and Rs. 6.50 Crore respectively approved by the Commission in the Tariff Order.

- 4.12.2 The Commission has accepted the submission of the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO under this head and has accordingly approved Non-Tariff Income Rs. 38.47 Crore, Rs. 33.84 Crore, Rs. 14.61 Crore, Rs. 27.78 Crore and Rs. 8.05 Crore respectively for FY 2014-15.

4.13 REVENUE FROM SALE OF POWER

- 4.13.1 The Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO have submitted that the actual revenue from sale of power including delay payment surcharges during FY 2014-15 is Rs. 6749.03 Crore, Rs. 6354.75 Crore, Rs. 10370.21 Crore, Rs. 6327.23 Crore and Rs. 1689.26 Crore respectively towards electricity sales of 11429.29 MU, 11665.40 MU, 20845.35 MU, 13893.33 MU and 2582.04 MU respectively against Rs. 6523.12 Crore, Rs. 6354.40 Crore, Rs. 11313.28 Crore, Rs. 7082.02 Crore and Rs. 1570.54 Crore respectively approved by the Commission in its Tariff Order.

- 4.13.2 The Commission, in its deficiency note, asked the Petitioners to confirm that Delayed Payment Surcharge has not been double accounted in the total revenue and to submit the detailed break-up of revenue from sale of power. In reply, the Licensees have submitted that “Delayed Payment surcharge” has not been double accounted in the total revenue and it has been added up to the Revenue from Sales. Further, the complete breakup of the total revenue and delayed payment surcharge as per the audited accounts was also submitted by the Petitioner.

- 4.13.3 The Commission has accepted the revenue from sale of power as submitted by the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO and has accordingly approved the actual revenue from sale of power including delay payment surcharges during FY 2014-15 is Rs. 6749.03 Crore, Rs. 6354.75 Crore, Rs. 10370.21 Crore, Rs. 6327.23 Crore and Rs. 1689.26 Crore respectively towards electricity sales of 11429.29 MU, 11665.40 MU, 20845.35 MU, 13893.33 MU and 2582.04 MU respectively. The summary of revenue approved in the Tariff Order, as claimed by the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO and as approved by the Commission in this Order for Truing up of FY 2014-15 is shown in the Table below:



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Table 4-62: REVENUE FOR DVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Revenue from Tariff including Delayed Payment Surcharge	6523.12	6749.03	6749.03	6749.03
Non-tariff items	12.34	38.47	38.47	38.47
Total Revenue	6535.46	6787.50	6787.50	6787.50

Table 4-63: REVENUE FOR MVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Revenue from Tariff including Delayed Payment Surcharge	6102.17	6354.75	6354.75	6354.75
Non-tariff items	20.45	33.84	33.84	33.84
Total Revenue	6122.62	6388.59	6388.59	6388.59

Table 4-64: REVENUE FOR PVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Revenue from Tariff including Delayed Payment Surcharge	11313.28	10370.21	10370.21	10370.21
Non-tariff items	14.75	14.61	14.61	14.61
Total Revenue	11328.03	10384.81	10384.81	10384.81

Table 4-65: REVENUE FOR PuVVNL FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Revenue from Tariff including Delayed Payment Surcharge	6523.12	6749.03	6749.03	6749.03
Non-tariff items	12.34	38.47	38.47	38.47
Total Revenue	6535.46	6787.50	6787.50	6787.50

Table 4-66: REVENUE FOR KESCO FOR FY 2014-15 (Rs. Crore)

Particulars	Tariff Order	Actual as per audited accounts	True-up Petition	Approved upon Truing up
Revenue from Tariff including Delayed Payment Surcharge	1570.54	1689.26	1689.26	1689.26
Non-tariff items	6.50	8.05	8.05	8.05
Total Revenue	1577.04	1697.31	1697.31	1697.31



4.14 ARR AND REVENUE GAP/ (SURPLUS) FOR FY 2014-15 AFTER TRUING UP

4.14.1 The Aggregate Revenue Requirement for FY 2014-15 for Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO after final truing up is summarized in the Table below:

Table 4-67: ARR, REVENUE AND GAP SUMMARY FOR DVVNL FOR FY 2014-15 (Rs. Crore)

Particulars (DVVNL)	Approved in order 1.10.2014	Actuals as per audited accounts	True-up Petition	Allowable
Power Purchase Expenses	7260.61	8603.86	7175.19	7141.01
Apportionment of O&M Expenses of UPPCL#	-	-	-	-
Transmission Expenses	366.81	303.64	280.02	280.02
Gross O&M Expenses	689.29	726.82	661.44	660.60
Gross Employee Expenses	399.36	309.77	383.56	382.15
Gross Repair and Maintenance Expenses	227.11	316.19	217.79	219.03
Gross A&G Expenses	62.82	100.86	60.08	59.42
Gross Interest on Long Term Loans	201.12	522.81	168.66	168.66
Finance Charges	0.47	0.17	0.17	0.17
Interest on Consumer	29.41	32.90	32.90	32.90
Interest on Working Capital	104.99	1269.47	99.54	95.64
Discount to Consumers	-	-	-	-
Depreciation	294.07	73.24	336.51	336.58
Prior Period Expenses	-	10.93	-	-
Other Misc Expenses	-	-	-	-
Provision for Bad and Doubtful Debts	-	71.56	132.64	-
Gross Expenditure	8946.76	11615.40	8887.07	8715.57
Less: Employee Capitalisation	59.90	147.40	147.40	147.40
Less: A&G Capitalisation	9.42	41.33	41.33	41.33
Less: Interest Capitalisation	46.26	25.02	25.02	25.02
Total Capitalisation	115.58	213.76	213.76	213.76
Net Expenditure	8831.17	11401.64	8673.31	8501.81
Add: Return on Equity	0.00	0.00	0.00	0.00
Less: Non-tariff Incomes	12.34	38.47	38.47	38.47
Add: Efficiency Gains				0.00
Aggregate Revenue Requirement	8818.84	11363.17	8634.84	8463.34
Revenue from Tariff incl DPS	6523.12	6749.03	6749.03	6749.03
GoUP Subsidy	904.86	2577.83	973.91	973.91
Net Revenue Gap	1390.86	2036.31	911.91	740.41
Additional Subsidy to be provided by GoUP	1055.45			1897.50
Net Revenue Gap / (Surplus)	335.39	2036.31	911.91	(1157.10)

Table 4-68: ARR, REVENUE AND GAP SUMMARY FOR MVVNL FOR FY 2014-15 (Rs. Crore)

Particulars (MVVNL)	Approved in order 1.10.2014	Actuals as per audited accounts	True-up Petition	Allowable
Power Purchase Expenses	5750.92	6794.11	6677.14	6645.34
Apportionment of O&M Expenses of UPPCL#	-	-	-	-
Transmission Expenses	290.54	232.49	260.58	260.58
Gross O&M Expenses	801.18	998.25	754.09	753.08
<i>Gross Employee Expenses</i>	530.58	481.34	500.23	498.68
<i>Gross Repair and Maintenance Expenses</i>	172.58	284.03	161.40	162.26
<i>Gross A&G Expenses</i>	98.02	232.89	92.46	92.14
Gross Interest on Long Term Loans	235.48	291.72	145.24	145.24
Finance Charges	0.00	0.11	0.11	0.11
Interest on Consumer	25.16	23.25	23.25	23.25
Interest on Working Capital	103.80	576.29	95.83	91.93
Discount to Consumers	0.00	0.00	0.00	0.00
Depreciation	289.28	109.46	312.85	312.84
Prior Period Expenses	0.00	-153.21	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	0.00	98.18	105.33	0.00
Gross Expenditure	7496.36	8970.66	8374.43	8232.37
Less: Employee Capitalisation	79.59	167.20	167.20	167.20
Less: A&G Capitalisation	14.70	32.25	32.25	32.25
Less: Interest Capitalisation	54.16	19.92	19.92	19.92
Total Capitalisation	148.45	219.38	219.38	219.38
Net Expenditure	7347.91	8751.28	8155.05	8012.99
Add: Return on Equity	-	-	-	-
Less: Non-tariff Incomes	20.45	33.84	33.84	33.84
Add: Efficiency Gains	-	-	-	-
Aggregate Revenue Requirement	7327.46	8717.45	8121.21	7979.15
Revenue from Tariff incl DPS	6354.40	6354.75	6354.75	6354.75
GoUP Subsidy	744.12	0.00	902.60	902.60
Net Revenue Gap	228.95	2362.70	863.86	721.81
Additional Subsidy to be provided by GoUP	155.26	0.00	0.00	673.08
Net Revenue Gap/ (Surplus)	77.67	2362.70	863.86	48.73



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Table 4-69: ARR, REVENUE AND GAP SUMMARY FOR PVVNL FOR FY 2014-15 (Rs. Crore)

Particulars (PVVNL)	Approved in order 1.10.2014	Actuals as per audited accounts	True-up Petition	Allowable
Power Purchase Expenses	10282.62	11669.46	11727.17	11671.31
Apportionment of O&M Expenses of UPPCL#	0.00	0.00	0.00	0.00
Transmission Expenses	519.48	396.15	457.66	457.66
Gross O&M Expenses	705.05	834.68	684.44	683.35
Gross Employee Expenses	455.76	377.56	442.04	436.75
Gross Repair and Maintenance Expenses	191.03	306.96	186.06	188.82
Gross A&G Expenses	58.26	150.16	56.35	57.78
Gross Interest on Long Term Loans	187.73	388.02	174.93	174.94
Finance Charges	0.00	0.02	0.02	0.02
Interest on Consumer	83.85	83.64	83.64	83.64
Interest on Working Capital	121.15	550.04	104.55	99.55
Discount to Consumers	0.00	0.00	0.00	0.00
Depreciation	368.03	136.14	490.90	490.90
Prior Period Expenses	0.00	-203.71	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	0.00	415.38	72.49	0.00
Gross Expenditure	12267.92	14269.83	13795.82	13661.36
Less: Employee Capitalisation	68.36	163.49	163.49	163.49
Less: A&G Capitalisation	8.74	31.21	31.21	31.21
Less: Interest Capitalisation	43.18	5.42	5.42	5.42
Total Capitalisation	120.28	200.12	200.12	200.12
Net Expenditure	12147.64	14069.71	13595.71	13461.25
Add: Return on Equity	0.00	0.00	0.00	0.00
Less: Non-tariff Incomes	14.75	14.61	14.61	14.61
Add: Efficiency Gains	0.00	0.00	0.00	0.00
Aggregate Revenue Requirement	12132.88	14055.10	13581.10	13446.64
Revenue from Tariff incl DPS	11313.28	10370.21	10370.21	10370.21
GoUP Subsidy	1657.72	1848.05	1702.45	1702.45
Net Revenue Gap	-838.12	1836.84	1508.44	1373.98
Additional Subsidy to be provided by GoUP	375.17	0.00	0.00	1917.17
Net Revenue Gap/ (Surplus)	-1213.30	1836.84	1508.44	(543.19)



Table 4-70: ARR, REVENUE AND GAP SUMMARY FOR PuVVNL FOR FY 2014-15 (Rs. Crore)

Particulars (PuVVNL)	Approved in order 1.10.2014	Actuals as per audited accounts	True-up Petition	Allowable
Power Purchase Expenses	7141.74	8197.07	8022.47	7984.25
Apportionment of O&M Expenses of UPPCL#	0.00	0.00	0.00	0.00
Transmission Expenses	360.80	409.77	313.08	313.08
Gross O&M Expenses	829.03	900.94	1004.29	900.94
Gross Employee Expenses	484.16	458.26	507.79	458.26
Gross Repair and Maintenance Expenses	281.12	343.30	364.14	343.30
Gross A&G Expenses	63.76	99.37	132.36	99.37
Gross Interest on Long Term Loans		388.55	217.42	217.42
Finance Charges	357.22	0.04	0.04	0.04
Interest to Consumer		-95.39	-95.39	-95.39
Interest on Working Capital		778.30	107.27	102.41
Discount to Consumers	0.00	0.00	0.00	0.00
Depreciation	288.75	164.95	427.34	427.38
Prior Period Expenses	0.00	4.48	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	0.00	88.09	184.72	0.00
Gross Expenditure	8977.54	10836.80	10181.24	9850.13
Less: Employee Capitalisation	72.62	167.78	167.78	167.78
Less: A&G Capitalisation	9.56	22.23	22.23	22.23
Less: Interest Capitalisation	51.00	25.71	25.71	25.02
Total Capitalisation	133.18	215.72	215.72	215.03
Net Expenditure	8844.36	10621.08	9965.53	9635.10
Add: Return on Equity	0.00	0.00	0.00	0.00
Less: Non-tariff Incomes	16.21	27.78	27.78	27.78
Add: Efficiency Gains	0.00	0.00	0.00	58.85
Aggregate Revenue Requirement	8828.15	10593.30	9937.74	9666.17
Revenue from Tariff incl DPS	7082.02	6327.23	6327.23	6327.23
GoUP Subsidy	1683.30	2948.08	1838.04	1838.04
Net Revenue Gap	62.83	1317.99	1772.47	1500.90
Additional Subsidy to be provided by GoUP	260.95	0.00	0.00	1107.59
Net Revenue Gap	-198.11	1317.99	1772.47	393.31



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Table 4-71: ARR, REVENUE AND GAP SUMMARY FOR KESCO FOR FY 2014-15 (Rs. Crore)

Particulars (KESCO)	Approved in order 1.10.2014	Actuals as per audited accounts	True-up Petition	Allowable
Power Purchase Expenses	1232.27	1574.24	1515.72	1508.50
Apportionment of O&M Expenses of UPPCL#	0.00	0.00	0.00	0.00
Transmission Expenses	62.25	53.39	59.15	59.15
Gross O&M Expenses	179.29	167.17	180.21	167.17
<i>Gross Employee Expenses</i>	121.14	99.42	108.27	99.42
<i>Gross Repair and Maintenance Expenses</i>	42.78	46.00	48.25	46.00
<i>Gross A&G Expenses</i>	15.37	21.75	23.70	21.75
Gross Interest on Long Term Loans	0.00	264.85	0.00	0.00
Finance Charges	0.00	0.00	0.00	0.00
Interest on Consumer	8.96	9.17	9.17	9.17
Interest on Working Capital	21.36	0.00	23.87	23.24
Discount to Consumers	0.00	0.00	0.00	0.00
Depreciation	30.11	13.08	42.37	36.42
Prior Period Expenses	0.00	0.99	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	0.00	19.33	35.70	0.00
Gross Expenditure	1534.24	2102.22	1866.19	1803.65
Less: Employee Capitalisation	18.17	1.41	1.41	1.41
Less: A&G Capitalisation	2.31	0.03	0.03	0.03
Less: Interest Capitalisation	0.00	0.00	0.00	0.00
Total Capitalisation	20.48	1.44	1.44	1.44
Net Expenditure	1513.77	2100.78	1864.75	1802.21
Add: Return on Equity	0.00	0.00	0.00	0.00
Less: Non-tariff Incomes	6.50	8.05	8.05	8.05
Add: Efficiency Gains				11.01
Aggregate Revenue Requirement	1507.27	2092.73	1856.70	1805.17
Revenue from Tariff incl DPS	1570.54	1689.26	1689.26	1689.26
GoUP Subsidy	0.00	121.80	0.00	0.00
Net Revenue Gap	(63.27)	281.68	167.45	115.92
Additional Subsidy to be provided by GoUP	0.00	0.00	0.00	0.00
Net Revenue Gap / (Surplus)	(63.27)	281.68	167.45	115.92

Table 4-72: ARR, REVENUE AND GAP SUMMARY FOR ALL 5 DISCOMS FOR FY 2014-15 (Rs. Crore)

Particulars (All 5 DISCOMS Consolidated)	Approved in order 1.10.2014	Actuals as per audited accounts	True-up Petition	Allowable
Power Purchase Expenses	31668.16	36838.75	35117.70	34950.40
Apportionment of O&M Expenses of UPPCL#	0.00	0.00	0.00	0.00
Transmission Expenses	1599.89	1395.44	1370.50	1370.50
Gross O&M Expenses	3203.84	3627.86	3284.47	3165.13
Gross Employee Expenses	1991.00	1726.35	1941.88	1875.25
Gross Repair and Maintenance Expenses	914.61	1296.48	977.64	959.41
Gross A&G Expenses	298.23	605.03	364.94	330.47
Gross Interest on Long Term Loans	981.54	1855.95	706.26	706.26
Finance Charges	0.47	0.34	0.34	0.34
Interest on Consumer	147.37	53.56	53.56	53.56
Interest on Working Capital	351.30	3174.10	431.06	412.77
Discount to Consumers	0.00	0.00	0.00	0.00
Depreciation	1270.25	496.88	1609.97	1604.12
Prior Period Expenses	0.00	-340.52	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	0.00	692.55	530.89	0.00
Gross Expenditure	39222.82	47794.90	43104.76	42263.08
Less: Employee Capitalisation	298.65	647.29	647.29	647.29
Less: A&G Capitalisation	44.74	127.05	127.05	127.05
Less: Interest Capitalisation	194.59	76.07	76.07	75.38
Total Capitalisation	537.98	850.41	850.41	849.72
Net Expenditure	38684.84	46944.49	42254.35	41413.36
Add: Return on Equity	0.00	0.00	0.00	0.00
Less: Non-tariff Incomes	70.25	122.75	122.75	122.75
Add: Efficiency Gains	0.00	0.00	0.00	69.87
Aggregate Revenue Requirement	38614.59	46821.74	42131.60	41360.48
Revenue from Tariff incl DPS	32843.36	31490.47	31490.47	31490.47
GoUP Subsidy	4990.00	7495.76	5417.00	5417.00
Net Revenue Gap	781.24	7835.52	5224.13	4453.02
Additional Subsidy to be provided by GoUP	1846.83	0.00	0.00	5595.34
Net Revenue Gap / (Surplus)	(1061.63)	7835.52	5224.13	(1142.33)

4.14.2 As observed from the above Tables, against the revenue gap of Rs. 911.91 Crore, Rs. 863.86 Crore, Rs. 1508.44 Crore, Rs. 1772.47 Crore and Rs. 167.45 Crore (total of Rs. 5224.13 Crore) claimed by the Petitioners namely DVVNL, MVVNL, PVVNL, PuVVNL & KESCO for truing up of FY 2014-15, the Commission has worked out the gap of Rs. (-) 1157.10 Crore, Rs. 49.26 Crore, Rs. (-) 543.19 Crore, Rs. 393.31 Crore and Rs. 115.92 Crore respectively (total of Rs. (-) 1142.33 Crore) while carrying out the truing up on the basis of the audited accounts. The Commission has discussed the treatment of above revenue gap subsequently in this Order.



5. BUSINESS PLAN

5.1 INTRODUCTION

5.1.1 In this section, the Commission has undertaken the process of approval of the Business Plan for Multi Year Tariff (MYT) Period (FY 2017-18 to FY 2019-20) in line with the provisions of the Distribution MYT Tariff Regulations, 2014.

5.1.2 The Commission in exercise of power vested with it under Section 181 read with Sections 61, 62 & 86 of the Electricity Act, 2003 issued the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014, in short, Distribution MYT Tariff Regulations, 2014 on May 12, 2014. These Regulations provide for the Multi Year Tariff framework for approval of ARR and expected revenue from tariffs and charges for the Control Period for which the distribution licensees shall submit the MYT Business Plan for the entire Control Period for the approval of the Commission prior to the beginning of the Control Period.

5.1.3 Regulation 5 of the Distribution MYT Tariff Regulations, 2014 stipulates that

“Business Plan

5.1 The Distribution Licensee shall file a Business Plan duly authorized by the Board of Directors or by any committee/person authorized by the Board in this regard, for the Control Period of three financial years i.e. from April 1 2017 to March 31, 2020 which shall comprise but not be limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets.

Provided that in case the Commission issues guidelines and formats, from time to time, the same shall be adhered to by the Distribution Licensee.

5.2 The capital investment plan shall show separately, on-going projects that will spill into the control period (details to be provided year wise) under review and new projects (along with justification) that will commence but may be completed within or beyond the control period. The Commission shall consider and approve the capital investment plan for which the Distribution Licensee shall provide relevant technical and commercial details.



5.3 The Distribution Licensees shall project the power purchase requirement after considering effect of target set for Energy Efficiency (EE) and Demand Side Management (DSM) schemes.”

5.1.4 Regulation 7 of the Distribution MYT Tariff Regulations, 2014 stipulates that;

“7.1 The Commission shall stipulate a trajectory while approving the Business Plan for certain variables having regard to the reorganization, restructuring and development of the electricity industry in the State:

Provided that the variables for which a trajectory may be stipulated include, but are not limited to

- (a) Supply availability and wires availability;*
- (b) Distribution losses and Collection efficiency;*
- (c) Operation and Maintenance expense norm;*
- (d) Achieving 100% metering”*

5.1.5 Regulation 9 of the Distribution MYT Tariff Regulations, 2014 states the Controllable and uncontrollable factors as depicted below:

Quote

9. Controllable and uncontrollable factors

9.1 The “uncontrollable factors” shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant:

- a. Force Majeure events, such as acts of war, fire, natural calamities, etc.*
- b. Change in law;*
- c. Taxes and Duties;*
- d. Variation in sales;*
- e. Variation in the cost of power generation and / or power purchase due to the circumstances specified in Regulation 19 (d) and 20;*



f. Other expenses- It will cover expenses like salary revision effected because of Pay Commissions or any other expenses allowed by the Commission after prudence check.

9.2 Some illustrative variations or expected variations in the performance of the applicant, which may be attributed by the Commission to controllable factors include, but are not limited to the following:

(a) Variations in capital expenditure on account of time and / or cost overruns / efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;

(b) Variations in Aggregate Technical & Commercial (AT&C) losses which shall be measured as the difference between the units input into the distribution system and the units realized (units billed and collected) wherein the units realized shall be equal to the product of units billed and collection efficiency (where Collection Efficiency shall be measured as ratio of total revenue realized to the total revenue billed for the same year);

Detailed methodology for computation of AT&C loss has been indicated in Annexure B to these regulations;

(c) Distribution Losses which shall be measured as the difference between total energy input for sale to all its consumers and sum of the total energy billed in its license area in the same year;

(d) Variations in Return on Equity (ROE), depreciation and working capital requirements;

(e) Failure to meet the standards specified in the Standards of Performance Regulations, except where exempted;

(f) Variation in operation & maintenance expenses, except those attributable to directions of the Commission;

(g) Variation in Wires Availability and Supply Availability.

Unquote



5.1.6 Further, Regulation 10 of Distribution MYT Tariff Regulations, 2014 provides for mechanism for pass through of gains or losses on account of uncontrollable factors. The relevant extract of the Distribution MYT Tariff Regulations, 2014 are as follows:

Quote

10. Mechanism for pass through of gains or losses on account of uncontrollable factors

10.1 The approved aggregate gain or loss to the Distribution Licensee on account of uncontrollable factors shall be passed through, as an adjustment in the tariff of the Distribution Licensee, as specified in these regulations and as may be determined in the Order of the Commission passed under these regulations.

11. Mechanism for sharing of gains or losses on account of controllable factors

11.1 The approved aggregate gain to the Distribution Licensee on account of controllable factor shall be dealt with in the following manner:

a. One-half of the amount of such gain shall be passed on as a rebate in tariff over such period as may be stipulated in the Order of the Commission;

b. The balance amount of such gain, may be utilized at the discretion of the Distribution Licensee.

11.2 The approved aggregate loss to the Distribution Licensee on account of controllable factor shall be dealt with in the following manner:

(a) One-half of the amount of such loss may be passed on as an additional charge in tariff over such period as may be stipulated in the Order of the Commission; and

(b) The balance amount of loss shall be absorbed by the Distribution Licensee.

Unquote



5.1.7 Further, the Commission observes that none of the Licensees submitted their petitions as per the timeline provided in the UPERC MYT Distribution Regulations, 2014, i.e. Business Plan by 1st July, 2016 and their ARR / Tariff Petitions for the MYT control period incorporating the trajectories for the specific variables approved in the Business Plan latest by 1st November, 2016. As the Business Plan Petition and the MYT ARR Petitions have been submitted at the same time, the Commission is of the view that in case the Petition for Business Plan is processed first, and approved by the Commission and then the Petitioner is asked to submit the revised MYT Petition based on the approved Business Plan, it would cause undue delay to the already delayed Tariff determination process for the first Control Period by around 6-8 months.

5.1.8 The Petitioners have filed their Business Plan in which they have submitted the consumption parameters i.e. consumer numbers, connected load and sales forecast, Distribution Loss trajectory and Energy Balance, Power Procurement Plan, Operation and Maintenance Expenses, Capital Expenditure Plan and other distribution costs along with the ARR for the MYT Control Period FY 2017-18 to FY 2019-20. However, for the sake of brevity the Commission has dealt with the components of Business Plan along with the other ARR components as elaborated in later part of this Chapter:

5.2 CONSUMPTION PARAMETERS: CONSUMER NUMBERS, CONNECTED LOAD, SALES

5.2.1 The Petitioners submitted that they have projected the category-wise sales based on the CAGR of the last eight years data and after considering factors like available population data, expected conversion of unauthorized connections, connected load factor and specific growth factors and wherever the data was incongruous such incongruity was ignored while projecting the load growth for the ensuing years.

5.2.2 The Petitioners submitted that the load forecast model projects the specific consumption level (consumption per customer) appropriate for each customer category. The Petitioner submitted that this forecast is based on expected growth relationships to income and price, effect of Demand Side Management and impact of hours of service. The Petitioners further submitted that the specific consumption level along with the number of consumers in each category gives the sales figure for that particular sub-category and the final detailed calculations estimate the connected load for each tariff category. The



Petitioner added that the division level forecasts have been consolidated and losses have been added to the sales estimates to determine power purchase requirements.

5.2.3 The billing determinants including number of Consumers, Connected Load and Energy Sales for the MYT Control Period i.e. FY 2017-18 to FY 2019-20 was submitted by the petitioner in the Tariff Proposal (Rate Schedule) as on August 8, 2017. Thereafter the Commission conducted a hearing on September 4, 2017 in the matter of Admittance of Petitions filed by various Licensees, wherein the the Commission conveyed its concerns regarding the steep Tariff rise of about 22.48% as proposed by the Licensees in contrast to the rise of 6.95% proposed in UDAY & 24x7 Power for All documents. In the hearing, the Commission observed that there is still scope for further reduction & optimisation of Power Purchase Cost. In view of the same, the Commission directed the petitioner i.e. UPPCL / State DISCOMs to re - work / re - visit the projected Power Purchase Cost for the MYT Control Period and bring it down to reasonable limits i.e. prevailing market prices and devise a strategy wherein they could buy cheaper power from Power Exchange / Bilateral agreements by curtailing the power from costlier power plants. In response the petitioner vide letter dated September 15, 2017 submitted the revised power purchase cost and revenue for FY 2017-18. It is observed that the petitioner had initially claimed sales as 128,908 MU, 153,577 MU and 172,955 MU for FY 2017-18, FY 2018-19 and FY 2019-20 respectively which was revised to 123,808 MU, 148,146 MU and 173,006 MU respectively. Accordingly, the power purchase cost projections were also revised from Rs 52,919 Crore, Rs 66,033 Crore and Rs 77,443 Crore in FY 2017-18, FY 2019-20 respectively to Rs 50,105.13 Crore, Rs 61,987.51 Crore, Rs 75,789.59 Crore in FY 2017-18, FY 2019-20 respectively.

5.2.4 The Commission in its deficiency to the petitioners, sought the basis of computation of category wise connected load, consumer sales and load factor as considered in the load forecast model for FY 2017-18 to FY 2019-20. In response, the petitioner submitted that Consumer category wise commercial data of each DISCOM comprising of Number of consumers/ Connected load (kW)/ Energy sales (billed energy): kWh, split between rural/urban consumers was tabulated for the past years. Further as the provisional billing determinants were available for FY 2016-17, the same has been considered while computing the multiplying factor for the purpose of projection of demand, connected load and no. of consumers for the MYT period. Also, since all UPPCL DISCOMs have



been moving aggressively towards the target of 24x7 Power for All by Oct, 2018 and accordingly in the last financial year the supply hours for rural and domestic consumer have also been increased as a first step. Thus, wherever the billing determinants in terms of Connected Load per Consumer, Consumption per connected Load, Consumer per consumer, etc. was considered as CAGR for previous year is low in comparison to the no. so derived for FY 2016-17, the Petitioner for the purpose of MYT Projections has considered the FY 2016-17 as the norms for determining the billing determinants for the MYT period.

5.2.5 The petitioners further mentioned that 3 years' (FY 2013-14 to FY 2015-16) compounded annual growth rate (CAGR) was determined for the following parameters consumer sub-category wise:

- Number of consumers
- Connected load: kW
- Energy sales (billed energy): kWh

And the CAGR for each of three major commercial parameters for 3/5/7/10 years was determined consumer category-wise. Further a Running hour factor i.e. Load shedding affects different consumer categories differently was taken into account through a factor of present running hour supply and projected hour supply. However, no adjustment on account of load shedding was made in case of the following consumer categories:

- Industrial
- Agricultural (assuming that the water output of agricultural pump sets in the limited hours of supply is enough for meeting the irrigation requirements)
- Railway traction

5.2.6 The petitioners further submitted that the Energy Billed was calculated by applying the factor to the remaining consumer categories in all areas. This was done step-wise as follows:

- a. Projecting the running hours supply;



- b. Obtaining the factor of running hours supply between present supply hours and projected hours supply;
- c. Sub-category Energy billed in % tabulated by way of Mahanagar, Commissioner, Districts, Bundelkhand and Rural Area according to the prevailing classification of the Areas; and

Table 5-1: Projected Hours of Supply as submitted by petitioner

Description	2017-18	2018-19	2018-19	2019-20
	Apr-Mar	Apr-Sep	Oct-Mar	Apr-Mar
Mahanagar – M	24:00	24:00	24:00	24:00
District – D	24:00	24:00	24:00	24:00
Commissionary – C	24:00	24:00	24:00	24:00
Rural – R	18:00	18:00	24:00	24:00
Bundelkhand – B	20:00	20:00	24:00	24:00

5.2.7 The petitioners have further submitted that Category wise energy Billed was calculated by applying the DSM factor. Following three ratios were determined for each set of commercial data of a given consumer category/ sub-category for each year:

- d. Energy sales per consumer
- e. Connected load per consumer
- f. Energy sales/Connected load

5.2.8 The petitioners submitted the methodology for sales forecasting of LV Consumers (Sub-category-wise) as under:

a) Number of consumers:

Adopted appropriate value of CAGR in the following manner:

- Normally 3 years' CAGR of number of consumers (sub-category wise) was adopted
- Wherever calculated value of 3 years' CAGR of number of consumers seemed unreasonably high or low, the most reasonable calculated value between 5/7/10 years' CAGR was adopted. The adopted value of CAGR was applied across all sub-categories within a given consumer category.



- Applied the CAGR so adopted to determine forecasted values of number of consumers, taking 2016-17 as the base year.

b) Connected load:

Multiplied number of consumers by the highest ratio of connected load per consumer calculated for the last three years to determine consumer sub-category wise connected load forecasts corresponding to forecasted values of number of consumers.

c) Energy Sales:

Forecasted value of energy sales for each consumer sub-category was determined by multiplying the number of consumers by the highest value of energy sales per consumer for the last three years. In case, the highest value of energy sales per consumer was found to be unreasonably high, the second highest value of the above ratio was adopted as the multiplier for determining energy sales corresponding to the forecasted value of number of consumers.

i. LMV Consumer categories (metered) other than LMV1 & LMV10 consumer categories:

The highest value of energy sales per kW connected load was adopted for a given consumer sub-category for the last three years as the multiplier to obtain forecasted value of energy sales corresponding to the forecasted value of connected load.

ii. LMV: Unmetered consumers (except rural state tube wells):

The forecasted value of energy sales for a given consumer sub-category was obtained by multiplying the forecasted value of connected load by the standard value of energy sales per kW connected load laid down in the norms.

iii. Rural state tube wells:

Forecasted value of energy sales was obtained by multiplying the forecasted value of number of consumers by the standard value of energy sales per consumer laid down in the norms as below:



TABLE 5-2: CONSUMPTION DETERMINANT FOR UN-METERED CONSUMER

Sr.No	Category of Un-Metered Consumer	Units	Consumption of Energy Per Month
1	Private Tube Well	KWh/KW/Month	183.32
2	Domestic Rural Consumers	KWh/KW/Month	144
3	Rural Commercial Consumers	KWh/KW/ Month	144
4	Rural State Tube Well	KWh/Consumer or Pump/Month	7124.71
5 -A	Street Light - Rural Area	KWh/KW/Month	300
5 -B	Street Light - Urban Area	KWh/KW/Month	360

5.2.9 The petitioners submitted the methodology for sales forecasting of HV Consumers (Sub-category-wise) as under:

a) Number of consumers:

Forecasted number of consumers corresponding to the forecasted value of connected load for a consumer sub-category in a given year was determined by dividing connected load by the value of connected load per consumer calculated of the preceding year.

b) Connected Load:

Forecasted value of connected load for a given sub-category for a given year was determined by applying the 3 years' CAGR of connected load calculated for the particular consumer sub-category, taking 2016-17 as the base year. Wherever the 3 years' CAGR appeared unreasonably high or low, the figure from amongst CAGR of connected load for a given consumer category calculated for 5/7/10 years that seemed most reasonable, was adopted as the CAGR to be used for forecasting. This value of CAGR was applied to all sub-categories comprising a given consumer category.

c) Energy sales:

- Year wise and sub-category wise energy sales forecasts were obtained by multiplying the forecasted value of connected load by the highest ratio of energy sales per kW connected load of the last three years.
- Year wise and sub-category wise energy sales forecasts were obtained by multiplying the forecasted value of sales MU by the running hour factors.



- Year wise and sub-category wise energy sales forecasts were obtained by multiplying the forecasted value of sales MU by the DSM factors.

Consumer Addition

5.2.10 The petitioners have submitted that taking into consideration the projections as per census, there are 2.89 Crore rural households in the state of Uttar Pradesh and out of them, 0.92 Crore rural households already exist in UP DISCOM's records. The petitioner submitted that the State undertook a survey in FY 15 to map habitations having drinking water supply. This survey also captured the status of electrification and the same was considered during finalization of DDUGJY scheme. As per the survey, 0.25 Crore households were being served through existing network. Also, under various ongoing rural electrification schemes, about 1.09 Crore un-electrified households (or approximately 1,62,000 habitations) were targeted to be served through additional network being created. Thus, there are around 1.12 Crore un-electrified rural households in the State. Also, around 0.15 Crore unelectrified households also exists in urban areas. The petitioners submit that the State also envisages to target the electrification of these remaining 0.15 Crore urban households by September 2018 after undertaking appropriate augmentation/extension of the existing network of urban areas. In addition to the above, the DISCOMs also have a challenging task to regularize and meter around 84 Lakh electricity consumers. Accordingly, the DISCOMs' under the '24 x 7 Power for All' agreements have formulated a plan for adding the aforementioned consumers in the Distribution Network of DISCOMs by FY 2018-19. The Year-wise, Quarter-wise Targets for each DISCOM for adding these consumers as considered in the MYT Projections is tabulated below:

TABLE 5-3: DISCOM WISE CONSUMER ADDITION PLAN

Particulars	FY 2017-18				FY 2018-19				TOTAL
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
DVVNL									
Connecting the unconnected (Urban)	15061	15061	15061	15061	60245	60245	60245	60245	301226
Connecting the unconnected (Rural)	248146	248146	248146	248146	301393	301393	301393	301393	2198154



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Particulars	FY 2017-18				FY 2018-19				TOTAL
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Regularisation on electrified households	312108	312108	312108	312108	78027	78027	78027	78027	1560541
PuVVNI									
Connecting the unconnected (Urban)	15061	15061	15061	15061	60245	60245	60245	60245	301226
Connecting the unconnected (Rural)	147816	147816	147816	147816	67504	67504	67504	67504	861282
Regularisation on electrified households	236505	236505	236505	236505	59126	59126	59126	59126	1182525
PVVNL									
Connecting the unconnected (Urban)	25102	25102	25102	25102	100409	100409	100409	100409	502043
Connecting the unconnected (Rural)	459059	459059	459059	459059	571949	571949	571949	571949	4124033
Regularisation on electrified households	570891	570891	570891	570891	142723	142723	142723	142723	2854454
MVVNL									
Connecting the unconnected (Urban)	19078	19078	19078	19078	76311	76311	76311	76311	381553
Connecting the unconnected (Rural)	455168	455168	455168	455168	551637	551637	551637	551637	4027219
Regularisation on electrified households	573035	573035	573035	573035	143259	143259	143259	143259	2865175
Total									
Connecting the unconnected (Urban)	74302	74302	74302	74302	297210	297210	297210	297210	1486048



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Particulars	FY 2017-18				FY 2018-19				TOTAL
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Connecting the unconnected (Rural)	1310189	1310189	1310189	1310189	1492483	1492483	1492483	1492483	11210688
Regularisation on electrified households	1692539	1692539	1692539	1692539	423135	423135	423135	423135	8462695

5.2.11 The petitioners submitted that the above consumer addition plan is in line with the '24x7 Power for All agreement' signed between the Government of India and State Govt. Further, for the purpose of the energy estimation during the control period, the Consumer addition has been considered to be spread over the year and accordingly the addition in connected load and energy sales has been worked out for each individual DISCOM.

100% Metering of Consumers

5.2.12 There are large proportions of electrified domestic registered consumers who haven't installed meters. As per FY 17 data, unmetered domestic consumers account for around 40% (70 Lakh) of the total domestic registered consumers. The unmetered consumption is one of the reasons behind the high loss levels in the state and hence it is of utmost importance. Though the DISCOMs have already submitted a 100% metering plan before the Commission, however since now the category and sub-category wise provisional no. of consumers till March, 2017 is available, the DISCOMs is under process of submitting a revised 100% metering plan to the Commission. It is planned to achieve 100% metering at all levels (consumers/DTs/feeders) to facilitate energy audit and extensive use of technology to improve efficiency and facilitate near real time monitoring and interventions to reduce AT&C losses. The DISCOMs have planned to get all the consumers metered by FY 2019. Accordingly, the Year-wise, DISCOM wise 100% metering plan is tabulated below:

TABLE 5-4: DISCOM WISE METERING PLAN

Particulars	FY 2017-18	FY 2018-19	Total
DVVNL	7,48,366	2161	7,50,527
PuVVNL	27,70,830	2,09,877	29,80,707
PVVNL	8,85,108	10,59,077	19,44,185
MVVNL	7,66,155	5,87,313	13,53,468
Total	51,70,459	18,58,427	70,28,886



5.2.13 However, the petitioners later on vide submission dated 15.09.2017 in reply to the directions of the Commission resubmitted the consumer addition for the DISCOMs as shown under: -

TABLE 5-5: CONSUMER ADDITION DVVNL

Particulars	DVVNL		
	FY 2017-18	FY 2018-19	FY 2019-20
LMV-1	523798	2081027	1614714
LMV-2	14063	14830	15636
LMV-3	130	152	5
LMV-4	1362	1438	1518
LMV-5	10452	21342	33820
LMV-6	2693	2843	3001
LMV-7	1122	1295	1498
LMV-8	122	239	361
LMV-9	423	494	578
LMV-10	475	490	505
HV-1	83	91	100
HV-2	282	316	355
HV-3	1	1	1
HV-4	2	2	3
Bulk & Extra State	0	0	0
GRAND TOTAL	555007	2124560	1672094

TABLE 5-6: CONSUMER ADDITION PVVNL

Particulars	PVVNL		
	FY 2017-18	FY 2018-19	FY 2019-20
LMV-1	839946	3745923	2914543
LMV-2	20331	21802	23580
LMV-3	84	91	48
LMV-4	1290	1405	1531
LMV-5	120	9329	30460
LMV-6	4154	4510	4897
LMV-7	369	414	465
LMV-8	36	151	411
LMV-9	51	54	57
LMV-10	1420	1519	1626
HV-1	263	316	379
HV-2	447	483	522
HV-3	-1	0	0



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Particulars	PVVNL		
	FY 2017-18	FY 2018-19	FY 2019-20
HV-4	0	0	0
Bulk & Extra State	0	0	0
GRAND TOTAL	868512	3785997	2978519

TABLE 5-7: CONSUMER ADDITION PuVVNL

Particulars	PuVVNL		
	FY 2017-18	FY 2018-19	FY 2019-20
LMV-1	365786	1179600	822536
LMV-2	20616	23621	26928
LMV-3	31	34	8
LMV-4	1153	1229	1310
LMV-5	303	32895	77071
LMV-6	2731	2962	3214
LMV-7	159	171	185
LMV-8	7	265	557
LMV-9	5	5	5
LMV-10	1863	2033	2219
HV-1	115	143	178
HV-2	107	118	130
HV-3	1	1	1
HV-4	4	4	4
Bulk & Extra State	0	0	0
GRAND TOTAL	392879	1243080	934345

TABLE 5-8: CONSUMER ADDITION MVVNL

Particulars	MVVNL		
	FY 2017-18	FY 2018-19	FY 2019-20
LMV-1	890771	3721877	2925574
LMV-2	29046	32257	36050
LMV-3	80	84	16
LMV-4	1563	1684	1815
LMV-5	1340	15496	44464
LMV-6	3104	3569	4119
LMV-7	157	167	177
LMV-8	56	389	1010
LMV-9	12	12	13
LMV-10	1514	1626	1746
HV-1	59	63	67
HV-2	76	83	91



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Particulars	MVVNL		
	FY 2017-18	FY 2018-19	FY 2019-20
HV-3	1	2	2
HV-4	3	3	3
Bulk & Extra State	0	0	0
GRAND TOTAL	927782	3777310	3015148

TABLE 5-9: CONSUMER ADDITION KESCO

Particulars	KESCO		
	FY 2017-18	FY 2018-19	FY 2019-20
LMV-1	37821	40847	44115
LMV-2	4533	4802	5087
LMV-3	0	0	0
LMV-4	42	44	46
LMV-5	0	0	0
LMV-6	563	592	621
LMV-7	6	6	6
LMV-8	0	0	0
LMV-9	0	0	0
LMV-10	0	0	0
HV-1	6	7	7
HV-2	12	13	13
HV-3	0	0	0
HV-4	0	0	0
Bulk & Extra State	0	0	0
GRAND TOTAL	42984	46309	49895

5.2.14 Based on the submissions of the petitioner the billing determinants as are shown in the Tables below:

TABLE 5-10: CONSUMPTION PARAMETERS SUBMITTED BY THE PETITIONER FOR MYT Control Period (FY 2017-18 to FY 2019-20)

DISCOM: DVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	3557063	5621716	7441.08	5638090	8633963	11316.43
LMV-2: Non-Domestic	297893	721413	1119.21	312724	758590	1279.77
LMV-3: Public Lamps	1708	42387	187.89	1860	46171	214.58
LMV-4: Institutions	27301	314658	694.48	28738	327304	797.72
LMV-5: Private Tube Wells	240006	1767024	3802.59	261348	1934249	4029.55



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DISCOM: DVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV 6: Small and Medium Power	52335	461947	794.77	55177	487203	924.80
LMV-7: Public Water Works	9630	161123	600.45	10925	180562	675.46
LMV-8: State Tube Wells	6984	149352	695.43	7223	153980	766.17
LMV-9: Temporary Supply	3315	15249	24.81	3810	17546	28.44
LMV-10: Departmental Employees	18949	60838	127.20	19439	62406	145.22
HV-1: Non-Industrial Bulk Loads	968	234677	620.61	1058	255994	667.12
HV-2: Large and Heavy Power	2657	870930	2607.84	2973	963655	2864.61
HV-3: Railway Traction	9	137589	437.99	9	146418	465.46
HV-4: Lift Irrigation	41	32291	152.46	44	33631	160.81
GRAND TOTAL	4218858	10591193	19306.80	6343419	14001671	24336.14

DVVNL	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	7252804	10934684	15157.00
LMV-2: Non Domestic	328360	796520	1451.72
LMV-3: Public Lamps	1865	46171	283.65
LMV-4: Institutions	30256	340523	909.57
LMV-5: Private Tube Wells	295168	2185281	4544.47
LMV 6: Small and Medium Power	58178	513882	1066.83
LMV-7: Public Water Works	12423	202706	761.25
LMV-8: State Tube Wells	7584	161679	804.48
LMV-9: Temporary Supply	4388	20229	32.68
LMV-10: Departmental Employees	19945	64022	164.03
HV-1: Non-Industrial Bulk Loads	1158	279386	718.02
HV-2: Large and Heavy Power	3329	1067172	3150.32
HV-3: Railway Traction	10	155823	494.68
HV-4: Lift Irrigation	46	35052	169.65
GRAND TOTAL	8015513	16803129	29708.36

**TABLE 5-11: CONSUMPTION PARAMETERS SUBMITTED BY THE PETITIONER FOR MYT Control
Period (FY 2017-18 to FY 2019-20)**

DISCOM: MVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	4701042	5874229	8703	8422919	8750502	13396
LMV-2: Non Domestic	341556	881089	1369	373813	974090	1666
LMV-3: Public Lamps	2279	104996	565	2363	110031	663
LMV-4: Institutions	22120	165327	509	23804	177720	616



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DISCOM: MVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-5: Private Tube Wells	174195	730228	1561	189691	796419	1495
LMV 6: Small and Medium Power	39564	351479	582	43133	378929	685
LMV-7: Public Water Works	3291	133555	612	3458	140257	644
LMV-8: State Tube Wells	10103	149884	1472	10491	157949	2478
LMV-9: Temporary Supply	3737	11802	40	3749	11840	40
LMV-10: Departmental Employees	25199	85949	276	26825	91354	306
HV-1: Non-Industrial Bulk Loads	893	338010	673	955	362271	722
HV-2: Large and Heavy Power	1643	626385	1731	1726	666854	1850
HV-3: Railway Traction	11	183922	343	13	210611	395
HV-4: Lift Irrigation	26	30775	182	29	34300	202
Bulk & Extra State	1	5000	65	1	5000	65
GRAND TOTAL	53,25,660	96,72,631	18,684	91,02,971	1,28,68,127	25,224

MVVNL	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	11348493	11094745	18537
LMV-2: Non Domestic	409863	1072003	2007
LMV-3: Public Lamps	2379	110031	1704
LMV-4: Institutions	25619	191063	737
LMV-5: Private Tube Wells	234155	982933	1733
LMV 6: Small and Medium Power	47253	410047	802
LMV-7: Public Water Works	3635	147349	678
LMV-8: State Tube Wells	11502	174348	3144
LMV-9: Temporary Supply	3762	11880	40
LMV-10: Departmental Employees	28571	97161	338
HV-1: Non-Industrial Bulk Loads	1023	388351	774
HV-2: Large and Heavy Power	1817	712368	1986
HV-3: Railway Traction	15	241302	454
HV-4: Lift Irrigation	32	38229	226
Bulk & Extra State	1	5000	65
GRAND TOTAL	12118118	15676810	33223.63



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TABLE 5-12: PuVVNL: CONSUMPTION PARAMETERS SUBMITTED BY THE PETITIONER FOR MYT Control Period (FY 2017-18 to FY 2019-20)

DISCOM: PuVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	4646365	7156476	10878	5825965	8472868	12554
LMV-2: Non-Domestic	385990	947259	1790	409612	1010359	2214
LMV-3: Public Lamps	626	58095	233	660	62259	268
LMV-4: Institutions	20587	245691	823	21816	259660	986
LMV-5: Private Tube Wells	256905	1183612	3937	289800	1088622	5415
LMV 6: Small and Medium Power	41631	348064	660	44594	370861	795
LMV-7: Public Water Works	2998	138193	586	3169	143882	610
LMV-8: State Tube Wells	11259	205355	1875	11524	202805	2899
LMV-9: Temporary Supply	76	1362	15	81	1471	19
LMV-10: Departmental Employees	27119	61336	93	29151	65457	110
HV-1: Non-Industrial Bulk Loads	602	190190	438	744	232215	528
HV-2: Large and Heavy Power	1193	530227	1360	1311	576183	1484
HV-3: Railway Traction	11	196303	590	11	206118	619
HV-4: Lift Irrigation	71	136329	850	75	145614	909
Bulk & Extra State	-	-	-	-	-	-
GRAND TOTAL	5395431	11398492	24127.68	6638511	12838376	29410.88

PuVVNL	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	6648501	9563034	15440
LMV-2 :Non Domestic	436540	1077770	2661
LMV-3: Public Lamps	667	62259	298
LMV-4: Institutions	23126	274496	1164
LMV-5: Private Tube Wells	366871	1355373	6919
LMV 6: Small and Medium Power	47808	395550	945
LMV-7: Public Water Works	3353	149988	636
LMV-8: State Tube Wells	12081	212112	3110
LMV-9: Temporary Supply	86	1589	23
LMV-10: Departmental Employees	31370	69939	130
HV-1: Non-Industrial Bulk Loads	922	284421	640
HV-2: Large and Heavy Power	1441	626496	1620
HV-3: Railway Traction	12	216424	650
HV-4: Lift Irrigation	79	155561	973
Bulk & Extra State	-	-	-
GRAND TOTAL	7572857	14445011	35207.47



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**TABLE 5-13: PVVNL: CONSUMPTION PARAMETERS SUBMITTED BY THE PETITIONER FOR MYT
Control Period (FY 2017-18 to FY 2019-20)**

DISCOM: PVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	4671158	10458102	11998	8417081	17983664	15871
LMV-2: Non-Domestic	383190	1012419	1496	404992	1074436	1806
LMV-3: Public Lamps	1225	69253	305	1317	75685	366
LMV-4: Institutions	16650	115911	382	18055	126697	460
LMV-5: Private Tube Wells	407257	2238322	4955	416586	2326120	5193
LMV 6: Small and Medium Power	57194	721669	1363	61703	781253	1690
LMV-7: Public Water Works	3597	123850	431	4011	138982	484
LMV-8: State Tube Wells	5289	69050	649	5441	64419	999
LMV-9: Temporary Supply	3621	71693	145	3675	72921	157
LMV-10: Departmental Employees	24502	169169	169	26021	176082	203
HV-1: Non-Industrial Bulk Loads	1585	1107157	1794	1901	1327989	2153
HV-2: Large and Heavy Power	6091	2055433	5095	6574	2214972	5479
HV-3: Railway Traction	6	52470	132	7	54644	137
HV-4: Lift Irrigation	2	311	0	2	311	0
Bulk & Extra State	0	0	0	0	0	0
GRAND TOTAL	5581369	18264811	28913.33	9367365	26418175	34997.92

PVVNL	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	11331624	23816027	20390
LMV-2: Non-Domestic	428572	1140152	2151
LMV-3: Public Lamps	1365	75685	429
LMV-4: Institutions	19586	138565	550
LMV-5: Private Tube Wells	447046	2516607	5642
LMV 6: Small and Medium Power	66601	846034	2062
LMV-7: Public Water Works	4476	156131	544
LMV-8: State Tube Wells	5852	65580	1261
LMV-9: Temporary Supply	3732	74211	170
LMV-10: Departmental Employees	27647	183401	239
HV-1: Non-Industrial Bulk Loads	2280	1592982	2583
HV-2: Large and Heavy Power	7095	2389141	5900
HV-3: Railway Traction	7	56926	143
HV-4: Lift Irrigation	2	311	-
Bulk & Extra State	-	-	-
GRAND TOTAL	12345884	33051753	42061.32



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**TABLE 5-14: KESCO: CONSUMPTION PARAMETERS SUBMITTED BY THE PETITIONER FOR MYT
Control Period (FY 2017-18 to FY 2019-20)**

DISCOM: KESCO	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	510586	1163840	1702	551433	1256947	2002
LMV-2: Non Domestic	80911	228840	360	85713	242422	408
LMV-3: Public Lamps	18	14493	63	18	14493	63
LMV-4: Institutions	828	15558	78	872	16382	88
LMV-5: Private Tube Wells	-	-	-	-	-	-
LMV 6: Small and Medium Power	11831	186735	466	12423	196072	515
LMV-7: Public Water Works	566	47126	90	571	47597	91
LMV-8: State Tube Wells	-	-	-	-	-	-
LMV-9: Temporary Supply	-	-	-	-	-	-
LMV-10: Departmental Employees	3346	10394	24	3346	10394	26
HV-1: Non-Industrial Bulk Loads	225	77451	176	232	79575	181
HV-2: Large and Heavy Power	636	224253	804	649	228738	821
HV-3: Railway Traction	-	-	-	-	-	-
HV-4: Lift Irrigation	-	-	-	-	-	-
Bulk & Extra State	-	-	-	-	-	-
GRAND TOTAL	608948	1968690	3763.70	655257	2092620	4194.16

KESCO	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	595548	1357502	2339
LMV-2: Non Domestic	90800	256809	461
LMV-3: Public Lamps	18	14493	63
LMV-4: Institutions	918	17251	98
LMV-5: Private Tube Wells	-	-	-
LMV 6: Small and Medium Power	13044	205875	567
LMV-7: Public Water Works	577	48073	92
LMV-8: State Tube Wells	-	-	-
LMV-9: Temporary Supply	-	-	-
LMV-10: Departmental Employees	3346	10394	28
HV-1: Non-Industrial Bulk Loads	239	81759	186
HV-2: Large and Heavy Power	662	233313	837
HV-3: Railway Traction	-	-	-
HV-4: Lift Irrigation	-	-	-
Bulk & Extra State	-	-	-
GRAND TOTAL	705152	2225469	4671.18



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TABLE 5-15: CONSOLIDATED: CONSUMPTION PARAMETERS SUBMITTED BY THE PETITIONER FOR MYT Control Period (FY 2017-18 to FY 2019-20)

Consolidated (5 DISCOMs)	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	18086214	30274363	40722	28855487	45097944	55140
LMV-2: Non-Domestic	1489540	3791021	6134	1586853	4059897	7375
LMV-3: Public Lamps	5856	289224	1353	6217	308639	1574
LMV-4: Institutions	87486	857145	2486	93285	907763	2947
LMV-5: Private Tube Wells	1078363	5919186	14255	1157425	6145409	16133
LMV 6: Small and Medium Power	202555	2069894	3865	217031	2214318	4609
LMV-7: Public Water Works	20082	603847	2320	22134	651281	2505
LMV-8: State Tube Wells	33636	573641	4692	34680	579153	7143
LMV-9: Temporary Supply	10749	100107	224	11314	103778	244
LMV-10: Departmental Employees	99115	387687	690	104782	405693	790
HV-1: Non-Industrial Bulk Loads	4273	1947484	3701	4891	2258044	4250
HV-2: Large and Heavy Power	12220	4307229	11599	13233	4650402	12499
HV-3: Railway Traction	37	570284	1503	40	617790	1617
HV-4: Lift Irrigation	140	199706	1185	149	213856	1273
Bulk & Extra State	1	5000	65	1	5000	65
GRAND TOTAL	21130266	51895817	94795.19	32107523	68218969	118163.19

Consolidated 5 DISCOMs	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	37176970	56765993	71863
LMV-2: Non-Domestic	1694135	4343254	8731
LMV-3: Public Lamps	6294	308639	2777
LMV-4: Institutions	99505	961897	3458
LMV-5: Private Tube Wells	1343240	7040193	18838
LMV 6: Small and Medium Power	232884	2371387	5443
LMV-7: Public Water Works	24463	704247	2711
LMV-8: State Tube Wells	37019	613720	8319
LMV-9: Temporary Supply	11967	107909	266
LMV-10: Departmental Employees	110879	424917	899
HV-1: Non-Industrial Bulk Loads	5622	2626898	4901
HV-2: Large and Heavy Power	14344	5028489	13492
HV-3: Railway Traction	43	670474	1742
HV-4: Lift Irrigation	159	229153	1368
Bulk & Extra State	1	5000	65
GRAND TOTAL	40757524	82202172	144871.94



5.2.15 For forecasting the consumption parameters for LMV-1 and LMV-5 category, the Commission has followed the methodology as under:

(i) LMV-1 & LMV-5 Rural Unmetered Category:

The Licensees have computed the energy requirement for rural unmetered category of consumers on the basis of their estimate as the data of actual consumption is not available, which is not based on any study conducted by the Licensees. However, the Commission feels that with the increased in supply hours, the diversity factor will come into play and also with the increased awareness among consumers about usage of LED bulbs and and promotion of Energy Efficient pumps for agricultural consumers and other energy efficient devices by the Licensees, the consumption of the rural category is expected to come down and accordingly the energy requirement estimated by the Licensees has been suitably modified and reduced for working out the energy purchase requirement.

Accordingly, the Commission has reduced the sales and no of consumers for LMV-1 and LMV-5 consumers for FY 2017-18. For FY 2018-19 and FY 2019-20. The Commission has adopted the same methodology as proposed by the Petitioner

5.2.16 For forecasting the consumption parameters of other categories of consumers, the Commission has adopted the same methodology as proposed by the Petitioner for the control period as it seems fair and equitable. The Commission hereby approves the consumption parameters for FY 2017-18 to FY 2019-20 as shown in the Tables below. The detailed sub-category wise consumption parameters (historical and approved) have been provided annexed to this Order.

TABLE 5-16: DVVNL CONSUMPTION PARAMETERS APPROVED BY THE COMMISSION FOR FY 2017-18 to FY 2019-20

DVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	3557063	5621716	7431	5638090	8633963	11316
LMV-2: Non Domestic	297893	721413	1119	312724	758590	1280
LMV-3: Public Lamps	1708	42387	188	1860	46171	215
LMV-4: Institutions	27301	314658	694	28738	327304	798
LMV-5: Private Tube Wells	240006	1767024	3701	261348	1934248	4030



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DVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV 6: Small and Medium Power	52335	461947	795	55177	487203	925
LMV-7: Public Water Works	9630	161123	600	10925	180562	675
LMV-8: State Tube Wells	6984	149352	695	7223	153980	766
LMV-9: Temporary Supply	3315	15249	25	3810	17546	28
LMV-10: Departmental Employees	18949	60838	127	19439	62406	145
HV-1: Non-Industrial Bulk Loads	968	234677	621	1058	255994	667
HV-2: Large and Heavy Power	2657	870931	2608	2973	963655	2865
HV-3: Railway Traction	9	137589	438	9	146418	465
HV-4: Lift Irrigation	41	32291	152	44	33631	161
Bulk & Extra State	0	0	0	0	0	0
GRAND TOTAL	4218858	10591193	19194.89	6343419	14001671	24336.14

DVVNL	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	7252804	10934684	15157
LMV-2: Non-Domestic	328360	796520	1452
LMV-3: Public Lamps	1865	46171	284
LMV-4: Institutions	30256	340523	910
LMV-5: Private Tube Wells	295168	2185281	4544
LMV 6: Small and Medium Power	58178	513882	1067
LMV-7: Public Water Works	12423	202706	761
LMV-8: State Tube Wells	7584	161679	804
LMV-9: Temporary Supply	4388	20229	33
LMV-10: Departmental Employees	19945	64022	164
HV-1: Non-Industrial Bulk Loads	1158	279386	718
HV-2: Large and Heavy Power	3329	1067172	3150
HV-3: Railway Traction	10	155822	495
HV-4: Lift Irrigation	46	35052	170
Bulk & Extra State	-	-	-
GRAND TOTAL	8015512	16803129	29708.36

TABLE 5-17: MVVNL CONSUMPTION PARAMETERS APPROVED BY THE COMMISSION FOR FY 2017-18 to FY 2019-20

MVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	4701042	5874229	8571	8422919	8750502	13396
LMV-2: Non Domestic	341556	881089	1369	373813	974090	1666



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MVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-3: Public Lamps	2279	104996	565	2363	110031	663
LMV-4: Institutions	22120	165327	509	23804	177720	616
LMV-5: Private Tube Wells	174195	730228	1458	189691	796419	1495
LMV 6: Small and Medium Power	39564	351479	582	43133	378929	685
LMV-7: Public Water Works	3291	133555	612	3458	140257	644
LMV-8: State Tube Wells	10103	149884	1472	10491	157949	2478
LMV-9: Temporary Supply	3737	11802	40	3749	11840	40
LMV-10: Departmental Employees	25199	85949	276	26825	91354	306
HV-1: Non-Industrial Bulk Loads	893	338010	673	955	362271	722
HV-2: Large and Heavy Power	1643	626385	1731	1726	666854	1850
HV-3: Railway Traction	11	183922	343	13	210611	395
HV-4: Lift Irrigation	26	30775	182	29	34300	202
Bulk & Extra State	1	5000	65	1	5000	65
GRAND TOTAL	5325660	9672631	18448.46	9102970	12868127	25224.09

MVVNL	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	11348493	11094745	18537
LMV-2: Non-Domestic	409863	1072003	2007
LMV-3: Public Lamps	2379	110031	1704
LMV-4: Institutions	25619	191063	737
LMV-5: Private Tube Wells	234155	982933	1733
LMV 6: Small and Medium Power	47253	410047	802
LMV-7: Public Water Works	3635	147349	678
LMV-8: State Tube Wells	11502	174348	3144
LMV-9: Temporary Supply	3762	11880	40
LMV-10: Departmental Employees	28571	97161	338
HV-1: Non-Industrial Bulk Loads	1023	388351	774
HV-2: Large and Heavy Power	1817	712368	1986
HV-3: Railway Traction	15	241302	454
HV-4: Lift Irrigation	32	38229	226
Bulk & Extra State	1	5000	65
GRAND TOTAL	12118118	15676810	33223.63



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**TABLE 5-18: PVVNL CONSUMPTION PARAMETERS APPROVED BY THE COMMISSION FOR FY
2017-18 to FY 2019-20**

PVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	4671158	10458102	10857.78	8417081	17983664	15871.44
LMV-2: Non-Domestic	383190	1012419	1495.64	404992	1074436	1806.22
LMV-3: Public Lamps	1225	69253	304.52	1317	75685	366.00
LMV-4: Institutions	16650	115911	381.53	18055	126697	459.96
LMV-5: Private Tube Wells	407257	2238322	4595.04	416586	2326120	5192.68
LMV 6: Small and Medium Power	57194	721669	1362.90	61703	781253	1689.74
LMV-7: Public Water Works	3597	123850	431.30	4011	138982	483.92
LMV-8: State Tube Wells	5289	69050	648.88	5441	64419	999.21
LMV-9: Temporary Supply	3621	71693	144.64	3675	72921	156.57
LMV-10: Departmental Employees	24502	169169	169.42	26021	176082	202.54
HV-1: Non-Industrial Bulk Loads	1585	1107157	1794.00	1901	1327989	2152.58
HV-2: Large and Heavy Power	6091	2055433	5095.10	6574	2214972	5479.41
HV-3: Railway Traction	6	52470	132.44	7	54644	137.44
HV-4: Lift Irrigation	2	311	0.21	2	311	0.21
Bulk & Extra State	-	0	0.00	-	0	0.00
GRAND TOTAL	5581369	18264811	27413.42	9367365	26418175	34997.92

PVVNL	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	11331624	23816027	20389.95
LMV-2: Non-Domestic	428572	1140152	2150.89
LMV-3: Public Lamps	1365	75685	428.76
LMV-4: Institutions	19586	138565	549.68
LMV-5: Private Tube Wells	447046	2516607	5641.52
LMV 6: Small and Medium Power	66601	846034	2062.18
LMV-7: Public Water Works	4476	156131	543.51
LMV-8: State Tube Wells	5852	65580	1260.70
LMV-9: Temporary Supply	3732	74211	169.56
LMV-10: Departmental Employees	27647	183401	239.15
HV-1: Non-Industrial Bulk Loads	2280	1592982	2582.88
HV-2: Large and Heavy Power	7095	2389141	5899.62
HV-3: Railway Traction	7	56926	142.68
HV-4: Lift Irrigation	2	311	0.21
Bulk & Extra State	-	-	0.00
GRAND TOTAL	12345884	33051753	42061.32



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**TABLE 5-19: PuVVNL CONSUMPTION PARAMETERS APPROVED BY THE COMMISSION FOR FY
2017-18 to FY 2019-20**

PuVVNL	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	4646365	7156476	10175.60	5825965	8472868	12554.36
LMV-2: Non-Domestic	385990	947259	1789.91	409612	1010359	2214.32
LMV-3: Public Lamps	626	58095	233.06	660	62259	267.66
LMV-4: Institutions	20587	245691	823.32	21816	259660	985.54
LMV-5: Private Tube Wells	256905	1183612	3784.76	289800	1088622	5415.13
LMV 6: Small and Medium Power	41631	348064	659.56	44594	370861	794.74
LMV-7: Public Water Works	2998	138193	585.86	3169	143882	610.03
LMV-8: State Tube Wells	11259	205355	1875.38	11524	202805	2899.35
LMV-9: Temporary Supply	76	1362	15.02	81	1471	18.72
LMV-10: Departmental Employees	27119	61336	92.71	29151	65457	110.14
HV-1: Non-Industrial Bulk Loads	602	190190	437.57	744	232215	528.20
HV-2: Large and Heavy Power	1193	530227	1360.43	1311	576183	1484.10
HV-3: Railway Traction	11	196303	589.71	11	206118	619.19
HV-4: Lift Irrigation	71	136329	850.44	75	145614	909.41
Bulk & Extra State	-	-	0.00	-	-	0.00
GRAND TOTAL	5395431	11398492	23273.34	6638511	12838376	29410.88

PuVVNL	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	6648501	9563034	15439.56
LMV-2: Non Domestic	436540	1077770	2661.30
LMV-3: Public Lamps	667	62259	297.56
LMV-4: Institutions	23126	274496	1164.09
LMV-5: Private Tube Wells	366871	1355373	6919.25
LMV 6: Small and Medium Power	47808	395550	944.52
LMV-7: Public Water Works	3353	149988	635.97
LMV-8: State Tube Wells	12081	212112	3109.70
LMV-9: Temporary Supply	86	1589	22.90
LMV-10: Departmental Employees	31370	69939	129.59
HV-1: Non-Industrial Bulk Loads	922	284421	640.37
HV-2: Large and Heavy Power	1441	626496	1619.87
HV-3: Railway Traction	12	216424	650.15
HV-4: Lift Irrigation	79	155561	972.64
Bulk & Extra State	-	-	0.00
GRAND TOTAL	7572857	14445011	35207.47



*Approval of Business Plan, MYT ARR and Tariff for State Discoms for FY
2017-18 to FY 2019-20 and True-up of FY 2014-15*

**TABLE 5-20: KESCO CONSUMPTION PARAMETERS APPROVED BY THE COMMISSION FOR FY
2017-18 to FY 2019-20**

KESCO	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	510586	1163840	1701.69	551433	1256947	2001.90
LMV-2: Non-Domestic	80911	228840	360.05	85713	242422	408.26
LMV-3: Public Lamps	18	14493	62.61	18	14493	62.61
LMV-4: Institutions	828	15558	78.22	872	16382	87.78
LMV-5: Private Tube Wells	0	-	0.00	0	-	0.00
LMV 6: Small and Medium Power	11831	186735	465.95	12423	196072	514.62
LMV-7: Public Water Works	566	47126	90.43	571	47597	91.33
LMV-8: State Tube Wells	0	-	0.00	0	-	0.00
LMV-9: Temporary Supply	0	-	0.00	0	-	0.00
LMV-10: Departmental Employees	3346	10394	24.32	3346	10394	26.11
HV-1: Non-Industrial Bulk Loads	225	77451	175.94	232	79575	180.95
HV-2: Large and Heavy Power	636	224253	804.50	649	228738	820.59
HV-3: Railway Traction	0	-	0.00	0	-	0.00
HV-4: Lift Irrigation	0	-	0.00	0	-	0.00
Bulk & Extra State	-	-	0.00	-	-	0.00
GRAND TOTAL	608948	1968690	3763.70	655257	2092620	4194.16

KESCO	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	595548	1357502	2339.25
LMV-2: Non-Domestic	90800	256809	460.93
LMV-3: Public Lamps	18	14493	62.61
LMV-4: Institutions	918	17251	98.13
LMV-5: Private Tube Wells	0	-	0.00
LMV 6: Small and Medium Power	13044	205875	567.00
LMV-7: Public Water Works	577	48073	92.25
LMV-8: State Tube Wells	0	-	0.00
LMV-9: Temporary Supply	0	-	0.00
LMV-10: Departmental Employees	3346	10394	27.91
HV-1: Non-Industrial Bulk Loads	239	81759	186.10
HV-2: Large and Heavy Power	662	233313	837.00
HV-3: Railway Traction	0	-	0.00
HV-4: Lift Irrigation	0	-	0.00
Bulk & Extra State	-	-	0.00
GRAND TOTAL	705152	2225469	4671.18



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**TABLE 5-21: CONSOLIDATED CONSUMPTION PARAMETERS APPROVED BY THE COMMISSION
FOR FY 2017-18 to FY 2019-20**

CONSOLIDATED	FY 2017-18			FY 2018-19		
	No. of Consumers	Connected Load	Energy Sales (MU)	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	18086214	30274363	38736.51	28855487	45097944	55140.24
LMV-2: Non Domestic	1489540	3791021	6133.99	1586853	4059897	7374.91
LMV-3: Public Lamps	5856	289224	1353.11	6217	308639	1573.79
LMV-4: Institutions	87486	857145	2486.14	93285	907763	2947.10
LMV-5: Private Tube Wells	1078363	5919186	13539.15	1157425	6145409	16132.70
LMV 6: Small and Medium Power	202555	2069894	3865.36	217031	2214318	4609.12
LMV-7: Public Water Works	20082	603847	2320.40	22134	651281	2504.90
LMV-8: State Tube Wells	33636	573641	4691.71	34680	579153	7142.95
LMV-9: Temporary Supply	10749	100107	224.43	11314	103778	243.94
LMV-10: Departmental Employees	99115	387687	690.07	104782	405693	789.60
HV-1: Non-Industrial Bulk Loads	4273	1947484	3701.10	4891	2258044	4250.43
HV-2: Large and Heavy Power	12220	4307229	11599.08	13233	4650402	12499.08
HV-3: Railway Traction	37	570284	1503.50	40	617790	1616.96
HV-4: Lift Irrigation	140	199706	1184.66	149	213856	1272.86
Bulk & Extra State	1	5000	64.61	1	5000	64.61
GRAND TOTAL	21130266	51895817	92093.81	32107523	68218969	118163.19

CONSOLIDATED	FY 2019-20		
	No. of Consumers	Connected Load	Energy Sales (MU)
LMV-1: Domestic	37176970	56765993	71862.53
LMV-2: Non-Domestic	1694135	4343254	8731.48
LMV-3: Public Lamps	6294	308639	2776.70
LMV-4: Institutions	99505	961897	3458.45
LMV-5: Private Tube Wells	1343240	7040193	18838.12
LMV 6: Small and Medium Power	232884	2371387	5442.55
LMV-7: Public Water Works	24463	704247	2710.84
LMV-8: State Tube Wells	37019	613720	8318.82
LMV-9: Temporary Supply	11967	107909	265.62
LMV-10: Departmental Employees	110879	424917	898.65
HV-1: Non-Industrial Bulk Loads	5622	2626898	4901.27
HV-2: Large and Heavy Power	14344	5028489	13492.44
HV-3: Railway Traction	43	670474	1741.61
HV-4: Lift Irrigation	159	229153	1368.25
Bulk & Extra State	1.00	5000	64.61
GRAND TOTAL	40757524	82202172	144871.94



5.2.17 Further, in the Tariff Proposal submitted by the Distribution Licensees it is observed that the proposal was for FY 2017-18 only and not for FY 2018-19 to FY 2019-20. The Commission vide letter (email) dated August 30, 2017 asked the petitioner to submit reasons for the same. In response the petitioner submitted that the Commission had earlier directed the Licensees to conduct the following studies, which relates to the Tariff Structure of the Licensees:

- Cost of Service studies
- Fresh Actuarial Valuation Study Report in respect to employee expenses
- Assessment Study of metered consumers as per the Regulations 16.2 notified vide MYT Regulations, 2014.
- Assessment Study of un-metered consumers to establish base line norms as per the Regulations 17.1 notified vide MYT Regulations, 2014.
- Study of Agriculture feeders segregated and not segregated in significant numbers to determine base line norms as per the Regulations 17.2, 17.3 notified vide MYT Regulations, 2014

5.2.18 The Petitioners' submitted that they are doing their best efforts in this regard. Further the Licensees stated that with the changing scenario of supply hours and expected consumer addition; these studies would play a major role in projection of Tariff Rate Schedule for balance MYT period. Since the process for aforementioned studies has just began, and would take some time for completion of the same, the Licensees sought liberty of the Commission to allow it to file the Tariff proposal for FY 2018-19 and 2019-20 at the time of filing of Annual Performance Review in line with the MYT Regulations. Accordingly, the Commission directs the Distribution Licensees to submit the Rate Schedule for FY 2018-19 and FY 2019-20 at the time of filing of APR (Annual Performance Review) along with the above-mentioned studies.

5.3 DISTRIBUTION LOSSES

5.3.1 Regulation 18 of Distribution MYT Tariff Regulations, 2014 states that:

"18 Treatment of Distribution Loss

18.1 Distribution Loss



Distribution loss shall be considered as a controllable parameter. Based on the assessment of metered and un-metered sales as per Regulations 16 and 17 of these regulations, the Commission shall update existing baseline of distribution losses.

Provided that circle-wise distribution loss reduction targets shall be approved by the Commission. On the basis of circle-wise distribution loss, circle-wise differential tariff by way of separate and distinct distribution loss surcharge may also be implemented by the Commission”

- 5.3.2 The petitioner in the Business Plan has proposed the Distribution loss for the DISCOMs in accordance to the UDAY Scheme as shown under:

TABLE 5-22: DISTRIBUTION LOSSES AS PER UDAY SCHEME

Distribution Loss	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
DVVNL	27.79%	28.44%	20.07%	16.25%	12.10%
MVVNL	22.24%	22.21%	19.16%	16.09%	11.80%
PuVVNL	23.02%	21.63%	19.73%	16.43%	12.20%
PVVNL	18.66%	18.55%	18.18%	15.20%	11.80%
KESCO	20.13%	15.60%	15.28%	15.13%	11.80%
Consolidated	22.53%	22.11%	19.06%	15.91%	11.96%

- 5.3.3 The Commission in its Tariff Order dated August 1st, 2016 stated that:

Quote

“The U.P. DISCOMs have been reeling under severe financial stress. As per the MOU signed by the DISCOMs, they had revenue deficit during FY 2013-14 (Rs. 13,802 Crore) with an expected revenue deficit of Rs. 10,636 Crore in FY 2014-15. The accumulated losses have reached to the level of Rs.70,738 Crore (approx.) up to March 31, 2015. The outstanding debt level of the U.P. DISCOMs has reached Rs.53,211 Crore (Figures of outstanding loan as on September 30, 2015 are provisional as all lenders are yet to confirm the outstanding loan data as such the amount of loan may change upon confirmation)at the end of September 2015. Also, the interest cost burden of nearly Rs. 0.88per unit of sales during FY 15is significantly higher than the national average of Rs 0.44 per unit only. The Aggregate Revenue Requirement (ARR) is insufficient to meet the Average Cost of Supply (ACOS), with a cost recovery of only 65.97 %.



The Distribution Loss trajectory as agreed by the DISCOMs in the MoU signed under UDAY Scheme is provided below:

SUMMARY OF DISTRIBUTION LOSSES AS PER MOU SIGNED BY PETITIONER UNDER “UDAY SCHEME”

Distribution Licensee	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
DVVNL	27.20%	23.82%	20.07%	16.25%	12.10%
MVVNL	23.14%	21.52%	19.16%	16.09%	11.80%
PVVNL	21.49%	20.20%	18.18%	15.20%	11.80%
PuVVNL	22.67%	21.57%	19.73%	16.43%	12.20%
KESCO	25.58%	22.51%	18.91%	15.13%	11.80%
Total	23.56%	21.71%	19.18%	15.90%	11.96%

The Commission has considered the practical difficulties being faced by the Distribution Licensees in reduction of Distribution Losses. It is well established that there are number of factors such as sales mix, consumer mix, geographical spread of consumers, condition of distribution infrastructure that contribute to the distribution losses. Distribution Licensees during the public hearing process and in various submissions to the Commission explained the steps undertaken by them to improve the supply hours and reduce the distribution losses. They also explained various contributing factors like increased supply hours, new connections addition drives etc. The Commission, while approving the distribution losses for FY 2016-17 has considered the submission made by the Distribution Licensees and practicality of the Distribution Loss Reduction target. The Commission has also considered the consumers mix, sales mix and geographical spread of the Distribution Licensees and all other relevant factor contributing to the Distribution Losses in the supply area of Distribution Licensees.”

Unquote

- 5.3.4 The Commission has considered the practical difficulties being faced by the Distribution Licensees in reduction of Distribution Losses. It is well established that there are number of factors such as sales mix, consumer mix, geographical spread of consumers, condition of distribution infrastructure that contribute to the distribution losses. Distribution Licensees during the public hearing process and in various submissions to the Commission explained the steps undertaken by them to improve the supply hours and reduce the distribution losses. They



also explained various contributing factors like increased supply hours, new connections addition drives etc. The Commission, while approving the distribution losses for FY 2017-18 to FY 2019-20 has considered the submission made by the Distribution Licensees and practicality of the Distribution Loss Reduction target. The Commission has also considered the consumers mix, sales mix and geographical spread of the Distribution Licensees and all other relevant factor contributing to the Distribution Losses in the supply area of Distribution Licensees.

- 5.3.5 The Commission believes that the Distribution Licensees must have performed prudence exercise before projecting the loss reduction trajectory to be achieved during FY 2015-16 to FY 2019-2020 in the MOU and considers the Distribution Loss targets as agreed to be more realistic. Thus, taking into consideration the loss trajectories set in UDAY as mentioned in Tariff order dated August 1st, 2016 and that claimed by the petitioner in the MYT Control Period the Commission allows the Distribution loss (%) as shown under:

TABLE 5-23: DISTRIBUTION LOSSES AS APPROVED

Distribution Loss	2017-18			2018-19			2019-20		
	Approved in Tariff Order dt 1.8.2016	Claimed in Petition	Allowed	Approved in Tariff Order dt 1.8.2016	Claimed in Petition	Allowed	Approved in Tariff Order dt 1.8.2016	Claimed in Petition	Allowed
DVVNL	20.07%	20.07%	20.07%	16.25%	16.25%	16.25%	12.10%	12.10%	12.10%
MVVNL	19.16%	19.16%	19.16%	16.09%	16.09%	16.09%	11.80%	11.80%	11.80%
PuVVNL	19.73%	19.73%	19.73%	16.43%	16.43%	16.43%	12.20%	12.20%	12.20%
PVVNL	18.18%	18.18%	18.18%	15.20%	15.20%	15.20%	11.80%	11.80%	11.80%
KESCO	18.91%	15.28%	15.28%	15.13%	15.13%	15.13%	11.80%	11.80%	11.80%

5.4 ENERGY BALANCE

- 5.4.1 While projecting the Power Purchase requirement, the Intra State-Transmission Losses has been considered at 3.79% for FY 2017-18 to FY 2019-20, periphery losses up to interconnection point has been considered as 1.69%, 1.41% and 1.14% for FY 2017-18, FY 2018-19 and FY 2019-20 respectively,
- 5.4.2 Based on the above, the approved energy balance for the MYT Control Period (FY 2017-18 to FY 2019-20) for the State owned Distribution Licensees is shown in the Table below:



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TABLE 5-24: APPROVED ENERGY BALANCE FOR FY 2017-18

Particulars	PVVNL	DVVNL	MVVNL	PuVVNL	KESCO	Consolidated
Retail Sales (MU)	27,413.42	19,194.89	18,448.46	23,273.34	3,763.70	92,093.81
Distribution Losses (%)	18.18%	20.07%	19.16%	19.73%	15.28%	19.06%
Energy at DISCOM Periphery for Retail Sales (MU)	33,504.20	24,014.62	22,819.62	28,994.21	4,442.74	113,775.39
Inter-State Transmission Losses %	3.79%	3.79%	3.79%	3.79%	3.79%	3.79%
Energy Available at State periphery for Transmission(MU)	34,824.03	24,960.63	23,718.55	30,136.38	4,617.75	118,257.34
Periphery Loss (Upto inter connection Point) (%)	1.69%	1.69%	1.69%	1.69%	1.69%	1.69%
Purchases Required & Billed Energy (MU)	35,422.24	25,389.40	24,125.99	30,654.06	4,697.07	120,288.75
Total Inter & Intra State Transmission Losses (%)	5.41%	5.41%	5.41%	5.41%	5.41%	5.41%
Total T&D Losses in Retail Sales (MU) / (%)	8,008.82	6,194.51	5,677.52	7,380.71	933.38	23.44%

TABLE 5-25: APPROVED ENERGY BALANCE FOR FY 2018-19

Particulars	PVVNL	DVVNL	MVVNL	PuVVNL	KESCO	Consolidated
Retail Sales (MU)	34997.92	24336.14	25224.09	29410.88	4194.16	118163.19
Distribution Losses (%)	15.20%	16.25%	16.09%	16.43%	15.13%	15.91%
Energy at DISCOM Periphery for Retail Sales (MU)	41270.06	29058.07	30061.03	35194.46	4941.62	140525.24
Inter-State Transmission Losses %	3.79%	3.79%	3.79%	3.79%	3.79%	3.79%
Energy Available at State periphery for Transmission(MU)	42895.81	30202.76	31245.23	36580.87	5136.28	146060.95
Periphery Loss (Upto inter connection Point) (%)	1.41%	1.41%	1.41%	1.41%	1.41%	1.41%
Purchases Required & Billed Energy (MU)	43508.05	30633.83	31691.18	37102.98	5209.59	148145.64
Total Inter & Intra State Transmission Losses (%)	5.14%	5.14%	5.14%	5.14%	5.14%	5.14%
Total T&D Losses in Retail Sales (MU) / (%)	8510.13	6297.70	6467.09	7692.10	1015.43	20.24%



TABLE 5-26: APPROVED ENERGY BALANCE FOR FY 2019-20

Particulars	PVVNL	DVVNL	MVVNL	PuVVNL	KESCO	Consolidated
Retail Sales (MU)	42061.32	29708.36	33223.63	35207.47	4671.18	144871.94
Distribution Losses (%)	11.80%	12.10%	11.80%	12.20%	11.80%	11.96%
Energy at DISCOM Periphery for Retail Sales (MU)	47688.57	33797.90	37668.51	40099.62	5296.12	164550.72
Inter-State Transmission Losses %	3.79%	3.79%	3.79%	3.79%	3.79%	3.79%
Energy Available at State periphery for Transmission(MU)	49567.16	35129.30	39152.38	41679.27	5504.75	171032.87
Periphery Loss (Upto inter connection Point) (%)	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
Purchases Required & Billed Energy (MU)	50138.94	35534.54	39604.03	42160.06	5568.25	173005.82
Total Inter & Intra State Transmission Losses (%)	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%
Total T&D Losses in Retail Sales (MU) / (%)	8077.63	5826.18	6380.40	6952.59	897.07	16.26%

5.5 COLLECTION EFFICIENCY

5.5.1 The Regulation 7 of the Distribution MYT Tariff Regulations, 2014 stipulates that;

“7.1 The Commission shall stipulate a trajectory while approving the Business Plan for certain variables having regard to the reorganization, restructuring and development of the electricity industry in the State:

Provided that the variables for which a trajectory may be stipulated include, but are not limited to

(a) Supply availability and wires availability;

(b) Distribution losses and Collection efficiency;

(c) Operation and Maintenance expense norm;

(d) Achieving 100% metering”



- 5.5.2 In reference to the above Regulation, the petitioners have submitted the trajectory for distribution loss reduction, however they have not submitted any target trajectory for improving the collection efficiency during the Control period,
- 5.5.3 The distribution losses and the collection efficiency are the two critical parameters to evaluate the performance of a Distribution Licensees and have to be brought to the desired levels, based on sound and authentic data and study analysis. The Commission while doing the True-up of previous years has disallowed the excess power purchase cost on account of higher losses and has not considered losses in revenue due to poor collection, such disallowance of the cost is borne by the Distribution Licensees however the officials responsible for not achieving the targets have no direct accountability. The Commission opines that the methodology of reducing the power purchase cost on account of distribution losses neither directly affects the officials responsible for achieving the target loss levels nor does it encourage the employees to strive for achieving the loss targets for the benefit of the utility. Further, it is a common industry practice that the employees achieving or exceeding their targets are provided with bonus / incentives. Such practice may be introduced for the officials of the Distribution Licensees so as to encourage them to assist the utilities to achieve the targeted losses / collection efficiency. The accountability of achieving the targets should be assigned to the responsible officials.
- 5.5.4 In view of the above, Commission in its Tariff Order for FY 2016-17 dated August 1st, 2016 had directed the Distribution Licensees to formulate a mechanism so as to make their officials accountable by providing incentives or disincentives for achievement or non-achievement of the distribution loss and the collection efficiency targets as under:

Quote

“In reply to the Commission’s query regarding submission of the signed MOU, the Licensee has sought some more time to comply with the Commission’s direction. The Commission again directs the Licensee to expedite the process to comply with the direction given by the Commission and submit the same at the earliest.”

Unquote



- 5.5.5 In response to the above, the petitioners have submitted that the DISCOMs are moving fast for 100% Metering, On-line billing and other consumer related facilities where most of these have been targeted to be completed by FY 2018-19. Since it is a transition period, formulation of incentive or dis-incentive norms for the concerned officials would be useful after the transition period is over. **The Commission again directs the petitioner to submit a draft mechanism formulation of incentive or dis-incentive norms at the earliest as formulation of incentive or dis-incentive norms for the concerned officials has no linkage with the Transition period.**
- 5.5.6 Further, in terms of Regulation 7 of the Distribution MYT Tariff Regulations, 2014, the Commission directs the Licensees to submit a trajectory of targets for improving Collection Efficiency during the Control Period, at the time of Annual Performance Review (APR).

5.6 ENERGY AVAILABILITY

- 5.6.1 The Licensees submitted a detailed power purchase plan for FY 2017-18 to FY 2019-20 in its MYT ARR petitions and proposed that the energy requirement for FY 2017-18 to FY 2019-20 of 123,808 MU, 148,146 MU and 173,006 MU respectively. The Licensees have further proposed to procure the same from the existing resources (State, Central and IPP / Joint Venture generating Stations) with whom they have PPAs. The Licensees have proposed that if these sources fail to supply the requisite amount of energy, the balance energy will be procured through energy exchanges / UI / short-term contracts with trading companies and utilities, which are having extra power and from other sources as well accordingly, a marginal amount of energy has been envisaged to be obtained from energy exchanges to manage the energy requirement during peak hours.
- 5.6.2 Clause 18 of the Distribution MYT Tariff Regulations, 2014 specifies that the methodology for power planning and procurement of power as shown under:

“19. Power Purchase Quantum and Cost

- a) Based on the demand estimates the power purchase quantum and cost shall be calculated.*
- b) The approved Power Purchase cost shall be net of expected revenue from sale of surplus power, if any, during lean period.*



c) Revenue from sale of surplus power shall be estimated at per unit weighted average price of bilateral purchases and power exchange rates for the same quarter, subject to trueing up.

d) If there is a short term requirement of power by the Distribution Licensee over and above the quantum as approved by the Commission and such requirement is on account of any factor beyond the control of the Licensee (shortage / non availability of fuel, snow capping of hydro resources inhibiting power generation in sources stipulated in the plan, unplanned / forced outages of power generating units or acts of God), then the cost shall be directly passed on to the customer without prior approval of the Commission.

Provided that the cost of the additional power shall be capped by the lower of the weighted average price of power exchange rates or bilateral market purchases for the same quarter.

Provided further that in such a case, the Distribution Licensee shall inform the

Commission about the purchase of power over and above approved quantum with all the details. In case the Commission is not satisfied by the quantum and/or rates, the

Commission may disallow the same in the True Up.

19.1 Power Purchase Planning

(a) Comprehensive Power Procurement Plan shall be submitted as part of MYT petition to the Commission.

(b) The Distribution Licensee shall prepare a short term (less than 1 year) and a medium-term (5 years) plan, separately stated for peak and off-peak periods, for unrestricted demand of electricity for each consumer category in its area of operation as per Regulation 16 and Regulation 17 of these regulations. At the gross level, independent variables like Gross Domestic Product, Average tariff of electricity and population etc. shall be regressed through econometric modeling for estimating long term total demand forecasting. Long term forecasting shall be done based upon the following multiple log linear econometric regression formula:

$$\text{Log } E_t = a_0 + a_1 \log (\text{GDPT}) - a_2 \log (\text{Tt}) + a_3 \log (\text{Pt})$$



Where,

E_t = Demand of electricity for the period 't'

a_0 = Constant term

a_1 = Percentage change in electricity demand for percentage change in GDP

a_2 = Price elasticity of electricity demand

a_3 = Percentage change in electricity demand for percentage change in population

GDP_t = Gross Domestic Product for period 't'

T_t = Average Tariff of Electricity for period 't'

P_t = Population for period 't'

Similarly, multiple log-linear regression analysis shall be carried out separately for each major category of consumers like domestic, agricultural, commercial and industrial.

Each of categories could be regressed with independent variables like –

- Per capita income and / or population and / or average domestic tariff for estimating residential demand
- GDP for agricultural and / or pump set and / or average agricultural tariff for estimating agricultural demand
- GDP for industry and / or Industrial output and / or average industrial tariff for estimating industrial demand
- GDP for service and / or average tariff for commercial category for estimating commercial demand

Based on the multiple log-linear regression analysis, statistically significant equation should be adopted for forecasting the demand.

(c) The demand projected as per above shall be augmented with distribution losses (as determined by Regulation 18 of these regulations) and transmission losses to arrive at power purchase requirement for the Distribution Licensee.

(d) The Distribution Licensee shall assess quantum of power available at its disposal from state's generating plants, central generating utilities, IPPs



etc. and month-wise deficit / surplus schedule shall be developed, separately stated for both peak and off peak period.

(e) The procurement plan for medium term shall be by way of competitive bidding.

(f) The Licensee with generation mix having less coal or hydro resource, shall explore Joint Ventures with coal bearing states and with states well-endowed with hydro for development of power plants, to ensure right mix of power procurement from coal and hydro based plants to have diversified procurement base and potential of addressing seasonal variations, peak demand.

(g) Long-term power procurement plan shall include proposals about acquisition of demand side resources through "standard bid" or "competitive demand side resource bidding process". The procurement plan shall also include power from plants using renewable sources of energy at least to the extent as stipulated by Commission.

(h) Due to in-firm nature of power from renewable sources of energy, alternate firm source of power (equivalent in terms of energy units) shall be specified in the procurement plan (over and above total energy required).

(i) Fixed cost pertaining to such alternate firm source of power shall be allowed to the Distribution Licensee and actual cost shall be Trued Up.

(j) If excess power beyond the procurement plan is required on long term basis, the Distribution Licensee shall invite bids through Case 1 or Case 2 bidding for power procurement in the "Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees" as notified by the Central Government from time to time.

(k) For the short term power requirement & procurement the Distribution Licensee will follow the guidelines issued by the Central Government from time to time.

- 5.6.3 The Commission in its deficiency note dated July 18, 2017 had sought the power purchase planning to be submitted in accordance to Regulation 19 of the Distribution MYT Tariff Regulations, 2014 along with all PPA's and supplementary PPA's. In response the petitioners submitted that power purchase planning has been done based on existing PPA's and upcoming generation capacities during the MYT Period. Further the petitioners submitted
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that they have appointed IIT Kanpur as consultant for Power Procurement Planning for Uttar Pradesh and the consultant is required to prepare and submit a report on the Energy and Peak Demand projection for the power system in Uttar Pradesh for the next 10 years, process for Developing system load profile based on the historical data and the expected changes in future including increasing grid connected solar generation, Assessing need for power procurement based on existing and pipeline PPAs against the projected load without transmission constraints, developing a power procurement scenario including long-term and medium-term PPA (RTC versus peak hours etc.) and short-term power procurement including that through power exchanges.

5.6.4 Further, for precisely projecting the power purchase quantum and cost, the Commission in its deficiency note sought the source-wise details of the actual power purchased during FY 2014-15, FY 2015-16 and FY 2016-17 in a specified format i.e. month-wise power purchase details including quantum, Fixed Charges, Energy Charges, other charges, PLF, Availability, etc. Further the Commission sought the source wise actual power purchase from April, 2017 to July, 2017. The Distribution Licensees vide their reply dated August 8, 2017 submitted the power purchase details for FY 2014-15 to FY 2016-17 (Q1 and Q2) to the Commission. The petitioners further submitted in reply dated August 16, 2017 that they have considered the fixed cost of the State generating stations in accordance to UPERC order dated January 18, 2017 and the variable cost per unit was considered by escalating the actual variable cost per unit for FY 2016-17. Further, the petitioner submitted that as per the direction of the Commission, they have taken the average variable costs for April to June 2017 for FY 2017-19 and have escalated the same further.

5.6.5 Further, the Commission vide its deficiency note dated August 16, 2017 sought justification for the variation in the Annual Fixed Charges of some Central Generating Stations as considered by the petitioners and that approved by CERC (Central Electricity Regulatory Commission) for FY 2014-19 period in its Tariff Orders. The Commission also sought clarification on the percentage share allocation considered by the petitioners, as it was different from the notification of North Regional Power Committee (NRPC). In response the petitioners submitted the revised power purchase plan as per revised share allocation and Annual Fixed Charges of Central Generating Stations.



- 5.6.6 The Commission had conducted a hearing on September 4, 2017 in the matter of Admittance of Petitions filed by various Licensees, wherein the the Commission conveyed its concern for further reduction & optimisation of Power Purchase Cost. In view of the same, the Commission directed the petitioner i.e. UPPCL / State DISCOMs to re - work / re - visit the projected Power Purchase Cost for the MYT Control Period and bring it down to reasonable limits i.e. prevailing market prices and devise a strategy wherein they could buy cheaper power from Power Exchange / Bilateral agreements by curtailing the power from costlier power plants. In response the petitioner vide letter dated September 15, 2017 submitted the revised power purchase cost and revenue for FY 2017-18. It is observed that the petitioner had initially claimed sales as 128,908 MU, 153,577 MU and 172,955 MU for FY 2017-18, FY 2018-19 and FY 2019-20 respectively which was revised to 123,808 MU, 148,146 MU and 173,006 MU respectively. Accordingly, the power purchase cost projections were also revised from Rs 52,919 Crore, Rs 66,033 Crore and Rs 77,443 Crore in FY 2017-18, FY 2019-20 respectively to Rs 50,105.13 Crore, Rs 61,987.51 Crore, Rs 75,789.59 Crore in FY 2017-18, FY 2019-20 respectively.
- 5.6.7 Accordingly, the Commission has considered the data in respect of power procurement plan provided in the ARR / Tariff Petition for the MYT period i.e. FY 2017-18 to FY 2019-20 and the details provided, as it is the most relevant data available for projecting the power purchase cost for the MYT period. Suitable modifications, wherever deemed necessary, have been made by the Commission to arrive at the approved power purchase cost for the MYT period and the same have been discussed in the relevant sections subsequently.
- 5.6.8 Further, the Commission has also prepared the merit order dispatch schedule for power purchase for the MYT period after considering the availability of power and sales trend projected for the Licensees. The final merit order dispatch showing the approved power purchase quantum by the Commission for the MYT period has been provided subsequently.
- 5.6.9 Since, the power purchase expense is the largest component in the ARR of a Distribution Licensees; it becomes imperative that this element of cost is incurred with utmost care based on the most efficient way of power procurement from the generating stations through long-term / short-term power purchase arrangements, through bilateral power purchase agreements or Power Exchange etc. trying to replace expensive power with cheaper power
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whenever possible. Power Purchase cost being an un-controllable component of the ARR, the Distribution MYT Tariff Regulations, 2014 provides for the Fuel and Power Purchase Cost Adjustment (FPPCA) formula, which enables the Distribution Licensees to claim legitimate variances on account of power purchase cost.

5.7 POWER PROCUREMENT FROM STATE GENERATING STATIONS

The Licensees' Submissions:

- 5.7.1 Distribution Licensees submitted that the State of Uttar Pradesh has got both Thermal as well as Hydro generating stations. UPRVUNL owns all the thermal generating stations within the State and the hydro stations are owned by UPJVNL. The Multi Year Tariff (MYT) Petitions filed by the UPRVUNL before the Commission and the UPERC (Terms and Conditions of Generation Tariff) Regulations, 2014 form the basis for determining the costs for the MYT period and thereafter escalations have been considered in the Fixed and energy Charges for determination of cost for the MYT period.
- 5.7.2 Distribution Licensees submitted that the cost of energy available from State Thermal and Hydro generating stations has been derived from the tariff petitions filed by the UPRVUNL before the Commission and the UPERC (Terms and Conditions of Generation Tariff) Regulations 2014. The variable cost per unit was considered by escalating the actual variable cost per unit for FY 2016-17. Additionally, the Petitioners have also submitted that they have considered the average variable cost for the period April, 2017 to June, 2017 and escalated the same accordingly. The petitioners also submitted the power purchase data for FY 2014-15 to FY 2016-17 in reply to the deficiencies raised by the Commission.
- 5.7.3 The major assumptions considered by the Distribution Licensees while projecting the power purchase from the State owned Thermal generating stations and Hydro stations are shown in the Tables below:

TABLE 5-27: ASSUMPTIONS FOR POWER PURCHASE FROM UPRVUNL AS CONSIDERED BY THE DISTRIBUTION LICENSEES

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum for FY 2017-18 is considered based on the Provisional Availability for FY 2016-17 and thereafter for the next two years of the Control Period it has been assumed that all the stations will be able to perform at



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S. No.	Particulars	Assumption
		their target availability. The Auxiliary Consumption norms have been considered in line with the UPERC MYT Generation Tariff Regulations, 2014.
2	Fixed & Variable Charges	The Capacity Charges have been considered based on the UPERC's Review Order dated 18.01.2017 for UPRVUNL for the period FY 2014-15 to 2018-19. Thereafter a yearly increase of 4% has been considered for FY 2019-20. The variable charges are considered as average variable cost for April to June 2017 and escalated the same by 4% for calculation of the Variable Charges of FY 2018-19 and FY 2019-20 for each power station. Additionally, the improvement in norms and operation parameters along with other changes in cost parameters stipulated by the UPERC (Terms and Conditions of Generation Tariff) Regulations, 2014 have been duly considered while projecting the capacity and energy charges.

TABLE 5-28: ASSUMPTIONS FOR POWER PURCHASE FROM UPJVNL AS CONSIDERED BY THE DISTRIBUTION LICENSEES

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum for the MYT Period for all power stations of UPJVNL has been considered based on the latest bills available for last year
2	Fixed & Variable Charges	The same for all power stations of UPJVNL has been considered based on the latest bills available for last year with an escalation of 4% per annum.

5.7.4 Considering the above, the power purchase quantum and cost as projected by the Distribution Licensees from State Thermal and Hydro Generating Stations for the MYT period FY 2017-18 to FY 2019-20 is as shown in the Tables below:

TABLE 5-29: DETAILS OF POWER PURCHASE COST FROM UPRVUNL STATIONS FOR FY 2017-18 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Procurement of power from State Sector Generating Stations									
Anpara A	630	3535	0.79	280	2.08	736	2.87	1,015	2.87
Anpara B	1,000	7055	0.67	473	2.02	1422	2.69	1,895	2.69
Harduagunj	105	206	2.35	48	4.84	100	7.19	148	7.19
Obra A	194	40	2.59	10	2.35	9.28	4.94	20	4.94
Obra B	1,000	2,769	0.69	192	2.27	630	2.97	821	2.97
Panki	210	232	1.63	38	3.88	90	5.51	128	5.51
Parichha	220	172	1.06	18	4.19	72	5.25	90	5.25
Parichha Extn.	420	2,411	1.35	324	3.53	851	4.88	1,176	4.88



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Parichha Extn. Stage II	500	2,790	1.81	505	3.53	985	5.34	1,490	5.34
Harduaganj Ext.	500	2,790	1.97	549	3.82	1,066	5.79	1,615	5.79
Anpara D	1,000	5,779	2.23	1,288	1.87	1,083	4.10	2,372	4.10
Sub total – Thermal	5779	27778		3726		7045		10771	3.88

**TABLE 5-30: DETAILS OF POWER PURCHASE COST FROM UPRVUNL STATIONS FOR FY 2018-19
AS SUBMITTED BY DISTRIBUTION LICENSEES**

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Anpara A	630.00	4039.76	0.79	319.58	2.17	874.62	2.96	1194.20	2.96
Anpara B	1000.00	7055.09	0.69	485.68	2.10	1479.26	2.79	1964.94	2.79
Harduaganj	-	-	-	-	-	-	-	-	-
Obra A	-	-	-	-	-	-	-	-	-
Obra B	1000.00	3955.14	0.72	283.48	2.36	935.32	3.08	1218.79	3.08
Panki	-	-	-	-	-	-	-	-	-
Parichha	-	-	-	-	-	-	-	-	-
Parichha Extn.	420.00	2845.86	1.34	381.95	3.67	1045.41	5.02	1427.36	5.02
Parichha Extn. Stage II	500.00	3387.93	1.79	607.06	3.67	1244.10	5.46	1851.16	5.46
Harduaganj Ext.	500.00	3387.93	1.94	658.65	3.97	1346.04	5.92	2004.69	5.92
Anpara D	1000.00	7017.86	2.23	1567.85	1.95	1368.12	4.18	2935.97	4.18
Sub total - Thermal	5050.00	31689.56		4304.24		8292.87		12597.11	3.98

**TABLE 5-31: DETAILS OF POWER PURCHASE COST FROM UPRVUNL STATIONS FOR FY 2019-20
AS SUBMITTED BY DISTRIBUTION LICENSEES**

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Anpara A	630.00	4292.25	0.82	353.13	2.25	966.46	3.07	1319.59	3.07
Anpara B	1000.00	7055.09	0.72	505.11	2.18	1538.43	2.90	2043.54	2.90



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Harduaganj	-	-	-	-	-	-	-	-	-
Obra A	-	-	-	-	-	-	-	-	-
Obra B	1000.00	6328.22	0.75	471.70	2.46	1556.37	3.20	2028.07	3.20
Panki	-	-	-	-	-	-	-	-	-
Parichha	-	-	-	-	-	-	-	-	-
Parichha Extn.	420.00	2845.86	1.40	397.23	3.82	1087.23	5.22	1484.46	5.22
Parichha Extn. Stage II	500.00	3387.93	1.86	631.34	3.82	1293.86	5.68	1925.20	5.68
Harduaganj Ext.	500.00	3387.93	2.02	685.00	4.13	1399.88	6.15	2084.88	6.15
Anpara D	1000.00	7017.86	2.32	1630.56	2.03	1422.84	4.35	3053.41	4.35
Sub total - Thermal	5050.00	34315.13		4674.07		9265.07		13939.14	4.06

TABLE 5-32: DETAILS OF POWER PURCHASE COST FROM UPJVNL STATIONS FOR FY 2017-18 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Total Cost	
			(Rs. / kWh)	(Rs. Cr.)
Khara	57.60	216.97	0.81	17.63
Matatila	20.00	80.60	0.75	6.04
Obra (Hydel)	99.00	216.81	0.70	15.16
Rihand	255.00	469.10	0.64	29.97
UGC Power Stations	13.70	21.60	2.39	5.17
Belka & Babail	6.00	2.10	2.25	0.47
Sheetla	3.60	2.21	2.84	0.63
Sub total - Hydro	454.90	1009.38		75.07

TABLE 5-33: DETAILS OF POWER PURCHASE COST FROM UPJVNL STATIONS FOR FY 2018-19 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Total Cost	
			(Rs. / kWh)	(Rs. Cr.)
Khara	57.60	216.97	0.85	18.34
Matatila	20.00	80.60	0.78	6.28
Obra (Hydel)	99.00	216.81	0.73	15.77



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Source of Power	MW Available	MU	Total Cost	
			(Rs. / kWh)	(Rs. Cr.)
Rihand	255.00	469.10	0.66	31.16
UGC Power Stations	13.70	21.60	2.49	5.37
Belka & Babail	6.00	2.10	2.25	0.47
Sheetla	3.60	2.21	2.95	0.65
Sub total - Hydro	454.90	1009.38		78.05

TABLE 5-34: DETAILS OF POWER PURCHASE COST FROM UPJVNL STATIONS FOR FY 2019-20 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Total Cost	
			(Rs. / kWh)	(Rs. Cr.)
Khara	57.60	216.97	0.88	19.07
Matatila	20.00	80.60	0.81	6.53
Obra (Hydel)	99.00	216.81	0.76	16.40
Rihand	255.00	469.10	0.69	32.41
UGC Power Stations	13.70	21.60	2.59	5.59
Belka & Babail	6.00	2.10	2.34	0.49
Sheetla	3.60	2.21	3.07	0.68
Sub total - Hydro	454.90	1009.38		81.17

The Commission's Analysis:

5.7.5 The assumptions considered by the Commission while approving the power purchase from the State owned Thermal generating stations and Hydro generating stations are given below in the following Tables:

TABLE 5-35: ASSUMPTIONS FOR POWER PURCHASE FROM UPRVUNL AS CONSIDERED BY THE COMMISSION

Sl. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is considered based on the Commission's Order for UPRVUNL stations. Further the quantum is approved as per Merit order despatch principles.
2	Fixed & Variable Charges	The Fixed Charges have been considered based on the UPERC's Review Order dated 18.01.2017 for UPRVUNL for the period FY 2014-15 to 2018-19. Thereafter a yearly increase of 4% has been considered for FY 2019-20. The variable charges are considered as average variable charge from April to June 2017 and escalated the same by 4% per annum for calculation of the Variable Charges of FY 2018-19 and FY 2019-20 for each power station.



TABLE 5-36: ASSUMPTIONS FOR POWER PURCHASE FROM UPJVNL AS CONSIDERED BY THE COMMISSION

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum for the MYT Period for all power stations of UPJVNL has been considered based on the latest bills available for last year
2	Fixed & Variable Charges	The same for all power stations of UPJVNL has been considered based on the latest bills available for last year with an escalation of 4% per annum.

5.7.6 The Commission observes that the fixed cost per unit and variable cost per unit for the plants may vary from the costs per unit allowed in the Tariff Orders of the Commission or in this Order, depending upon the quantum of power scheduled / purchased and the same shall be reviewed at the time of Annual Performance Review / True Up. Based on above approach, the summary of approved cost of power purchase from UPRVUNL and UPJVNL generating stations for the MYT Period is given in the following Tables:

TABLE 5-37: APPROVED COST OF POWER PURCHASE FROM UPRVUNL STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anpara A	630	3,535	0.79	279.52	2.08	735.86	2.87	1,015	2.87
Anpara B	1,000	7,055	0.67	472.83	2.02	1,422.36	2.69	1,895	2.69
Harduaganj	105	206	2.35	48.42	4.84	99.60	7.19	148	7.19
Obra A	194	40	2.59	10.24	2.35	9.28	4.94	20	4.94
Obra B	1,000	2,769	0.69	191.92	2.27	629.54	2.97	821	2.97
Panki	210	232	1.63	37.84	3.88	90.06	5.51	128	5.51
Parichha	220	172	1.06	18.19	4.19	72.19	5.25	90	5.25
Parichha Extn.	420	2,411	1.35	324.36	3.53	851.47	4.88	1,176	4.88
Parichha Extn. Stage II	500	2,790	1.81	505.24	3.53	985.15	5.34	1,490	5.34
Harduaganj Ext.	500	2,790	1.97	548.96	3.82	1,065.87	5.79	1,615	5.79
Anpara D	1,000	5,779	2.23	1,288.44	1.87	1,083.35	4.10	2,372	4.10
Total	5779	27778		3726		7045		10771	3.88



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TABLE 5-38: APPROVED COST OF POWER PURCHASE FROM UPRVUNL STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anpara A	630.00	4039.76	0.79	319.58	2.17	874.62	2.96	1194.20	2.96
Anpara B	1000.00	7055.09	0.69	485.68	2.10	1479.26	2.79	1964.94	2.79
Harduaganj	-	-	-	-	-	-	-	-	-
Obra A	-	-	-	-	-	-	-	-	-
Obra B	1000.00	3955.14	0.72	283.48	2.36	935.32	3.08	1218.79	3.08
Panki	-	-	-	-	-	-	-	-	-
Parichha	-	-	-	-	-	-	-	-	-
Parichha Extn.	420.00	2845.86	1.34	381.95	3.67	1045.41	5.02	1427.36	5.02
Parichha Extn. Stage II	500.00	3387.93	1.79	607.06	3.67	1244.10	5.46	1851.16	5.46
Harduaganj Ext.	500.00	3387.93	1.94	658.65	3.97	1346.04	5.92	2004.69	5.92
Anpara D	1000.00	7017.86	2.23	1567.85	1.95	1368.12	4.18	2935.97	4.18
Total	5050.00	31689.56		4304.24		8292.87		12597.11	3.98

TABLE 5-39: APPROVED COST OF POWER PURCHASE FROM UPRVUNL STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anpara A	630.00	4292.25	0.82	353.13	2.25	966.46	3.07	1319.59	3.07
Anpara B	1000.00	7055.09	0.72	505.11	2.18	1538.43	2.90	2043.54	2.90
Harduaganj	-	-	-	-	-	-	-	-	-
Obra A	-	-	-	-	-	-	-	-	-
Obra B	1000.00	6328.22	0.75	471.70	2.46	1556.37	3.20	2028.07	3.20
Panki	-	-	-	-	-	-	-	-	-
Parichha	-	-	-	-	-	-	-	-	-
Parichha Extn.	420.00	2845.86	1.40	397.23	3.82	1087.23	5.22	1484.46	5.22
Parichha Extn. Stage II	500.00	3387.93	1.86	631.34	3.82	1293.86	5.68	1925.20	5.68
Harduaganj Ext.	500.00	3387.93	2.02	685.00	4.13	1399.88	6.15	2084.88	6.15
Anpara D	1000.00	7017.86	2.32	1630.56	2.03	1422.84	4.35	3053.41	4.35
Total	5050.00	34315.13		4674.07		9265.07		13939.14	4.06



TABLE 5-40: APPROVED COST OF POWER PURCHASE FROM UPJVNL STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost	
			(Rs. / kWh)	(Rs. Cr.)
Khara	57.60	216.97	0.81	17.63
Matatila	20.00	80.60	0.75	6.04
Obra (Hydel)	99.00	216.81	0.70	15.16
Rihand	255.00	469.10	0.64	29.97
UGC Power Stations	13.70	21.60	2.39	5.17
Belka&Babail	6.00	2.10	2.25	0.47
Sheetla	3.60	2.21	2.84	0.63
Total	454.90	1009.38		75.07

TABLE 5-41: APPROVED COST OF POWER PURCHASE FROM UPJVNL STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost	
			(Rs. / kWh)	(Rs. Cr.)
Khara	57.60	216.97	0.85	18.34
Matatila	20.00	80.60	0.78	6.28
Obra (Hydel)	99.00	216.81	0.73	15.77
Rihand	255.00	469.10	0.66	31.16
UGC Power Stations	13.70	21.60	2.49	5.37
Belka&Babail	6.00	2.10	2.25	0.47
Sheetla	3.60	2.21	2.95	0.65
Total	454.90	1009.38		78.05

TABLE 5-42: APPROVED COST OF POWER PURCHASE FROM UPJVNL STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost	
			(Rs. / kWh)	(Rs. Cr.)
Khara	57.60	216.97	0.88	19.07
Matatila	20.00	80.60	0.81	6.53
Obra (Hydel)	99.00	216.81	0.76	16.40
Rihand	255.00	469.10	0.69	32.41
UGC Power Stations	13.70	21.60	2.59	5.59
Belka&Babail	6.00	2.10	2.34	0.49
Sheetla	3.60	2.21	3.07	0.68
Total	454.90	1009.38		81.17

5.8 POWER PROCUREMENT FROM CENTRAL GENERATING STATIONS

The Licensees' Submissions:

- 5.8.1 The Licensees procure power from Central Generating Stations (CGS), which includes power from National Thermal Power Corporation Ltd. (NTPC), National



Hydro Power Corporation Ltd. (NHPC), and Nuclear Power Corporation of India Ltd. (NPCIL). In addition to the firm share allocation, most of these stations have unallocated power. The distribution of this unallocated power among the constituents of Northern Region is decided from time to time based on power requirement and power shortage in different States. UPPCL also gets a substantial portion of the unallocated share. The Licensees have submitted that the cost of power procurement for the MYT control period i.e. FY 2017-18 to FY 2019-20 from these sources is based on the following:

- UPPCL’s current allocated share from various central sector plants is projected as per NRPC circular which includes UPPCL’s total share includes the allocated share from unallocated quota also.
- The variable (Primary & Secondary fuel) costs of Central Sector plants and other plants have been taken from the energy bills for the period FY 2015-16 and 2016-17 and are inclusive of FPA. All variable costs have been escalated by 3% for the MYT Period.
- Provisional power purchase cost and units of FY 2015-16 and FY 2016-17.
- Trend observed in the previous and current year
- Impact of loss reduction initiatives.
- Estimated growth in sales.
- Share of expected capacity available from various Generators to the Licensees.

5.8.2 The assumptions considered by the Licensees while estimating the power purchase from NTPC, NHPC and NPCIL Stations are given in the following Tables:

TABLE 5-43: ASSUMPTIONS FOR POWER PURCHASE FROM NTPC STATIONS AS CONSIDERED BY THE DISTRIBUTION LICENSEES for FY 2017-18

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, plant load factor (PLF) and UP state's share in respective power plant. Further the quantum is approved as per Merit order despatch principles. We have also referred to the actual plant load factor of such stations for the last 2 years while projecting the PLF for the Control period.



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S. No.	Particulars	Assumption
2	Fixed Charges	Fixed charges are computed after considering UP state's allocated share in respective power plant as per Regional Energy Accounting Report and Annual Report of NRPC and ERPC and fixed cost as per the latest available bills of the generating station. Further the escalation factor @ 4% per annum has been considered.
3	Variable Charges	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor @ 4% per annum has been considered.

TABLE 5-44: ASSUMPTIONS FOR POWER PURCHASE FROM NHPC STATIONS AS CONSIDERED BY THE DISTRIBUTION LICENSEES

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, plant load factor (PLF) and UP State's share in respective power plant.
2	Fixed Charges	Fixed charges are computed after considering UP state's allocated share in respective power plant as per Regional Energy Accounting Report and Annual Report of NRPC and fixed cost as per the latest available bills for the period FY 2015-16 and 2016-17. Further the escalation factor @ 4% per annum has been considered.
3	Variable Charges	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor @ 4% per annum has been considered

TABLE 5-45: ASSUMPTIONS FOR POWER PURCHASE FROM NPCIL STATIONS AS CONSIDERED BY THE DISTRIBUTION LICENSEES

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, capacity factor and UP state's share in respective power plant.
2	Tariff (Single part)	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor of @ 4% per annum has been considered.

5.8.3 The Licensees have proposed that it will not buy costly power of Anta, Auriya and Dadri Gas from FY 2018-19 onwards. The Licensees' submission of projected power purchase from NTPC, NHPC and NPCIL generating stations for the MYT Control Period is provided in the following Tables:



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**TABLE 5-46: DETAILS OF POWER PURCHASE COST FROM NTPC STATIONS FOR FY 2017-18 AS
SUBMITTED BY DISTRIBUTION LICENSEES**

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anta	100	43	2.99	13	2.84	12	5.82	25	5.82
Auriya	223	95	2.66	25	3.40	32	6.06	58	6.06
Dadri Thermal	84	539	0.86	46	3.54	191	4.40	237	4.40
Dadri Gas	254	217	1.19	26	2.75	60	3.94	85	3.94
Dadri Ext.	135	874	1.47	129	3.28	286	4.75	415	4.75
Rihand-I	360	2,415	0.84	203	1.85	447	2.70	651	2.70
Rihand-II	333	2,751	0.72	198	1.68	463	2.40	660	2.40
Singrauli	823	6,173	0.58	355	1.71	1,056	2.29	1,411	2.29
Tanda	440	2,985	1.19	356	3.34	996	4.53	1,351	4.53
Unchahar-I	256	1,670	0.99	165	3.07	513	4.06	678	4.06
Unchahar-II	146	1,143	0.76	87	3.09	353	3.84	439	3.84
Unchahar-III	72	570	1.07	61	3.36	192	4.43	253	4.43
Farakka	33	231	0.86	20	2.77	64	3.63	84	3.63
Kahalgaon St. I	77	550	0.97	53	2.60	143	3.57	196	3.57
Kahalgaon St. IIPh. I	251	1,906	1.01	193	2.33	445	3.35	638	3.35
Koldam (Hydro)	159	1,101	2.15	236	2.21	244	4.36	480	4.36
Rihand-III	361	2,823	1.36	385	1.72	486	3.08	871	3.08
Total	4106	26086		2551		5982		8533	3.27

**TABLE 5-47: DETAILS OF POWER PURCHASE COST FROM NTPC STATIONS FOR FY 2018-19 AS
SUBMITTED BY DISTRIBUTION LICENSEES**

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anta	-	-	-	-	-	-	-	-	-
Auriya	-	-	-	-	-	-	-	-	-
Dadri Thermal	84.00	538.63	0.89	49.60	3.68	198.18	4.57	247.79	4.60
Dadri Gas	-	-	-	-	-	-	-	-	-
Dadri Extension	135.04	896.70	1.37	127.41	3.41	305.58	4.78	432.99	4.83
Rihand-I	360.00	2472.82	0.87	210.10	1.93	476.60	2.80	686.70	2.78
Rihand-II	333.20	2751.00	0.72	165.47	1.75	481.28	2.47	646.75	2.35



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Singrauli	822.60	6173.39	0.67	372.85	1.78	1,098.35	2.45	1471.20	2.38
Tanda	440.00	2984.85	1.30	366.44	3.47	1,035.46	4.77	1401.90	4.70
Unchahar-I	255.53	1670.31	1.01	171.39	3.19	533.45	4.21	704.84	4.22
Unchahar-II	146.29	1142.81	0.93	89.54	3.21	366.67	4.13	456.21	3.99
Unchahar-III	71.55	570.34	1.29	60.88	3.50	199.40	4.78	260.29	4.56
Farakka	33.28	230.61	0.92	20.65	2.88	66.47	3.80	87.12	3.78
Kahalgaon St. I	76.61	549.62	1.09	55.05	2.71	148.79	3.79	203.84	3.71
Kahalgaon St.II Ph.I	250.95	1906.17	1.12	192.31	2.43	462.54	3.54	654.84	3.44
Koldam (Hydro)	79.56	550.59	1.56	245.77	2.30	126.79	3.86	372.56	6.77
Rihand-III	361.40	2823.32	1.67	400.10	1.79	505.48	3.46	905.57	3.21
Uchchahar-IV	117.00	626.23	1.29	80.54	3.50	218.94	4.78	299.48	4.78
Sub-Total NTPC	3567.00	25887.38		2608.11		6223.98		8832.10	3.41

TABLE 5-48: DETAILS OF POWER PURCHASE COST FROM NTPC STATIONS FOR FY 2019-20 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Anta	-	-	-	-	-	-	-	-	-
Auriya	-	-	-	-	-	-	-	-	-
Dadri Thermal	84.00	538.63	0.92	51.59	3.83	206.11	4.75	257.70	4.78
Dadri Gas	-	-	-	-	-	-	-	-	-
Dadri Extension	135.04	896.70	1.42	132.51	3.54	317.80	4.97	450.31	5.02
Rihand-I	360.00	2,472.82	0.90	218.50	2.00	495.67	2.91	714.17	2.89
Rihand-II	333.20	2,751.00	0.75	172.09	1.82	500.53	2.57	672.62	2.45
Singrauli	822.60	6,173.39	0.70	387.77	1.85	1,142.28	2.55	1,530.05	2.48
Tanda	440.00	2,984.85	1.35	381.10	3.61	1,076.87	4.96	1,457.98	4.88
Unchahar-I	255.53	1,670.31	1.05	178.25	3.32	554.79	4.38	733.03	4.39
Unchahar-II	146.29	1,142.81	0.96	93.12	3.34	381.34	4.30	474.46	4.15
Unchahar-III	71.55	570.34	1.34	63.32	3.64	207.38	4.97	270.70	4.75



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Farakka	33.28	230.61	0.95	21.48	3.00	69.13	3.95	90.61	3.93
Kahalgaon St. I	76.61	549.62	1.13	57.25	2.82	154.74	3.94	211.99	3.86
Kahalgaon St.II Ph.I	250.95	1,906.17	1.16	200.00	2.52	481.04	3.69	681.04	3.57
Koldam (Hydro)	79.56	550.59	1.56	255.60	2.39	131.87	3.95	387.46	7.04
Rihand-III	361.40	2,823.32	1.74	416.10	1.86	525.70	3.60	941.80	3.34
Tanda Stage-II	155.00	829.62	1.35	112.31	3.61	299.31	4.96	411.61	4.96
Uchchahar-IV	117.00	818.91	1.35	110.59	3.67	300.62	5.02	411.21	5.02
Total	3722.00	26909.68		2851.57		6845.18		9696.74	3.60

TABLE 5-49: DETAILS OF POWER PURCHASE COST FROM NHPC STATIONS FOR FY 2017-18 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Chamera	109.46	434.27	0.75	32.54	0.75	32.54	1.50	65.08	1.50
Chamera-II	69.78	324.26	0.93	30.07	0.93	30.07	1.85	60.15	1.85
Chamera-III	51.54	199.50	2.35	46.93	2.35	46.93	4.70	93.86	4.70
Dhauliganga	62.08	204.14	1.62	33.05	1.62	33.05	3.24	66.09	3.24
Salal I&II	47.96	224.85	0.48	10.87	0.58	10.87	1.07	21.74	0.97
Tanakpur	21.33	62.79	2.23	13.99	2.23	13.99	4.46	27.97	4.46
Uri	96.29	548.01	0.67	36.47	0.67	36.47	1.33	72.94	1.33
Dulhasti	93.52	527.61	2.10	110.77	2.10	110.77	4.20	221.53	4.20
Sewa-II	29.60	112.88	2.26	25.52	2.26	25.52	4.52	51.03	4.52
Uri-II	55.90	346.38	1.57	54.32	1.57	54.32	3.14	108.64	3.14
Parbati ST-III	116.06	149.37	2.03	30.36	2.03	30.36	4.06	60.71	4.06
Kishanganga HEP	64.00	276.96	2.40	66.47	2.40	66.47	4.80	132.94	4.80
Total	817.51	3411.03		491.35		491.35		982.69	2.88



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TABLE 5-50: DETAILS OF POWER PURCHASE COST FROM NHPC STATIONS FOR FY 2018-19 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Chamera	109.46	434.27	0.77	33.48	0.78	33.48	1.55	66.95	1.54
Chamera-II	69.78	324.26	0.94	30.48	0.96	30.48	1.90	60.95	1.88
Chamera-III	51.54	199.50	2.45	48.81	2.45	48.81	4.89	97.61	4.89
Dhauliganga	62.08	204.14	1.30	26.57	1.68	26.57	2.99	53.14	2.60
Salal I&II	47.96	224.85	0.51	11.49	0.61	11.49	1.12	22.98	1.02
Tanakpur	21.33	62.79	2.34	14.67	2.32	14.67	4.65	29.35	4.67
Uri	96.29	548.01	0.68	37.10	0.69	37.10	1.37	74.21	1.35
Dulhasti	93.52	527.61	2.07	109.30	2.18	109.30	4.26	218.61	4.14
Sewa-II	29.60	112.88	2.35	26.54	2.35	26.54	4.70	53.07	4.70
Uri-II	55.90	346.38	1.54	53.39	1.63	53.39	3.17	106.77	3.08
Parbati ST-II	155.00	268.30	2.11	56.70	2.11	56.70	4.23	113.41	4.23
Parbati ST-III	116.06	149.37	2.11	31.57	2.11	31.57	4.23	63.14	4.23
Kishanganga HEP	64.00	276.96	2.45	67.85	2.45	67.85	4.90	135.71	4.90
Parbati II	155.00	670.75	2.45	164.33	2.45	164.33	4.90	328.67	4.90
Total	1127.51	4350.08		712.28		712.28		1424.56	3.27

TABLE 5-51: DETAILS OF POWER PURCHASE COST FROM NHPC STATIONS FOR FY 2019-20 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Chamera	109.46	434.27	0.77	33.48	0.81	33.48	1.58	66.95	1.54
Chamera-II	69.78	324.26	0.94	30.48	1.00	30.48	1.94	60.95	1.88
Chamera-III	51.54	199.50	2.45	48.81	2.54	48.81	4.99	97.61	4.89
Dhauliganga	62.08	204.14	1.30	26.57	1.75	26.57	3.05	53.14	2.60
Salal I&II	47.96	224.85	0.51	11.49	0.63	11.49	1.14	22.98	1.02
Tanakpur	21.33	62.79	2.34	14.67	2.41	14.67	4.75	29.35	4.67
Uri	96.29	548.01	0.68	37.10	0.72	37.10	1.40	74.21	1.35
Dulhasti	93.52	527.61	2.07	109.30	2.27	109.30	4.34	218.61	4.14
Sewa-II	29.60	112.88	2.35	26.54	2.44	26.54	4.80	53.07	4.70
Uri-II	55.90	346.38	1.54	53.39	1.70	53.39	3.24	106.77	3.08



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Parbati ST-II	160.00	276.96	2.20	60.87	2.20	60.87	4.40	121.75	4.40
Parbati ST-III	116.06	149.37	2.11	31.57	2.20	31.57	4.31	63.14	4.23
Tapovan Vishnu Gad	101.00	262.24	2.45	64.25	2.45	64.25	4.90	128.50	4.90
Kishanganga HEP	64.00	276.96	2.55	70.57	2.55	70.57	5.10	141.14	5.10
Vishnugarh Pipalkoti	166.00	431.01	2.60	112.06	2.60	112.06	5.20	224.13	5.20
Parbati II	155.00	670.75	2.55	170.91	2.55	170.91	5.10	341.82	5.10
Kameng	55.00	142.81	2.60	37.13	2.60	37.13	5.20	74.26	5.20
Sub-Total NHPC	1,454.51	5194.80		939.18		939.18		1878.36	3.62

TABLE 5-52: DETAILS OF POWER PURCHASE COST FROM NPCIL STATIONS FOR FY 2017-18 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NAPP	146.92	1,015.36	-	-	2.75	279.65	2.75	279.65	2.75
RAPP #3&4	81.00	552.35	-	-	3.20	177.00	3.20	177.00	3.20
RAPP#5&6	101.20	628.96	-	-	3.86	243.01	3.86	243.01	3.86
Total	329.12	2196.68				699.66		699.66	3.19

TABLE 5-53: DETAILS OF POWER PURCHASE COST FROM NPCIL STATIONS FOR FY 2018-19 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NAPP	166.14	1148.25	-	-	2.86	329	2.86	329	2.86
RAPP #3&4	79.67	543.25	-	-	3.33	181	3.33	181	3.33
RAPP#5&6	115.06	764.90	-	-	4.02	307	4.02	307	4.02
Total	360.87	2456.41				817.30		817.30	3.33



TABLE 5-54: DETAILS OF POWER PURCHASE COST FROM NPCIL STATIONS FOR FY 2019-20 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
NAPP	166.14	1,148.25	-	-	2.98	342	2.98	342.06	2.98
RAPP #3&4	79.67	543.25	-	-	3.47	188	3.47	188.29	3.47
RAPP#5&6	115.06	764.90	-	-	4.18	320	4.18	319.64	4.18
RAPP#7&8	162.00	633.50	-	-	4.18	265	4.18	264.73	4.18
Sub-Total NPCIL	522.87	3089.91				1115		1114.73	3.61

The Commission's Analysis:

5.8.4 The Commission's assumptions for approving the power purchase quantum and cost from the NTPC, NHPC and NPCIL Stations are given in the following Tables:

TABLE 5-55: ASSUMPTIONS OF POWER PURCHASE FROM NTPC AS CONSIDERED BY THE COMMISSION

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, plant load factor (PLF) and UP state's share in respective power plant. Further the quantum is approved as per Merit order despatch principles. The Commission has also considered the actual plant load factor of such stations for the last 2 years while projecting the PLF for the Control period.
2	Fixed Charges	Fixed charges are computed after considering UP state's allocated share in respective power plant as per Regional Energy Accounting Report and Annual Report of NRPC and ERPC and fixed cost as per the latest available bills of the generating station. Further the escalation factor @ 4% per annum has been considered.
3	Variable Charges	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor @ 4% per annum has been considered.



TABLE 5-56: ASSUMPTIONS FOR POWER PURCHASE FROM NHPC STATIONS AS CONSIDERED BY THE COMMISSION

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, plant load factor (PLF) and UP State's share in respective power plant.
2	Fixed Charges	Fixed charges are computed after considering UP state's allocated share in respective power plant as per Regional Energy Accounting Report and Annual Report of NRPC and fixed cost as per the latest available bills for the period FY 2015-16 and 2016-17. Further the escalation factor @ 4% per annum has been considered.
3	Variable Charges	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor @ 4% per annum has been considered

TABLE 5-57: ASSUMPTIONS FOR POWER PURCHASE FROM NPCIL STATIONS AS CONSIDERED BY THE COMMISSION

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, capacity factor and UP state's share in respective power plant.
2	Tariff (Single part)	Variable cost is considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor @ 4% per annum has been considered.

5.8.5 Further, on analysis the Commission found that the petitioner has not considered the correct Annual Fixed charges for Rihand-III stations in FY 2017-18 and FY 2018-19 the same has been corrected as per CERC order dated 6.2.2017 for determination of tariff of Rihand- III for the period 1.4.2014 to 31.3.2019. Further, the Commission observes that the computation of fixed charges and variable charges for Koldam hydro (NTPC) plant as computed by the petitioner are not correct and the same has been corrected by the Commission in FY 2017-18, FY 2018-19 and FY 2019-20. The Commission also observes that the fixed cost per unit and variable cost per unit for the plants may vary from the costs per unit allowed in the tariff order, depending upon the quantum of power scheduled / purchased and the same shall be reviewed



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at the time of Annual Performance Review / True Up. Based on above approach, the summary of approved cost of power purchase from NTPC, NHPC and NPCIL generating stations is given in the Tables below:

TABLE 5-58: APPROVED COST OF POWER PURCHASE FROM NTPC STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Anta	100.26	42.78	2.99	12.78	2.84	12.14	5.82	24.92	5.82
Auriya	222.62	95.02	2.66	25.30	3.40	32.26	6.06	57.57	6.06
Dadri Thermal	84.00	538.63	0.86	46.18	3.54	190.56	4.40	236.75	4.40
Dadri Gas	254.06	217.00	1.19	25.74	2.75	59.76	3.94	85.49	3.94
Dadri Extension	135.00	874.29	1.50	131.36	3.28	286.48	4.78	417.84	4.78
Rihand-I	360.00	2414.63	0.85	204.41	1.85	447.49	2.70	651.90	2.70
Rihand-II	333.20	2751.00	0.72	197.59	1.68	462.77	2.40	660.36	2.40
Singrauli	822.60	6173.39	0.58	355.35	1.71	1056.11	2.29	1411.45	2.29
Tanda	440.00	2984.85	1.20	357.28	3.34	995.63	4.53	1352.92	4.53
Unchahar-I	255.53	1670.31	0.99	165.23	3.07	512.93	4.06	678.16	4.06
Unchahar-II	146.29	1142.81	0.76	86.68	3.09	352.57	3.84	439.25	3.84
Unchahar-III	71.55	570.34	1.07	60.86	3.36	191.73	4.43	252.60	4.43
Farakka	33.28	230.61	0.85	19.60	2.77	63.91	3.62	83.51	3.62
Kahalgaoon St. I	76.61	549.62	0.97	53.18	2.60	143.07	3.57	196.24	3.57
Kahalgaoon St.II Ph.II	250.95	1906.17	1.01	193.33	2.33	444.75	3.35	638.08	3.35
Koldam (Hydro)	159.12	1101.17	1.07	118.16	1.07	118.16	2.15	236.31	2.15
Rihand-III	361.40	2823.32	1.31	370.91	1.72	486.03	3.04	856.95	3.04
Total	4106.46	26085.94		2423.95		5856.35		8280.30	3.17

TABLE 5-59: APPROVED COST OF POWER PURCHASE FROM NTPC STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Anta	-	-	-	-	-	-	-	-	-
Auriya	-	-	-	-	-	-	-	-	-
Dadri Thermal	84.00	538.63	0.92	49.60	3.68	198.18	4.60	247.79	4.60
Dadri Gas	-	-	-	-	-	-	-	-	-
Dadri Extension	135.04	896.70	1.45	129.82	3.41	305.58	4.86	435.40	4.86
Rihand-I	360.00	2472.82	0.85	211.10	1.93	476.60	2.78	687.71	2.78
Rihand-II	333.20	2751.00	0.60	165.47	1.75	481.28	2.35	646.75	2.35
Singrauli	822.60	6173.39	0.60	372.85	1.78	1098.35	2.38	1471.20	2.38



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Tanda	440.00	2984.85	1.24	368.93	3.47	1035.46	4.71	1404.39	4.71
Unchahar-I	255.53	1670.31	1.03	171.39	3.19	533.45	4.22	704.84	4.22
Unchahar-II	146.29	1142.81	0.78	89.54	3.21	366.67	3.99	456.21	3.99
Unchahar-III	71.55	570.34	1.07	60.88	3.50	199.40	4.56	260.29	4.56
Farakka	33.28	230.61	0.83	19.21	2.88	66.47	3.72	85.68	3.72
Kahalgaon St. I	76.61	549.62	1.00	55.05	2.71	148.79	3.71	203.84	3.71
Kahalgaon St.II Ph.I	250.95	1906.17	1.01	192.31	2.43	462.54	3.44	654.84	3.44
Koldam (Hydro)	79.56	550.59	2.23	122.88	2.23	122.88	4.46	245.77	4.46
Rihand-III	361.40	2823.32	1.30	368.31	1.79	505.48	3.09	873.79	3.09
Uchchahar-IV	117.00	626.23	1.29	80.54	3.50	218.94	4.78	299.48	4.78
Sub-Total NTPC	3567.00	25887.38		2457.90		6220.07		8677.98	3.35

TABLE 5-60: APPROVED COST OF POWER PURCHASE FROM NTPC STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Anta	-	-	-	-	-	-	-	-	-
Auriya	-	-	-	-	-	-	-	-	-
Dadri Thermal	84.00	538.63	0.92	51.59	3.83	206.11	4.78	257.70	4.78
Dadri Gas	-	-	-	-	-	-	-	-	-
Dadri Extension	135.04	896.70	1.42	132.51	3.54	317.80	5.02	450.31	5.02
Rihand-I	360.00	2472.82	0.90	218.50	2.00	495.67	2.89	714.17	2.89
Rihand-II	333.20	2751.00	0.75	172.09	1.82	500.53	2.45	672.62	2.45
Singrauli	822.60	6173.39	0.70	387.77	1.85	1142.28	2.48	1530.05	2.48
Tanda	440.00	2984.85	1.35	381.10	3.61	1076.87	4.88	1457.98	4.88
Unchahar-I	255.53	1670.31	1.05	178.25	3.32	554.79	4.39	733.03	4.39
Unchahar-II	146.29	1142.81	0.96	93.12	3.34	381.34	4.15	474.46	4.15
Unchahar-III	71.55	570.34	1.34	63.32	3.64	207.38	4.75	270.70	4.75
Farakka	33.28	230.61	0.95	21.48	3.00	69.13	3.93	90.61	3.93
Kahalgaon St. I	76.61	549.62	1.13	57.25	2.82	154.74	3.86	211.99	3.86
Kahalgaon St.II Ph.I	250.95	1906.17	1.16	200.00	2.52	481.04	3.57	681.04	3.57
Koldam (Hydro)	79.56	550.59	2.32	127.80	2.32	127.80	4.64	255.60	4.64
Rihand-III	361.40	2823.32	1.74	416.10	1.86	525.70	3.34	941.80	3.34
Tanda Stage-II	155.00	829.62	1.35	112.31	3.61	299.31	4.96	411.61	4.96
Uchchahar-IV	117.00	818.91	1.35	110.59	3.67	300.62	5.02	411.21	5.02
Sub-Total NTPC	3722.00	26909.68		2723.77		6841.11		9564.88	3.55



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TABLE 5-61: APPROVED COST OF POWER PURCHASE FROM NHPC STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Chamera	109.46	434.27	0.75	32.54	0.75	32.54	1.50	65.08	1.50
Chamera II	69.78	324.26	0.93	30.07	0.93	30.07	1.85	60.15	1.85
Chamera III	51.55	199.50	2.35	46.94	2.35	46.94	4.71	93.88	4.71
Dhauliganga	62.08	204.14	1.62	33.06	1.62	33.06	3.24	66.11	3.24
Salal I&II	47.96	224.85	0.48	10.87	0.48	10.87	0.97	21.74	0.97
Tanakpur	21.33	62.79	2.23	13.99	2.23	13.99	4.46	27.97	4.46
Uri	96.29	548.01	0.67	36.47	0.67	36.47	1.33	72.94	1.33
Dulhasti	93.52	527.61	2.10	110.77	2.10	110.77	4.20	221.53	4.20
Sewa II (June/July -2010)	29.60	112.88	2.26	25.52	2.26	25.52	4.52	51.03	4.52
Uri-II	55.88	346.38	1.57	54.31	1.57	54.31	3.14	108.62	3.14
Parbati III	116.06	149.37	2.03	30.36	2.03	30.36	4.06	60.71	4.06
Kishanganga HEP	64.00	276.96	2.40	66.47	2.40	66.47	4.80	132.94	4.80
Sub-Total-NHPC	817.50	3411.03		491.35		491.35		982.71	2.88

TABLE 5-62: APPROVED COST OF POWER PURCHASE FROM NHPC STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Chamera	109.46	434.27	0.77	33.48	0.77	33.48	2.30	66.95	1.54
Chamera-II	69.78	324.26	0.94	30.48	0.94	30.48	2.75	60.95	1.88
Chamera-III	51.54	199.50	2.45	48.81	2.45	48.81	5.16	97.61	4.89
Dhauliganga	62.08	204.14	1.30	26.58	1.30	26.58	4.39	53.15	2.60
Salal I&II	47.96	224.85	0.51	11.49	0.51	11.49	2.55	22.98	1.02
Tanakpur	21.33	62.79	2.34	14.67	2.34	14.67	5.27	29.35	4.67
Uri	96.29	548.01	0.68	37.10	0.68	37.10	2.44	74.21	1.35
Dulhasti	93.52	527.61	2.07	109.30	2.07	109.30	6.47	218.61	4.14
Sewa-II	29.60	112.88	2.35	26.54	2.35	26.54	5.67	53.07	4.70
Uri-II	55.90	346.38	1.54	53.39	1.54	53.39	7.07	106.77	3.08
Parbati ST-II	155.00	268.30	2.11	56.70	2.11	56.70		113.41	4.23
Parbati ST-III	116.06	149.37	2.11	31.57	2.11	31.57	5.40	63.14	4.23
Kishanganga HEP	64.00	276.96	2.45	67.85	2.45	67.85	5.05	135.71	4.90
Parbati II	155.00	670.75	2.45	164.33	2.45	164.33	5.05	328.67	4.90
Sub-Total NHPC	1127.51	4350.08		712.29		712.29		1424.58	3.27



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TABLE 5-63: APPROVED COST OF POWER PURCHASE FROM NHPC STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Chamera	109.46	434.27	0.46	33.48	0.81	33.48	1.54	66.95	1.54
Chamera-II	69.78	324.26	0.54	30.48	1.00	30.48	1.88	60.95	1.88
Chamera-III	51.54	199.50	0.45	48.81	2.54	48.81	4.89	97.61	4.89
Dhauliganga	62.08	204.14	0.38	26.57	1.75	26.57	2.60	53.14	2.60
Salal I&II	47.96	224.85	0.54	11.49	0.63	11.49	1.02	22.98	1.02
Tanakpur	21.33	62.79	0.34	14.67	2.41	14.67	4.67	29.35	4.67
Uri	96.29	548.01	0.66	37.10	0.72	37.10	1.35	74.21	1.35
Dulhasti	93.52	527.61	0.65	109.30	2.27	109.30	4.14	218.61	4.14
Sewa-II	29.60	112.88	0.44	26.54	2.44	26.54	4.70	53.07	4.70
Uri-II	55.90	346.38	0.72	53.39	1.70	53.39	3.08	106.77	3.08
Parbati ST-II	160.00	276.96	0.20	60.87	2.20	60.87	4.40	121.75	4.40
Parbati ST-III	116.06	149.37	0.15	31.57	2.20	31.57	4.23	63.14	4.23
Tapovan Vishnu Gad	101.00	262.24	0.30	64.25	2.45	64.25	4.90	128.50	4.90
Kishanganga HEP	64.00	276.96	0.50	70.57	2.55	70.57	5.10	141.14	5.10
Vishnugarh Pipalkoti	166.00	431.01	0.30	112.06	2.60	112.06	5.20	224.13	5.20
Parbati II	155.00	670.75	0.50	170.91	2.55	170.91	5.10	341.82	5.10
Kameng	55.00	142.81	0.30	37.13	2.60	37.13	5.20	74.26	5.20
Sub-Total NHPC	1454.51	5194.80		939.18		939.18		1878.36	3.62

TABLE 5-64: APPROVED COST OF POWER PURCHASE FROM NPCIL STATIONS FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
					(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
NAPP	146.92	1,015.36	-	-	2.75	279.65	2.75	279.65	2.75
RAPP #3&4	81.00	552.35	-	-	3.20	177.00	3.20	177.00	3.20
RAPP#5&6	101.20	628.96	-	-	3.86	243.01	3.86	243.01	3.86
Total	329.12	2196.68				699.66		699.66	3.19



TABLE 5-65: APPROVED COST OF POWER PURCHASE FROM NPCIL STATIONS FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
					(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NAPP	166.14	1148.25	-	-	2.86	328.90	2.86	328.90	2.86
RAPP #3&4	79.67	543.25	-	-	3.33	181.05	3.33	181.05	3.33
RAPP#5&6	115.06	764.90	-	-	4.02	307.35	4.02	307.35	4.02
Total	360.87	2456.41				817.30		817.30	3.33

TABLE 5-66: APPROVED COST OF POWER PURCHASE FROM NPCIL STATIONS FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
					(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NAPP	166.14	1148.25	-	-	2.98	342.06	2.98	342	2.98
RAPP #3&4	79.67	543.25	-	-	3.47	188.29	3.47	188	3.47
RAPP#5&6	115.06	764.90	-	-	4.18	319.64	4.18	320	4.18
RAPP#7&8	162.00	633.50	-	-	4.18	264.73	4.18	265	4.18
Sub-Total NPCIL	522.87	3089.91				1115		1115	3.61

5.9 POWER PROCUREMENT FROM IPPS / JVs

The Licensees' Submission:

- 5.9.1 The cost of power purchase from IPPs within the State has been determined in accordance with UPERC (Terms and Conditions of Generation Tariff) Regulations, 2014.
- 5.9.2 The Petitioners have submitted that apart from purchase of power from the existing IPPs, they have signed PPAs under Case-1 bidding from various generators and traders such as PTC India Limited (TRN Energy & MB Power), Lanco Babandh, KSK Energy. The scheduled date of supply was 1.10.2016. However, early supply from PTC India (MB Power) and KSK Energy has already commenced from August and October 2015 respectively. Accordingly, the projected power purchase from such generators has been projected at the yearly tariff streams quoted by such generators in the Case-1 bids. Further, the petitioner submitted that it has stopped procuring power from Bajaj Hindustan



Power Plan (BEPL) since July 2017 and has accordingly not proposed any power purchase from the plant in FY 2018-19 and FY 2019-20. The petitioner has only considered the actual power purchase cost and quantum from Bajaj till June 2017 in FY 2017-18.

5.9.3 The assumptions considered by the Licensees while estimating the power purchase from the IPPs and Joint Ventures (JVs) for the MYT Control Period is provided in the Table below:

TABLE 5-67: ASSUMPTIONS FOR POWER PURCHASE FROM IPPS / JVs AS CONSIDERED BY THE DISTRIBUTION LICENSEES

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, plant load factor and UP state's share in respective power plant.
2	Tariff (Single part & Two part)	Fixed and Variable Charges have been considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17. Further the escalation factor @ 4% per annum has been considered.

5.9.4 The summary of power purchase quantum and cost estimated by Distribution Licensees for the MYT Period from IPP / JVs are provided in the Table below:

TABLE 5-68: DETAILS OF POWER PURCHASE COST FROM IPPS / JVs STATIONS FOR FY 2017-18 AS SUBMITTED BY DISTRIBUTION LICENSEES

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Nathpa Jhakri HPS	242.40	1265.14	1.63	206.65	1.46	185.02	3.10	391.67	3.10
RAMPUR	95.70	374.61	2.03	76.10	1.75	65.54	3.78	141.64	3.78
TALA POWER	44.98	157.62	0.00	0.00	2.11	33.21	2.11	33.21	2.11
Koteshwar	160.72	529.65	2.03	107.68	1.97	104.57	4.01	212.25	4.01
Srinagar	290.00	1135.18	3.25	368.77	2.59	293.74	5.84	662.51	5.84
Sasan	495.00	3685.77	0.17	62.97	1.76	649.82	1.93	712.79	1.93
MB Power	361.00	2529.89	2.66	672.92	1.44	364.69	4.10	1037.61	4.10
KSK	1000.00	4782.96	2.07	989.33	2.31	1106.77	4.38	2096.09	4.38
TRN Energy	390.00	1270.90	1.90	241.86	1.41	179.22	3.31	421.08	3.31
Karcham-Wangtoo	200.00	173.97	0.00	0.00	4.13	71.85	4.13	71.85	4.13



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
VISHNUPRAYAG	352.00	2082.12	0.76	157.69	1.45	302.40	2.21	460.09	2.21
TEHRI STAGE-I	388.20	1343.93	2.91	390.65	2.86	384.16	5.77	774.81	5.77
Rosa Power Project	600.00	3826.37	1.65	632.58	3.27	1250.69	4.92	1883.27	4.92
Rosa Power Project	600.00	3826.37	1.65	632.58	3.27	1252.16	4.93	1884.74	4.93
Bara	1782.00	9909.82	1.68	1662.98	2.49	2466.57	4.17	4129.56	4.17
Anpara 'C'	1100.00	7453.45	0.92	689.08	3.00	2233.24	3.92	2922.32	3.92
IGSTPP, Jhajhjar	16.50	86.72	2.58	22.41	4.35	37.71	6.93	60.13	6.93
*Bajaj Hindusthan	450.00	606.96	2.34	141.99	4.18	253.89	6.52	395.88	6.52
Lalitpur	1980.00	10625.86	2.05	2173.35	2.97	3152.82	5.01	5326.17	5.01
RKM Powergen	350.00	1995.97	2.37	473.00	1.47	293.24	3.84	766.23	3.84
Teesta	200.00	483.55	2.00	96.71	2.00	96.71	4.00	193.42	4.00
Total	11098.5	58146.80		9799.29		14778.01		24577.30	4.23

*The energy procured at actual from April 17 to June 17 has been considered.

**TABLE 5-69: DETAILS OF POWER PURCHASE COST FROM IPPS / JVs STATIONS FOR FY 2018-19
AS SUBMITTED BY DISTRIBUTION LICENSEES**

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Nathpa Jhakri HPS	242.40	1265.14	1.70	214.91	1.52	192.42	3.22	407.33	3.22
RAMPUR	62.09	270.06	2.11	57.05	1.82	49.14	3.93	106.19	3.93
TALA POWER	44.98	197.02	0.00	0.00	2.19	43.17	2.19	43.17	2.19
Koteshwar	160.72	696.91	2.11	147.35	2.05	143.10	4.17	290.45	4.17
Srinagar	290.00	1261.31	3.38	426.13	2.69	339.43	6.07	765.56	6.07
Sasan	495.00	3685.77	0.18	65.49	1.83	675.82	2.01	741.30	2.01
MB Power	361.00	2688.01	2.77	743.58	1.50	402.98	4.27	1146.56	4.27
KSK	1000.00	6377.28	2.15	1371.86	2.41	1534.72	4.56	2906.58	4.56
TRN Energy	390.00	2224.08	1.98	440.18	1.47	326.18	3.45	766.36	3.45
Karcham-Wangtoo	200.00	869.87	0.00	0.00	4.29	373.60	4.29	373.60	4.29
VISHNUPRAYAG	352.00	2082.12	0.79	164.00	1.51	314.49	2.30	478.49	2.30
TEHRI STAGE-I	388.20	1679.91	3.02	507.84	2.97	499.41	6.00	1007.26	6.00
Rosa Power Project	600.00	4065.52	1.54	627.37	3.40	1382.01	4.94	2009.38	4.94
Rosa Power Project	600.00	4065.52	1.54	627.37	3.40	1383.64	4.95	2011.00	4.95



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Bara	1782.00	12572.16	1.75	2194.15	2.59	3254.41	4.33	5448.55	4.33
Anpara 'C'	1100.00	7453.45	0.96	716.64	3.12	2322.57	4.08	3039.21	4.08
IGSTPP, Jhajhjar	16.50	119.97	2.69	32.25	4.52	54.26	7.21	86.50	7.21
Bajaj Hindusthan	-	-	-	-	-	-	-	-	-
Lalitpur	1980.00	13895.35	1.56	2173.35	3.09	4287.83	4.65	6461.18	4.65
RKM Powergen	350.00	2423.67	2.46	597.33	1.53	370.32	3.99	967.64	3.99
Teesta	200.00	967.10	2.08	201.16	2.08	201.16	4.16	402.32	4.16
NTPC Meja	495.00	2419.60	2.23	540.56	2.30	556.51	4.53	1097.07	4.53
Total	11109.89	71279.80		11848.56		18707.15		30555.71	4.29

**TABLE 5-70: DETAILS OF POWER PURCHASE COST FROM IPPS / JVs STATIONS FOR FY 2019-20
AS SUBMITTED BY DISTRIBUTION LICENSEES**

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Nathpa Jhakri HPS	242.40	1265.14	1.77	223.51	1.58	200.12	3.35	423.63	3.35
RAMPUR	62.09	324.07	2.20	71.20	1.89	61.32	4.09	132.53	4.09
TALA POWER	44.98	236.43	0.00	0.00	2.28	53.87	2.28	53.87	2.28
Koteshwar	160.72	836.30	2.20	183.89	2.14	178.59	4.33	362.48	4.33
Srinagar	290.00	1513.57	3.51	531.81	2.80	423.61	6.31	955.42	6.31
Sasan	495.00	3685.77	0.18	68.10	1.91	702.85	2.09	770.95	2.09
MB Power	361.00	2688.01	2.88	773.32	1.56	419.10	4.44	1192.42	4.44
KSK	1000.00	6377.28	2.24	1426.74	2.50	1596.11	4.74	3022.84	4.74
TRN Energy	390.00	2541.80	2.06	523.19	1.53	387.68	3.58	910.87	3.58
Karcham-Wangtoo	200.00	1130.83	0.00	0.00	4.47	505.10	4.47	505.10	4.47
VISHNUPRAYAG	352.00	2296.45	0.82	188.12	1.57	360.74	2.39	548.86	2.39
TEHRI STAGE-I	388.20	2587.06	3.14	813.36	3.09	799.86	6.24	1613.22	6.24
Rosa Power Project	600.00	4065.52	1.54	627.37	3.54	1437.30	5.08	2064.66	5.08
Rosa Power Project	600.00	4065.52	1.54	627.37	3.54	1438.98	5.08	2066.35	5.08
Bara	1782.00	12572.16	1.82	2281.91	2.69	3384.58	4.51	5666.49	4.51
Anpara 'C'	1100.00	7453.45	1.00	745.31	3.24	2415.47	4.24	3160.78	4.24
IGSTPP, Jhajhjar	16.50	119.97	2.80	33.54	4.70	56.43	7.50	89.96	7.50
Bajaj Hindusthan	-	-	-	-	-	-	-	-	-



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Lalitpur	1980.00	13895.35	1.56	2173.35	3.21	4459.34	4.77	6632.69	4.77
RKM Powergen	350.00	2423.67	2.56	621.22	1.59	385.13	4.15	1006.35	4.15
Teesta	200.00	967.10	2.16	209.20	2.16	209.20	4.33	418.41	4.33
NTPC Meja	990.00	6855.53	2.32	1592.85	2.39	1639.84	4.72	3232.69	4.72
Total	11604.89	77900.97		13715.35		21115.24		34830.59	4.47

The Commission's Analysis:

5.9.5 The Commission, on analysis observed that for Tehri Plant the average cost claimed by the petitioner is Rs. 5.77 / kWh which is higher than the per unit cost for Tehri in FY 2016-17 is Rs. 5.54 / kWh and from the first quarter of FY 2017-18 is Rs. 5.23 / kWh. The Commission is of the view that the fixed cost per unit and variable cost per unit for the plants may vary from the costs per unit approved in PPAs or allowed in this Order, depending upon the quantum of power scheduled / purchased and the same shall be reviewed at the time of Annual Performance Review / True Up. The Commission's assumptions for approving the power purchase quantum and cost from the IPPs / JVs are given in the following Tables:

TABLE 5-71: ASSUMPTIONS FOR POWER PURCHASE FROM IPPS / JVs AS CONSIDERED BY THE COMMISSION

S. No.	Particulars	Assumption
1	Power Purchase Quantum	Net Power Purchase Quantum is derived as a product of respective power plants MW capacity, plant load factor and UP state's share in respective power plant. Further the quantum is approved as per Merit order despatch principles.
2	Tariff (Single part & Two part) for IPPs / JVs	Fixed and Variable Charges have been considered as per the recent energy bills raised for the period FY 2015-16 and 2016-17 and April 17 to June 17. Further the escalation factor @ 4% per annum has been considered.



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TABLE 5-72: APPROVED COST OF POWER PURCHASE FROM IPPS / JVs FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Nathpa Jhakri HPS	242.40	1265.14	1.63	206.65	1.46	185.02	3.10	391.67	3.10
RAMPUR	95.70	374.61	2.03	76.10	1.75	65.54	3.78	141.64	3.78
TALA POWER	44.98	157.62	0.00	0.00	2.11	33.21	2.11	33.21	2.11
Koteshwar	160.72	529.65	2.03	107.68	1.97	104.57	4.01	212.25	4.01
Srinagar	290.00	1135.18	3.25	368.77	2.59	293.74	5.84	662.51	5.84
Sasan	495.00	3685.77	0.17	62.97	1.76	649.82	1.93	712.79	1.93
MB Power	361.00	2529.89	2.66	672.92	1.44	364.69	4.10	1037.61	4.10
KSK	1000.00	4782.96	2.07	989.33	2.31	1106.77	4.38	2096.09	4.38
TRN Energy	390.00	1270.90	1.90	241.86	1.41	179.22	3.31	421.08	3.31
Karcham-Wangtoo	200.00	173.97	0.00	0.00	4.13	71.85	4.13	71.85	4.13
VISHNUPRAYAG	352.00	2082.12	0.76	157.69	1.45	302.40	2.21	460.09	2.21
TEHRI STAGE-I	388.20	1343.93	2.91	390.65	2.86	384.16	5.77	774.81	5.77
Rosa Power Project	600.00	3826.37	1.65	632.58	3.27	1250.69	4.92	1883.27	4.92
Rosa Power Project	600.00	3826.37	1.65	632.58	3.27	1252.16	4.93	1884.74	4.93
Bara	1782.00	9909.82	1.68	1662.98	2.49	2466.57	4.17	4129.56	4.17
Anpara 'C'	1100.00	7453.45	0.92	689.08	3.00	2233.24	3.92	2922.32	3.92
IGSTPP, Jhajhjar	16.50	86.72	2.58	22.41	4.35	37.71	6.93	60.13	6.93
*Bajaj Hindusthan	450.00	606.96	2.34	142.00	4.18	253.89	6.52	395.89	6.52
Lalitpur	1980.00	10625.86	2.05	2173.35	2.97	3152.82	5.01	5326.17	5.01
RKM Powergen	350.00	1995.97	2.37	473.00	1.47	293.24	3.84	766.23	3.84
Teesta	200.00	483.55	2.00	96.71	2.00	96.71	4.00	193.42	4.00
Total	11098.50	58146.80		9799.30		14778.01		24577.31	4.23

*The energy procured at actual from April 17 to June 17 has been considered.

TABLE 5-73: APPROVED COST OF POWER PURCHASE FROM IPPS / JVs FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Nathpa Jhakri HPS	242.40	1265.14	1.70	214.91	1.52	192.42	3.22	407.33	3.22
RAMPUR	62.09	270.06	2.11	57.05	1.82	49.14	3.93	106.19	3.93
TALA POWER	44.98	197.02	0.00	0.00	2.19	43.17	2.19	43.17	2.19



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Koteshwar	160.72	696.91	2.11	147.35	2.05	143.10	4.17	290.45	4.17
Srinagar	290.00	1261.31	3.38	426.13	2.69	339.43	6.07	765.56	6.07
Sasan	495.00	3685.77	0.18	65.49	1.83	675.82	2.01	741.30	2.01
MB Power	361.00	2688.01	2.77	743.58	1.50	402.98	4.27	1146.56	4.27
KSK	1000.00	6377.28	2.15	1371.86	2.41	1534.72	4.56	2906.58	4.56
TRN Energy	390.00	2224.08	1.98	440.18	1.47	326.18	3.45	766.36	3.45
Karcham-Wangtoo	200.00	869.87	0.00	0.00	4.29	373.60	4.29	373.60	4.29
Vishnuprayag	352.00	2082.12	0.79	164.00	1.51	314.49	2.30	478.49	2.30
TEHRI STAGE-I	388.20	1679.91	3.02	507.84	2.97	499.41	6.00	1007.26	6.00
Rosa Power Project	600.00	4065.52	1.54	627.37	3.40	1382.01	4.94	2009.38	4.94
Rosa Power Project	600.00	4065.52	1.54	627.37	3.40	1383.64	4.95	2011.00	4.95
Bara	1782.00	12572.16	1.75	2194.15	2.59	3254.41	4.33	5448.55	4.33
Anpara 'C'	1100.00	7453.45	0.96	716.64	3.12	2322.57	4.08	3039.21	4.08
IGSTPP, Jhahjhar	16.50	119.97	2.69	32.25	4.52	54.26	7.21	86.50	7.21
Bajaj Hindusthan	-	-	-	-	-	-	-	-	-
Lalitpur	1980.00	13895.35	1.56	2173.35	3.09	4287.83	4.65	6461.18	4.65
RKM Powergen	350.00	2423.67	2.46	597.33	1.53	370.32	3.99	967.64	3.99
Teesta	200.00	967.10	2.08	201.16	2.08	201.16	4.16	402.32	4.16
NTPC Meja	495.00	2419.60	2.23	540.56	2.30	556.51	4.53	1097.07	4.53
Sub-Total IPP/JV	11109.89	71279.80		11848.56		18707.15		30555.71	4.29

TABLE 5-74: APPROVED COST OF POWER PURCHASE FROM IPPS / JVs FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Nathpa Jhakri HPS	242.40	1265.14	1.77	223.51	1.58	200.12	3.35	423.63	3.35
RAMPUR	62.09	324.07	2.20	71.20	1.89	61.32	4.09	132.53	4.09
TALA POWER	44.98	236.43	0.00	0.00	2.28	53.87	2.28	53.87	2.28
Koteshwar	160.72	836.30	2.20	183.89	2.14	178.59	4.33	362.48	4.33
Srinagar	290.00	1513.57	3.51	531.81	2.80	423.61	6.31	955.42	6.31
Sasan	495.00	3685.77	0.18	68.10	1.91	702.85	2.09	770.95	2.09
MB Power	361.00	2688.01	2.88	773.32	1.56	419.10	4.44	1192.42	4.44
KSK	1000.00	6377.28	2.24	1426.74	2.50	1596.11	4.74	3022.84	4.74



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
TRN Energy	390.00	2541.80	2.06	523.19	1.53	387.68	3.58	910.87	3.58
Karcham-Wangtoo	200.00	1130.83	0.00	0.00	4.47	505.10	4.47	505.10	4.47
VISHNUPRAYAG	352.00	2296.45	0.82	188.12	1.57	360.74	2.39	548.86	2.39
TEHRI STAGE-I	388.20	2587.06	3.14	813.36	3.09	799.86	6.24	1613.22	6.24
Rosa Power Project	600.00	4065.52	1.54	627.37	3.54	1437.30	5.08	2064.66	5.08
Rosa Power Project	600.00	4065.52	1.54	627.37	3.54	1438.98	5.08	2066.35	5.08
Bara	1782.00	12572.16	1.82	2281.91	2.69	3384.58	4.51	5666.49	4.51
Anpara 'C'	1100.00	7453.45	1.00	745.31	3.24	2415.47	4.24	3160.78	4.24
IGSTPP, Jhajhjar	16.50	119.97	2.80	33.54	4.70	56.43	7.50	89.96	7.50
Bajaj Hindusthan	-	-	-	-	-	-	-	-	-
Lalitpur	1980.00	13895.35	1.56	2173.35	3.21	4459.34	4.77	6632.69	4.77
RKM Powergen	350.00	2423.67	2.56	621.22	1.59	385.13	4.15	1006.35	4.15
Teesta	200.00	967.10	2.16	209.20	2.16	209.20	4.33	418.41	4.33
NTPC Meja	990.00	6855.53	2.32	1592.85	2.39	1639.84	4.72	3232.69	4.72
Total	11604.89	77900.97		13715.35		21115.24		34830.59	4.47

5.10 POWER PROCUREMENT FROM OTHER SOURCES

The Licensees' Submission:

5.10.1 The Licensee's submission of power purchased from Co-generating stations, Solar energy sources and NTPC Vidyut Vyapar Nigam Ltd. (NVVNL) for the MYT Period is provided in the Table below:

TABLE 5-75: POWER PURCHASE COST: STATE CO-GENERATION FACILITIES, SOLAR AND OTHER SOURCES FOR FY 2017-18

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Captive and Cogen	3,412	-	-	5.18	1,766	5.18	1,766	5.18
Renewable Energy	553	-	-	6.46	358	6.46	358	6.46
NVVN Coal Power	352	-	-	5.12	180	5.12	180	5.12
Total	4317.09				2303.54		2303.54	5.34



TABLE 5-76: POWER PURCHASE COST: STATE CO-GENERATION FACILITIES, SOLAR AND OTHER SOURCES FOR FY 2018-19

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Captive and Cogen	3412.33	-	-	5.38	1,837	5.38	1,837	5.38
Renewable Energy	1998.54	-	-	5.04	1,008	5.04	1,008	5.04
NVVN Coal Power	351.62	-	-	5.33	187	5.33	187	5.33
Total	5762.49				3031.81		3031.81	5.26

TABLE 5-77: POWER PURCHASE COST: STATE CO-GENERATION FACILITIES, SOLAR AND OTHER SOURCES FOR FY 2019-20

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Captive and Cogen	3412.33	-	-	5.60	1910.05	5.60	1910.05	5.60
Renewable Energy	3641.04	-	-	4.80	1747.11	4.80	1747.11	4.80
NVVN Coal Power	351.62	-	-	5.54	194.73	5.54	194.73	5.54
Total	7404.99				3851.89		3851.89	5.20

The Commission's Analysis:

- 5.10.2 In an effort to encourage renewable generation, the Commission has mandated that the Distribution Licensees shall, based on availability, procure a minimum % of power from the renewable energy sources including Co-generating stations available in the State as well as from the solar energy sources.
- 5.10.3 The Commission in its deficiency sought information from the Petitioners regarding the details of procurement of power from renewable sources along with the status of RPO Compliance and the RPO compliance status for the last 3 years and the current year. The Commission also asked the Petitioners to submit a quarterly action plan for achievement of RPO compliance targets for the previous years and current year. In response, the Petitioners submitted the details for procuring power from renewable sources with status RPO Compliance for the last few years as under:



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Financial Year	Status of RPO-Fulfilment			
	Non-Solar			
	Renewable Energy Purchased(MU)	Total Energy Purchased(MU)	Target as per Regulation (%)	RPO Achieved (%)
2010-11	2978.77	65375.42	3.75	4.56
2011-12	5152.37	74479.61	4.50	6.92
2012-13	3719.98	77707.16	5.00	4.66
2013-14	3318.20	84251.84	5.00	3.94
2014-15	2883.61	86431.18	5.00	3.34
2015-16	2990.81	85597.03	5.00	3.50

Financial Year	Status of RPO-Fulfilment			
	Solar			
	Renewable Energy Purchased(MU)	Total Energy Purchased(MU)	Target as per Regulation (%)	RPO Achieved (%)
2010-11	-	65375.42	0.25	-
2011-12	-	74479.61	0.50	-
2012-13	11.04	77707.16	1.00	0.01
2013-14	82.29	84251.84	1.00	0.1
2014-15	141.82	86431.18	1.00	0.16
2015-16	226.22	85597.03	1.00	0.26

5.10.4 The Petitioners further submitted that they have considered a weighted average price of Rs. 4.50 / kWh for the renewable energy procurement during the MYT Period. Further, they stated that under the present competitive industry scenario, the petitioners hope that there would be a further decrease in the prices of renewable energy and same would be submitted to the Commission at the time of Annual Performance Review. In regard with the firm plan and steps considered to comply the RPO for the MYT Control Period, the Petitioners submitted that they have envisaged a renewable energy generation capacity addition of around 3416 MW during the MYT control period resulting in fulfilment of RPO compliance of the Petitioner. Further, in response to the Commission`s query regarding purchase of REC (Renewable Energy Certificates) purchased and amount deposited in the RPO Regulatory Fund, (if any) in compliance with Regulation 7 of Uttar Pradesh Electricity Regulatory Commission (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010, the petitioners submitted that that no REC (Renewable Energy Certificates) have been purchased till date.



- 5.10.5 The Commission, for projecting the power purchase for the MYT Period, has considered the quantum from captive and cogenerating stations as submitted by the Licensees. The Commission is of the view that the rate of solar power has been decreasing in past years and the petitioners have also estimated the same during the Control period, the Commission is approving the power purchase cost from solar energy sources for the Control period as submitted by the Petitioners.
- 5.10.6 Further, although the Commission has considered the quantum from renewable sources as estimated by the Licensees for projection purposes, however, the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 specifies that during each Financial Year, every obligated entity shall purchase a minimum 6 % of its total consumption of electricity (in kWh) from Renewable Energy (RE) sources under RPO (5% from Non-solar and 1% from Solar). **In view of the same, the Commission directs the Licensees to procure renewable energy in accordance with Regulation 4 of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 as amended from time to time to meet their obligation and submit a quarterly action plan for achievement of RPO compliance targets for the MYT Control Period. The Licensees are directed to submit the above figures for FY 2016 - 17 along with the Annual Performance Review. The Commission shall review the same at the time of Annual Performance Review and non-compliance of the RPO targets shall be strictly dealt in terms of UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010.**
- 5.10.7 Based on the above, the approved power purchase quantum and cost from the Co-generating stations and Solar energy sources for the MYT Period is provided in the Table below:

TABLE 5-78: APPROVED COST OF POWER PURCHASE FROM STATE CO-GENERATION FACILITIES AND SOLAR ENERGY SOURCES FOR FY 2017-18

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Captive and Cogen	3412.33	-	-	5.18	1765.95	5.18	1765.95	5.18
Solar Energy	553.14	-	-	6.46	357.56	6.46	357.56	6.46
NVVN Coal Power	351.62	-	-	5.12	180.04	5.12	180.04	5.12



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Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Total	4317.09				2303.54		2303.54	5.34

TABLE 5-79: APPROVED COST OF POWER PURCHASE FROM STATE CO-GENERATION FACILITIES AND SOLAR ENERGY SOURCES FOR FY 2018-19

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Captive and Cogen	3412.33	-	-	5.38	1836.59	5.38	1836.59	5.38
Solar Energy	1998.54	-	-	5.04	1007.99	5.04	1007.99	5.04
NVVN Coal Power	351.62	-	-	5.33	187.24	5.33	187.24	5.33
Total	5762.49				3031.81		3031.81	5.26

TABLE 5-80: APPROVED COST OF POWER PURCHASE FROM STATE CO-GENERATION FACILITIES AND SOLAR ENERGY SOURCES FOR FY 2019-20

Source of Power	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Captive and Cogen	3412.33	-	-	5.60	1910.05	5.60	1910.05	5.60
Solar Energy	3641.04	-	-	4.80	1747.11	4.80	1747.11	4.80
NVVN Coal Power	351.62	-	-	5.54	194.73	5.54	194.73	5.54
Total	7404.99				3851.89		3851.89	5.20

5.11 POWER PROCUREMENT FROM BILATERAL SOURCES

The Licensees' Submission:

- 5.11.1 The Petitioners have submitted that they will procure the short-term and peak power from Bilateral sources or power exchanges. The Licensee's submission of power purchase from bilateral sources for the MYT Control Period is provided in the Table below:



**TABLE 5-81: DETAILS OF POWER PURCHASE COST FROM IEX & PXIL / UI / BILATERAL AS
SUBMITTED BY DISTRIBUTION LICENSEES**

Inter system exchange (Bilateral & PXIL) / UI	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
FY 2017-18	862.48	-	-	3.80	327.74	3.80	327.74	3.80
FY 2018-19	5710.53	-	-	4.00	2284.21	4.00	2284.21	4.00
FY 2019-20	17180.95	-	-	4.20	7216.00	4.20	7216.00	4.20

The Commission's Analysis:

- 5.11.2 The Commission based on the submission of the Licensees has assessed the rate for Power purchase from other / emergency sources as Rs. 3.80 / kWh, Rs. 4.00/ kWh and Rs.4.20/ kWh for FY 2017-18, FY 2018-19 and FY 2019-20 respectively. In accordance with Regulation 19(c) of the Distribution MYT Tariff Regulations, 2014, the Commission hereby approves a maximum ceiling rate of as Rs. 3.80 / kWh, Rs. 4.00/ kWh and Rs.4.20/ kWh for FY 2017-18, FY 2018-19 and FY 2019-20 respectively towards power purchase cost from short term sources. Further, if at any point of time, the Licensees are required to purchase the power at the rate more than the above ceiling limit, the same should be done after obtaining prior approval of the Commission. It may be noted that the average power purchase rate from other / emergency sources should not be more than the specified ceiling limit.
- 5.11.3 Considering the above, the approved power purchase from bilateral sources for the MYT Period is provided in the Table below:

TABLE 5-82: APPROVED COST OF POWER PURCHASE FROM IEX & PXIL / UI / BILATERAL

Inter system exchange (Bilateral & PXIL) / UI	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
		(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
FY 2017-18	862.48	-	-	3.80	327.74	3.80	327.74	3.80
FY 2018-19	5710.53	-	-	4.00	2284.21	4.00	2284.21	4.00
FY 2019-20	17180.95	-	-	4.00	6872.38	4.00	6872.38	4.00

- 5.11.4 Considering that the Distribution Licensees may need to buy power in exigency to meet immediate and urgent power delivery, the Commission would also like to mention that any quantum of power purchased from emergency / other sources should be procured only through bilateral sources / power exchanges



or through competitive bidding route to the extent possible following the “Guidelines for short-term (i.e. for a period of more than one day to one year) Procurement of Power by Distribution Licensees through Tariff based bidding process” / framework laid down by Gol on March, 2016.

- 5.11.5 The Commission initiated a Suo-Moto proceeding in the matter of power purchase being made by UPPCL from the power exchange. In its Order dated June 9, 2016 the Commission held that the opportunity of cheaper prices in the exchange can be utilised by UPPCL by reducing the load of costly power stations to the technical minimum. UPPCL should carry out a detailed exercise to ascertain that how the total power purchase cost can be reduced further without compromising the availability of power to the consumers. Many utilities in other States have taken advantage of cheaper power by reorganising their scheduling practices. In the aforesaid Order the Commission also gave the following direction:

“The Commission directs UPPCL to submit a power purchase plan showing that how it will take the advantage of cheaper power either through the Energy Exchanges or other sources. The Commission would monitor the steps taken by UPPCL in future on monthly basis. UPPCL should submit the details of monthly power procurement to the Commission highlighting the efforts made by it in the light of observations made by the Commission.”

Thus, in line with the above Order the Petitioner / UPPCL is directed to comply with the above direction of the Commission.

- 5.11.6 The Commission, in Regulation 19.2 (11) of the Distribution MYT Tariff Regulations, 2014, has specified that in the regime of Availability Based Tariff (ABT), the cost of power purchase through UI shall be allowed to be passed through in tariff of the subsequent year subject to the following conditions:

“a) The average rate for power purchased through UI should not exceed the maximum rate for power purchased under the Merit Order of the Licensee as approved by the Commission.

b) The total cost of electricity units purchased through UI shall be restricted to 10% of total power purchase cost approved by the Commission.



Provided that where the average rate for power purchased under UI exceeds the maximum specified rate of power purchase under the Merit Order of the Licensee, the cost of such power purchase shall be allowed to be passed through in tariffs of the subsequent year at the maximum rate for power purchase under the Merit Order of the Licensee as approved by the Commission whether the ceiling limit of 10% as stated in 11 (b) above has reached or not.”

- 5.11.7 The Commission is of the view that the UI mechanism is intended for maintaining discipline in the grid operations and is not to be treated as a regular source for power purchase. Hence, the Commission reiterates that the Licensees should take due care while overdrawing power from the grid (if any), especially when the UI rates are high.
- 5.11.8 The Commission would also like to caution the Licensees here that this issue would be dealt with at the time of True-up and any power purchases undertaken in contravention to the provisions of the Distribution MYT Tariff Regulations, 2014 would be disallowed and the Licensees would have to bear the cost for the same.
- 5.11.9 Further, the Commission would like to reiterate that the Licensees should assess the demand supply position in the State in advance and make its best endeavour to enter into bilateral contracts with generators / traders for meeting the envisaged demand supply gap. This would enable them to optimise the power purchase expenses.
- 5.11.10 The Licensees needs to adopt a transparent procedure based on competitive bidding for procuring power on short-term basis.

5.12 FUEL & POWER PURCHASE COST ADJUSTMENT SURCHARGE (FPPCA) / INCREMENTAL POWER PROCUREMENT COST

- 5.12.1 The Commission in the Review Petition No. 893/2013 filed by UPPCL, MVVNL, PVVNL, PuVVNL, DVVNL & KESCo in the matter of “Review of the Mechanism for Fuel & Power Purchase Cost Adjustment formulated by the Commission”, had approved the revised formula / procedure with respect to the applicability and recovery of Fuel and Power Purchase Cost Adjustment (FPPCA) in its Tariff Order dated June 18, 2015 for FY 2015-16 as detailed below:

6.9 Fuel and Power Purchase Cost Adjustment (FPPCA):



1. Recovery Periodicity (Cycle):

The cycle will be quarterly. The FPPCA for the quarter ending March will be calculated in next quarter i.e. up to June when the data / bills from generators / suppliers and sale of energy data for the quarter under consideration are available and the same will be applicable to all categories w.e.f. July.

2. Fuel & Power Purchase Cost Adjustment Formula (FPPCA):

1. The distribution licensee shall recover FPPCA amount with effect from a date which would be issued by a separate Commission's order from all consumers. The formula is as follows:

Step (A) Determination of Difference between Actual and Approved Power Purchase Cost in a quarter

$$P_D = (P_{actual} - P_{approved})$$

Where,

P_D = Difference in Actual and Approved Power Purchase Cost (Rs. Crore)

P_{actual} = Actual Cost of Power Purchase (Rs. Crore)

$P_{approved}$ = Approved Cost of Power Purchase (Rs. Crore)

Step (B) Determination of (E) Energy billed (in MUs) in a quarter after considering approved T&D losses.

Actual power purchased during the quarter (MUs) : X (MUs)

Approved T&D losses : Y%

Approved MUs billed after T&D losses (E) : $X * (1 - Y / 100)$

Step (C) Determination of Category wise Fuel & Power Purchase Cost Adjustment per unit based on approved T&D losses to be charged from consumers each month of the quarter

$$\text{Category wise FPPCA (Rs. / unit)} = ABR_C / ABR_D * FPPCA_A$$

Where,

$FPPCA_A$ is Average Fuel and Power Purchase Cost Adjustment (in Rs. / kWh)
 $= (P_D / E) * 10$



ABR_c is Average Billing Rate or through rate of Consumer Category (in Rs. / kWh) as approved in Tariff Order for the year

ABR_D is Average Billing Rate or through rate of Distribution Licensee (in Rs. / kWh) as approved in Tariff Order for the year

2. The variation in power purchase cost due to UI and other unapproved purchases from short term sources shall not be covered under FPPCA-

3. For the purpose of recovery of FPPCA, power purchase cost shall include all the bills received by the distribution licensee, from the suppliers of the power, during the previous FPPCA cycle irrespective of the period to which they pertain. This shall include arrears and refunds, if any, not settled earlier.

4. The total FPPCA recoverable, as per the formula specified above, shall be recovered from the actual sales and in case of unmetered consumers, it shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology / mechanism as may be stipulated by the Commission.

5. Per unit rate of FPPCA shall be worked out in paisa after rounding off to the unit place.

6. In case of negative FPPCA, the credit shall be given to the consumers under the FPPCA head, so that the base tariff determined by the Commission effectively remains the same.

7. The Distribution licensee shall submit details to the Commission on a quarterly basis towards the computation of the FPPCA, which shall include the source wise power purchase quantum, power purchase cost incurred and power purchase rate, details of the FPPCA incurred and the FPPCA chargeable from the consumers for each month in such quarter, along with the detailed computations and supporting documents as may be required for approval by the Commission.

Provided that the above submission made to the Commission must be certified by a Chartered Accountant.

Provided further that the FPPCA applicable for each month shall be displayed prominently at the collection centres and the offices dealing with consumers and on the internet website of the Distribution Licensee.



Provided that the Distribution Licensee shall put up on his internet website such details of the FPPCA incurred and the FPPCA charged to all consumers for each month along with detailed computations.

8. In case of Minimum Charges, FPPCA shall be charged only on actual units consumed by the consumer during the relevant month in addition to the Minimum Charges amount.

9. In case Government of Uttar Pradesh decided to provide subsidy on FPPCA to a particular consumer category then, it should do the same as per the provisions of Section 65 of Electricity Act 2003. It shall be the responsibility of the licensee to seek prior approval of the State Government in this regard and maintain appropriate record of the same.

10. The Commission may however suitably modify / change the proposed formula / procedure or adopt a different formula / procedure for the assessment of fuel surcharge if it considers it to be more appropriate.

- 5.12.2 In view of the above provisions, in the Tariff Order for FY 2015-16 dated June 18, 2015 the UPPCL vide its Letter No. 2867 / CE / RAU/ FPPCA dated September 29, 2016 had filed the FPPCA for the 1st quarter of FY 2016-17 i.e. April'2016 to June'2016 and it submitted that the FPPCA charge for the 1st quarter was Rs. 0.00 /unit. Hence, as per the provisions of the Tariff Order no FPPCA charge was applicable for the 1st quarter of FY 2016-17 (April'2016 to June'2016).
- 5.12.3 Thereafter, UPPCL vide its Letter No. 215 / CE / RAU/ FPPCA dated January 21, 2017 had filed the FPPCA for the 2nd quarter of FY 2016-17 i.e. July'2016 to September'2016 and submitted that FPPCA charge for the 2nd quarter was Rs. 0.00 /unit. Hence, as per the provisions of the Tariff Order no FPPCA charge was applicable for the 2nd quarter of FY 2016-17 (July'2016 to September'2016).
- 5.12.4 Further, the Commission, through its various Tariff Orders Directions / Letters / Deficiency notes (during ARR processing) had been repeatedly asking the State Distribution Licensees to file FPPCA in a timely and regular manner. In view of the above, the Commission vide its Letter dated August 2, 2017, directed UPPCL / State Discoms to file the FPPCA for 3rd & 4th quarter of FY 2016-17 as per the directions of the Commission.
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- 5.12.5 In view of the above directions, UPPCL filed a Petition dated August 18, 2017 in the matter of FPPCA for 3rd and 4th Quarter of FY 2016-17 (i.e. October'2016 to December'2016 and January'2017 to March'2017 respectively). A preliminary analysis of the Petition was done by the Commission, wherein certain deficiencies / discrepancies were observed.
- 5.12.6 The Commission vide its Letter dated September 11, 2017 asked UPPCL to submit the audited statement of Quarter - wise actual Power Purchased quantum & cost from various sources / power stations, wherein the above statement should be certified by Director (Finance), UPPCL and also a Chartered Accountant. In view of the above, UPPCL vide its Letter dated October 25, 2017 submitted the certified copy of the FPPCA submission by a Chartered Accountant. It was further submitted that electricity import – export and payment circle has informed UPPCL that audited statement of quarter wise actual power purchase quantum is not available. Hence, Director (Finance), UPPCL can provide the certified copy only after the audit of FY 2016-17 is completed.
- 5.12.7 In view of the above incomplete submission made by UPPCL, the Commission will deal the same at the time of truing of FY 2016-17.
- 5.12.8 For the purpose of Fuel & Power Purchase Cost Adjustment (FPPCA) / Incremental Power Procurement Cost (Incremental Cost), the projected monthly power purchase requirement is provided in this Order, which is derived from the monthly power purchase submitted by the Licensees.
- 5.12.9 It is to be noted that the power purchase expenses being an uncontrollable expense, is pass-through to the consumers, however, the difference between the actual cost of power procurement and the approved power purchase expenses, is being recovered by the Distribution Licensees at the time of truing up. The time lag in recovery of the variation in power purchase expenses adversely affects the cash flow of the Distribution Licensees and also puts additional burden on consumers on account of Carrying Cost.
- 5.12.10 Failure to file FPPCA / Incremental Power Procurement Cost (Incremental Cost) in a timely manner has many repercussions such as higher accumulated Aggregate Revenue Requirement (ARR) on account of variation in Power Purchase Expenses and the carrying cost and higher increase in Tariff or allowance in the form of Regulatory Surcharge, leading to Tariff shock. Further,
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the delayed filing of the FPPCA / Incremental Cost and claiming of the additional power purchase expenses during the Truing-up process also put the burden of such additional power purchase expenses on the new consumers, who may not have been consumers during the respective year.

5.12.11 **The Commission once again directs the licensees that they should file FPPCA / Incremental Cost in a timely and regular manner failing which the Commission may have to resort to take strict action against the Licensees like disallowance of additional power purchase expenses and the associated carrying cost on account of additional Power Purchase expenses or any other action that the Commission may deem fit while doing the Truing up of the said year.**

5.13 SUMMARY OF POWER PURCHASE

5.13.1 The total power purchase quantum available from State owned generating stations, central generating stations and other sources along with the quantum and cost as submitted by Licensees and approved by Commission for the MYT Period is presented in the Tables below:

TABLE 5-83: SUMMARY OF POWER PURCHASE COST FOR FY 2017-18 AS SUBMITTED BY THE DISTRIBUTION LICENSEES FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Thermal Generating Station									
Anpara A	630.00	3534.79	0.79	279.52	2.08	735.86	2.87	1015.38	2.87
Anpara B	1000.00	7055.09	0.67	472.83	2.02	1422.36	2.69	1895.19	2.69
Harduaganj	105.00	205.81	2.35	48.42	4.84	99.60	7.19	148.02	7.19
Obra A	194.00	39.55	2.59	10.24	2.35	9.28	4.94	19.52	4.94
Obra B	1000.00	2768.60	0.69	191.92	2.27	629.54	2.97	821.46	2.97
Panki	210.00	232.30	1.63	37.84	3.88	90.06	5.51	127.90	5.51
Parichha	220.00	172.10	1.06	18.19	4.19	72.19	5.25	90.38	5.25
Parichha Extn.	420.00	2410.61	1.35	324.36	3.53	851.47	4.88	1175.83	4.88
Parichha Extn. Stage II	500.00	2790.06	1.81	505.24	3.53	985.15	5.34	1490.38	5.34
Harduaganj Ext.	500.00	2790.06	1.97	548.96	3.82	1065.87	5.79	1614.83	5.79
Anpara D	1000.00	5779.41	2.23	1288.44	1.87	1083.35	4.10	2371.80	4.10
Sub total - Thermal	5779.00	27778.38		3725.96		7044.73		10770.69	3.88
Hydro Stations									
Khara	57.60	216.97	0.81	17.63			0.81	17.63	0.81
Matatila	20.00	80.60	0.75	6.04			0.75	6.04	0.75



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Obra (Hydel)	99.00	216.81	0.70	15.16			0.70	15.16	0.70
Rihand	255.00	469.10	0.64	29.97			0.64	29.97	0.64
UGC Power Stations	13.70	21.60	2.39	5.17			2.39	5.17	2.39
Belka & Babail	6.00	2.10	2.25	0.47			2.25	0.47	2.25
Sheetla	3.60	2.21	2.84	0.63			2.84	0.63	2.84
Sub total - Hydro	454.90	1009.38		75.07		-		75.07	0.74
Sub-Total Own generation	6234	28788		3,801.03		7044.73		10845.76	3.77
Procurement of power from Central Sector Generating Stations									
Anta	100.18	42.78	2.99	12.78	2.84	12.14	5.82	24.92	5.82
Auriya	222.50	95.02	2.66	25.30	3.40	32.26	6.06	57.57	6.06
Dadri Thermal	84.00	538.63	0.86	46.18	3.54	190.56	4.40	236.75	4.40
Dadri Gas	254.06	217.00	1.19	25.74	2.75	59.76	3.94	85.49	3.94
Dadri Extension	135.04	874.29	1.47	128.93	3.28	286.48	4.75	415.40	4.75
Rihand-I	360.00	2414.63	0.84	203.41	1.85	447.49	2.70	650.90	2.70
Rihand-II	333.20	2751.00	0.72	197.59	1.68	462.77	2.40	660.36	2.40
Singrauli	822.60	6173.39	0.58	355.35	1.71	1056.11	2.29	1411.45	2.29
Tanda	440.00	2984.85	1.19	355.55	3.34	995.63	4.53	1351.18	4.53
Unchahar-I	255.53	1670.31	0.99	165.23	3.07	512.93	4.06	678.16	4.06
Unchahar-II	146.29	1142.81	0.76	86.68	3.09	352.57	3.84	439.25	3.84
Unchahar-III	71.55	570.34	1.07	60.86	3.36	191.73	4.43	252.60	4.43
Farakka	33.28	230.61	0.86	19.86	2.77	63.91	3.63	83.77	3.63
Kahalgaoon St. I	76.61	549.62	0.97	53.18	2.60	143.07	3.57	196.24	3.57
Kahalgaoon St. II Ph. I	250.95	1906.17	1.01	193.33	2.33	444.75	3.35	638.08	3.35
Koldam (Hydro)	159.12	1101.17	2.15	236.31	2.21	243.83	4.36	480.15	4.36
Rihand-III	361.40	2823.32	1.36	384.71	1.72	486.03	3.08	870.74	3.08
Sub-Total NTPC	4106.31	26085.94		2550.99		5982.03		8533.01	3.27
Chamera	109.46	434.27	0.75	32.54	0.75	32.54	1.50	65.08	1.50
Chamera-II	69.78	324.26	0.93	30.07	0.93	30.07	1.85	60.15	1.85
Chamera-III	51.54	199.50	2.35	46.93	2.35	46.93	4.70	93.86	4.70
Dhauliganga	62.08	204.14	1.62	33.05	1.62	33.05	3.24	66.09	3.24
Salal I&II	47.96	224.85	0.48	10.87	0.58	10.87	1.07	21.74	0.97
Tanakpur	21.33	62.79	2.23	13.99	2.23	13.99	4.46	27.97	4.46
Uri	96.29	548.01	0.67	36.47	0.67	36.47	1.33	72.94	1.33
Dulhasti	93.52	527.61	2.10	110.77	2.10	110.77	4.20	221.53	4.20
Sewa-II	29.60	112.88	2.26	25.52	2.26	25.52	4.52	51.03	4.52
Uri-II	55.90	346.38	1.57	54.32	1.57	54.32	3.14	108.64	3.14
Parbati ST-III	116.06	149.37	2.03	30.36	2.03	30.36	4.06	60.71	4.06
Kishanganga HEP	64.00	276.96	2.40	66.47	2.40	66.47	4.80	132.94	4.80
Sub-Total NHPC	817.51	3411.03		491.35		491.35		982.69	2.88
NAPP	146.92	1,015.36			2.75	279.65	2.75	279.65	2.75



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
RAPP #3&4	81.00	552.35			3.20	177.00	3.20	177.00	3.20
RAPP#5&6	101.20	628.96			3.86	243.01	3.86	243.01	3.86
Sub-Total NPCIL	329.12	2196.68				699.66		699.66	3.19
Nathpa Jhakri HPS	242.40	1265.14	1.63	206.65	1.46	185.02	3.10	391.67	3.10
RAMPUR	95.70	374.61	2.03	76.10	1.75	65.54	3.78	141.64	3.78
TALA POWER	44.98	157.62	0.00	0.00	2.11	33.21	2.11	33.21	2.11
Koteshwar	160.72	529.65	2.03	107.68	1.97	104.57	4.01	212.25	4.01
Srinagar	290.00	1135.18	3.25	368.77	2.59	293.74	5.84	662.51	5.84
Sasan	495.00	3685.77	0.17	62.97	1.76	649.82	1.93	712.79	1.93
MB Power	361.00	2529.89	2.66	672.92	1.44	364.69	4.10	1037.61	4.10
KSK	1000.00	4782.96	2.07	989.33	2.31	1106.77	4.38	2096.09	4.38
TRN Energy	390.00	1270.90	1.90	241.86	1.41	179.22	3.31	421.08	3.31
Karcham-Wangtoo	200.00	173.97	0.00	0.00	4.13	71.85	4.13	71.85	4.13
VISHNUPRAYAG	352.00	2082.12	0.76	157.69	1.45	302.40	2.21	460.09	2.21
TEHRI STAGE-I	388.20	1343.93	2.91	390.65	2.86	384.16	5.77	774.81	5.77
Rosa Power Project	600.00	3826.37	1.65	632.58	3.27	1250.69	4.92	1883.27	4.92
Rosa Power Project	600.00	3826.37	1.65	632.58	3.27	1252.16	4.93	1884.74	4.93
Bara	1782.00	9909.82	1.68	1662.98	2.49	2466.57	4.17	4129.56	4.17
Anpara 'C'	1100.00	7453.45	0.92	689.08	3.00	2233.24	3.92	2922.32	3.92
IGSTPP, Jhajhjar	16.50	86.72	2.58	22.41	4.35	37.71	6.93	60.13	6.93
*Bajaj Hindusthan	450.00	606.96	2.34	141.99	4.18	253.89	6.52	395.88	6.52
Lalitpur	1980.00	10625.86	2.05	2173.35	2.97	3152.82	5.01	5326.17	5.01
RKM Powergen	350.00	1995.97	2.37	473.00	1.47	293.24	3.84	766.23	3.84
Teesta	200.00	483.55	2.00	96.71	2.00	96.71	4.00	193.42	4.00
Sub-Total IPP/JV	11098.50	58146.80		9799.29		14778.01		24577.30	4.23
Captive and Cogen	-	3412.33	-	-	5.18	1765.95	5.18	1765.95	5.18
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	862.48	-	-	3.80	327.74	3.80	327.74	3.80
Renewable Energy	-	553.14	-	-	6.46	357.56	6.46	357.56	6.46
NVVN Coal Power	-	351.62	-	-	5.12	180.04	5.12	180.04	5.12
Sub-Total: Co-Generation & Other Sources	-	5179.57				2631.29		2631.29	5.08
Grand Total of Power Purchase	22585.34	123807.78	1.34	16642.65	2.55	31627.06	3.90	48269.71	3.90



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**TABLE 5-84: SUMMARY OF POWER PURCHASE COST FOR FY 2018-19 AS SUBMITTED BY THE
DISTRIBUTION LICENSEES FOR FY 2018-19**

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Thermal Generating Stations									
Anpara A	630.00	4039.76	0.79	319.58	2.17	874.62	2.96	1194.20	2.96
Anpara B	1000.00	7055.09	0.69	485.68	2.10	1479.26	2.79	1964.94	2.79
Harduaganj	-	-	-	-	-	-	-	-	-
Obra A	-	-	-	-	-	-	-	-	-
Obra B	1000.00	3955.14	0.72	283.48	2.36	935.32	3.08	1218.79	3.08
Panki	-	-	-	-	-	-	-	-	-
Parichha	-	-	-	-	-	-	-	-	-
Parichha Extn.	420.00	2845.86	1.34	381.95	3.67	1045.41	5.02	1427.36	5.02
Parichha Extn. Stage II	500.00	3387.93	1.79	607.06	3.67	1244.10	5.46	1851.16	5.46
Harduaganj Ext.	500.00	3387.93	1.94	658.65	3.97	1346.04	5.92	2004.69	5.92
Anpara D	1000.00	7017.86	2.23	1567.85	1.95	1368.12	4.18	2935.97	4.18
Sub total - Thermal	5050.00	31689.56		4304.24		8292.87		12597.11	3.98
Hydro Stations									
Khara	57.60	216.97	0.85	18.34			0.85	18.34	0.85
Matatila	20.00	80.60	0.78	6.28			0.78	6.28	0.78
Obra (Hydel)	99.00	216.81	0.73	15.77			0.73	15.77	0.73
Rihand	255.00	469.10	0.66	31.16			0.66	31.16	0.66
UGC Power Stations	13.70	21.60	2.49	5.37			2.49	5.37	2.49
Belka & Babail	6.00	2.10	2.25	0.47			2.25	0.47	2.25
Sheetla	3.60	2.21	2.95	0.65			2.95	0.65	2.95
Sub total - Hydro	454.90	1009.38		78.05		-		78.05	0.77
Sub-Total Own generation	5505	32699		4382.29		8292.87		12675.16	3.88
Procurement of power from Central Sector Generating Stations									
Anta	-	-	-	-	-	-	-	-	-
Auriya	-	-	-	-	-	-	-	-	-
Dadri Thermal	84.00	538.63	0.89	49.60	3.68	198.18	4.57	247.79	4.60
Dadri Gas	-	-	-	-	-	-	-	-	-
Dadri Extension	135.04	896.70	1.37	127.41	3.41	305.58	4.78	432.99	4.83
Rihand-I	360.00	2472.82	0.87	210.10	1.93	476.60	2.80	686.70	2.78
Rihand-II	333.20	2751.00	0.72	165.47	1.75	481.28	2.47	646.75	2.35
Singrauli	822.60	6173.39	0.67	372.85	1.78	1,098.35	2.45	1471.20	2.38
Tanda	440.00	2984.85	1.30	366.44	3.47	1,035.46	4.77	1401.90	4.70
Unchahar-I	255.53	1670.31	1.01	171.39	3.19	533.45	4.21	704.84	4.22
Unchahar-II	146.29	1142.81	0.93	89.54	3.21	366.67	4.13	456.21	3.99
Unchahar-III	71.55	570.34	1.29	60.88	3.50	199.40	4.78	260.29	4.56
Farakka	33.28	230.61	0.92	20.65	2.88	66.47	3.80	87.12	3.78



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Kahalgaon St. I	76.61	549.62	1.09	55.05	2.71	148.79	3.79	203.84	3.71
Kahalgaon St.II Ph.I	250.95	1906.17	1.12	192.31	2.43	462.54	3.54	654.84	3.44
Koldam (Hydro)	79.56	550.59	1.56	245.77	2.30	126.79	3.86	372.56	6.77
Rihand-III	361.40	2823.32	1.67	400.10	1.79	505.48	3.46	905.57	3.21
Uchchahar-IV	117.00	626.23	1.29	80.54	3.50	218.94	4.78	299.48	4.78
Sub-Total NTPC	3567.00	25887.38		2608.11		6223.98		8832.10	3.41
Chamera	109.46	434.27	0.77	33.48	0.78	33.48	1.55	66.95	1.54
Chamera-II	69.78	324.26	0.94	30.48	0.96	30.48	1.90	60.95	1.88
Chamera-III	51.54	199.50	2.45	48.81	2.45	48.81	4.89	97.61	4.89
Dhauliganga	62.08	204.14	1.30	26.57	1.68	26.57	2.99	53.14	2.60
Salal I&II	47.96	224.85	0.51	11.49	0.61	11.49	1.12	22.98	1.02
Tanakpur	21.33	62.79	2.34	14.67	2.32	14.67	4.65	29.35	4.67
Uri	96.29	548.01	0.68	37.10	0.69	37.10	1.37	74.21	1.35
Dulhasti	93.52	527.61	2.07	109.30	2.18	109.30	4.26	218.61	4.14
Sewa-II	29.60	112.88	2.35	26.54	2.35	26.54	4.70	53.07	4.70
Uri-II	55.90	346.38	1.54	53.39	1.63	53.39	3.17	106.77	3.08
Parbati ST-II	155.00	268.30	2.11	56.70	2.11	56.70	4.23	113.41	4.23
Parbati ST-III	116.06	149.37	2.11	31.57	2.11	31.57	4.23	63.14	4.23
Kishanganga HEP	64.00	276.96	2.45	67.85	2.45	67.85	4.90	135.71	4.90
Parbati II	155.00	670.75	2.45	164.33	2.45	164.33	4.90	328.67	4.90
Sub-Total NHPC	1127.51	4350.08		712.28		712.28		1424.56	3.27
NAPP	166.14	1148.25			2.86	329	2.86	329	2.86
RAPP #3&4	79.67	543.25			3.33	181	3.33	181	3.33
RAPP#5&6	115.06	764.90			4.02	307	4.02	307	4.02
Sub-Total NPCIL	360.87	2456.41				817.30		817.30	3.33
Nathpa Jhakri HPS	242.40	1265.14	1.70	214.91	1.52	192.42	3.22	407.33	3.22
RAMPUR	62.09	270.06	2.11	57.05	1.82	49.14	3.93	106.19	3.93
TALA POWER	44.98	197.02	-	-	2.19	43.17	2.19	43.17	2.19
Koteshwar	160.72	696.91	2.11	147.35	2.05	143.10	4.17	290.45	4.17
Srinagar	290.00	1261.31	3.38	426.13	2.69	339.43	6.07	765.56	6.07
Sasan	495.00	3685.77	0.18	65.49	1.83	675.82	2.01	741.30	2.01
MB Power	361.00	2688.01	2.77	743.58	1.50	402.98	4.27	1146.56	4.27
KSK	1000.00	6377.28	2.15	1371.86	2.41	1534.72	4.56	2906.58	4.56
TRN Energy	390.00	2224.08	1.98	440.18	1.47	326.18	3.45	766.36	3.45
Karcham-Wangtoo	200.00	869.87	0.00	0.00	4.29	373.60	4.29	373.60	4.29
VISHNUPRAYAG	352.00	2082.12	0.79	164.00	1.51	314.49	2.30	478.49	2.30
TEHRI STAGE-I	388.20	1679.91	3.02	507.84	2.97	499.41	6.00	1007.26	6.00
Rosa Power Project	600.00	4065.52	1.54	627.37	3.40	1382.01	4.94	2009.38	4.94
Rosa Power Project	600.00	4065.52	1.54	627.37	3.40	1383.64	4.95	2011.00	4.95
Bara	1782.00	12572.16	1.75	2194.15	2.59	3254.41	4.33	5448.55	4.33
Anpara 'C'	1100.00	7453.45	0.96	716.64	3.12	2322.57	4.08	3039.21	4.08



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
IGSTPP, Jhajhjar	16.50	119.97	2.69	32.25	4.52	54.26	7.21	86.50	7.21
Bajaj Hindusthan	-	-	-	-	-	-	-	-	-
Lalitpur	1980.00	13895.35	1.56	2173.35	3.09	4287.83	4.65	6461.18	4.65
RKM Powergen	350.00	2423.67	2.46	597.33	1.53	370.32	3.99	967.64	3.99
Teesta	200.00	967.10	2.08	201.16	2.08	201.16	4.16	402.32	4.16
NTPC Meja	495.00	2419.60	2.23	540.56	2.30	556.51	4.53	1097.07	4.53
Sub-Total IPP/JV	11109.89	71279.80		11848.56		18707.15		30555.71	4.29
Captive and Cogen	-	3412.33	-	-	5.38	1,837	5.38	1,837	5.38
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	5710.53	-	-	4.00	2284.21	4.00	2284.21	4.00
Renewable Energy	-	1998.54	-	-	5.04	1,008	5.04	1,008	5.04
NVVN Coal Power	-	351.62	-	-	5.33	187	5.33	187	5.33
Sub-Total : Co-Generation & Other Sources	-	11473				5,316.02		5,316.02	4.63
Grand Total of Power Purchase	21670.18	148146	1.32	19,551.24	2.70	40,069.6	4.02	59,620.85	4.02

TABLE 5-85: SUMMARY OF POWER PURCHASE COST FOR FY 2019-20 AS SUBMITTED BY THE DISTRIBUTION LICENSEES FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Anpara A	630.00	4292.25	0.82	353.13	2.25	966.46	3.07	1319.59	3.07
Anpara B	1000.00	7055.09	0.72	505.11	2.18	1538.43	2.90	2043.54	2.90
Harduaganj	-	-	-	-	-	-	-	-	-
Obra A	-	-	-	-	-	-	-	-	-
Obra B	1000.00	6328.22	0.75	471.70	2.46	1556.37	3.20	2028.07	3.20
Panki	-	-	-	-	-	-	-	-	-
Parichha	-	-	-	-	-	-	-	-	-
Parichha Extn.	420.00	2845.86	1.40	397.23	3.82	1087.23	5.22	1484.46	5.22
Parichha Extn. Stage II	500.00	3387.93	1.86	631.34	3.82	1293.86	5.68	1925.20	5.68
Harduaganj Ext.	500.00	3387.93	2.02	685.00	4.13	1399.88	6.15	2084.88	6.15
Anpara D	1000.00	7017.86	2.32	1630.56	2.03	1422.84	4.35	3053.41	4.35
Sub total Thermal	5050.00	34315.13		4674.07		9265.07		13939.14	4.06
Hydro Stations									



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Khara	58	217	0.88	19			0.88	19.07	0.88
Matatila	20	81	0.81	7			0.81	6.53	0.81
Obra (Hydel)	99	217	0.76	16			0.76	16.40	0.76
Rihand	255	469	0.69	32			0.69	32.41	0.69
UGC Power Stations	14	22	2.59	6			2.59	5.59	2.59
Belka & Babail	6	2	2.34	0			2.34	0.49	2.34
Sheetla	4	2	3.07	1			3.07	0.68	3.07
Sub total - Hydro	455	1009		81.17		0.00		81.17	0.80
Purchase Per unit Avg Rate from hydro generating stations								0.80	
Sub-Total Own generation	5505	35325		4,755.24		9,265.07		14,020.32	3.97
Procurement of power from Central Sector Generating Stations									
Anta	-	-	-	-	-	-	-	-	-
Auriya	-	-	-	-	-	-	-	-	-
Dadri Thermal	84.00	538.63	0.92	51.59	3.83	206.11	4.75	257.70	4.78
Dadri Gas	-	-	-	-	-	-	-	-	-
Dadri Extension	135.04	896.70	1.42	132.51	3.54	317.80	4.97	450.31	5.02
Rihand-I	360.00	2,472.82	0.90	218.50	2.00	495.67	2.91	714.17	2.89
Rihand-II	333.20	2,751.00	0.75	172.09	1.82	500.53	2.57	672.62	2.45
Singrauli	822.60	6,173.39	0.70	387.77	1.85	1,142.28	2.55	1,530.05	2.48
Tanda	440.00	2,984.85	1.35	381.10	3.61	1,076.87	4.96	1,457.98	4.88
Unchahar-I	255.53	1,670.31	1.05	178.25	3.32	554.79	4.38	733.03	4.39
Unchahar-II	146.29	1,142.81	0.96	93.12	3.34	381.34	4.30	474.46	4.15
Unchahar-III	71.55	570.34	1.34	63.32	3.64	207.38	4.97	270.70	4.75
Farakka	33.28	230.61	0.95	21.48	3.00	69.13	3.95	90.61	3.93
Kahalgaon St. I	76.61	549.62	1.13	57.25	2.82	154.74	3.94	211.99	3.86
Kahalgaon St. II Ph. I	250.95	1,906.17	1.16	200.00	2.52	481.04	3.69	681.04	3.57
Koldam (Hydro)	79.56	550.59	1.56	255.60	2.39	131.87	3.95	387.46	7.04
Rihand-III	361.40	2,823.32	1.74	416.10	1.86	525.70	3.60	941.80	3.34
Tanda Stage-II	155.00	829.62	1.35	112.31	3.61	299.31	4.96	411.61	4.96
Uchchahar-IV	117.00	818.91	1.35	110.59	3.67	300.62	5.02	411.21	5.02
Sub-Total NTPC	3722.00	26909.68		2851.57		6845.18		9696.74	3.60
Chamera	109.46	434.27	0.77	33.48	0.81	33.48	1.58	66.95	1.54
Chamera-II	69.78	324.26	0.94	30.48	1.00	30.48	1.94	60.95	1.88
Chamera-III	51.54	199.50	2.45	48.81	2.54	48.81	4.99	97.61	4.89
Dhauliganga	62.08	204.14	1.30	26.57	1.75	26.57	3.05	53.14	2.60
Salal I&II	47.96	224.85	0.51	11.49	0.63	11.49	1.14	22.98	1.02
Tanakpur	21.33	62.79	2.34	14.67	2.41	14.67	4.75	29.35	4.67
Uri	96.29	548.01	0.68	37.10	0.72	37.10	1.40	74.21	1.35



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Dulhasti	93.52	527.61	2.07	109.30	2.27	109.30	4.34	218.61	4.14
Sewa-II	29.60	112.88	2.35	26.54	2.44	26.54	4.80	53.07	4.70
Uri-II	55.90	346.38	1.54	53.39	1.70	53.39	3.24	106.77	3.08
Parbati ST-II	160.00	276.96	2.20	60.87	2.20	60.87	4.40	121.75	4.40
Parbati ST-III	116.06	149.37	2.11	31.57	2.20	31.57	4.31	63.14	4.23
Tapovan Vishnu Gad	101.00	262.24	2.45	64.25	2.45	64.25	4.90	128.50	4.90
Kishanganga HEP	64.00	276.96	2.55	70.57	2.55	70.57	5.10	141.14	5.10
Vishnugarh Pipalkoti	166.00	431.01	2.60	112.06	2.60	112.06	5.20	224.13	5.20
Parbati II	155.00	670.75	2.55	170.91	2.55	170.91	5.10	341.82	5.10
Kameng	55.00	142.81	2.60	37.13	2.60	37.13	5.20	74.26	5.20
Sub-Total NHPC	1,454.51	5,194.80		939.18		939.18		1,878.36	3.62
NAPP	166.14	1,148.25	-	-	2.98	342	2.98	342.06	2.98
RAPP #3&4	79.67	543.25	-	-	3.47	188	3.47	188.29	3.47
RAPP#5&6	115.06	764.90	-	-	4.18	320	4.18	319.64	4.18
RAPP#7&8	162.00	633.50	-	-	4.18	265	4.18	264.73	4.18
Sub-Total NPCIL	522.87	3,089.91				1115		1,114.73	3.61
Nathpa Jhakri HPS	242.40	1265.14	1.77	223.51	1.58	200.12	3.35	423.63	3.35
RAMPUR	62.09	324.07	2.20	71.20	1.89	61.32	4.09	132.53	4.09
TALA POWER	44.98	236.43	0.00	0.00	2.28	53.87	2.28	53.87	2.28
Koteshwar	160.72	836.30	2.20	183.89	2.14	178.59	4.33	362.48	4.33
Srinagar	290.00	1513.57	3.51	531.81	2.80	423.61	6.31	955.42	6.31
Sasan	495.00	3685.77	0.18	68.10	1.91	702.85	2.09	770.95	2.09
MB Power	361.00	2688.01	2.88	773.32	1.56	419.10	4.44	1192.42	4.44
KSK	1000.00	6377.28	2.24	1426.74	2.50	1596.11	4.74	3022.84	4.74
TRN Energy	390.00	2541.80	2.06	523.19	1.53	387.68	3.58	910.87	3.58
Karcham-Wangtoo	200.00	1130.83	0.00	0.00	4.47	505.10	4.47	505.10	4.47
VISHNUPRAYAG	352.00	2296.45	0.82	188.12	1.57	360.74	2.39	548.86	2.39
TEHRI STAGE-I	388.20	2587.06	3.14	813.36	3.09	799.86	6.24	1613.22	6.24
Rosa Power Project	600.00	4065.52	1.54	627.37	3.54	1437.30	5.08	2064.66	5.08
Rosa Power Project	600.00	4065.52	1.54	627.37	3.54	1438.98	5.08	2066.35	5.08
Bara	1782.00	12572.16	1.82	2281.91	2.69	3384.58	4.51	5666.49	4.51
Anpara 'C'	1100.00	7453.45	1.00	745.31	3.24	2415.47	4.24	3160.78	4.24
IGSTPP, Jhajhjar	16.50	119.97	2.80	33.54	4.70	56.43	7.50	89.96	7.50
Bajaj Hindusthan	-	-	-	-	-	-	-	-	-
Lalitpur	1980.00	13895.35	1.56	2173.35	3.21	4459.34	4.77	6632.69	4.77
RKM Powergen	350.00	2423.67	2.56	621.22	1.59	385.13	4.15	1006.35	4.15
Teesta	200.00	967.10	2.16	209.20	2.16	209.20	4.33	418.41	4.33



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
NTPC Meja	990.00	6855.53	2.32	1592.85	2.39	1639.84	4.72	3232.69	4.72
Sub-Total IPP/JV	11604.89	77900.97		13715.35		21115.24		34830.59	4.47
Captive and Cogen	-	3412.33	-	-	5.60	1910.05	5.60	1910.05	5.60
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	17180.95	-	-	4.20	7216.00	4.20	7216.00	4.20
Renewable Energy	-	3641.04	-	-	4.80	1747.11	4.80	1747.11	4.80
NVVN Coal Power	-	351.62	-	-	5.54	194.73	5.54	194.73	5.54
Sub-Total: Co-Generation & Other Sources	-	24585.94				11067.89		11067.89	4.50
Grand Total of Power Purchase	22809	173006	1.29	22,261.35	2.91	50347.29	4.20	72608.63	4.20

TABLE 5-86: SUMMARY OF APPROVED BY THE COMMISSION POWER PURCHASE COST FOR FY 2017-18

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Anpara A	630.00	3534.79	0.79	279.52	2.08	735.86	2.87	1015.38	2.87
Anpara B	1000.00	7055.09	0.67	472.83	2.02	1422.36	2.69	1895.19	2.69
Harduaganj	105.00	205.81	2.35	48.42	4.84	99.60	7.19	148.02	7.19
Obra A	194.00	39.55	2.59	10.24	2.35	9.28	4.94	19.52	4.94
Obra B	1000.00	2768.60	0.69	191.92	2.27	629.54	2.97	821.46	2.97
Panki	210.00	232.30	1.63	37.84	3.88	90.06	5.51	127.90	5.51
Parichha	220.00	172.10	1.06	18.19	4.19	72.19	5.25	90.38	5.25
Parichha Extn.	420.00	2410.61	1.35	324.36	3.53	851.47	4.88	1175.83	4.88
Parichha Extn. Stage II	500.00	2790.06	1.81	505.24	3.53	985.15	5.34	1490.38	5.34
Harduaganj Ext.	500.00	2790.06	1.97	548.96	3.82	1065.87	5.79	1614.83	5.79
Anpara D	1000.00	5779.41	2.23	1288.44	1.87	1083.35	4.10	2371.80	4.10
Sub total - Thermal	5779.00	27778.38		3725.96		7044.73		10770.69	3.88
Hydro Stations									
Khara	57.60	216.97	0.81	17.63			0.81	17.63	0.81
Matatila	20.00	80.60	0.75	6.04			0.75	6.04	0.75
Obra (Hydel)	99.00	216.81	0.70	15.16			0.70	15.16	0.70
Rihand	255.00	469.10	0.64	29.97			0.64	29.97	0.64
UGC Power Stations	13.70	21.60	2.39	5.17			2.39	5.17	2.39
Belka & Babail	6.00	2.10	2.25	0.47			2.25	0.47	2.25



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Sheetla	3.60	2.21	2.84	0.63			2.84	0.63	2.84
Sub total - Hydro	454.90	1009.38		75.07		0.00		75.07	0.74
Sub-Total Own generation	6234	28788		3,801.03		7,044.73		10,845.76	3.77
Procurement of power from Central Sector Generating Stations									
Anta	100.26	42.78	2.99	12.78	2.84	12.14	5.82	24.92	5.82
Auriya	222.62	95.02	2.66	25.30	3.40	32.26	6.06	57.57	6.06
Dadri Thermal	84.00	538.63	0.86	46.18	3.54	190.56	4.40	236.75	4.40
Dadri Gas	254.06	217.00	1.19	25.74	2.75	59.76	3.94	85.49	3.94
Dadri Extension	135.00	874.29	1.50	131.36	3.28	286.48	4.78	417.84	4.78
Rihand-I	360.00	2,414.63	0.85	204.41	1.85	447.49	2.70	651.90	2.70
Rihand-II	333.20	2,751.00	0.72	197.59	1.68	462.77	2.40	660.36	2.40
Singrauli	822.60	6,173.39	0.58	355.35	1.71	1,056.11	2.29	1,411.45	2.29
Tanda	440.00	2,984.85	1.20	357.28	3.34	995.63	4.53	1,352.92	4.53
Unchahar-I	255.53	1,670.31	0.99	165.23	3.07	512.93	4.06	678.16	4.06
Unchahar-II	146.29	1,142.81	0.76	86.68	3.09	352.57	3.84	439.25	3.84
Unchahar-III	71.55	570.34	1.07	60.86	3.36	191.73	4.43	252.60	4.43
Farakka	33.28	230.61	0.85	19.60	2.77	63.91	3.62	83.51	3.62
Kahalgaoon St. I	76.61	549.62	0.97	53.18	2.60	143.07	3.57	196.24	3.57
Kahalgaoon St. II Ph. I	250.95	1,906.17	1.01	193.33	2.33	444.75	3.35	638.08	3.35
Koldam (Hydro)	159.12	1,101.17	1.07	118.16	1.07	118.16	2.15	236.31	2.15
Rihand-III	361.40	2,823.32	1.31	370.91	1.72	486.03	3.04	856.95	3.04
Sub-Total NTPC	4106.46	26085.94		2423.95		5856.35		8280.30	3.17
Chamera	109.46	434.27	0.75	32.54	0.75	32.54	1.50	65.08	1.50
Chamera-II	69.78	324.26	0.93	30.07	0.93	30.07	1.85	60.15	1.85
Chamera-III	51.55	199.50	2.35	46.94	2.35	46.94	4.71	93.88	4.71
Dhauliganga	62.08	204.14	1.62	33.06	1.62	33.06	3.24	66.11	3.24
Salal I&II	47.96	224.85	0.48	10.87	0.48	10.87	0.97	21.74	0.97
Tanakpur	21.33	62.79	2.23	13.99	2.23	13.99	4.46	27.97	4.46
Uri	96.29	548.01	0.67	36.47	0.67	36.47	1.33	72.94	1.33
Dulhasti	93.52	527.61	2.10	110.77	2.10	110.77	4.20	221.53	4.20
Sewa-II	29.60	112.88	2.26	25.52	2.26	25.52	4.52	51.03	4.52
Uri-II	55.88	346.38	1.57	54.31	1.57	54.31	3.14	108.62	3.14
Parbati ST-III	116.06	149.37	2.03	30.36	2.03	30.36	4.06	60.71	4.06
Kishanganga HEP	64.00	276.96	2.40	66.47	2.40	66.47	4.80	132.94	4.80
Sub-Total NHPC	817.50	3411.03		491.35		491.35		982.71	2.88
NAPP	146.92	1015.36	-	-	2.75	279.65	2.75	279.65	2.75
RAPP #3&4	81.00	552.35	-	-	3.20	177.00	3.20	177.00	3.20
RAPP#5&6	101.20	628.96	-	-	3.86	243.01	3.86	243.01	3.86
Sub-Total NPCIL	329.12	2196.68				699.66		699.66	3.19
Nathpa Jhakri HPS	242.40	1265.14	1.63	206.65	1.46	185.02	3.10	391.67	3.10



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
RAMPUR	95.70	374.61	2.03	76.10	1.75	65.54	3.78	141.64	3.78
TALA POWER	44.98	157.62	0.00	0.00	2.11	33.21	2.11	33.21	2.11
Koteshwar	160.72	529.65	2.03	107.68	1.97	104.57	4.01	212.25	4.01
Srinagar	290.00	1135.18	3.25	368.77	2.59	293.74	5.84	662.51	5.84
Sasan	495.00	3685.77	0.17	62.97	1.76	649.82	1.93	712.79	1.93
MB Power	361.00	2529.89	2.66	672.92	1.44	364.69	4.10	1037.61	4.10
KSK	1000.00	4782.96	2.07	989.33	2.31	1106.77	4.38	2096.09	4.38
TRN Energy	390.00	1270.90	1.90	241.86	1.41	179.22	3.31	421.08	3.31
Karcham-Wangtoo	200.00	173.97	0.00	0.00	4.13	71.85	4.13	71.85	4.13
VISHNUPRAYAG	352.00	2082.12	0.76	157.69	1.45	302.40	2.21	460.09	2.21
TEHRI STAGE-I	388.20	1343.93	2.91	390.65	2.86	384.16	5.77	774.81	5.77
Rosa Power Project	600.00	3826.37	1.65	632.58	3.27	1250.69	4.92	1883.27	4.92
Rosa Power Project	600.00	3826.37	1.65	632.58	3.27	1252.16	4.93	1884.74	4.93
Bara	1782.00	9909.82	1.68	1662.98	2.49	2466.57	4.17	4129.56	4.17
Anpara 'C'	1100.00	7453.45	0.92	689.08	3.00	2233.24	3.92	2922.32	3.92
IGSTPP, Jhajhjar	16.50	86.72	2.58	22.41	4.35	37.71	6.93	60.13	6.93
*Bajaj Hindusthan	450.00	606.96	2.34	142.00	4.18	253.89	6.52	395.89	6.52
Lalitpur	1980.00	10625.86	2.05	2173.35	2.97	3152.82	5.01	5326.17	5.01
RKM Powergen	350.00	1995.97	2.37	473.00	1.47	293.24	3.84	766.23	3.84
Teesta	200.00	483.55	2.00	96.71	2.00	96.71	4.00	193.42	4.00
Sub-Total IPP/JV	11098.50	58146.80		9799.30		14778.01		24577.31	4.23
Captive and Cogen	-	3412.33	-	-	5.18	1765.95	5.18	1765.95	5.18
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	862.48	-	-	3.80	327.74	3.80	327.74	3.80
Renewable Energy	-	553.14	-	-	6.46	357.56	6.46	357.56	6.46
NVVN Coal Power	-	351.62	-	-	5.12	180.04	5.12	180.04	5.12
Sub-Total: Co-Generation & Other Sources	-	5179.57				2631.29		2631.29	5.08
Grand Total of Power Purchase	22585	123807.78	1.33	16515.63	2.54	31501.39	3.88	48017.03	3.88
Grand Total of Power Purchase (after applying merit order)	22585	120288.76	1.37	16515.63	2.43	30078.02	3.87	46593.65	3.87



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TABLE 5-87: SUMMARY OF APPROVED POWER PURCHASE COST FOR FY 2018-19

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Procurement of power from State Sector Generating Stations									
Thermal Stations									
Anpara A	630.00	4039.76	0.79	319.58	2.17	874.62	2.96	1194.20	2.96
Anpara B	1000.00	7055.09	0.69	485.68	2.10	1479.26	2.79	1964.94	2.79
Harduaganj	-	-	-	-	-	-	-	-	-
Obra A	-	-	-	-	-	-	-	-	-
Obra B	1000.00	3955.14	0.72	283.48	2.36	935.32	3.08	1218.79	3.08
Panki	-	-	-	-	-	-	-	-	-
Parichha	-	-	-	-	-	-	-	-	-
Parichha Extn.	420.00	2845.86	1.34	381.95	3.67	1045.41	5.02	1427.36	5.02
Parichha Extn. Stage II	500.00	3387.93	1.79	607.06	3.67	1244.10	5.46	1851.16	5.46
Harduaganj Ext.	500.00	3387.93	1.94	658.65	3.97	1346.04	5.92	2004.69	5.92
Anpara D	1000.00	7017.86	2.23	1567.85	1.95	1368.12	4.18	2935.97	4.18
Sub total - Thermal	5050.00	31689.56		4304.24		8292.87		12597.11	3.98
Per unit Avg Rate of Thermal Generation								3.98	
Hydro Stations									
Khara	57.60	216.97	0.85	18.34			0.85	18.34	0.85
Matatila	20.00	80.60	0.78	6.28			0.78	6.28	0.78
Obra (Hydel)	99.00	216.81	0.73	15.77			0.73	15.77	0.73
Rihand	255.00	469.10	0.66	31.16			0.66	31.16	0.66
UGC Power Stations	13.70	21.60	2.49	5.37			2.49	5.37	2.49
Belka & Babail	6.00	2.10	2.25	0.47			2.25	0.47	2.25
Sheetla	3.60	2.21	2.95	0.65			2.95	0.65	2.95
Sub total - Hydro	454.90	1009.38		78.05		0.00		78.05	0.77
Purchase Per unit Avg Rate from hydro generating stations								0.77	
Sub-Total Own generation	5504.90	32698.95		4382.29		8292.87		12675.16	3.88
Procurement of power from Central Sector Generating Stations									
Anta	-	-	-	-	-	-	-	-	-
Auriya	-	-	-	-	-	-	-	-	-
Dadri Thermal	84.00	538.63	0.92	49.60	3.68	198.18	4.60	247.79	4.60
Dadri Gas	-	-	-	-	-	-	-	-	-
Dadri Extension	84.00	538.63	0.92	49.60	3.68	198.18	4.60	247.79	4.60
Rihand-I	-	-	-	-	-	-	-	-	-
Rihand-II	135.04	896.70	1.45	129.82	3.41	305.58	4.86	435.40	4.86
Singrauli	360.00	2472.82	0.85	211.10	1.93	476.60	2.78	687.71	2.78
Tanda	333.20	2751.00	0.60	165.47	1.75	481.28	2.35	646.75	2.35
Unchahar-I	822.60	6173.39	0.60	372.85	1.78	1098.35	2.38	1471.20	2.38



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Unchahar-II	440.00	2984.85	1.24	368.93	3.47	1035.46	4.71	1404.39	4.71
Unchahar-III	255.53	1670.31	1.03	171.39	3.19	533.45	4.22	704.84	4.22
Farakka	146.29	1142.81	0.78	89.54	3.21	366.67	3.99	456.21	3.99
Kahalgaon St. I	71.55	570.34	1.07	60.88	3.50	199.40	4.56	260.29	4.56
Kahalgaon St.II Ph.I	33.28	230.61	0.83	19.21	2.88	66.47	3.72	85.68	3.72
Koldam (Hydro)	76.61	549.62	1.00	55.05	2.71	148.79	3.71	203.84	3.71
Rihand-III	250.95	1906.17	1.01	192.31	2.43	462.54	3.44	654.84	3.44
Uchchahar-IV	117.00	626.23	1.29	80.54	3.50	218.94	4.78	299.48	4.78
Sub-Total NTPC	3567.00	25887.38		2457.90		6220.07		8677.98	3.35
Chamera	109.46	434.27	0.77	33.48	0.77	33.48	2.30	66.95	1.54
Chamera-II	69.78	324.26	0.94	30.48	0.94	30.48	2.75	60.95	1.88
Chamera-III	51.54	199.50	2.45	48.81	2.45	48.81	5.16	97.61	4.89
Dhauliganga	62.08	204.14	1.30	26.58	1.30	26.58	4.39	53.15	2.60
Salal I&II	47.96	224.85	0.51	11.49	0.51	11.49	2.55	22.98	1.02
Tanakpur	21.33	62.79	2.34	14.67	2.34	14.67	5.27	29.35	4.67
Uri	96.29	548.01	0.68	37.10	0.68	37.10	2.44	74.21	1.35
Dulhasti	93.52	527.61	2.07	109.30	2.07	109.30	6.47	218.61	4.14
Sewa-II	29.60	112.88	2.35	26.54	2.35	26.54	5.67	53.07	4.70
Uri-II	55.90	346.38	1.54	53.39	1.54	53.39	7.07	106.77	3.08
Parbati ST-II	155.00	268.30	2.11	56.70	2.11	56.70		113.41	4.23
Parbati ST-III	116.06	149.37	2.11	31.57	2.11	31.57	5.40	63.14	4.23
Kishanganga HEP	64.00	276.96	2.45	67.85	2.45	67.85	5.05	135.71	4.90
Parbati II	155.00	670.75	2.45	164.33	2.45	164.33	5.05	328.67	4.90
Sub-Total NHPC	1127.51	4350.08		712.29		712.29		1424.58	3.27
NAPP	166.14	1148.25	0.00	0.00	2.86	328.90	2.86	328.90	2.86
RAPP #3&4	79.67	543.25	0.00	0.00	3.33	181.05	3.33	181.05	3.33
RAPP#5&6	115.06	764.90	0.00	0.00	4.02	307.35	4.02	307.35	4.02
Sub-Total NPCIL	360.87	2456.41				817.30		817.30	3.33
Nathpa Jhakri HPS	242.40	1265.14	1.70	214.91	1.52	192.42	3.22	407.33	3.22
RAMPUR	62.09	270.06	2.11	57.05	1.82	49.14	3.93	106.19	3.93
TALA POWER	44.98	197.02	0.00	0.00	2.19	43.17	2.19	43.17	2.19
Koteshwar	160.72	696.91	2.11	147.35	2.05	143.10	4.17	290.45	4.17
Srinagar	290.00	1261.31	3.38	426.13	2.69	339.43	6.07	765.56	6.07
Sasan	495.00	3685.77	0.18	65.49	1.83	675.82	2.01	741.30	2.01
MB Power	361.00	2688.01	2.77	743.58	1.50	402.98	4.27	1146.56	4.27
KSK	1000.00	6377.28	2.15	1371.86	2.41	1534.72	4.56	2906.58	4.56
TRN Energy	390.00	2224.08	1.98	440.18	1.47	326.18	3.45	766.36	3.45



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Karcham-Wangtoo	200.00	869.87	0.00	0.00	4.29	373.60	4.29	373.60	4.29
VISHNUPRAYAG	352.00	2082.12	0.79	164.00	1.51	314.49	2.30	478.49	2.30
TEHRI STAGE-I	388.20	1679.91	3.02	507.84	2.97	499.41	6.00	1007.26	6.00
Rosa Power Project	600.00	4065.52	1.54	627.37	3.40	1382.01	4.94	2009.38	4.94
Rosa Power Project	600.00	4065.52	1.54	627.37	3.40	1383.64	4.95	2011.00	4.95
Bara	1782.00	12572.16	1.75	2194.15	2.59	3254.41	4.33	5448.55	4.33
Anpara 'C'	1100.00	7453.45	0.96	716.64	3.12	2322.57	4.08	3039.21	4.08
IGSTPP, Jhajhjar	16.50	119.97	2.69	32.25	4.52	54.26	7.21	86.50	7.21
Bajaj Hindusthan	-	-	-	-	-	-	-	-	-
Lalitpur	1980.00	13895.35	1.56	2173.35	3.09	4287.83	4.65	6461.18	4.65
RKM Powergen	350.00	2423.67	2.46	597.33	1.53	370.32	3.99	967.64	3.99
Teesta	200.00	967.10	2.08	201.16	2.08	201.16	4.16	402.32	4.16
NTPC Meja	495.00	2419.60	2.23	540.56	2.30	556.51	4.53	1097.07	4.53
Sub-Total IPP/JV	11109.89	71279.80		11848.56		18707.15		30555.71	4.29
Captive and Cogen	-	3412.33	-	-	5.38	1836.59	5.38	1836.59	5.38
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	5710.53	-	-	4.00	2284.21	4.00	2284.21	4.00
Renewable Energy	-	1998.54	-	-	5.04	1007.99	5.04	1007.99	5.04
NVVN Coal Power	-	351.62	-	-	5.33	187.24	5.33	187.24	5.33
Sub-Total: Co-Generation & Other Sources	-	11473.02	-	-		5316.02		5316.02	4.63
Grand Total of Power Purchase	21670.18	148145.64	1.31	19401.04	2.70	40065.71	4.01	59466.75	4.01
Grand Total of Power Purchase (after applying merit order)	21670.18	148145.64	1.31	19401.04	2.70	40065.71	4.01	59466.75	4.01



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TABLE 5-88: SUMMARY OF APPROVED POWER PURCHASE COST FOR FY 2019-20

Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost (Rs. / kWh)
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	
Procurement of power from State Sector Generating Stations									
Anpara A	630.00	4292.25	0.82	353.13	2.25	966.46	3.07	1319.59	3.07
Anpara B	1000.00	7055.09	0.72	505.11	2.18	1538.43	2.90	2043.54	2.90
Harduaganj	-	-	-	-	-	-	-	-	-
Obra A	-	-	-	-	-	-	-	-	-
Obra B	1000.00	6328.22	0.75	471.70	2.46	1556.37	3.20	2028.07	3.20
Panki	-	-	-	-	-	-	-	-	-
Parichha	-	-	-	-	-	-	-	-	-
Parichha Extn.	420.00	2845.86	1.40	397.23	3.82	1087.23	5.22	1484.46	5.22
Parichha Extn. Stage II	500.00	3387.93	1.86	631.34	3.82	1293.86	5.68	1925.20	5.68
Harduaganj Ext.	500.00	3387.93	2.02	685.00	4.13	1399.88	6.15	2084.88	6.15
Anpara D	1000.00	7017.86	2.32	1630.56	2.03	1422.84	4.35	3053.41	4.35
Sub total – Thermal	5050.00	34315.13		4674.07		9265.07		13939.14	4.06
Hydro Stations									
Khara	57.60	216.97	0.88	19.07			0.88	19.07	0.88
Matatila	20.00	80.60	0.81	6.53			0.81	6.53	0.81
Obra (Hydel)	99.00	216.81	0.76	16.40			0.76	16.40	0.76
Rihand	255.00	469.10	0.69	32.41			0.69	32.41	0.69
U.G.C. Power Stations	13.70	21.60	2.59	5.59			2.59	5.59	2.59
E.Y.C. Power Stations	6.00	2.10	2.34	0.49			2.34	0.49	2.34
Sheetla	3.60	2.21	3.07	0.68			3.07	0.68	3.07
Sub total – Hydro	454.90	1,009.38		81.17		0.00		81.17	0.80
Sub-Total Own generation	5505	35325		4,755.24		9,265.07		14,020.32	3.97
Procurement of power from Central Sector Generating Stations									
Anta	-	-	-	-	-	-	-	-	-
Auriya	-	-	-	-	-	-	-	-	-
Dadri Thermal	84.00	538.63	0.92	51.59	3.83	206.11	4.78	257.70	4.78
Dadri Gas	-	-	-	-	-	-	-	-	-
Dadri Extension	135.04	896.70	1.42	132.51	3.54	317.80	5.02	450.31	5.02
Rihand-I	360.00	2472.82	0.90	218.50	2.00	495.67	2.89	714.17	2.89
Rihand-II	333.20	2751.00	0.75	172.09	1.82	500.53	2.45	672.62	2.45
Singrauli	822.60	6173.39	0.70	387.77	1.85	1142.28	2.48	1530.05	2.48
Tanda	440.00	2984.85	1.35	381.10	3.61	1076.87	4.88	1457.98	4.88
Unchahar-I	255.53	1670.31	1.05	178.25	3.32	554.79	4.39	733.03	4.39
Unchahar-II	146.29	1142.81	0.96	93.12	3.34	381.34	4.15	474.46	4.15



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
Unchahar-III	71.55	570.34	1.34	63.32	3.64	207.38	4.75	270.70	4.75
Farakka	33.28	230.61	0.95	21.48	3.00	69.13	3.93	90.61	3.93
Kahalgaon St. I	76.61	549.62	1.13	57.25	2.82	154.74	3.86	211.99	3.86
Kahalgaon St.II Ph.I	250.95	1906.17	1.16	200.00	2.52	481.04	3.57	681.04	3.57
Koldam (Hydro)	79.56	550.59	2.32	127.80	2.32	127.80	4.64	255.60	4.64
Rihand-III	361.40	2823.32	1.74	416.10	1.86	525.70	3.34	941.80	3.34
Tanda Stage-II	155.00	829.62	1.35	112.31	3.61	299.31	4.96	411.61	4.96
Uchchahar-IV	117.00	818.91	1.35	110.59	3.67	300.62	5.02	411.21	5.02
Sub-Total NTPC	3722.00	26909.68		2723.77		6841.11		9564.88	3.55
Chamera	109.46	434.27	0.46	33.48	0.81	33.48	1.54	66.95	1.54
Chamera-II	69.78	324.26	0.54	30.48	1.00	30.48	1.88	60.95	1.88
Chamera-III	51.54	199.50	0.45	48.81	2.54	48.81	4.89	97.61	4.89
Dhauliganga	62.08	204.14	0.38	26.57	1.75	26.57	2.60	53.14	2.60
Salal I&II	47.96	224.85	0.54	11.49	0.63	11.49	1.02	22.98	1.02
Tanakpur	21.33	62.79	0.34	14.67	2.41	14.67	4.67	29.35	4.67
Uri	96.29	548.01	0.66	37.10	0.72	37.10	1.35	74.21	1.35
Dulhasti	93.52	527.61	0.65	109.30	2.27	109.30	4.14	218.61	4.14
Sewa-II	29.60	112.88	0.44	26.54	2.44	26.54	4.70	53.07	4.70
Uri-II	55.90	346.38	0.72	53.39	1.70	53.39	3.08	106.77	3.08
Parbati ST-II	160.00	276.96	0.20	60.87	2.20	60.87	4.40	121.75	4.40
Parbati ST-III	116.06	149.37	0.15	31.57	2.20	31.57	4.23	63.14	4.23
Tapovan Vishnu Gad	101.00	262.24	0.30	64.25	2.45	64.25	4.90	128.50	4.90
Kishanganga HEP	64.00	276.96	0.50	70.57	2.55	70.57	5.10	141.14	5.10
Vishnugarh Pipalkoti	166.00	431.01	0.30	112.06	2.60	112.06	5.20	224.13	5.20
Parbati II	155.00	670.75	0.50	170.91	2.55	170.91	5.10	341.82	5.10
Kameng	55.00	142.81	0.30	37.13	2.60	37.13	5.20	74.26	5.20
Sub-Total NHPC	1454.51	5194.80		939.18		939.18		1878.36	3.62
NAPP	166.14	1148.25	-	-	2.98	342.06	2.98	342	2.98
RAPP #3&4	79.67	543.25	-	-	3.47	188.29	3.47	188	3.47
RAPP#5&6	115.06	764.90	-	-	4.18	319.64	4.18	320	4.18
RAPP#7&8	162.00	633.50	-	-	4.18	264.73	4.18	265	4.18
Sub-Total NPCIL	522.87	3089.91				1114.73		1114.73	3.61
Nathpa Jhakri HPS	242.40	1265.14	1.77	223.51	1.58	200.12	3.35	423.63	3.35
RAMPUR	62.09	324.07	2.20	71.20	1.89	61.32	4.09	132.53	4.09
TALA POWER	44.98	236.43	0.00	0.00	2.28	53.87	2.28	53.87	2.28
Koteshwar	160.72	836.30	2.20	183.89	2.14	178.59	4.33	362.48	4.33
Srinagar	290.00	1513.57	3.51	531.81	2.80	423.61	6.31	955.42	6.31
Sasan	495.00	3685.77	0.18	68.10	1.91	702.85	2.09	770.95	2.09
MB Power	361.00	2688.01	2.88	773.32	1.56	419.10	4.44	1192.42	4.44
KSK	1000.00	6377.28	2.24	1426.74	2.50	1596.11	4.74	3022.84	4.74



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Source of Power	MW Available	MU	Fixed Cost		Variable Cost		Total Cost		Average Cost
			(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)	(Rs. Cr.)	(Rs. / kWh)
TRN Energy	390.00	2541.80	2.06	523.19	1.53	387.68	3.58	910.87	3.58
Karcham-Wangtoo	200.00	1130.83	0.00	0.00	4.47	505.10	4.47	505.10	4.47
VISHNUPRAYAG	352.00	2296.45	0.82	188.12	1.57	360.74	2.39	548.86	2.39
TEHRI STAGE-I	388.20	2587.06	3.14	813.36	3.09	799.86	6.24	1613.22	6.24
Rosa Power Project	600.00	4065.52	1.54	627.37	3.54	1437.30	5.08	2064.66	5.08
Rosa Power Project	600.00	4065.52	1.54	627.37	3.54	1438.98	5.08	2066.35	5.08
Bara	1782.00	12572.16	1.82	2281.91	2.69	3384.58	4.51	5666.49	4.51
Anpara 'C'	1100.00	7453.45	1.00	745.31	3.24	2415.47	4.24	3160.78	4.24
IGSTPP, Jhajhjar	16.50	119.97	2.80	33.54	4.70	56.43	7.50	89.96	7.50
Bajaj Hindusthan	-	-	-	-	-	-	-	-	-
Lalitpur	1980.00	13895.35	1.56	2173.35	3.21	4459.34	4.77	6632.69	4.77
RKM Powergen	350.00	2423.67	2.56	621.22	1.59	385.13	4.15	1006.35	4.15
Teesta	200.00	967.10	2.16	209.20	2.16	209.20	4.33	418.41	4.33
NTPC Meja	990.00	6855.53	2.32	1592.85	2.39	1639.84	4.72	3232.69	4.72
Sub-Total IPP/JV	11604.89	77900.97		13715.35		21115.24		34830.59	4.47
Captive and Cogen	-	3412.33	-	-	5.60	1910.05	5.60	1910.05	5.60
Inter system exchange (Bilateral & PXIL, IEX) / UI	-	17180.95	-	-	4.00	6872.38	4.00	6872.38	4.00
Renewable Energy	-	3641.04	-	-	4.80	1747.11	4.80	1747.11	4.80
NVVN Coal Power	-	351.62	-	-	5.54	194.73	5.54	194.73	5.54
Sub-Total: Co-Generation & Other Sources	-	24585.94				10724.27		10724.27	4.36
Grand Total of Power Purchase	22809.18	173005.81	1.28	22133.55	2.89	49999.60	4.17	72133.15	4.17
Grand Total of Power Purchase (after applying merit order)	22809.18	173005.81	1.28	22133.55	2.89	49999.60	4.17	72133.15	4.17

5.14 APPROVED MERIT ORDER DISPATCH

5.14.1 The Merit Order Dispatch as approved by the Commission after evaluating the power purchase cost is given in the Table below:



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TABLE 5-89: APPROVED MERIT ORDER DISPATCH FOR FY 2017-18

Source of Power	Plant Type	Dispatch Mode	Variable Charge (Rs / kWh)
Khara	UPJVNL-Hydro	Must Run	0.00
Matatila	UPJVNL-Hydro	Must Run	0.00
Obra (Hydel)	UPJVNL-Hydro	Must Run	0.00
Rihand	UPJVNL-Hydro	Must Run	0.00
UGC Power Stations	UPJVNL-Hydro	Must Run	0.00
Belka & Babail	UPJVNL-Hydro	Must Run	0.00
Sheetla	UPJVNL-Hydro	Must Run	0.00
Salal I&II	NHPC-Hydro	Must Run	0.48
Uri	NHPC-Hydro	Must Run	0.67
Chamera	NHPC-Hydro	Must Run	0.75
Chamera-II	NHPC-Hydro	Must Run	0.93
Koldam (Hydro)	NTPC-Hydro	Must Run	1.07
VISHNUPRAYAG	IPP/JV/Bilateral/Others	Must Run	1.45
NATHPA JHAKRI HPS	IPP/JV/Bilateral/Others	Must Run	1.46
Uri-II	NHPC-Hydro	Must Run	1.57
Dhauliganga	NHPC-Hydro	Must Run	1.62
RAMPUR	IPP/JV/Bilateral/Others	Must Run	1.75
Koteshwar	IPP/JV/Bilateral/Others	Must Run	1.97
Teesta	IPP/JV/Bilateral/Others	Must Run	2.00
Parbati ST-III	NHPC-Hydro	Must Run	2.03
Dulhasti	NHPC-Hydro	Must Run	2.10
TALA POWER	IPP/JV/Bilateral/Others	Must Run	2.11
Tanakpur	NHPC-Hydro	Must Run	2.23
Sewa-II	NHPC-Hydro	Must Run	2.26
Chamera-III	NHPC-Hydro	Must Run	2.35
Kishanganga HEP	NPCIL-Nuclear	Must Run	2.40
Srinagar	IPP/JV/Bilateral/Others	Must Run	2.59
NAPP	NPCIL-Nuclear	Must Run	2.75
TEHRI STAGE-I	IPP/JV/Bilateral/Others	Must Run	2.86
RAPP #3&4	NPCIL-Nuclear	Must Run	3.20
RAPP#5&6	NPCIL-Nuclear	Must Run	3.86
Karcham-Wangtoo	IPP/JV/Bilateral/Others	Must Run	4.13
Captive and Cogen	Renewable	Must Run*	5.18
Renewable Energy	Renewable	Must Run*	6.46
TRN Energy	IPP/JV/Bilateral/Others	Merit	1.41
MB Power	IPP/JV/Bilateral/Others	Merit	1.44
RKM Powergen	IPP/JV/Bilateral/Others	Merit	1.47
Rihand-II	NTCP-Thermal	Merit	1.68
Singrauli	NTCP-Thermal	Merit	1.71
Rihand-III	NTCP-Thermal	Merit	1.72
Sasan	IPP/JV/Bilateral/Others	Merit	1.76
Rihand-I	NTCP-Thermal	Merit	1.85



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Source of Power	Plant Type	Dispatch Mode	Variable Charge (Rs / kWh)
Anpara D	UPRVUNL-Thermal	Merit	1.87
Anpara B	UPRVUNL-Thermal	Merit	2.02
Anpara A	UPRVUNL-Thermal	Merit	2.08
Obra B	UPRVUNL-Thermal	Merit	2.27
KSK	IPP/JV/Bilateral/Others	Merit	2.31
Kahalgaon St.II Ph.I	NTCP-Thermal	Merit	2.33
Obra A	UPRVUNL-Thermal	Merit	2.35
Bara	IPP/JV/Bilateral/Others	Merit	2.49
Kahalgaon St. I	NTCP-Thermal	Merit	2.60
Dadri Gas	NTCP-Thermal	Merit	2.75
Farakka	NTCP-Thermal	Merit	2.77
Anta	NTCP-Thermal	Merit	2.84
Lalitpur	IPP/JV/Bilateral/Others	Merit	2.97
Anpara 'C'	IPP/JV/Bilateral/Others	Merit	3.00
Unchahar-I	NTCP-Thermal	Merit	3.07
Unchahar-II	NTCP-Thermal	Merit	3.09
Rosa Power Project	IPP/JV/Bilateral/Others	Merit	3.27
Rosa Power Project	IPP/JV/Bilateral/Others	Merit	3.27
Dadri Extension	NTCP-Thermal	Merit	3.28
Tanda	NTCP-Thermal	Merit	3.34
Unchahar-III	NTCP-Thermal	Merit	3.36
Auriya	NTCP-Thermal	Merit	3.40
Parichha Extn. Stage II	UPRVUNL-Thermal	Merit	3.53
Parichha Extn.	UPRVUNL-Thermal	Merit	3.53
Dadri Thermal	NTCP-Thermal	Merit	3.54
Inter system exchange (Bilateral & PXIL, IEX) / UI	Exchange	Merit	3.80
Harduaganj Ext.	UPRVUNL-Thermal	Merit	3.82
Panki	UPRVUNL-Thermal	Merit	3.88
*Bajaj Hindusthan	IPP/JV/Bilateral/Others	Merit	4.18
Parichha	UPRVUNL-Thermal	Merit	4.19
IGSTPP, Jhahjhar	IPP/JV/Bilateral/Others	Merit	4.35
Harduaganj	UPRVUNL-Thermal	Merit	4.84
NVVN Coal Power	Exchange	Merit	5.12

*till the RPO Obligations are fulfilled



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TABLE 5-90: APPROVED MERIT ORDER DISPATCH FOR FY 2018-19

Source of Power	Plant Type	Dispatch Mode	Variable Charge (Rs / kWh)
Khara	UPJVNL-Hydro	Must Run	0.00
Matatila	UPJVNL-Hydro	Must Run	0.00
Obra (Hydel)	UPJVNL-Hydro	Must Run	0.00
Rihand	UPJVNL-Hydro	Must Run	0.00
UGC Power Stations	UPJVNL-Hydro	Must Run	0.00
Belka & Babail	UPJVNL-Hydro	Must Run	0.00
Sheetla	UPJVNL-Hydro	Must Run	0.00
Salal I&II	NHPC-Hydro	Must Run	0.51
Uri	NHPC-Hydro	Must Run	0.68
Chamera	NHPC-Hydro	Must Run	0.77
Chamera-II	NHPC-Hydro	Must Run	0.94
Dhauliganga	NHPC-Hydro	Must Run	1.30
VISHNUPRAYAG	IPP/JV/Bilateral/Others	Must Run	1.51
NATHPA JHAKRI HPS	IPP/JV/Bilateral/Others	Must Run	1.52
Uri-II	NHPC-Hydro	Must Run	1.54
RAMPUR	IPP/JV/Bilateral/Others	Must Run	1.82
Sewa-II	NHPC-Hydro	Must Run	2.35
Koteshwar	IPP/JV/Bilateral/Others	Must Run	2.05
Dulhasti	NHPC-Hydro	Must Run	2.07
Teesta	IPP/JV/Bilateral/Others	Must Run	2.08
Parbati ST-II	NHPC-Hydro	Must Run	2.11
Parbati ST-III	NHPC-Hydro	Must Run	2.11
Chamera-III	NHPC-Hydro	Must Run	2.45
TALA POWER	IPP/JV/Bilateral/Others	Must Run	2.19
Koldam (Hydro)	NTPC-Hydro	Must Run	2.23
Tanakpur	NHPC-Hydro	Must Run	2.34
Parbati II	NHPC-Hydro	Must Run	2.45
Kishanganga HEP	NHPC-Hydro	Must Run	2.45
Srinagar	IPP/JV/Bilateral/Others	Must Run	2.69
NAPP	NPCIL-Nuclear	Must Run	2.86
TEHRI STAGE-I	IPP/JV/Bilateral/Others	Must Run	2.97
RAPP #3&4	NPCIL-Nuclear	Must Run	3.33
RAPP#5&6	NPCIL-Nuclear	Must Run	4.02
Karcham-Wangtoo	IPP/JV/Bilateral/Others	Must Run	4.29
Renewable Energy	Renewable	Must Run*	5.04
Captive and Cogen	Renewable	Must Run*	5.38
TRN Energy	IPP/JV/Bilateral/Others	Merit	1.47
MB Power	IPP/JV/Bilateral/Others	Merit	1.50
RKM Powergen	IPP/JV/Bilateral/Others	Merit	1.53
Rihand-II	NTPC-Thermal	Merit	1.75
Singrauli	NTPC-Thermal	Merit	1.78
Rihand-III	NTPC-Thermal	Merit	1.79



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Source of Power	Plant Type	Dispatch Mode	Variable Charge (Rs / kWh)
Sasan	IPP/JV/Bilateral/Others	Merit	1.83
Rihand-I	NTPC-Thermal	Merit	1.93
Anpara D	UPRVUNL-Thermal	Merit	1.95
Anpara B	UPRVUNL-Thermal	Merit	2.10
Anpara A	UPRVUNL-Thermal	Merit	2.17
NTPC Meja	IPP/JV/Bilateral/Others	Merit	2.30
Obra B	UPRVUNL-Thermal	Merit	2.36
KSK	IPP/JV/Bilateral/Others	Merit	2.41
Kahalgaoon St.II Ph.I	NTPC-Thermal	Merit	2.43
Bara	IPP/JV/Bilateral/Others	Merit	2.59
Kahalgaoon St. I	NTPC-Thermal	Merit	2.71
Farakka	NTPC-Thermal	Merit	2.88
Lalitpur	IPP/JV/Bilateral/Others	Merit	3.09
Anpara 'C'	IPP/JV/Bilateral/Others	Merit	3.12
Unchahar-I	NTPC-Thermal	Merit	3.19
Unchahar-II	NTPC-Thermal	Merit	3.21
Rosa Power Project	IPP/JV/Bilateral/Others	Merit	3.40
Rosa Power Project	IPP/JV/Bilateral/Others	Merit	3.40
Dadri Extension	NTPC-Thermal	Merit	3.41
Tanda	NTPC-Thermal	Merit	3.47
Unchahar-III	NTPC-Thermal	Merit	3.50
Unchahar-IV	NTPC-Thermal	Merit	3.50
Parichha Extn. Stage II	UPRVUNL-Thermal	Merit	3.67
Parichha Extn.	UPRVUNL-Thermal	Merit	3.67
Dadri Thermal	NTPC-Thermal	Merit	3.68
Harduaganj Ext.	UPRVUNL-Thermal	Merit	3.97
Inter system exchange (Bilateral & PXIL, IEX) / UI	Exchange	Merit	4.00
IGSTPP, Jhajhhar	IPP/JV/Bilateral/Others	Merit	4.52
NVVN Coal Power	Exchange	Merit	5.33

*till the RPO Obligations are fulfilled



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TABLE 5-91: APPROVED MERIT ORDER DISPATCH FOR FY 2019-20

Source of Power	Plant Type	Dispatch Mode	Variable Charge (Rs / kWh)
Khara	UPJVNL-Hydro	Must Run	0.00
Matatila	UPJVNL-Hydro	Must Run	0.00
Obra (Hydel)	UPJVNL-Hydro	Must Run	0.00
Rihand	UPJVNL-Hydro	Must Run	0.00
U.G.C. Power Stations	UPJVNL-Hydro	Must Run	0.00
E.Y.C. Power Stations	UPJVNL-Hydro	Must Run	0.00
Sheetla	UPJVNL-Hydro	Must Run	0.00
Salal I&II	NHPC-Hydro	Must Run	0.63
Uri	NHPC-Hydro	Must Run	0.72
Chamera	NHPC-Hydro	Must Run	0.81
Chamera-II	NHPC-Hydro	Must Run	1.00
VISHNUPRAYAG	IPP/JV/Bilateral/Others	Must Run	1.57
NATHPA JHAKRI HPS	IPP/JV/Bilateral/Others	Must Run	1.58
Uri-II	NHPC-Hydro	Must Run	1.70
Dhauliganga	NHPC-Hydro	Must Run	1.75
RAMPUR	IPP/JV/Bilateral/Others	Must Run	1.89
Koteshwar	IPP/JV/Bilateral/Others	Must Run	2.14
Teesta	IPP/JV/Bilateral/Others	Must Run	2.16
Parbati ST-II	NHPC-Hydro	Must Run	2.20
Parbati ST-III	NHPC-Hydro	Must Run	2.20
Dulhasti	NHPC-Hydro	Must Run	2.27
TALA POWER	IPP/JV/Bilateral/Others	Must Run	2.28
Koldam (Hydro)	NTPC-Hydro	Must Run	2.32
Tanakpur	NHPC-Hydro	Must Run	2.41
Sewa-II	NHPC-Hydro	Must Run	2.44
Tapovan Vishnu Gad	NHPC-Hydro	Must Run	2.45
Chamera-III	NHPC-Hydro	Must Run	2.54
Kishanganga HEP	NHPC-Hydro	Must Run	2.55
Parbati II	NHPC-Hydro	Must Run	2.55
Vishnugarh Pipalkoti	NHPC-Hydro	Must Run	2.60
Kameng	NHPC-Hydro	Must Run	2.60
Srinagar	IPP/JV/Bilateral/Others	Must Run	2.80
NAPP	NPCIL-Nuclear	Must Run	2.98
TEHRI STAGE-I	IPP/JV/Bilateral/Others	Must Run	3.09
RAPP #3&4	NPCIL-Nuclear	Must Run	3.47
RAPP#5&6	NPCIL-Nuclear	Must Run	4.18
RAPP#7&8	NPCIL-Nuclear	Must Run	4.18
Karcham-Wangtoo	IPP/JV/Bilateral/Others	Must Run	4.47
Renewable Energy	Renewable	Must Run*	4.80
Captive and Cogen	Renewable	Must Run*	5.60
TRN Energy	IPP/JV/Bilateral/Others	Merit	1.53
MB Power	IPP/JV/Bilateral/Others	Merit	1.56



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Source of Power	Plant Type	Dispatch Mode	Variable Charge (Rs / kWh)
RKM Powergen	IPP/JV/Bilateral/Others	Merit	1.59
Rihand-II	NTPC-Thermal	Merit	1.82
Singrauli	NTPC-Thermal	Merit	1.85
Rihand-III	NTPC-Thermal	Merit	1.86
Sasan	IPP/JV/Bilateral/Others	Merit	1.91
Rihand-I	NTPC-Thermal	Merit	2.00
Anpara D	UPRVUNL-Thermal	Merit	2.03
Anpara B	UPRVUNL-Thermal	Merit	2.18
Anpara A	UPRVUNL-Thermal	Merit	2.25
NTPC Meja	IPP/JV/Bilateral/Others	Merit	2.39
Obra B	UPRVUNL-Thermal	Merit	2.46
KSK	IPP/JV/Bilateral/Others	Merit	2.50
Kahalgaon St.II Ph.I	NTPC-Thermal	Merit	2.52
Bara	IPP/JV/Bilateral/Others	Merit	2.69
Kahalgaon St. I	NTPC-Thermal	Merit	2.82
Farakka	NTPC-Thermal	Merit	3.00
Lalitpur	IPP/JV/Bilateral/Others	Merit	3.21
Anpara 'C'	IPP/JV/Bilateral/Others	Merit	3.24
Unchahar-I	NTPC-Thermal	Merit	3.32
Unchahar-II	NTPC-Thermal	Merit	3.34
Rosa Power Project	IPP/JV/Bilateral/Others	Merit	3.54
Rosa Power Project	IPP/JV/Bilateral/Others	Merit	3.54
Dadri Extension	NTPC-Thermal	Merit	3.54
Tanda	NTPC-Thermal	Merit	3.61
Tanda Stage-II	NTPC-Thermal	Merit	3.61
Unchahar-III	NTPC-Thermal	Merit	3.64
Uchchahar-IV	NTPC-Thermal	Merit	3.67
Parichha Extn. Stage II	UPRVUNL-Thermal	Merit	3.82
Parichha Extn.	UPRVUNL-Thermal	Merit	3.82
Dadri Thermal	NTPC-Thermal	Merit	3.83
Inter system exchange (Bilateral & PXIL, IEX) / UI	Exchange	Merit	4.00
Harduaganj Ext.	UPRVUNL-Thermal	Merit	4.13
IGSTPP, Jhahjhar	IPP/JV/Bilateral/Others	Merit	4.70
NVVN Coal Power	Exchange	Merit	5.54

*till the RPO Obligations are fulfilled

5.14.2 The Commission directs the Distribution Licensees to procure power to meet demand on real time basis strictly following the merit order dispatch principles. The Distribution Licensees should also take into consideration the prevailing rates on the Energy Exchanges while procuring the power and should try to minimize the cost of power purchase as much as possible. It has



been provided, that the power from short term sources should be procured at cheapest price and in any case, it should not be more than that approved by the Commission for the MYT Period taking into consideration the availability of power at lower prices in the market.

- 5.14.3 The Commission has been directing the Licensees in various proceeding to take advantage of the prevailing cheaper short-term power based on the availability. Further, in its Order dated June 9, 2016 in the matter of Suo-Moto proceeding regarding purchase of power from energy exchange has directed the Licensees to follow the philosophy of daily scheduling. Also, the Commission in the matter of Petition No. 1070 / 2015 has passed various orders (dt. June 21, 2016 etc.) regarding the merit order dispatch. The Licensees are hereby directed that they must strictly comply with the same in procuring the power.



6. AGGREGATE REVENUE REQUIREMENT FOR MYT CONTROL PERIOD FY 2017-18 TO FY 2019-20

6.1 ARR FOR MYT CONTROL PERIOD

6.1.1 The Petitioners have submitted that Regulation 24 of the Distribution MYT Regulations, 2014, provides the principles for determination of ARR wherein the Aggregate Revenue Requirement for the Distribution Business of the Distribution Licensees for each year of the Control Period, shall contain the following financial parameters:

- Cost of power procurement;
- Transmission & Load Dispatch charges;
- Operation and Maintenance expenses;
- Employee Expenses
- Repair and Maintenance Expenses
- Administrative & General Expenses
- Depreciation;
- Contingency Reserves;
- Interest on Loan;
- Interest on Working Capital;
- Bad Debts;
- Return on Equity;
- Income Tax;
- Non-Tariff Income; and
- Income from Other Business

6.1.2 The Petitioners submitted that in the current petition they have filed ARRs for the 1st Control Period i.e. FY 2017-18 to FY 2019-20 for the approval by the Commission. The Petitioners further submitted that in estimating the ARRs the main objective of the Petitioners has been to reduce or at least contain the expenses to the extent possible thereby reducing the cost burden on the beneficiaries.



6.2 POWER PROCUREMENT COST

- 6.2.1 The Petitioners' have submitted that the Distribution MYT Regulations, 2014, provides that the distribution licensees shall have flexibility of procuring power from any source in the country. However, they shall procure power on least cost basis and as per merit order principle. The petitioners further submitted that a two-part tariff structure shall be adopted for all long-term contracts to facilitate merit order dispatch.
- 6.2.2 The Petitioners submitted that some key assumptions considered in forecasting power purchase units & costs are as follows:
- Actual power purchase cost and units of FY 2015-16 and FY 2016-17
 - Provisional power purchase cost and units for April 2017 to June 2017
 - Power Purchase trends observed in the previous and current year.
 - Impact of loss reduction initiatives.
 - Estimated growth in sales.
 - Conversion of Un-Metered Consumers to Metered Consumers
 - Share of expected capacity available from various generators to the UPPCL/DISCOM.
- 6.2.3 The Commission has run the merit order Dispatch schedule for power purchase for the first control period after considering the availability of power. The power purchase quantum and cost approved by the Commission for the first control period has already been discussed in previous section.
- 6.2.4 Further aligning with the Licensee's submission, the Commission has grossed up the power purchase costs to include PGCIL losses (inter-State transmission losses).
- 6.2.5 The Commission has projected the PGCIL charges based on the approved power purchase quantum as detailed in the Table below:

TABLE 6-1: PGCIL CHARGES FOR FY 2017-18 to FY 2018-19

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Claimed Power Purchase by Licensees (MU)	123,807.78	148,145.64	173,005.82
Claimed PGCIL Charges (Rs. Crore)	1,835.41	2,366.66	3,180.96
Approved Power Purchase (MU)	120,288.76	148,145.64	173,005.82
Approved PGCIL Charges (Rs. Crore)	1,783.24	2,366.66	3,180.96



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6.2.6 The Commission further reiterates that the actual inter-State transmission charges for FY 2017-18 to FY 2019-20 would be allowed as pass through during true-up process subject to prudence check by the Commission based on audited accounts.

6.2.7 The Commission has determined the bulk supply rate by dividing the power purchase cost including PGCIL charges so computed with the energy input (MU) at transmission-distribution interface. The Commission has approved the bulk power supply tariff for FY 2017-18 to FY 2019-20 as given in the Table below:

Table 6-2: APPROVED CONSOLIDATED BULK SUPPLY TARIFF

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Purchases Required & Billed Energy (MU)	A	123807.78	120288.76	1,48,145.64	1,48,145.64	1,73,005.82	1,73,005.82
Periphery Loss (Up to inter connection Point) (%)	B	1.69%	1.69%	1.41%	1.41%	1.14%	1.14%
Energy Available at State periphery for Transmission (MU)	C=A* (1-B)	121716.94	118257.35	1,46,060.95	1,46,060.95	1,71,032.87	1,71,032.87
Intra -State Transmission losses %	D	3.79%	3.79%	3.79%	3.79%	3.79%	3.79%
Energy Input into Transmission-Distribution Interface (MU)	E=C* (1-D)	117103.87	113775.39	1,40,525.24	1,40,525.24	1,64,550.72	1,64,550.72
Power Purchase Cost (Rs. Crore)	F	48269.71	46593.65	59,620.85	59,466.75	72,608.63	72,133.15
PGCIL Inter-State transmission charges (Rs. Crore)	G	1835.41	1783.24	2,366.66	2,366.66	3,180.96	3,180.96
Total Power Procurement Cost (Rs. Crore)	H=F+G	50105.13	48376.89	61,987.51	61,833.40	75,789.59	75,314.11
Bulk Supply Tariff (Rs./Unit)	I= (H/E)* 10	4.28	4.25	4.41	4.40	4.61	4.58

6.2.8 Based on the approved quantum, the Commission has approved power procurement cost for State Discoms for FY 2017-18 to FY 2019-20 as given in the tables below:



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Table 6-3: POWER PROCUREMENT COST FOR DVVNL FOR FY 2017-18 to FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	24,154.63	24,014.62	29,058.07	29058.07	33,797.90	33797.90
Bulk Supply Tariff (Rs./kWh)	B	4.28	4.25	4.41	4.40	4.61	4.58
Power Procurement Cost from UPPCL (Rs. Crore)	C =A*B /10	10,335.02	10,210.93	12,817.89	12786.03	15,566.81	15469.14

Table 6-4: POWER PROCUREMENT COST FOR PVVNL FOR FY 2017-18 to FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	35,337.37	33,504.20	41,270.06	41270.06	47,688.57	47688.57
Bulk Supply Tariff (Rs./kWh)	B	4.28	4.25	4.41	4.40	4.61	4.58
Power Procurement Cost from UPPCL (Rs. Crore)	C =A*B /10	15,119.77	14,245.87	18,204.76	18159.50	21,964.64	21826.84

Table 6-5: POWER PROCUREMENT COST FOR MVVNL FOR FY 2017-18 to FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	23,110.58	22,819.62	30,061.03	30061.03	37,668.51	37668.51
Bulk Supply Tariff (Rs./kWh)	B	4.28	4.25	4.41	4.40	4.61	4.58
Power Procurement Cost from UPPCL (Rs. Crore)	C =A*B /10	9,888.30	9,702.82	13,260.31	13227.35	17,349.55	17240.70



Table 6-6: POWER PROCUREMENT COST FOR PuVVNL FOR FY 2017-18 to FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	30,058.55	28,994.21	35,194.46	35194.46	40,099.62	40099.62
Bulk Supply Tariff (Rs./kWh)	B	4.28	4.25	4.41	4.40	4.61	4.58
Power Procurement Cost from UPPCL (Rs. Crore)	C =A*B /10	12,861.12	12,328.24	15,524.73	15486.14	18,469.28	18353.41

Table 6-7: POWER PROCUREMENT COST FOR KESCo FOR FY 2017-18 to FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	4,442.74	4,442.74	4,941.62	4941.62	5,296.12	5296.12
Bulk Supply Tariff (Rs./kWh)	B	4.28	4.25	4.41	4.40	4.61	4.58
Power Procurement Cost from UPPCL (Rs. Crore)	C =A*B /10	1,900.91	1,889.04	2,179.81	2174.39	2,439.31	2424.01

6.3 TRANSMISSION AND SLDC CHARGES

- 6.3.1 The Petitioners submitted that the Intra-State transmission charges for current year and ensuing year payable by the Petitioners are on the basis of actual energy received and uniform charges are to be paid by all the Distribution Licensees proportionate to the energy delivered to them.
- 6.3.2 The Petitioners further submitted that the transmission licensee is also performing the function of SLDC and such SLDC cost is embedded in the transmission charges.
- 6.3.3 The Petitioners submitted that the projections of transmission charges have been taken from the ARR / Tariff Petition filed by U.P. Power Transmission Corporation Ltd (UPPTCL) for FY 2017-18 to FY 2019-20.
- 6.3.4 The Petitioners submitted that in its Petition, UPPTCL has projected transmission charge at a rate of Rs. 0.2210 per kWh, Rs. 0.2323 per kWh and 0.2506 per kWh for FY 2017-18, FY 2018-19 and FY 2019-20 respectively and



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accordingly the state DISCOMs have estimated the cost of Intra-State transmission charges.

6.3.5 Transmission and SLDC charges for FY 2017-18 to FY 2019-20 have been approved in concurrence with the MYT ARR and Transmission tariff approved for UPPTCL for FY 2017-18 to FY 2019-20 in the Commission's Order for determination of Intra-State transmission charges approved for UPPTCL by the Commission. The approved transmission charges for all State DISCOMs for FY 2017-18 to FY 2019-20 are given in tables below:

Table 6-8: INTRA STATE TRANSMISSION CHARGES FOR DVVNL FOR FY 2017-18 TO FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	24154.63	24,014.62	29,058.07	29,058.07	33,797.90	33,797.90
Transmission Tariff (Rs. /kWh)	B	0.207	0.233	0.24	0.237	0.262	0.248
Transmission Cost (Rs. Cr.)	C =A*B /10	500.24	559.51	687.22	689.99	886.18	837.48

Table 6-9: INTRA STATE TRANSMISSION CHARGES FOR PVVNL FOR FY 2017-18 TO FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	35337.37	33504.20	41270.06	41270.06	47688.57	47688.57
Transmission Tariff (Rs./kWh)	B	0.207	0.233	0.24	0.237	0.262	0.248
Transmission Cost (Rs. Cr.)	C =A*B /10	731.84	780.60	976.04	979.97	1250.39	1,181.68

Table 6-10: INTRA STATE TRANSMISSION CHARGES FOR MVVNL FOR FY 2017-18 TO FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	23110.58	22,819.62	30061.03	30,061.03	37668.51	37,668.51
Transmission Tariff (Rs./kWh)	B	0.207	0.233	0.234	0.237	0.262	0.248
Transmission Cost (Rs. Cr.)	C =A*B /10	478.62	531.67	702.34	713.81	987.67	933.39



Table 6-11: INTRA STATE TRANSMISSION CHARGES FOR PuVVNL FOR FY 2017-18 TO FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	30058.55	28994.21	35194.46	35194.46	40099.62	40099.62
Transmission Tariff (Rs./kWh)	B	0.207	0.233	0.24	0.237	0.262	0.248
Transmission Cost (Rs. Cr.)	C =A*B /10	622.51	675.53	832.35	835.70	1051.41	993.63

Table 6-12: INTRA STATE TRANSMISSION CHARGES FOR KESCO FOR FY 2017-18 TO FY 2019-20

Particulars	Derivation	FY 2017-18		FY 2018-19		FY 2019-20	
		Petition	Approved	Petition	Approved	Petition	Approved
Energy Input into Transmission-Distribution Interface (MU)	A	4442.74	4442.74	4941.62	4941.62	5296.12	5296.12
Transmission Tariff (Rs./kWh)	B	0.207	0.233	0.234	0.237	0.262	0.248
Transmission Cost (Rs. Cr.)	C =A*B /10	92.01	103.51	115.46	117.34	138.86	131.23

6.4 O&M EXPENSES

- 6.4.1 The Petitioners submitted that the O&M expenses comprise of Employee costs, Administrative & General (A&G) Expenses and Repair & Maintenance (R&M) expenses. Regulation 25 of the Distribution MYT Tariff Regulations, 2014 mandates the Commission to stipulate a separate trajectory of norms for each of the components of O&M expenses viz., Employee cost, Repairs and maintenance (R&M) expense and Administrative and General Expense (A&G) expense. The relevant extract of the Regulations is as follows:

Quote

25. Operation & Maintenance Expenses

(a) The Commission shall stipulate a separate trajectory of norms for each of the components of O&M expenses viz., Employee cost, Repairs and maintenance (R&M) expense and Administrative and General Expense (A&G) expense. Provided that such norms may be specified for a specific Distribution Licensee or a class of Distribution Licensees.

(b) Norms shall be defined in terms of combination of number of personnel per 1000 consumers and number of personnel per substation along with annual expenses per personnel for Employee cost; combination of A&G expense per personnel and A&G expense per 1000 consumers for A&G



expenses and R&M expense as percentage of gross fixed assets for estimation of R&M expenses:

(c) One-time expenses such as expense due to change in accounting policy, arrears paid due to pay commissions etc., shall be excluded from the norms in the trajectory.

(d) The expenses beyond the control of the Distribution Licensee such as dearness allowance, terminal benefits etc. in Employee cost etc., shall be excluded from the norms in the trajectory.

(e) The One-time expenses and the expenses beyond the control of the Distribution Licensee shall be allowed by the Commission over and above normative Operation & Maintenance Expenses after prudence check.

(f) The norms in the trajectory shall be specified over the control period with due consideration to productivity improvements.

(g) The norms shall be determined at constant prices of base year and escalation on account of inflation shall be over and above the baseline.

(h) The Distribution Licensee specific trajectory of norms shall be identified by the Commission on the basis of simple average of previous five years audited figures, duly normalized for any abnormal variation.

(i) For new Distribution Licensee whose date of commercial operation is within the tariff period (i.e. April 1, 2015 to March 31, 2020), detailed project report shall be used by the Commission to estimate values of norms.”

25.1 Employee Cost

Employee cost shall be computed as per the approved norm escalated by consumer price index (CPI), adjusted by provisions for expenses beyond the control of the Licensee and one-time expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears, Interim Relief etc., governed by the following formula:

$$EMP_n = (EMP_b * CPI \text{ inflation}) + Provision$$

Where:

EMP_n: Employee expense for the year n.

EMP_b: Employee expense as per the norm CPI inflation: is the average increase in the Consumer Price Index (CPI) for immediately preceding three financial years.



Provision: Provision for expenses beyond control of the Distribution Licensee and expected one-time expenses as specified above.”

25.2 Repairs and Maintenance Expense

Repairs and Maintenance expense shall be calculated as percentage (as per the norm defined) of Average Gross Fixed Assets for the year governed by following formula:

$$R\&Mn = K_b * GFAn$$

Where:

R&Mn: Repairs & Maintenance expense for nth year

GFAn: Average Gross Fixed Assets for nth year

Kb: Percentage point as per the norm.”

25.3 Administrative and General Expense

A&G expense shall be computed as per the norm escalated by wholesale price index (WPI) and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Distribution Licensee and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:

$$A\&Gn = (A\&Gb * WPI \text{ inflation}) + \text{Provision}$$

Where:

A&Gn: A&G expense for the year n

A&Gb: A&G expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three financial years

Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission. “

Unquote

- 6.4.2 Further, the Commission in its Order dated February 23, 2017, issued under Clause 42 (Power to Remove Difficulties) of Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 has clarified the base year as submitted below:

Quote

“.....Now whereas, Clause 3.1 (5) and Clause 4.12.1 of the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 relates to the Base Year. Clause 3.1 (5) provides that “Base Year” means the financial year immediately preceding first year of



the Control Period (FY 2017-18 to FY 2019-20) i.e. FY 2016-17 and used for the purposes of these regulations;” and Clause 4.12.1 provides that “The values for the Base Year of the Control Period will be determined based on the audited accounts available, best estimate for the relevant years and other factors considered relevant by the Commission, and after applying the tests for determining the controllable or uncontrollable nature of various items.”

And whereas, from above it can be observed that as per the Clause 3.1 (5) the Base Year should be FY 2016-17. However, as per clause 4.12.1, the values for the Base Year of the Control Period will be determined based on the audited accounts available best estimate for the relevant years and other factors considered relevant by the Commission, and after applying the tests for determining the controllable or uncontrollable nature of various items. It is for sure that the audited accounts for FY 2016-17 cannot be made available at time of filing of the petition (i.e. November 1, 2016) for MYT first control period (i.e. FY 2017-18 to FY 2019-20). The available audited accounts will be for FY 2015-16 and its preceding years. Hence, the ‘Base Year’ must be taken to be as FY 2015-16 and in case audited accounts of FY 2015-16 are not available, then immediately preceding previous year i.e. FY 2014-15 must be taken as ‘Base Year’.”

Unquote

- 6.4.3 For the purpose of calculation of O&M Expenses for the MYT Period, the Commission had prepared the methodology for calculation of O&M Expenses and circulated to all the Licensees vide letter dated February 23, 2017. The Petitioners have submitted that they have computed O&M based the Commission`s methodology. However, the petitioners in their computation of the O&M Expenses have not considered the no of sub-stations/ distribution sub-stations as specified in Regulation 25 of Distribution MYT Tariff Regulations, 2014. The Commission in its deficiency note sought the revised calculations based on the same. Thereafter, the Petitioners submitted the revised calculations of O&M considering the no of sub-stations/ distribution sub-stations.
- 6.4.4 For the purpose of understanding / illustration the Commission has considered the values of DVVNL. The audited data for DVVNL is available up to FY 2014-15, accordingly, the base year has been considered as FY 2014-15. The values for all three components of the O&M expenses for FY 2016-17, i.e. Employee cost, R&M and A&G Expenses has been calculated considering the last five years



audited accounts available i.e. from FY 2010-11 to 2014-15. Based on these values, trajectory for the period from FY 2017-18 to 2019-20 for each component has been stipulated. Further for computing CPI and WPI the indices of FY 2012-13, FY 2013-14 and FY 2014-15 has been used (previous 3 years from the base year) as per Distribution MYT Tariff Regulations, 2014. Considering these values, subsequently the O&M Expense for FY 2017-18 to FY 2019-20 is calculated, for DVVNL, whose component wise detailed calculation described in the subsequent paragraphs. Accordingly, the submission of the petitioners and the approach adopted by the Commission for approving the various components of O&M expenses for the MYT Period is discussed head wise (Employee, A&G and R&M Expenses) below:

Employee Expenses

- 6.4.5 For the purpose of projecting Employee Expenses for the MYT Period, the petitioners have considered the methodology provided by the Commission's approach note for calculation of O&M Expenses dated February 23, 2017. The Petitioners submitted that the base year has been considered as '2014-15', for which the audited accounts are available as on the date of submission of the Multi-Year Tariff Petition. The norms have been worked out by the petitioners considering the cost of per employee deployed based on the actual employee expenses incurred during the past five financial years.
- 6.4.6 Further the petitioners have submitted that in accordance to the Distribution MYT Tariff Regulations, 2014 they have conducted the benchmarking study of operational parameters. The petitioners submitted that, as per the observations and comments of the said benchmarking report the number of personnel per 1000 consumers in case of DVVNL, MVVNL, PVVNL, PuVVNL and KESCO is 1.92, 2.36, 1.35, 1.54 and 3.27 as compared to the statistical mean of the data of sample DISCOMs (excluding UP DISCOMs) which is 2.85, which is owing to significant under deployment of personnel against sanctioned employee strength. Accordingly, the petitioners have requested the Commission to allow the additional employee cost for the additional employees as planned for the MYT Period.
- 6.4.7 The petitioners further submitted that the 7th Pay Commission is expected to be implemented in the State by next financial year i.e. FY 2017-18. Thus, in addition to the above the petitioners have also claimed arrears and implications



of the 7th Pay Commission which are expected to be discharged in FY 2017-18 and subsequent years. The petitioners submitted that since the 7th Pay Commission is effective from 1st January 2016, the impact of the 7th Pay Commission over the employee expenses is computed for different years starting from FY 2015-16 (last quarter of FY 2015-16). The overall increase in the employee expenses due to implementation of the 7th Pay Commission is estimated to be approximately 15%. The petitioners have computed the yearly impact of the 7th Pay Commission by escalating the employee's expenses for FY 2015-16 at 15% and the expenses thus arrived are further escalated by the applicable escalation rate of each year to derive the impact of 7th Pay Commission for subsequent years. The petitioners submitted that the impact of the 7th Pay Commission for FY 2015-16 and FY 2016-17 are expected to be discharged in FY 2017-18 and FY 2018-19 in two equal instalments.

6.4.8 The Commission in its deficiency sought the details of DISCOM-wise total number of sanctioned posts and filled posts for the year FY 2010-11 to FY 2016-17 along with the actual expenditure which the petitioners have incurred and would have incurred if the posts were filled. The Commission further sought justification for this claim quantitatively and numerically based on the findings of the benchmarking studies. In response the petitioners submitted that the benchmarking studies have been conducted with extensive planning and State Govt of UP has already initiated the process of filling in the vacant posts along with increase in the sanctioned posts. The details of the additional number of employees proposed by the petitioners are as follows:

Table 6-13: Additional Number of Employees

DISCOMs (FY 2014-15)	Total No. of Sanctioned Employees	Total No. of Employees	Shortage	% Shortage	Total Establishment Expenses	Total Establishment Expenses
DVVNL	9,114	6,630	2,484	27.25%	310	425.83
MVVNL	13,216	9,794	3,422	25.89%	481	649.52
PVVNL	9,823	5,811	4,012	40.84%	378	638.23
PuVVNL	15,824	7,374	8,450	53.40%	458	983.39
KESCO	3,092	1,718	1,374	44.44%	99	178.93
Total	51,069	31,327	19,742	38.66%	1,726	2,876

6.4.9 Accordingly, the petitioners have claimed the Employee Expenses as shown below:



Table 6-14: Employee Expenses as Claimed by the Petitioners'

DVVNL	FY 2017-18	FY 2018-19	FY 2019-20
Gross Employee Expenses	851.03	1126.62	1353.94
Less: Capitalization	127.66	168.99	203.09
Net Employee Expenses	723.38	957.63	1,150.85

MVVNL	FY 2017-18	FY 2018-19	FY 2019-20
Gross Employee Expenses	1369.02	1917.05	2402.02
Less: Capitalization	205.35	287.56	360.30
Net Employee Expenses	1,163.67	1,629.49	2,041.71

PuVVNL	FY 2017-18	FY 2018-19	FY 2019-20
Gross Employee Expenses	1819.99	2093.40	2308.88
Less: Capitalization	273.00	314.01	346.33
Net Employee Expenses	1,546.99	1,779.39	1,962.55

PVVNL	FY 2017-18	FY 2018-19	FY 2019-20
Gross Employee Expenses	1229.29	1643.90	1994.52
Less: Capitalization	184.39	246.58	299.18
Net Employee Expenses	1,044.90	1,397.31	1,695.34

KESCO	FY 2017-18	FY 2018-19	FY 2019-20
Gross Employee Expenses	291.33	324.28	350.52
Less: Capitalization	43.70	48.64	52.58
Net Employee Expenses	247.63	275.64	297.94

- 6.4.10 The Commission observes that the petitioners have not provided any proper justification for the claim of cost of additional employees. The employee cost for the MYT Period is computed based on clear and documented normative methodology already provided to the petitioners. Further, the petitioners have already claimed the 7th Pay Commission arrears which would be allowed as one-time expense under Regulation 25 of the Distribution MYT Tariff Regulations, 2014 and there is no provision of additional employee cost in the Distribution MYT Tariff Regulations, 2014. Therefore, the additional employee cost is not allowed in this order, however, the same may be considered at the time of filing of APR (Annual Performance Review) of the MYT Period, provided the petitioners provides the actual details of additional employees, sanctioned employees and the additional cost incurred etc.



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6.4.11 The methodology adopted by the Commission for computation of employee expenses is described below. For understanding / illustration the Commission has considered the values of DVVNL. The audited data for DVVNL is available up to FY 2014-15, hence the base year has been considered as FY 2014-15.

6.4.12 The norms for preceding five years for which audited accounts is available i.e. FY 2011-12 to FY 2015-16 is calculated by using following formulae:

SI No	Formulae
(A)	Norms per 1000 consumers = (Employee Expense for year / Number of Consumers) * 1000
(B)	Norms per substation= (Net Employee expense for a year / Number of substation)
(C)	Average of (A) from FY 2010-11 to FY 2014-15. (5 years)
(D)	Average of (B) from FY 2010-11 to FY 2014-15. (5 years)

6.4.13 It is observed that the value of (C) & (D) is nearest to the value for FY 2012-13 which is also the mid-point in this calculation. Hence (C) & (D) are escalated using CPI escalation for FY 2012-13 to FY 2015-16 to arrive at value for FY 2017-18.

Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	Average of FY 2010- 2015
Gross Employee Expenses (Audited) (A1) (Rs Crore)	237.23	239.83	249.42	272.37	309.77	
Number of consumers (A2) (nos.)	2344626	2553857	2725486	2864766	3099144	
Number of substations (A3) (nos.)	214574	215576	216515	217558	231867	
Norms per 1000 consumers (A)= (A1/A2)*1000 (Rs Crore)	0.101	0.094	0.092	0.095	0.100	0.096
Norms per substation (B)= (A1/A3) (RsCrore)	0.0011	0.0011	0.0012	0.0013	0.0013	0.0012

6.4.14 CPI escalation for a year is calculated considering CPI inflation of preceding three years as per the MYT Distribution Tariff Regulations, 2014.



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Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
CPI Indices*	194.83	215.17	236.00	250.83	265.00	275.92	-	-	-
Percentage increase over previous year-CPI Inflation		10.44% (= (215.17-194.83)/194.83)	9.68% (= (236-215.17)/215.17)	6.29% (=(250.83-236/236))	5.65% (=(265-250.83/250.83))	4.12% (=(275.92-265)/265)	8.80% (Avg of previous 3 years from the base year) (= 10.44%+9.68%+6.29%)/3)		

*Source: <http://labourbureau.nic.in/indtab.html>

6.4.15 Then year wise i.e. FY 2017-18, FY 2018-19 and FY 2019-20 Employee Expense (Consumers) and Employee Expense (Substation) is calculated considering norms per 1000 consumers and norms per substation (calculated above) using following formulae:

Employee Expense (Consumers)= (Norms per 1000 consumers * Number of consumers) / 1000

Employee Expense (Substation)= (Norms per substation * Number of consumers)

Particulars	Base Value	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
CPI Inflation		4.12%	8.80%	8.80%	8.80%
Norms per 1000 consumers (Rs Crore)	0.096	0.142*	0.155	0.168	0.183
No of consumers		3663851	4218858	6343419	8015513
Employee Expense (F) (Rs Crore)		520.46	652.04	1066.69	1466.50
Norms per substation (Rs Crore)	0.0012	0.0018	0.0019	0.0021	0.0023
No of sub-stations		297158	322276	348325	371365
Employee Expense (G) (Rs Crore)		522.18	616.16	724.58	840.49

*Note-Values is arrived after escalating the base values by applying CPI inflation for FY 2012-13 to 2016-17.

6.4.16 The arrears of the 7th Pay Commission has been considered by the Commission as 15% of the expenses incurred in the last quarter of FY 2015-16 and FY 2016-17. The computation of total Employee Expense is calculated by taking the



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average of Employee Expense (Consumers) and Employee Expense (Substation), as shown under:

TABLE 6-15: EMPLOYEE EXPENSES AS APPROVED BY THE COMMISSION FOR THE MYT PERIOD

	DVVNL	Control Period		
		FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
A	Norms per 1000 consumers (Rs Crore)	0.155	0.168	0.183
B	Number of consumers (nos)	4218858	6343419	8015513
C	Employee Expenses (consumers) (F) (Rs Crore)	652.04	1066.69	1466.50
D	Norms per substation (Rs Crore)	0.0019	0.0021	0.0023
E	Number of substations (nos)	322276	348325	371365
F	Employee Expenses (substation) (G) (Rs Crore)	616.16	724.58	840.49
G	Gross Employee Expenses (F+G)/2 (Rs Crore)	634.10	895.63	1153.49
H	Less: Employee Expenses Capitalized** (Rs Crore)	95.12	134.34	173.02
	Add: Arrears (K)	47.11	47.11	
I	Net Employee Expenses (G-H+K) (Rs Crore)	586.09	808.40	980.47

** Employee Expenses capitalized for the year has been reduced in proportion to the gross employee expenses claimed and gross employee expenses allowed as per norms

	MVVNL	Control Period		
		FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
A	Norms per 1000 consumers (Rs Crore)	0.220	0.240	0.261
B	Number of consumers (nos)	5325660	9102971	12118118
C	Employee Expenses (consumers) (F) (Rs Crore)	1173.79	2182.91	3161.70
D	Norms per substation(RsCrore)	0.0041	0.0045	0.0049
E	Number of substations (nos)	279061.00	285531.00	295870.00
F	Employee Expenses (substation) (G) (Rs Crore)	1144.35	1273.93	1436.24
G	Gross Employee Expenses (F+G)/2 (Rs Crore)	1159.07	1728.42	2298.97
H	Less: Employee Expenses Capitalized** (Rs Crore)	186.57	271.98	344.84
	Add: Arrears (K)	84.74	84.74	
I	Net Employee Expenses (G-H+K) (Rs Crore)	1057.24	1541.18	1954.13



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	PVVNL	Control Period		
		FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
A	Norms per 1000 consumers (Rs Crore)	0.162	0.176	0.192
B	Number of consumers (nos)	5581369	9367365	12345884
C	Employee Expenses (consumers) (F) (Rs Crore)	905.09	1652.74	2369.98
D	Norms per substation (Rs Crore)	0.0031	0.0034	0.0037
E	Number of substations (nos)	274288	277497	280075
F	Employee Expenses (substation) (G) (Rs Crore)	862.75	949.66	1042.84
G	Gross Employee Expenses (F+G)/2 (Rs Crore)	883.92	1301.20	1706.41
H	Less: Employee Expenses Capitalized** (Rs Crore)	142.56	205.15	255.96
	Add: Arrears (K)	66.52	66.52	
I	Net Employee Expenses (G-H+K) (Rs Crore)	807.87	1162.56	1450.45

	PuVVNL	Control Period		
		FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
A	Norms per 1000 consumers (Rs Crore)	0.184	0.201	0.218
B	Number of consumers (nos)	5395431	6638511	7572857
C	Employee Expenses (consumers) (F) (Rs Crore)	994.97	1331.95	1653.15
D	Norms per substation (Rs Crore)	0.0034	0.0037	0.0040
E	Number of substations (nos)	374814	389879	399934
F	Employee Expenses (substation) (G) (Rs Crore)	1270.10	1437.43	1604.28
G	Gross Employee Expenses (F+G)/2 (Rs Crore)	1132.54	1384.69	1628.72
H	Less: Employee Expenses Capitalized** (Rs Crore)	169.88	207.70	244.31
	Add: Arrears (K)	86.69	86.69	
I	Net Employee Expenses (G-H+K) (Rs Crore)	1049.35	1263.68	1384.41



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	KESCO	Control Period		
		FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
A	Norms per 1000 consumers (Rs Crore)	0.295	0.321	0.350
B	Number of consumers (nos)	608948	655257	705152
C	Employee Expenses (consumers) (F) (Rs Crore)	179.88	210.59	246.57
D	Norms per substation (Rs Crore)	0.0374	0.0407	0.0443
E	Number of substations (nos)	5017.00	5322.00	5626.00
F	Employee Expenses (substation) (G) (Rs Crore)	187.57	216.49	249.00
G	Gross Employee Expenses (F+G)/2 (Rs Crore)	183.72	213.54	247.79
H	Less: Employee Expenses Capitalized** (Rs Crore)	27.56	32.03	37.17
	Add: Arrears (K)	14.46	14.46	
I	Net Employee Expenses (G-H+K) (Rs Crore)	170.63	195.97	210.62

R&M Expenses

6.4.17 The petitioners submitted that R&M expenses have been calculated as a percentage of average GFA by dividing the total R&M expenses with GFA balance of the relevant year. To arrive at the percentage norm or the factor 'K_b' for calculation of R&M expenses for the MYT period the petitioners have referred to the methodology provided in the Commission's approach note for calculation of O&M Expenses dated February 23rd, 2017. The WPI annual escalation index has been considered for computing the R&M expense for the Control Period. Accordingly, the petitioners in the instant Petitions have at first worked out the norms for the base year considering the average of past five years of the R&M expenses as a percentage of average GFA balance for each year.

6.4.18 The claimed R&M Expenses of the petitioners are as shown below:

TABLE 6-16: R&M EXPENSES AS CLAIMED IN THE MYT PERIOD

DVVNL	2017-18	2018-19	2019-20
Average GFA (Rs in Crore)	8,397.22	10,262.78	12,336.55
K _b	6.27%	6.39%	6.51%
R&M Expenses (Rs in Crore)	526.91	655.77	802.73



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MVVNL	2017-18	2018-19	2019-20
Average GFA (Rs in Crore)	9,136.95	11,711.29	14,008.60
K _b	5.17%	5.27%	5.37%
R&M Expenses (Rs in Crore)	472.80	617.12	751.70

PVVNL	2017-18	2018-19	2019-20
Average GFA (Rs in Crore)	12,201.50	16,180.05	19,743.93
K _b	3.66%	3.72%	3.79%
R&M Expenses (Rs in Crore)	446.12	602.42	748.58

PuVVNL	2017-18	2018-19	2019-20
Average GFA (Rs in Crore)	9,239.77	11,465.88	13,793.93
K _b	6.12%	6.23%	6.34%
R&M Expenses (Rs in Crore)	565.34	714.40	875.21

KESCO	2017-18	2018-19	2019-20
Average GFA (Rs in Crore)	789.93	972.43	1,180.23
K _b	6.51%	6.63%	6.75%
R&M Expenses (Rs in Crore)	51.45	64.50	79.72

6.4.19 The methodology adopted by the Commission as provided in Distribution MYT Tariff Regulations, 2014 for the detailed calculation of R&M Expense is as follows:

6.4.20 K_b is calculated considering audited figures for the preceding five years (i.e. FY 2010-11 to FY 2014-15) as follows:

$$K_b = \% \text{ of (Actual R\&M Expense / Average GFA)}$$

Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
Average GFA (A) (Rs Crore)	3516.05	4013.36	4438.86	4837.35	5533.94
R&M Expenses (B) (Rs Crore)	209.12	215.18	261.10	329.62	316.19
K_b (D= B/A)	5.95%	5.36%	5.88%	6.81%	5.71%

6.4.21 Average of K_b is calculated for the preceding five years is calculated. This is considered as value of K_b for FY 2014-15 (base year). Thereafter the value is escalated by using increase in WPI for the corresponding years.



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Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
Kb (D= B/A)	5.95%	5.36%	5.88%	6.81%	5.71%
Average of 5 years					5.94%

6.4.22 WPI escalation for a year is calculated by considering the average increase in WPI for preceding three years.

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
WPI Indices*	100	107	113	114	110	112			
Percentage increase over previous year- WPI Inflation		6.90%	5.53%	0.94%	-3.65%	1.73%	4.46% (Avg of previous 3 years from the base year) = ((6.90%+5.53%+0.94%)/3)		

*Source- <http://eaindustry.nic.in/#>

The new WPI series has been issued by the government and the new series of Wholesale Price Index (WPI) with base 2011-12 is effective from April 2017. The same has been considered for escalation purposes during the MYT control period.

6.4.23 Then the total R&M Expense is calculated by using following formulae:

$$\text{Total R\&M Expense} = K_b * \text{Average GFA}$$

Particulars	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Average GFA (Rs Crore)	6294.49	7092.06	8383.71	9964.58	11561.52
WPI Inflation	-3.65%	1.73%	4.46%	4.46%	4.46%
Kb	5.73% = (5.94%)*(1-3.65%)	5.83 % (= 5.73% *(1+1.73%))	6.09% (=5.83%*(1+4.46%))	6.36% (=6.09%*(1+4.46%))	6.64% (=6.36%*(1+4.46%))

6.4.24 The calculation of R&M Expense for DVVNL is as follows:

S. No.	Particulars	Control Period		
		FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
1	Average GFA for R&M (Rs Crore)*	8383.71	9964.58	11561.52
2	Kb	6.09%	6.36%	6.64%
3	R&M Expense (Rs Crore)	510.20	633.44	767.72

* GFA for R&M includes asset value of Gol Grants not considered in investment



6.4.25 Accordingly, the R&M Expenses computed for the DISCOMs are as shown below:

TABLE 6-17: R&M EXPENSES AS APPROVED BY THE COMMISSION IN THE MYT PERIOD

S. No.	DVVNL	Control Period		
		FY 2017-18	FY 2018-19	FY 2019-20
1	Average GFA for R&M (Rs Crore)	8383.71	9964.58	11561.52
2	K _b	6.09%	6.36%	6.64%
3	R&M Expense (Rs Crore)	510.20	633.44	767.72

S.No.	MVVNL	Control Period		
		FY 2017-18	FY 2018-19	FY 2019-20
1	Average GFA for R&M (Rs Crore)	7892.75	9641.35	11529.23
2	K _b	5.02%	5.24%	5.48%
3	R&M Expense (Rs Crore)	396.11	505.43	631.34

S.No.	PVVNL	Control Period		
		FY 2017-18	FY 2018-19	FY 2019-20
1	Average GFA for R&M (Rs Crore)	12183.28	15213.34	18131.79
2	K _b	3.55%	3.70%	3.87%
3	R&M Expense (Rs Crore)	432.02	563.51	701.55

S. No.	PuVVNL	Control Period		
		FY 2017-18	FY 2018-19	FY 2019-20
1	Average GFA for R&M (Rs Crore)	9201.71	10871.54	12464.39
2	K _b	5.93%	6.20%	6.47%
3	R&M Expense (Rs Crore)	546.04	673.88	807.06

S. No.	KESCO	Control Period		
		FY 2017-18	FY 2018-19	FY 2019-20
1	Average GFA for R&M (Rs Crore)	785.25	956.33	1148.65
2	K _b	6.31%	6.59%	6.89%
3	R&M Expense (Rs Crore)	49.57	63.06	79.11

A&G Expenses

6.4.26 The petitioners' submitted that A&G Expenses have been worked out considering the methodology provided in the Commission's approach note for calculation of O&M Expenses dated February 23, 2017. The Petitioners have worked out the norms depicting cost of A&G expenses per employee and A&G expenses per 1000 consumers based on the actual A&G expenses incurred



during the past five financial years. The Petitioners have considered the above worked out norm of Rs. Crore A&G cost per 1000 Consumers and per employee as the A&G cost per 1000's consumer and per employee for the middle year i.e. for FY 2013-14 and has thereafter applied the yearly increase in the CPI inflation Index for FY 2014-15, 2015-16 and 2016-17 to reach the base year norms, for the purpose of calculation of A&G expenses for the MYT Period. Further, no amounts have been claimed under the entitlement "Provision" provided by the MYT Distribution Regulations. However, the Petitioners reserve the right to claim any deviation in A&G expenditure owing to any "cost for initiatives or other one-time expenses" at the stage of truing up.

6.4.27 Accordingly, the A&G Expenses claimed by the petitioners are as shown under:

TABLE 6-18: A&G EXPENSES AS CLAIMED IN THE MYT PERIOD

A&G Expenses	FY 2017-18	FY 2018-19	FY 2019-20
DVVNL	146.96	194.85	233.72
MVVNL	286.11	426.28	548.74
PVVNL	116.74	171.09	216.38
PuVVNL	132.93	156.86	183.45
KESCO	33.64	36.59	39.81

6.4.28 The methodology adopted by the Commission as provided in Distribution MYT Tariff Regulations, 2014 for the detailed calculation of A&G Expense for DVVNL is as under:

6.4.29 The norms for five years (i.e. for last five years for which audited accounts are available i.e. from FY 2010-11 to FY 2014-15) are calculated by using formulae as follows:

Sl No	Formulae
(A)	Norms per 1000 consumers= (Net A&G expense for a year / Number of consumers) * 1000
(B)	Norms per Employee= (Net A&G expense for a year / Number of employee)
(C)	Average of (A) from FY 2010-11 to FY 2014-15 (5 years)
(D)	Average of (B) from FY 2010-11 to FY 2014-15 (5 years)

Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	Average of FY 2011- 2016
A&G Expenses (Audited) (A1) (Rs Crore)	59.64	55.63	75.31	79.35	100.86	



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Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	Average of FY 2011- 2016
Number of consumers (A2) (nos.)	2344626	2553857	2725486	2864766	3099144	
Number of employees (A3) (nos.)	5845	5995	6185	6395	6630	
Norms per 1000 consumers (A)= (A1/A2)*1000 (Rs Crore)	0.025	0.022	0.028	0.028	0.033	0.027 (C)
Norms per employee (B)= (A1/A3) (Rs Crore)	0.0102	0.0093	0.0122	0.0124	0.0152	0.0119 (D)

6.4.30 It is observed that the value of (C) & (D) is nearest to the value for the year FY 2012-13 which is also the mid-point in this calculation. Hence, (C) & (D) are escalated using WPI escalation for FY 2012-13 to FY 2015-16 to arrive at value for FY 2017-18.

6.4.31 WPI escalation for a year is calculated considering WPI inflation of preceding three years.

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
WPI Indices*	100	107	113	114	110	112	-	-	-
Percentage increase over previous year- WPI Inflation		6.90% (= (107-100)/100)	5.53% (= (113-107)/ 107)	0.94% (=(114-113/113))	-3.65% (=(110-114/114)	1.73% (=(112-110)/110)	4.46% (Avg of previous 3 years from the base year) ((=6.90%+ 5.53%+0.94%)/3)		

*Source- <http://eaindustry.nic.in/#>

The new WPI series has been issued by the government and the new series of Wholesale Price Index (WPI) with base 2011-12 is effective from April 2017. The same has been considered for escalation purposes during the MYT control period.

6.4.32 Thereafter the year wise i.e. FY 2017-18, FY 2018-19 and FY 2019-20 total A&G Expenses are calculated considering A&G Expense (Consumers) and A&G Expense (Employee) per 1000 consumers as shown below:

A&G Expense (Consumers)= (Norms per 1000 consumers * Number of consumers) / 1000

A&G Expense (Employee)= (Norms per employee * Number of employee)



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Particulars	Base Value	2016-17	2017-18	2018-19	2019-20
WPI Inflation		1.73%	4.46%	4.46%	4.46%
Norms per 1000 consumers (RsCrore)	0.027	0.028*	0.029	0.031	0.032
No of consumers (nos.)		3663851	4218858	6343419	8015513
A&G Expense (F) (Rs Crore)		103.36	124.33	195.27	257.74
Norms per Employee (Rs Crore)	0.00119	0.0122*	0.0127	0.0133	0.0139
No of employees (nos.)		8029	8459	8892	9118
A&G Expense (G) (Rs Crore)		97.70	107.52	118.06	126.46

Note- *Values arrived after escalating the base values by applying WPI inflation for FY 2012-13 to FY 2015-16

6.4.33 The total A&G expense is calculated by taking the average of A&G Expense (Consumers) and A&G Expense (Employee), as follows:

DVVNL	Control Period		
	FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
Norms per 1000 consumers (Rs Crore)	0.029	0.031	0.032
Number of Consumers (nos)	4218858	6343419	8015513
Administration & General Expenses (consumers) (F) (Rs Crore)	124.33	195.27	257.74
Norms per Employee (Rs Crore)	0.0127	0.0133	0.0139
Number of Employee (nos)	8459	8892	9118
Administration & General Expenses (Employee) (G) (Rs Crore)	107.52	118.06	126.46
Total Administration & General Expenses (F+G)/2 (Rs Crore)	115.92	156.67	192.10

6.4.34 Accordingly, the approved A&G Expenses for the Licensees are as shown under:

TABLE 6-19: A&G EXPENSES AS APPROVED BY THE COMMISSION FOR THE MYT PERIOD

DVVNL	Control Period		
	FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
Norms per 1000 consumers (Rs Crore)	0.029	0.031	0.032
Number of Consumers (nos)	4218858	6343419	8015513
Administration & General Expenses (consumers) (F) (Rs Crore)	124.33	195.27	257.74
Norms per Employee (Rs Crore)	0.0127	0.0133	0.0139



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DVVNL	Control Period		
	FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
Number of Employee (nos)	8459	8892	9118
Administration & General Expenses (Employee) (G) (Rs Crore)	107.52	118.06	126.46
Total Administration & General Expenses (F+G)/2 (Rs Crore)	115.92	156.67	192.10

MVVNL	Control Period		
	FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
Norms per 1000 consumers (Rs Crore)	0.0538	0.0562	0.0587
Number of Consumers (nos)	5325660	9102971	12118118
Administration & General Expenses (consumers) (F) (Rs Crore)	286.48	511.50	711.28
Norms per Employee (Rs Crore)	0.0186	0.0195	0.0203
Number of Employee (nos)	11,017	12,038	13,315
Administration & General Expenses (Employee) (G) (Rs Crore)	205.40	234.44	270.87
Total Administration & General Expenses (F+G)/2 (Rs Crore)	245.94	372.97	491.07

PVVNL	Control Period		
	FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
Norms per 1000 consumers (Rs Crore)	0.0215	0.0224	0.0234
Number of Consumers (nos)	5581369	9367365	12345884
Administration & General Expenses (consumers) (F) (Rs Crore)	119.73	209.90	288.97
Norms per Employee (Rs Crore)	0.0122	0.0127	0.0133
Number of Employee (nos)	6,239	6,426	6,618
Administration & General Expenses (Employee) (G) (Rs Crore)	75.88	81.64	87.83
Total Administration & General Expenses (F+G)/2 (Rs Crore)	97.81	145.77	188.40



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PuVVNL	Control Period		
	FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
Norms per 1000 consumers (Rs Crore)	0.0235	0.0246	0.0257
Number of Consumers (nos)	5395431	6638511	7572857
Administration & General Expenses (consumers) (F) (Rs Crore)	127.05	163.29	194.58
Norms per Employee (Rs Crore)	0.0123	0.0128	0.0134
Number of Employee (nos)	8336	8862	10284
Administration & General Expenses (Employee) (G) (Rs Crore)	102.41	113.73	137.86
Total Administration & General Expenses (F+G)/2 (Rs Crore)	114.73	138.51	166.22

KESCO	Control Period		
	FY 2017-18 (n+1)	FY 2018-19 (n+2)	FY 2019-20 (n+3)
Norms per 1000 consumers (Rs Crore)	0.0325	0.0339	0.0354
Number of Consumers (nos)	608948	655257	705152
Administration & General Expenses (consumers) (F) (Rs Crore)	19.78	22.24	25.00
Norms per Employee (Rs Crore)	0.0127	0.0133	0.0139
Number of Employee (nos)	2246	2281	2313
Administration & General Expenses (Employee) (G) (Rs Crore)	28.53	30.26	32.06
Total Administration & General Expenses (F+G)/2 (Rs Crore)	24.16	26.25	28.53

6.4.35 The summary of O&M Expenses approved by the Commission for the DISCOMs are as shown under:

TABLE 6-20: O&M EXPENSES AS APPROVED BY THE COMMISSION FOR THE MYT PERIOD

DVVNL	Claimed			Approved		
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
Repair & Maintenance Expenses	526.91	655.77	802.73	510.20	633.44	767.72
Employee Expenses *	851.03	1126.62	1353.94	681.21	942.74	1153.49
Administrative and General Expenses	146.96	194.85	233.72	115.92	156.67	192.10
Gross O&M Expenses	1524.90	1977.24	2390.39	1260.23	1685.74	2113.31
Less:						
Employee Expenses capitalized	127.66	168.99	203.09	95.12	134.34	173.02



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DVVNL	Claimed			Approved		
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
Administrative and General Expenses capitalized	22.04	29.23	35.06	17.39	23.50	28.81
Expenses Capitalized	149.70	198.22	238.15	112.51	157.84	201.84
Net O&M Expenses	1375.20	1779.02	2152.24	1194.83	1575.00	1911.47

*Note-Including Arrears

MVVNL	Claimed			Approved		
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
Repair & Maintenance Expenses	472.80	617.12	751.70	396.11	505.43	631.34
Employee Expenses *	1369.02	1917.05	2402.02	1243.81	1813.16	2298.97
Administrative and General Expenses	286.11	426.28	548.74	245.94	372.97	491.07
Gross O&M Expenses	2127.93	2960.45	3702.46	1885.85	2691.56	3421.39
Less:						
Employee Expenses capitalized	205.35	287.56	360.30	186.57	271.98	344.84
Administrative and General Expenses capitalized	42.92	63.94	82.31	36.89	55.94	73.66
Expenses Capitalized	248.27	351.50	442.61	223.46	327.92	418.50
Net O&M Expenses	1879.66	2608.95	3259.85	1662.39	2363.64	3002.88

*Note-Including Arrears

PVVNL	Claimed			Approved		
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
Repair & Maintenance Expenses	446.12	602.42	748.58	432.02	563.51	701.55
Employee Expenses *	1229.29	1643.90	1994.52	950.44	1367.72	1706.41
Administrative and General Expenses	116.74	171.09	216.38	97.81	145.77	188.40
Gross O&M Expenses	1792.15	2417.41	2959.48	1480.27	2077.00	2596.36
Less :						
Employee Expenses capitalized	184.39	246.58	299.18	142.57	205.16	255.96
Administrative and General Expenses capitalized	17.51	25.66	32.46	14.67	21.87	28.26
Expenses Capitalized	201.90	272.24	331.64	157.24	227.02	284.22
Net O&M Expenses	1590.25	2145.17	2627.84	1323.03	1849.98	2312.14



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PuVVNL	Claimed			Approved		
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
Repair & Maintenance Expenses	565.34	714.40	875.21	546.04	673.88	807.06
Employee Expenses *	1819.99	2093.40	2308.88	1219.23	1471.39	1628.72
Administrative and General Expenses	132.93	156.86	183.45	114.73	138.51	166.22
Gross O&M Expenses	2518.26	2964.66	3367.54	1793.31	2197.09	2601.99
Less :						
Employee Expenses capitalized	273.00	314.01	346.33	169.88	207.70	244.31
Administrative and General Expenses capitalized	19.94	23.53	27.52	17.21	20.78	24.93
Expenses Capitalized	292.94	337.54	373.85	187.09	228.48	269.24
Net O&M Expenses	2225.32	2627.12	2993.69	1692.91	2055.30	2332.75

**Note-Including Arrears*

KESCO	Claimed			Approved		
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
Repair & Maintenance Expenses	51.45	64.50	79.72	49.57	63.06	79.12
Employee Expenses *	291.33	324.28	350.52	183.72	213.54	247.79
Administrative and General Expenses	58.03	61.59	65.39	24.16	26.25	28.53
Gross O&M Expenses	400.81	450.37	495.63	257.45	302.85	355.43
Less :						
Employee Expenses capitalized	43.70	48.64	52.58	27.56	32.03	37.17
Administrative and General Expenses capitalized	8.70	9.24	9.81	3.62	3.94	4.28
Expenses Capitalized	52.40	57.88	62.39	31.18	35.97	41.45
Net O&M Expenses	348.41	392.50	433.24	240.73	281.34	313.98

**Note-Including Arrears*

6.5 GFA BALANCES AND CAPITAL FORMATION ASSUMPTIONS

6.5.1 The Petitioners have submitted that the projected capital expenditure is proposed to be funded in a debt equity mix of 70:30, which is also in line with the Distribution MYT Regulations, 2014 and established philosophy of the Commission. The Petitioners have proposed the following capital expenditure for the first control period from FY 2017-18 to FY 2019-20.



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**TABLE 6-21: CAPITAL INVESTMENT PLAN PROPOSED BY DVVNL FOR FY 2017-18 to FY 2019-20
(RS. CRORE)**

FY	Loans	Equity / Internal Accruals	Deposit Works	Total
2017-18	1348.17	577.79	269.63	2195.59
2018-19	1,636.07	701.17	327.21	2664.45
2019-20	865.36	370.87	173.07	1409.29

**TABLE 6-22: CAPITAL INVESTMENT PLAN PROPOSED BY PVVNL FOR FY 2017-18 to FY 2019-20
(RS. CRORE)**

FY	Loans	Equity / Internal Accruals	Deposit Works	Total
2017-18	4,539.01	1,945.29	907.80	7,392.10
2018-19	1,861.45	797.76	372.29	3,031.50
2019-20	1,100.39	471.60	220.08	1,792.07

**TABLE 6-23: CAPITAL INVESTMENT PLAN PROPOSED BY MVVNL FOR FY 2017-18 to FY 2019-20
(RS. CRORE)**

FY	Loans	Equity / Internal Accruals	Deposit Works	Total
2017-18	1,690.05	724.31	338.01	2,752.36
2018-19	850.30	364.42	170.06	1,384.78
2019-20	844.00	361.72	168.80	1,374.52

**TABLE 6-24: CAPITAL INVESTMENT PLAN PROPOSED BY PuVVNL FOR FY 2017-18 to FY 2019-20
(RS. CRORE)**

FY	Loans	Equity / Internal Accruals	Deposit Works	Total
2017-18	1907.34	817.43	381.47	3106.25
2018-19	1734.90	743.53	346.98	2825.41
2019-20	715.65	306.71	143.13	1165.48

**TABLE 6-25: CAPITAL INVESTMENT PLAN PROPOSED BY KESCO FOR FY 2017-18 to FY 2019-20
(RS. CRORE)**

FY	Loans	Equity / Internal Accruals	Deposit Works	Total
2017-18	154.88	66.38	30.98	252.23
2018-19	116.20	49.80	23.24	189.24
2019-20	105.00	45.00	21.00	171.00



- 6.5.2 The Petitioners submitted that the following assumptions were used for projecting GFA and CWIP:
- 40% of the opening CWIP and 40% of investment made during the year, expenses capitalized & interest capitalized (40% of total investment) has been assumed to get capitalized during the year.
 - Investment through “deposit work “has been taken for capital formation. However, depreciation thereon has not been charged to the ARR in line with the policy adopted by the Commission in its previous Tariff Orders.
 - The capital investment plan (net of deposit works) has been projected to be funded in the ratio of 70:30 (debt to equity).
- 6.5.3 The Regulation 5.2 of the Distribution MYT Tariff Regulations, 2014 stipulates as below:
- “The capital investment plan shall show separately, on-going projects that will spill into the control period (details to be provided year wise) under review and new projects (along with justification) that will commence but may be completed within or beyond the control period. The Commission shall consider and approve the capital investment plan for which the Distribution Licensee shall provide relevant technical and commercial details.”*
- 6.5.4 It is observed that the petitioners have claimed the Capital Expenditure Plan and Investment details with schemes such as Vyapar Vikas Nidhi Scheme, Ram Manohar Lohiya Scheme, U/G Cabelling, R-Apdrp Part B, IPDS, DDUGJY etc. The details of the Capital Expenditure submitted by the petitioners are annexed in this order.
- 6.5.5 Further, the Government of India (GoI) has launched two schemes i.e. Deen Dayal Upadhyay Gram Jyoti Yojna (DDUGJY) and Integrated Power Development Scheme (IPDS) under which 60% Grant is provided by GoI. It has been submitted by the licensees that 60% grant is converted to equity by Government of UP (GoUP) and therefore they have claimed the same as investments and have not reduced the value of grant from investments. However, the Commission observes that the intent of GoI is to provide relief to the consumers by providing the grant for the schemes. If the grant is also added in the investment and the same is allowed as 70:30 then the burden of the consumer by way of depreciation and interest would increase year after year.
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The Commission is of the view that the capital grants provided by GoI for capital investments should be deducted from the value of total investments and only balance should be taken by financing in the ratio of 70:30. Accordingly, the Commission has disallowed the 60% value of investments for IPDS and DDUGJY schemes. Further, the funding of schemes RAPDRP Part-A and Part-B are provided by GoI in form of loan initially and then converts to grant subject to achievement of targets. Hence, the same has been considered part of the capital investments. The above methodology would be applicable under the Distribution MYT Regulations, 2014 and the investments shall be reviewed at the time of Annual Performance Review / True-Up. The claimed investments are accordingly deducted by an amount equal to 60% of value of these schemes which is shown under:

Scheme	DVVNL			MVVNL			PVVNL		
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
DDUGJY - Starts from 2016-17	354.61	472.82	0.00	443.24	0.00	0.00	1210.50	386.96	0.00
IPDS - Starts from 2016-17	137.74	183.65	0.00	259.20	0.00	0.00	532.31	88.72	0.00
Total	492.35	656.47	0.00	702.44	0.00	0.00	1742.81	475.68	0.00

Scheme	PuVVNL			KESCo			Total		
	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20	FY 2017-18	FY 2018-19	FY 2019-20
DDUGJY - Starts from 2016-17	641.56	600.00	0.00	0.00	0.00	0.00	2649.92	1459.78	0.00
IPDS - Starts from 2016-17	304.94	307.75	63.60	0.00	0.00	0.00	1234.20	580.12	63.60
Total	946.51	907.75	63.60	0.00	0.00	0.00	3884.12	2039.89	63.60

6.5.6 Further, for the MYT Control Period, the Commission observed that the capital investment claimed by the Licensees is not in accordance with the Distribution MYT Regulations, 2014 as reproduced above and hence, the Commission vide its deficiency notes sought the remaining information from the Licensees. The Licensees did not submit any of the sought information citing that the required information is under preparation. The Commission in its previous orders has been approving 70% of the claimed capital investment plan as the Licensees did not submit the capital investment plan as per the Regulations. However, the Commission observes that during the MYT Control Period, the Licensees have to undergo intensive capital investment for achieving the targets inked under UDAY and 24 x 7 Power for ALL schemes. Hence, in view of the above, the



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Commission approves full capital investment (apart from the grants from GoI as discussed above) as proposed by the Petitioners. **The Commission directs the petitioners to submit the complete capital investment plan at the time of APR for FY 2017-18. It is to be noted that in case the Licensees fail to submit the capital investment plan while filing the Annual Performance Review petitions the Commission may disallow, the 30% of proposed capital investment in order to reprimand the petitioners’.**

6.5.7 Further, with a view to approve realistic levels of Gross Fixed Asset (GFA) balance, and consequent tariff components such as depreciation, interest on loan and return on equity, the Commission has referred to the gross fixed asset balances, capital additions, capital deletions, capital work in progress balances, etc., up to FY 2014-15 as per the audited accounts and for FY 2015-16 as per provisional accounts for FY 2015-16 and FY 2016-17 as per revised submission considered by the Licensees in their petitions. The capitalisation of expenses and interest has been considered as detailed in the sections dealing with O&M expenses and Interest on long term loans. Further, in line with the methodology adopted by the Commission in its previous Orders, 40% of the total investments including opening CWIP, expenses and interest capitalisation during the year have been projected to be capitalised in FY 2017-18 to FY 2019-20.

6.5.8 Accordingly, the details of Capitalisation and Work-in-progress for the MYT Control Period are shown in the Table below:

TABLE 6-26: CAPITALISATION & WIP FOR DVVNL UP TO FY 2017-18 to FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening WIP as on 1 st April	1531.31	1526.72	2379.62	2052.81	3217.07	2591.35
Investments	2195.58	1703.23	2664.46	2007.99	1409.30	1409.30
Employee Expenses Capitalisation	127.66	95.12	168.99	134.34	203.09	173.02
A&G Expenses Capitalisation	22.04	17.39	29.23	23.50	35.06	28.81
Interest Capitalisation on Interest on long term loans	89.44	78.89	119.49	100.28	142.54	119.74
Total Investments including opening WIP	3966.03	3421.35	5361.78	4318.92	5007.05	4322.23
Transferred to GFA (Total Capitalisation)	1586.41	1368.54	2144.71	1727.57	2002.82	1728.89
Closing WIP	2379.62	2052.81	3217.07	2591.35	3004.23	2593.34



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TABLE 6-27: CAPITALISATION & WIP FOR PVVNL UP TO FY 2017-18 to FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening WIP as on 1 st April	2486.75	2481.85	6139.42	5048.89	5796.24	4801.56
Investments	7392.10	5649.29	3031.50	2555.82	1792.07	1792.07
Employee Expenses Capitalisation	184.39	142.57	246.58	205.16	299.18	255.96
A&G Expenses Capitalisation	17.51	14.67	25.66	21.87	32.46	28.26
Interest Capitalisation on Interest on long term loans	151.61	126.44	217.23	170.86	239.08	187.49
Total Investments including opening WIP	10232.36	8414.81	9660.40	8002.60	8159.03	7065.34
Transferred to GFA (Total Capitalisation)	4092.94	3365.93	3864.16	3201.04	3263.61	2826.13
Closing WIP	6139.42	5048.89	5796.24	4801.56	4895.42	4239.20

TABLE 6-28: CAPITALISATION & WIP FOR MVVNL UP TO FY 2017-18 to FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening WIP as on 1 st April	3811.10	2378.78	4156.94	2848.19	3651.54	2819.07
Investments	2771.67	2069.23	1431.66	1431.66	1402.49	1402.49
Employee Expenses Capitalisation	205.35	186.57	287.56	271.98	360.30	344.84
A&G Expenses Capitalisation	42.92	36.89	63.94	55.94	82.31	73.66
Interest Capitalisation on Interest on long term loans	84.32	75.52	101.70	90.67	108.31	100.90
Total Investments including opening WIP	6915.37	4746.99	6041.80	4698.44	5604.95	4740.96
Transferred to GFA (Total Capitalisation)	2758.42	1898.80	2390.26	1879.38	2204.37	1896.38
Closing WIP	4156.94	2848.19	3651.54	2819.07	3400.58	2844.57

TABLE 6-29: CAPITALISATION & WIP FOR PuVVNL UP TO FY 2017-18 to FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening WIP as on 1 st April	1415.72	1397.73	2942.33	2296.21	3736.00	2736.54
Investments	3106.24	2159.74	2828.16	1920.42	1165.49	1101.89
Employee Expenses Capitalisation	273.00	169.88	314.01	207.70	346.33	244.31
A&G Expenses Capitalisation	19.94	17.21	20.78	20.78	27.52	24.93



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Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest Capitalisation on Interest on long term loans	88.98	82.45	121.39	115.80	138.26	139.84
Total Investments including opening WIP	4903.88	3827.02	6226.66	4560.91	5413.60	4247.51
Transferred to GFA (Total Capitalisation)	1961.55	1530.81	2490.67	1824.36	2165.44	1699.00
Closing WIP	2942.33	2296.21	3736.00	2736.54	3248.16	2548.51

TABLE 6-30: CAPITALISATION & WIP FOR KESCo UP TO FY 2017-18 to FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening WIP as on 1 st April	106.12	105.68	247.77	234.64	299.72	278.60
Investments	252.22	252.22	189.24	189.24	171.00	171.00
Employee Expenses Capitalisation	43.70	27.56	48.64	32.03	52.58	37.17
A&G Expenses Capitalisation	8.70	3.62	9.24	3.94	9.81	4.28
Interest Capitalisation on Interest on long term loans	2.20	1.98	4.65	4.48	6.38	6.32
Total Investments including opening WIP	412.95	391.07	499.54	464.33	539.49	497.37
Transferred to GFA (Total Capitalisation)	165.18	156.43	199.82	185.73	215.80	198.95
Closing WIP	247.77	234.64	299.72	278.60	323.70	298.42

6.6 FINANCING OF THE CAPITAL INVESTMENT

6.6.1 The Petitioners submitted that they have considered a normative ratio of 70:30. Considering this approach, 70% of the capital expenditure undertaken in any year has been considered to be financed through loan and balance 30% has been considered to be financed through equity contributions. The portion of capital expenditure financed through consumer contribution, capital subsidies and grants has been separated as the depreciation and interest thereon would not be charged to the beneficiaries.

6.6.2 The Petitioners further submitted that the amounts received as consumer contributions, capital subsidies and grants are traced from the provisional accounts for FY 2015-16. Further, the consumer contributions, capital subsidies and grants for the first control period have been considered to be in the same ratio to the total investments, as received by them in FY 2014-15 for which audited accounts are available and for FY 2016-17, the revised estimated nos



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based on the actuals. Thus, the Petitioners submitted that the total capital investment proposed during the first control period after netting off the capital investment through deposit works, has been considered to be funded through debt and equity.

6.6.3 The Commission, on the similar lines, has re-worked the portion of capital expenditure financed through consumer contribution capital grants and subsidies. The Trued-up closing balance of consumer contribution, capital grants and subsidies of FY 2014-15 based on the audited accounts has been considered and subsequent additions in FY 2015-16 as per the provisional accounts and in FY 2016-17 as submitted by the petitioners, have been considered to arrive at the opening amount of consumer contribution, capital grants and subsidies.

6.6.4 The Table below summarises the amounts considered towards consumer contributions, capital grants and subsidies from GoUP for the first control period:

**Table 6-31: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES from GoUP
CONSIDERED FOR DVVNL FROM FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	1569.71	1569.71	1603.30	1603.30	1619.39	1619.39
Additions during the year	269.63	269.63	327.21	327.21	173.07	173.07
Less: Amortization (Depreciation on assets created out of Consumer Contribution)	236.04	236.04	311.12	311.12	393.36	393.36
Closing Balance	1603.30	1603.30	1619.39	1619.39	1399.10	1399.10

**Table 6-32: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES from GoUP
CONSIDERED FOR PVVNL FROM FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	1749.23	1749.23	2501.03	2501.03	2612.49	2612.49
Additions during the year	907.97	907.97	372.29	372.29	220.08	220.08



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Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Less: Amortization (Depreciation on assets created out of Consumer Contribution)	156.00	156.00	260.83	260.83	349.36	349.36
Closing Balance	2501.19	2501.19	2612.49	2612.49	2483.21	2483.21

Table 6-33: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES from GoUP CONSIDERED FOR MVVNL FROM FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	1455.59	1455.59	1644.35	1644.35	1611.40	1611.40
Additions during the year	338.01	338.01	170.06	170.06	168.80	168.80
Less: Amortization (Depreciation on assets created out of Consumer Contribution)	149.25	149.25	203.01	203.01	247.83	247.83
Closing Balance	1644.34	1644.34	1611.41	1611.41	1532.37	1532.37

Table 6-34: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES from GoUP CONSIDERED FOR PuVNL FROM FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	1489.02	1489.02	1731.19	1731.12	1893.22	1892.97
Additions during the year	381.47	381.47	346.98	346.98	143.13	143.13
Less: Amortization (Depreciation on assets created out of Consumer Contribution)	139.31	139.31	184.94	185.13	230.56	230.87
Closing Balance	1731.19	1731.19	1893.22	1892.97	1805.79	1805.23

Table 6-35: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES from GoUP CONSIDERED FOR KESCo FROM FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance of Consumer Contributions, Grants and Subsidies towards Cost of Capital Assets	170.03	170.03	188.78	188.78	194.91	194.91
Additions during the year	30.98	30.98	23.24	23.24	21.00	21.00



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Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Less: Amortization (Depreciation on assets created out of Consumer Contribution)	12.23	12.23	17.10	17.10	22.49	22.49
Closing Balance	188.78	188.78	194.91	194.91	193.43	193.43

6.6.5 Thus, the financing of the capital investment as considered by the Commission is shown in the Table below:

Table 6-36: FINANCING OF THE CAPITAL INVESTMENTS FOR DVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Investment	2195.58	1703.23	2664.46	2007.99	1409.30	1409.30
Less:	-	-	-	-	-	-
Consumer Contribution and Capital Assets Subsidy from GoUP	269.63	269.63	327.21	327.21	173.07	173.07
Investment funded by debt and equity	1925.95	1433.59	2337.24	1680.78	1236.22	1236.22
Debt Funded	1348.16	1003.52	1636.07	1176.54	865.36	865.36
Equity Funded	577.78	430.08	701.17	504.23	370.87	370.87

Table 6-37: FINANCING OF THE CAPITAL INVESTMENTS FOR PVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Investment	7392.10	5649.29	3031.50	2555.82	1792.07	1792.07
Less:						
Consumer Contribution and Capital Assets Subsidy from GoUP	907.97	907.97	372.29	372.29	220.08	220.08
Investment funded by debt and equity	6484.14	4741.32	2659.21	2183.53	1571.99	1571.99
Debt Funded	4538.90	3318.93	1861.45	1528.47	1100.39	1100.39
Equity Funded	1945.24	1422.40	797.76	655.06	471.60	471.60

Table 6-38: FINANCING OF THE CAPITAL INVESTMENTS FOR MVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Investment	2771.67	2069.23	1431.66	1431.66	1402.49	1402.49
Less:						



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Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Consumer Contribution and Capital Assets Subsidy from GoUP	338.01	338.01	170.06	170.06	168.80	168.80
Investment funded by debt and equity	2433.66	1731.22	1261.59	1261.59	1233.69	1233.69
Debt Funded	1703.56	1211.85	883.12	883.12	863.58	863.58
Equity Funded	730.10	519.37	378.48	378.48	370.11	370.11

Table 6-39: FINANCING OF THE CAPITAL INVESTMENTS FOR PuVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Investment	3106.24	2159.74	2828.16	1920.42	1165.49	1101.89
Less:						
Consumer Contribution and Capital Assets Subsidy from GoUP	381.47	381.47	346.98	346.98	143.13	143.13
Investment funded by debt and equity	2724.78	1778.27	2481.18	1573.44	1022.36	958.76
Debt Funded	1907.34	1244.79	1734.90	1101.41	715.65	671.13
Equity Funded	817.43	533.48	744.35	472.03	306.71	287.63

Table 6-40: FINANCING OF THE CAPITAL INVESTMENTS FOR KESCO FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Investment	252.22	252.22	189.24	189.24	171.00	171.00
Less:						
Consumer Contribution and Capital Assets Subsidy from GoUP	30.98	30.98	23.24	23.24	21.00	21.00
Investment funded by debt and equity	221.25	221.25	166.00	166.00	150.00	150.00
Debt Funded	154.87	154.87	116.20	116.20	105.00	105.00
Equity Funded	66.37	66.37	49.80	49.80	45.00	45.00

6.7 DEPRECIATION EXPENSE

6.7.1 The Petitioners submitted that Regulation 26 of the Distribution MYT Regulations, 2014 provides for the calculation of depreciation based on the written down value of the fixed assets of the corresponding year, whereas the previous Distribution Tariff Regulations, 2006 provides for calculation of depreciation on Straight Line Method basis. The petitioners further submitted



that though the Commission has revised the methodology for calculation of depreciation, the rate of depreciation for each asset category as defined in Annexure – C of the Regulations, have not been revised. However, the Petitioners for the purpose of computing the allowable depreciation has considered the same rates as specified in Annexure – C of the Distribution MYT Tariff Regulations, 2014.

- 6.7.2 The Petitioners submitted that for the purpose of computing the allowable depreciation, they have considered the opening GFA balance for FY 2015-16 equivalent to the closing GFA balance for FY 2014-15 as per the audited balance sheet and have thereafter added the capital additions for FY 2015-16 on the basis of provisional balance sheets available. The petitioners further to project the GFA balances for FY 2016-17, have considered the capitalization methodology considering 40% of the opening CWIP and 40% of investment made during the year, expenses capitalized & interest capitalized (40% of total investment), assumed to get capitalized during the year.
- 6.7.3 The petitioners further submitted that they have followed a similar methodology to arrive at the Gross Fixed Asset balances for the control period from FY 2017-18 to FY 2019-20.
- 6.7.4 The Petitioners submitted that they have computed the weightage average rate of depreciation based on the closing gross fixed asset base for FY 2016-17 and the depreciation rates as prescribed in Annexure-C of the MYT Distribution Regulation as mentioned below:

TABLE 6-41: WEIGHTED AVERAGE RATE OF DEPRECIATION FOR MYT CONTROL PERIOD SUBMITTED BY DVVNL (RS CRORE)

Particulars	Rate of Depreciation (%) as per MYT Reg.	Normative GFA Opening 2017-18	Depreciation
Land & Land Rights			
i) Unclassified	0	1.25	-
ii) Freehold Land	0	-	-
Buildings	3.02	163.57	4.94
Other Civil Works	3.02	-	-
Plant & Machinery	7.84	1,947.80	152.71
Lines, Cable Network etc.	7.84	5,506.65	431.72
Vehicles	12.77	1.40	0.18
Furniture & Fixtures	12.77	5.08	0.65



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Particulars	Rate of Depreciation (%) as per MYT Reg.	Normative GFA Opening 2017-18	Depreciation
Office Equipment's	12.77	3.59	0.46
Jeep & Motor Car	12.77	-	-
Assets taken over from the Licensee pending final valuation	12.77	-	-
Total		7,629.33	590.65
Weighted Average rate of Depreciation (%)			7.74

TABLE 6-42: WEIGHTED AVERAGE RATE OF DEPRECIATION FOR MYT CONTROL PERIOD SUBMITTED BY PVVNL (RS CRORE)

Particulars	Rate of Depreciation (%) as per MYT Reg.	Normative GFA Opening 2017-18	Depreciation
Land & Land Rights			
i) Unclassified	0	1.26	-
ii) Freehold Land	0	-	-
Buildings	3.02	137.31	4.15
Other Civil Works	3.02	-	-
Plant & Machinery	7.84	4,915.55	385.38
Lines, Cable Network etc.	7.84	5,054.20	396.25
Vehicles	12.77	0.44	0.06
Furniture & Fixtures	12.77	27.56	3.52
Office Equipments	12.77	18.71	2.39
Jeep & Motor Car	12.77	-	-
Assets taken over from the Licensee pending final valuation	12.77	-	-
Total		10,155.02	791.74
Weighted Average rate of Depreciation (%)			7.80%

TABLE 6-43: WEIGHTED AVERAGE RATE OF DEPRECIATION FOR MYT CONTROL PERIOD SUBMITTED BY MVVNL (RS CRORE)

Particulars	Rate of Depreciation (%) as per MYT Reg.	Normative GFA Opening 2017-18	Depreciation
Land & Land Rights			



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Particulars	Rate of Depreciation (%) as per MYT Reg.	Normative GFA Opening 2017-18	Depreciation
i) Unclassified	0	1.07	-
ii) Freehold Land	0	-	-
Buildings	3.02	149.62	4.52
Other Civil Works	3.02	21.07	0.64
Plant & Machinery	7.84	3,078.68	241.37
Lines, Cable Network etc.	7.84	4,344.40	340.60
Vehicles	12.77	8.62	1.10
Furniture & Fixtures	12.77	14.77	1.89
Office Equipments	12.77	139.50	17.81
Jeep & Motor Car	12.77	-	-
Assets taken over from the Licensee pending final valuation	12.77	-	-
Total		7,757.73	607.93
Weighted Average rate of Depreciation (%)			7.84%

TABLE 6-44: WEIGHTED AVERAGE RATE OF DEPRECIATION FOR MYT CONTROL PERIOD SUBMITTED BY PUVVNL (RS CRORE)

Particulars	Rate of Depreciation (%) as per MYT Reg.	Normative GFA Opening 2017-18	Depreciation
Land & Land Rights			
i) Unclassified	0	1.04	-
ii) Freehold Land	0	-	-
Buildings	3.02	145.33	4.39
Other Civil Works	3.02	-	-
Plant & Machinery	7.84	3,886.60	304.71
Lines, Cable Network etc.	7.84	4,218.74	330.75
Vehicles	12.77	1.75	0.22
Furniture & Fixtures	12.77	1.51	0.19
Office Equipments	12.77	4.02	0.51
Jeep & Motor Car	12.77	-	-
Assets taken over from the Licensee pending final valuation	12.77	-	-
Total		8,258.99	640.78



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Particulars	Rate of Depreciation (%) as per MYT Reg.	Normative GFA Opening 2017-18	Depreciation
Weighted Average rate of Depreciation (%)			7.76%

TABLE 6-45: WEIGHTED AVERAGE RATE OF DEPRECIATION FOR MYT CONTROL PERIOD SUBMITTED BY KESCO (RS CRORE)

Particulars	Rate of Depreciation (%) as per MYT Reg.	Normative GFA Opening 2017-18	Depreciation
Land & Land Rights			
i) Unclassified	0	0.00	-
ii) Freehold Land	0	-	-
Buildings	3.02	34.94	1.06
Other Civil Works	3.02	-	-
Plant & Machinery	7.84	199.84	15.67
Lines, Cable Network etc.	7.84	451.90	35.43
Vehicles	12.77	4.34	0.55
Furniture & Fixtures	12.77	1.49	0.19
Office Equipments	12.77	14.82	1.89
Jeep & Motor Car	12.77	-	-
Assets taken over from the Licensee pending final valuation	12.77	-	-
Total		707.34	54.79
Weighted Average rate of Depreciation (%)			7.75%

- 6.7.5 The petitioners submitted that in line with the approach provided in Distribution MYT Regulations, 2014, they have calculated the written down value of the fixed assets as on 1st April, 2017 and have netted off the Opening Gross Fixed Assets by the total depreciation allowed by the Commission in its previous true-up orders up to FY 2013-14 and the allowable depreciation calculated from FY 2014-15 to FY 2016-17, based on the methodology prescribed by the Commission in Distribution Tariff Regulations, 2006.
- 6.7.6 The petitioners' have submitted that they have computed the full year depreciation on the opening written down value of fixed assets and pro-rated



depreciation on the additions during the year, considering the weighted average depreciation rate as computed above.

6.7.7 The Petitioners' have further submitted that they have reduced the equivalent depreciation in respect of depreciation on assets created out of consumer contributions, capital grants and subsidies from gross allowable depreciation to arrive at the net allowable depreciation.

6.7.8 Regulation 26 of the Distribution MYT Regulations, 2014, specifies as under:

"26. Treatment of Depreciation:

a) Depreciation shall be calculated for each year of the control period on the written down value of the fixed assets of the corresponding year.

b) Depreciation shall not be allowed on assets funded by consumer contributions or subsidies / grants.

c) Depreciation shall be calculated annually on the basis of rates as detailed in Annexure – C or as may be notified by the Commission vide a separate order.

d) The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset.

Provided that Land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.

e) Depreciation shall be charged from the first year of operation of the asset.

Provided that in case the operation of the asset is for a part of the year, depreciation shall be charged on proportionate basis.

f) Provision of replacement of assets shall be made in the capital investment plan."

6.7.9 The Commission in line with the Regulation 26 of the Distribution MYT Regulations, 2014, has computed the depreciation for all the DISCOMs. The detailed methodology adopted for computation of depreciation has been explained taking the case of DVVNL for illustration purpose is as under:



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Step 1- The GFA projected for the year FY 2017-18 to FY 2019-20 is as shown under:

Particulars	(Rs in Crore)					
	FY 2017-18		FY 2018-19		FY 2019-20	
	Petitioner	As computed by Commission	Petitioner	As computed by Commission	Petitioner	As computed by Commission
Opening GFA	7604.02	7600.96	9190.43	8969.50	11335.14	10697.07
Additions	1586.41	1368.71	2144.71	1727.57	2002.82	1728.89
Closing GFA	9190.43	8969.68	11335.14	10697.07	13337.96	12425.97

Step 2- The gross block of various assets is considered and the additions during the year are allocated in proportion of the closing GFA of the previous year to the various sub-components like land & land rights, buildings, etc. as shown under:

Sl No	Particulars	(Rs in Crore)						
		Gross Block as on 31.3. 2017	Additions- FY 2017-18*	Gross Block as on 31.3. 2018	Additions- FY 2018-19	Gross Block as on 31.3. 2019	Additions- FY 2019-20	Gross Block as on 31.3. 2020
1	Land & Land Rights	1.10	0.21	1.31	0.25	1.56	0.25	1.81
2	Buildings	159.15	31.01	190.16	36.17	226.33	36.20	262.53
3	Plant & Machinery	1,605.21	350.38	1955.59	364.84	2320.42	365.12	2685.54
4	Lines, Cables, Network etc.	5,826.11	985.11	6811.22	1324.18	8135.40	1325.19	9460.59
5	Furniture & Fixtures	6.04	1.18	7.22	1.37	8.60	1.37	9.97
6	Office Equipment	2.75	0.53	3.27	0.62	3.90	0.62	4.52
7	Jeeps, Motor Car	0.61	0.12	0.72	0.14	0.86	0.14	1.00
8	Sub-Total	7600.96	1368.54	8969.50	1727.57	10697.07	1728.89	12425.96

*Note- Allocation of total additions Rs 1567.30 Cr is done sub-component wise in proportionate basis as per closing GFA of FY 2016-17. Accordingly, Rs 2114.50 Cr (i.e. addition FY 2018-19) is proportionately bifurcated as per closing GFA of FY 2017-18, and Rs 1967.72 Cr (i.e. addition FY 2019-20) is proportionately bifurcated as per closing GFA of FY 2017-18.

Step 3-The MYT Distribution Regulations, 2014 provides that the depreciation shall be calculated on written down value method at the rates specified in the Depreciation Schedule of the Regulation. The depreciation rates considered in accordance to the MYT Distribution Regulations, 2014 as shown under:



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Particulars	Depreciation Rates Considered
Land & Land Rights	0.00%
Buildings	3.02%
Plant & Machinery	7.79%*
Lines, Cables, Network etc.	7.91%*
Furniture & Fixtures	12.77%
Office Equipment	12.77%
Jeeps, Motor Car	33.40%

**Note- Weighted average rate of depreciation is computed considering opening GFA (as per Fixed Asset Register) and individual rates of depreciation as per Depreciation schedule in Distribution MYT Tariff Regulations, 2014 for various sub-components for Plant & Machinery, Lines, cables etc. is considered.*

Lines & Cables	Opening GFA as per FAR (Rs in Crore)	Depreciation rate as per Schedule
OH: higher than 66kV	12.33	5.27%
OH: 13.2 kVA to 66 KVA	706.87	7.84%
OH: Reinforced concrete support	1748.40	7.84%
OH: Wood supports	2.72	7.84%
UG	31.67	5.27%
UG: Duct system	4.39	3.02%
Weighted avgrate(%)	2,506.38	7.79%

Plant & Machinery	Opening GFA as per FAR (Rs in Crore)	Depreciation rate as per Schedule
Transformers 100 kVA & above	770.46	7.81%
Other Transformers	627.16	7.84%
Transformers Kioks, ss equip	11.28	7.84%
Switchgear incl cable connections	29.75	7.84%
Batteries incl charging equip	0.43	33.40%
Lightning Arrestors	0.02	7.84%
Communication Equip	0.00	12.77%
Start Machine Tools & Equip	0.02	12.77%
Refrigerator & Water cooler	0.01	12.77%
Meter Testing Lab tools & equip	0.18	12.77%
Tools & tackles	0.19	12.77%
Other misc equip	23.04	12.77%
Weighted avg rate(%)	1462.56	7.91%



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Step 4-The written down value of the fixed assets as on 1st April, 2017 is calculated after netting off the Opening Gross Fixed Assets by the total cumulative depreciation as allowed in the previous true-up orders up to FY 2013-14 and the allowable depreciation from FY 2014-15 to FY 2016-17. The details of year-wise Cumulative depreciation considered by petitioner and Commission from FY 2003-04 to FY 2016-17 is detailed in the table below:

Cumulative Depreciation up to FY 2016-17 (Rs Crore)

Financial Year	Source	Net Allowable Depreciation	Cumulative Depreciation
2003-04	True-up Order	71.94	71.94
2004-05	True-up Order	117.13	189.07
2005-06	True-up Order	115.64	304.71
2006-07	True-up Order	128.07	432.78
2007-08	True-up Order	144.22	577.00
2008-09	True-up Order	167.61	744.61
2009-10	True-up Order	193.77	938.38
2010-11	True-up Order	237.26	1,175.64
2011-12	True-up Order	275.62	1,451.26
2012-13	True-up Order	304.19	1,755.45
2013-14	True-up Order	261.63	2,017.08
2014-15	True-up value as computed by Commission	336.58	2,353.66
2015-16	Revised Estimates as computed by Commission	438.18	2,791.78
2016-17	Revised Estimates as computed by Commission	238.92	3,030.70

Thereafter, the cumulative depreciation is allocated to each asset of GFA, i.e. buildings, plant & machinery etc. in a proportionate basis as shown under: -

Sl No	Particulars	Cum Depreciation allocation (FY 2016-17) in Rs Crore
1	Land & Land Rights	0.00
2	Buildings	63.21
3	Plant & Machinery	757.69
4	Lines, Cables, Network etc.	2206.18
5	Furniture & Fixtures	2.70
6	Office Equipment	0.87
7	Jeeps, Motor Car	0.04
8	Sub-Total	3,030.70

The same has been considered the opening written down value of fixed assets for FY 2017-18 and is worked out.



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Step 5- Thereafter, the depreciation was computed on the opening written down value of fixed assets of individual assets like land & land rights, buildings etc. and on the additions during the year i.e. average of opening and closing GFA during the year, considering the depreciation rates as stated in Step-3. Depreciation has been calculated only on the depreciable asset base excluding the non-depreciable assets such as land, land rights, etc. as shown under:

Land & Land Rights	Control Period (Rs in Crore)		
	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	1.10	1.31	1.56
Cumulative Depreciation	-	-	-
Written Down Value: Opening	1.10	1.31	1.56
Additions to GFA	0.21	0.25	0.25
Deductions to GFA	-	-	-
Closing GFA	1.31	1.56	1.81
Rate of Depreciation (%)	0.00%	0.00%	0.00%
Gross Allowable Depreciation	-	-	-
Less: Consumer Contribution	-	-	-
Net Allowable Depreciation	-	-	-

Building & Civil Works	Control Period (Rs in Crore)		
	2017-18	2018-19	2019-20
Opening GFA	159.15	190.16	226.33
Cumulative Depreciation	63.21	66.58	70.86
Written Down Value: Opening	95.94	123.58	155.47
Additions to GFA	31.01	36.17	36.20
Deductions to GFA	-	-	-
Closing GFA	126.95	159.75	191.67
Rate of Depreciation (%)	3.02%	3.02%	3.02%
Gross Allowable Depreciation	3.37	4.28	5.24
Less: Consumer Contribution	-	-	-
Net Allowable Depreciation	3.37	4.28	5.24

Plant and machinery	Control Period (Rs in Crore)		
	2017-18	2018-19	2019-20
Opening GFA	1605.21	1955.59	2320.42
Cumulative Depreciation	757.69	838.60	941.39
Written Down Value: Opening	847.52	1116.99	1379.03
Additions to GFA	350.38	364.84	365.12



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Plant and machinery	Control Period (Rs in Crore)		
	2017-18	2018-19	2019-20
Deductions to GFA	-	-	-
Closing GFA	1197.90	1481.83	1744.15
Rate of Depreciation (%)	7.91%	7.91%	7.91%
Gross Allowable Depreciation	80.90	102.79	123.54
Less: Consumer Contribution	-	-	-
Net Allowable Depreciation	80.90	102.79	123.54

Transmission and Distribution system (Lines, cable network etc.)	Control Period (Rs in Crore)		
	2017-18	2018-19	2019-20
Opening GFA	5826.11	6811.22	8135.40
Cumulative Depreciation	2206.18	2526.40	2911.59
Written Down Value: Opening	3619.93	4284.83	5223.81
Additions to GFA	985.11	1324.18	1325.19
Deductions to GFA	-	-	-
Closing GFA	4605.04	5609.00	6549.00
Rate of Depreciation (%)	7.79%	7.79%	7.79%
Gross Allowable Depreciation	320.22	385.19	458.34
Less: Consumer Contribution	-	-	-
Net Allowable Depreciation	320.22	385.19	458.34

Vehicles	Control Period (Rs in Crore)		
	2017-18	2018-19	2019-20
Opening GFA	0.61	0.72	0.86
Cumulative Depreciation	0.04	0.25	0.43
Written Down Value: Opening	0.57	0.48	0.43
Additions to GFA	0.12	0.14	0.14
Deductions to GFA	-	-	-
Closing GFA	0.69	0.61	0.57
Rate of Depreciation (%)	33.40%	33.40%	33.40%
Gross Allowable Depreciation	0.21	0.18	0.17
Less: Consumer Contribution	-	-	-
Net Allowable Depreciation	0.21	0.18	0.17

Furniture and Fixtures	Control Period (Rs in Crore)		
	2017-18	2018-19	2019-20
Opening GFA	6.04	7.22	8.60
Cumulative Depreciation	2.70	3.20	3.80



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Furniture and Fixtures	Control Period (Rs in Crore)		
	2017-18	2018-19	2019-20
Written Down Value: Opening	3.35	4.02	4.79
Additions to GFA	1.18	1.37	1.38
Deductions to GFA	-	-	-
Closing GFA	4.52	5.39	6.17
Rate of Depreciation (%)	12.77%	12.77%	12.77%
Gross Allowable Depreciation	0.50	0.60	0.70
Less: Consumer Contribution	-	-	-
Net Allowable Depreciation	0.50	0.60	0.70

Office Equipment	Control Period (Rs in Crore)		
	2017-18	2018-19	2019-20
Opening GFA	2.75	3.27	3.90
Cumulative Depreciation	0.87	1.14	1.46
Written Down Value: Opening	1.87	2.13	2.44
Additions to GFA	0.53	0.62	0.62
Deductions to GFA	-	-	-
Closing GFA	2.40	2.75	3.07
Rate of Depreciation (%)	12.77%	12.77%	12.77%
Gross Allowable Depreciation	0.27	0.31	0.35
Less: Consumer Contribution	-	-	-
Net Allowable Depreciation	0.27	0.31	0.35

(Note- However, it is observed that the Petitioner has computed the full year depreciation on the opening written down value of fixed assets of individual components like land & land rights, buildings etc. and pro-rated depreciation on the additions during the year, considering the weighted average depreciation rate of 7.74% as computed in the preceding section. The Petitioner has computed the depreciation only on the depreciable asset base and has excluded the non-depreciable assets such as land, land rights, etc.)

Step 6- The gross allowable depreciation for each component is sum totalled and the equivalent depreciation on assets created out of consumer contributions, capital grants and subsidies are deducted as shown under:



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TABLE 6-46: Gross Allowable Depreciation for DVVNL for FY 2017-18 to FY 2019-20

DVVNL	(Rs in Crore)					
	FY 2017-18		FY 2018-19		FY 2019-20	
	ARR Petition	Commission	ARR Petition	Commission	ARR Petition	Commission
Opening GFA	7604.02	7600.96	9190.43	8969.50	11335.14	10697.07
Cumulative Dep	3030.49	3030.70	3208.94	3436.17	3443.49	3929.52
Written Down Value: Opening	4573.53	4570.27	5981.49	5533.34	7891.65	6767.55
Additions to GFA	1586.41	1368.54	2144.71	1727.57	2002.82	1728.89
Deductions to GFA	-	-	-	-	-	-
Closing GFA	6159.94	5938.81	8126.20	7260.90	9894.47	8496.44
Rate of Depreciation (%)	7.74%	-	7.74%	-	7.74%	-
Gross Allowable Depreciation	415.49	405.47	546.10	493.36	688.49	588.34
Less: Consumer Contribution	237.04	237.04	311.55	311.55	392.78	392.78
Net Allowable Depreciation	178.45	168.44	234.55	181.81	295.71	195.55

6.7.10 On similar lines, the Commission has computed the allowable depreciation for all the other DISCOMs, which is as follows:

TABLE 6-47: Gross Allowable Depreciation for PVVNL for FY 2017-18 to FY 2019-20

PVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	ARR Petition	Commission	ARR Petition	Commission	ARR Petition	Commission
Opening GFA	10155.02	10151.70	14247.46	13517.62	18109.81	16718.66
Cumulative Dep	4407.23	4407.33	4793.46	5022.10	5357.65	5838.11
Written Down Value: Opening	5747.79	5744.36	9454.00	8495.52	12752.16	10880.55
Additions to GFA	4092.43	3365.74	3862.35	3200.03	3260.09	2825.25
Closing GFA	9840.23	9110.11	13316.35	11695.56	16012.26	13705.80
Rate of Depreciation (%)	7.75%	-	7.75%	-	7.75%	-
Gross Allowable Depreciation	432.37	614.77	722.90	816.01	968.28	988.02
Less: Consumer Contribution	156.00	156.00	260.83	260.83	349.36	349.36
Net Allowable Depreciation	276.07	458.76	460.59	555.18	615.24	638.66



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TABLE 6-48: Gross Allowable Depreciation for MVVNL for FY 2017-18 to FY 2019-20

MVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	ARR Petition	Commission	ARR Petition	Commission	ARR Petition	Commission
Opening GFA	7757.73	6802.47	10516.16	8702.48	12906.41	10582.86
Cumulative Depreciation	2867.13	2867.28	3209.36	3272.94	3673.42	3801.08
Written Down Value: Opening	4890.60	3935.19	7306.80	5429.55	9233.00	6781.78
Additions to GFA	2758.42	1900.02	2390.26	1880.38	2204.37	1897.19
Closing GFA	7649.02	5835.21	9697.06	7309.92	11437.36	8678.97
Rate of Depreciation (%)	7.84%	-	7.84%	-	7.84%	-
Gross Allowable Depreciation	491.33	405.92	666.24	528.40	809.90	640.47
Less: Consumer Contribution	149.10	149.25	202.18	203.01	245.78	247.83
Net Allowable Depreciation	342.22	256.66	464.06	325.39	564.12	392.64

TABLE 6-49: Gross Allowable Depreciation for PuVVNL for FY 2017-18 to FY 2019-20

PuVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	ARR Petition	Commission	ARR Petition	Commission	ARR Petition	Commission
Opening GFA	8258.99	8247.00	10220.54	9777.81	12711.21	11602.17
Cumulative Depreciation	3411.70	3793.08	3724.50	4169.02	4139.99	4638.61
Written Down Value: Opening	4847.29	4453.92	6496.05	5608.79	8571.22	6963.56
Additions to GFA	1961.55	1530.74	2490.67	1824.28	2165.44	1698.93
Closing GFA	6808.84	5984.66	8986.71	7433.07	10736.66	8662.49
Rate of Depreciation (%)	7.76%	-	7.76%	-	7.76%	-
Gross Allowable Depreciation	452.17	375.94	600.62	469.59	749.01	562.45
Less: Consumer Contribution	139.37	139.37	185.13	185.13	230.87	230.87
Net Allowable Depreciation	312.80	236.57	415.49	284.46	518.14	331.58



TABLE 6-50: Gross Allowable Depreciation for KESCo for FY 2017-18 to FY 2019-20

KESCo	FY 2017-18		FY 2018-19		FY 2019-20	
	ARR Petition	Commission	ARR Petition	Commission	ARR Petition	Commission
Opening GFA	707.34	393.02	872.52	534.13	1072.33	703.63
Cumulative Depreciation	384.23	338.39	403.39	368.71	430.28	409.24
Written Down Value: Opening	323.11	368.95	469.12	503.81	642.06	663.10
Additions to GFA	165.18	165.18	199.82	199.82	215.80	215.80
Closing GFA	488.29	534.13	668.94	703.63	857.85	878.89
Rate of Depreciation (%)	7.75%	0.00	7.75%	0.00	7.75%	0.00
Gross Allowable Depreciation	31.42	30.32	44.08	40.53	58.09	51.72
Less: Consumer Contribution	12.26	12.26	17.19	17.19	22.66	22.66
Net Allowable Depreciation	19.17	18.06	26.88	23.34	35.43	29.06

6.8 INTEREST CHARGES

Interest on Long Term Loans

- 6.8.1 The Petitioners submitted that they have considered a normative approach with a debt: equity ratio of 70:30. In this approach, 70% of the capital expenditure undertaken in any year has been financed through loan and balance 30% has been considered to be funded through equity contributions. The portion of capital expenditure financed through consumer contributions, capital subsidies and grants has been separated as the depreciation and interest thereon has not been charged to the beneficiaries.
- 6.8.2 The Petitioners have submitted that the allowable depreciation for the year has been considered as normative loan repayment. The weighted average rate of interest of overall long-term loan portfolio for FY 2014-15 has been considered for the first control period. The interest capitalization has been considered at a rate of 23% which is consistent with the rate considered by the Commission in previous Tariff Orders.
- 6.8.3 It is observed that the Petitioners have computed interest on long term loan based on the normative approach adopted by the Commission in its previous Orders. Therefore, the Commission has approved the methodology used by the



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Petitioners. However, the Commission has computed the interest on long term loan based on the revised opening and closing loan balances approved in earlier sections while doing up the Truing up of FY 2014-15. Also, the loan addition during the first control period has been considered as worked out in earlier section of this Chapter. The allowable depreciation for the year has been considered as normative loan repayment.

6.8.4 The weighted average rate of interest as submitted by the Petitioners have been considered for computing the interest on long term loans for the control period. Further, the interest capitalisation has been considered at a rate of 23%, which is same as the Petitioners' submission and is also consistent with the methodology adopted by the Commission in its previous Tariff Orders.

6.8.5 The interest on long term loan as claimed by the Petitioners and as approved by the Commission is shown in the Table below:

Table 6-51: INTEREST ON LONG TERM LOANS FOR DVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Loan	3240.54	2956.79	4410.26	3791.87	5811.78	4786.61
Loan Additions (70% of Investments)	1348.17	1003.52	1636.07	1176.54	865.36	865.36
Less: Repayments (Depreciation allowable for the year)	178.45	168.44	234.55	181.81	295.71	195.55
Closing Loan Balance	4410.26	3791.87	5811.78	4786.61	6381.43	5456.41
Weighted Average Rate of Interest	10.16%	10.16%	10.16%	10.16%	10.16%	10.16%
Interest on long term loan	388.85	343.00	519.54	436.00	619.72	520.60
Interest Capitalization Rate	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%
Less: Interest Capitalized	89.44	78.89	119.49	100.28	142.54	119.74
Net Interest Charged	299.42	264.11	400.04	335.72	477.18	400.86

Table 6-52: INTEREST ON LONG TERM LOANS FOR PVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Loan	4410.65	4026.20	8673.58	6886.36	5813.09	7859.65
Loan Additions (70% of Investments)	4539.01	3318.93	1861.45	1528.47	1100.39	1100.39
Less: Repayments (Depreciation allowable for the year)	276.07	458.76	460.59	555.18	615.24	638.66
Closing Loan Balance	8673.58	6886.36	10074.44	7859.65	6298.25	8321.38
Weighted Average Rate of Interest	10.08%	10.08%	10.16%	10.08%	10.16%	10.08%



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Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest on long term loan	659.15	549.75	944.48	742.87	1039.50	815.16
Interest Capitalisation Rate	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%
Less: Interest Capitalized	151.61	126.44	217.23	170.86	239.08	187.49
Net Interest Charged	507.55	423.31	727.25	572.01	800.41	627.68

Table 6-53: INTEREST ON LONG TERM LOANS FOR MVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Loan	3286.89	3286.85	4648.23	4241.89	5813.09	4798.79
Loan Additions (70% of Investments)	1703.56	1211.85	883.12	883.12	863.58	863.58
Less: Repayments (Depreciation allowable for the year)	342.22	256.81	464.06	326.22	564.12	394.69
Closing Loan Balance	4648.23	4241.89	5067.29	4798.79	6112.55	5267.68
Weighted Average Rate of Interest	8.72%	8.72%	10.16%	8.72%	10.16%	8.72%
Interest on long term loan	366.64	328.38	442.27	394.33	471.33	439.07
Interest Capitalisation Rate	23.00%	23.00%	23.00%	22.99%	23.00%	22.98%
Less: Interest Capitalized	84.32	75.52	101.72	90.67	108.31	100.90
Net Interest Charged	282.32	252.86	340.55	303.66	363.02	338.17

Table 6-54: INTEREST ON LONG TERM LOANS FOR PuVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Loan	3202.10	3202.10	4796.65	4796.65	6116.06	6116.06
Loan Additions (70% of Investments)	1907.34	1244.79	1734.90	1101.41	715.65	671.13
Less: Repayments (Depreciation allowable for the year)	312.80	236.57	415.49	284.46	518.14	331.58
Closing Loan Balance	4796.65	4210.32	6116.06	5613.60	6313.57	6455.61
Weighted Average Rate of Interest	9.67%	9.67%	9.67%	9.67%	9.67%	9.67%
Interest on long term loan	386.85	358.49	527.78	503.48	601.14	608.01
Interest Capitalisation Rate (%)	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%
Less: Interest Capitalized	88.98	82.45	121.39	115.80	138.26	139.84
Net Interest Charged	297.87	276.04	406.39	387.68	462.88	468.17

Table 6-55: INTEREST ON LONG TERM LOANS FOR KESCo FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Loan	32.90	22.38	168.61	159.19	257.93	252.06
Loan Additions (70% of Investments)	154.88	154.87	116.20	116.20	105.00	105.00
Less: Repayments (Depreciation allowable for the year)	19.17	18.06	26.88	23.34	35.43	29.06
Closing Loan Balance	168.61	159.19	257.93	252.06	327.50	327.99



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Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Weighted Average Rate of Interest	9.48%	9.48%	9.48%	9.48%	9.48%	9.48%
Interest on long term loan	9.55	8.61	20.22	19.49	27.75	27.49
Interest Capitalisation Rate	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%
Less: Interest Capitalized	2.20	1.98	4.65	4.48	6.38	6.32
Net Interest Charged	7.35	6.63	15.57	15.01	21.37	21.17

Interest on Working Capital

- 6.8.6 The Petitioners have submitted that they have worked out the interest on working capital based on the methodology specified in the Distribution MYT Regulations, 2014.
- 6.8.7 The Petitioners submitted that the Distribution MYT Regulations, 2014 provides for interest on the working capital requirement to be considered equal to the State Bank Advance Rate (SBAR) as notified on the current date i.e. 14.05%.
- 6.8.8 Regulation 28 of the Distribution MYT Regulations, 2014 lays down the norms and methodology for calculating interest on working capital, which is as follows:

“28 The Distribution Licensee shall be allowed interest on estimated level of working capital for the financial year, computed as follows:

a) O&M expenses for one month.

b) Two months equivalent of expected revenue.

c) Maintenance spares @ 40% of R&M expenses for two months.

Less:

Security deposits from consumers, if any.

Provided that the interest on working capital shall be on normative basis and rate of interest shall be equal to the State Bank Advance Rate (SBAR) as of the date on which petition for determination of tariff is accepted by the Commission.”

- 6.8.9 In view of the above Regulation, the Commission has considered the interest on working capital at the rate of SBAR prevailing at the time acceptance of the petition i.e. at 14.05% as proposed by the Petitioners, in accordance with the provisions of the Distribution MYT Regulations, 2014.



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6.8.10 The interest on working capital as submitted by the Petitioners and as approved by the Commission for the first control period is shown in the Table below:

Table 6-56: INTEREST COST ON WORKING CAPITAL LOANS FOR DVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

DVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
O&M expenses for 1 month	127.08	99.57	164.77	131.25	199.20	159.29
Two months equivalent of expected revenue	1790.39	1865.90	2158.46	2452.18	2497.78	2917.16
Maintenance spares @ 40% of R&M expenses for two months	35.13	34.01	43.72	42.23	53.52	51.18
Gross Total	1952.60	1999.49	2366.95	2625.66	2750.49	3127.63
Less: Security deposits from consumers, if any	496.28	496.28	531.53	531.53	570.58	570.58
Net Working Capital	1456.32	1503.21	1835.42	2094.12	2179.91	2557.04
State Bank Advance Rate (SBAR) %	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
Interest on Working Capital	204.61	211.20	257.88	294.22	306.28	359.26

Table 6-57: INTEREST COST ON WORKING CAPITAL LOANS FOR PVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

PVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
O&M expenses for 1 month	149.35	110.25	201.45	154.17	246.62	192.68
Two months equivalent of expected revenue	2549.84	2627.43	3197.38	3651.99	3824.47	4416.53
Maintenance spares @ 40% of R&M expenses for two months	29.74	28.80	40.16	37.57	49.91	46.77
Gross Total	2728.92	2766.48	3438.99	3843.72	4120.99	4655.98
Less: Security deposits from consumers, if any	1240.86	1240.86	1794.78	1794.78	2245.45	2245.45
Net Working Capital	1488.06	1525.62	1644.21	2048.94	1875.54	2410.53
State Bank Advance Rate (SBAR) %	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
Interest on Working Capital	209.07	214.35	231.01	287.88	263.51	338.68



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Table 6-58: INTEREST COST ON WORKING CAPITAL LOANS FOR MVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

MVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
O&M expenses for 1 month	177.33	138.53	246.70	196.97	308.54	250.24
Two months equivalent of expected revenue	1672.39	1751.49	2198.69	2547.02	2765.85	3259.19
Maintenance spares @ 40% of R&M expenses for two months	31.52	26.41	41.14	33.70	50.11	42.09
Gross Total	1881.23	1916.43	2486.54	2777.69	3124.51	3551.52
Less: Security deposits from consumers, if any	439.64	439.64	467.21	467.21	497.26	497.26
Net Working Capital	1441.59	1476.79	2019.33	2310.48	2627.24	3054.26
State Bank Advance Rate (SBAR) %	14.05%	13.85%	14.05%	13.85%	14.05%	13.85%
Interest on Working Capital	202.54	204.53	283.72	320.00	369.13	423.01

Table 6-59: INTEREST COST ON WORKING CAPITAL LOANS FOR PuVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

PuVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
O&M expenses for 1 month	209.85	141.08	247.06	171.27	280.63	194.40
Two months equivalent of expected revenue	1839.76	1945.66	2337.72	2764.89	2693.82	3210.07
Maintenance spares @ 40% of R&M expenses for two months	37.69	36.40	47.63	44.93	58.35	53.80
Gross Total	2087.31	2123.14	2632.40	2981.09	3032.80	3458.27
Less: Security deposits from consumers, if any	763.99	763.99	837.53	837.53	919.36	919.36
Net Working Capital	1323.32	1359.15	1794.87	2143.57	2113.43	2538.91
State Bank Advance Rate (SBAR) %	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
Interest on Working Capital	185.93	190.96	252.18	301.17	296.94	356.72



Table 6-60: INTEREST COST ON WORKING CAPITAL LOANS FOR KESCo FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

KESCo	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
O&M expenses for 1 month	33.40	20.06	37.53	23.45	41.30	26.16
Two months equivalent of expected revenue	451.10	459.63	496.31	524.99	543.00	575.32
Maintenance spares @ 40% of R&M expenses for two months	3.43	3.30	4.30	4.20	5.31	5.27
Gross Total	487.93	482.99	538.14	552.64	589.62	606.76
Less: Security deposits from consumers, if any	132.11	132.11	140.15	140.15	148.77	148.77
Net Working Capital	355.82	350.88	397.99	412.49	440.85	457.99
State Bank Advance Rate (SBAR) %	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
Interest on Working Capital	49.99	49.30	55.92	57.95	61.94	64.35

Interest on Consumer Security Deposits

6.8.11 The Petitioners submitted that as per the Regulation 28 of the Distribution MYT Regulation, 2014 and as per the provisions of the Electricity Supply Code, 2005 and its subsequent amendments / addendums & the new regulations made after repeal of the same, the Licensees have to pay interest to the consumers security deposits.

6.8.12 Further, in terms of the Commission`s order dated 30.6.2017 the Licensees have to pay interest to the consumers at bank rate or more on the consumer security deposit. The Petitioners further submitted that Section 47(4) of the Electricity Act 2003, states as follows:

“the distribution licensee shall pay interest equivalent to the bank rate or more, as may be specified by the concerned state Commission, on the security referred to in sub-section (1) and refund such security on the request of the person who gave such security”

6.8.13 The Petitioners submitted that accordingly, the interest to consumers on the security deposits has been computed on the average of the opening and closing balance of the security deposits for the years at the State Bank of India Bank Rate of 9.36% for the control period, however, the same shall be Trued-up, based on audited accounts.



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6.8.14 As per Distribution MYT Regulations 2014, the interest on Security deposits shall be allowed as follows:

“Provided further that interest shall be allowed on consumer security deposits as per the provisions of the Electricity Supply Code, 2005 and its subsequent amendments / addendums & the new regulations made after repeal of the same.”

6.8.15 It is observed that the Commission in its earlier orders has been allowing interest on Security deposits at RBI Bank Rate. However, the petitioners have claimed the interest on Security deposits at SBI Bank Rate. Further, the Commission’s order dated June 30, 2017 also provides the bank rate as RBI Bank Rate. Hence, the Commission in line with the approach followed in its previous orders and its order dated June 30, 2017 approves the interest on consumer security deposit at the RBI Bank Rate of 7.75%. However, the actual interest payable on consumer security deposits would be at the Bank Rates notified by the RBI from time to time as per the provision of the Electricity Supply Code 2005 and its amendments. The same would be trued up based on audited accounts.

6.8.16 Accordingly, the Commission has approved interest on security deposits for the first control period at 7.75% as shown in the Table below:

Table 6-61: INTEREST ON SECURITY DEPOSITS FOR DVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

DVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance Security Deposits from Consumers	464.38	464.38	496.27	496.27	531.53	531.53
Additions	31.89	31.89	35.26	35.26	39.05	39.05
Projected Closing Balance Security Deposits from Consumers	496.27	496.27	531.53	531.53	570.58	570.58
Bank Rate (%)	9.36%	7.75%	9.36%	7.75%	9.36%	7.75%
Interest on Security Deposits	44.96	37.23	48.10	39.83	51.58	42.71

Table 6-62: INTEREST ON SECURITY DEPOSITS FOR PVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

PVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance Security Deposits from Consumers	1100.77	1100.77	1240.86	1240.86	1794.78	1794.78
Additions	140.09	140.09	553.92	553.92	450.67	450.67



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PVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Projected Closing Balance Security Deposits from Consumers	1240.86	1240.86	1794.78	1794.78	2245.45	2245.45
Bank Rate (%)	9.36%	7.75%	9.36%	7.75%	9.36%	7.75%
Interest on Security Deposits	109.59	90.74	142.07	117.63	197.15	156.56

Table 6-63: INTEREST ON SECURITY DEPOSITS FOR MVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

MVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance Security Deposits from Consumers	414.30	414.30	439.64	439.64	467.21	467.21
Additions	25.34	25.34	27.56	27.56	30.06	30.06
Projected Closing Balance Security Deposits from Consumers	439.64	439.64	467.21	467.21	497.26	497.26
Bank Rate (%)	9.36%	7.75%	9.36%	7.75%	9.36%	7.75%
Interest on Security Deposits	39.96	33.09	42.44	35.14	45.14	37.37

Table 6-64: INTEREST ON SECURITY DEPOSITS FOR PuVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance Security Deposits from Consumers	697.81	697.81	763.99	763.99	837.53	837.53
Additions	66.18	66.18	73.54	73.54	81.83	81.83
Projected Closing Balance Security Deposits from Consumers	763.99	763.99	837.53	837.53	919.36	919.36
Bank Rate (%)	9.36%	7.75%	9.36%	7.75%	9.36%	7.75%
Interest on Security Deposits	68.41	56.64	74.95	62.06	82.22	68.08

Table 6-65: INTEREST ON SECURITY DEPOSITS FOR KESCo FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Balance Security Deposits from Consumers	124.62	124.62	132.11	132.11	140.14	140.14
Additions	7.49	7.49	8.03	8.03	8.62	8.62
Projected Closing Balance Security Deposits from Consumers	132.11	132.11	140.14	140.14	148.76	148.76



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Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Bank Rate (%)	9.36%	7.75%	9.36%	7.75%	9.36%	7.75%
Interest on Security Deposits	12.02	9.95	12.74	10.55	13.52	11.19

6.8.17 The Petitioners' have submitted that the finance charges towards expenses such as guarantee fees and bank charges have been computed by extrapolating the actual guarantee fees and bank charges incurred in FY 2015-16 as per provisional accounts by using the Inflation Index.

6.8.18 The Commission has considered bank charges being the legitimate expense as submitted by the Petitioners for the control period as finance charges.

Summary of Interest Charges

6.8.19 In view of the above, the approved interest and finance costs including interest on working capital for the first control period is summarised in the Table below:

TABLE 6-66: INTEREST CHARGES FOR DVVNL FOR FY 2017-18 TO FY 2019-20 (RS. CRORE)

DVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest on Long Term Loans	388.85	343.00	519.54	436.00	619.72	520.60
Interest on Working Capital Loans	204.61	211.20	257.88	294.22	306.28	359.26
Sub Total	593.46	554.20	777.41	730.23	926.00	879.87
Interest on Consumer Security Deposits	44.96	37.23	48.10	39.83	51.58	42.71
Bank Charges	0.69	0.69	0.72	0.72	0.75	0.75
Discount to Consumers	0.00	0.00	0.00	0.00	0.00	0.00
Sub Total	45.65	37.92	48.82	40.55	52.33	43.46
Gross Total Interest Charges	639.11	592.12	826.23	770.77	978.33	923.32
Less: Capitalization of interest on Long Term Loans	89.44	78.89	119.49	100.28	142.54	119.74
% Capitalization	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%
Net Interest Charges	564.91	513.23	706.74	670.49	835.79	803.59



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TABLE 6-67: INTEREST CHARGES FOR PVVNL FOR FY 2017-18 TO FY 2019-20 (RS. CRORE)

PVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest on Long Term Loans	659.15	549.75	944.48	742.87	1039.50	815.16
Interest on Working Capital Loans	209.07	214.35	231.01	287.88	263.51	338.68
Sub Total	868.23	764.10	1175.49	1030.75	1303.01	1153.84
Interest on Consumer Security Deposits	109.59	90.74	142.07	117.63	189.08	156.56
Bank Charges	51.65	51.65	53.67	53.67	55.76	55.76
Discount to Consumers	-	-	-	-	-	-
Sub Total	161.24	142.39	195.74	171.30	244.84	212.32
Gross Total Interest Charges	1029.47	906.49	1371.23	1202.05	1547.85	1366.16
Less: Capitalization of interest on Long Term Loans	507.55	126.44	217.23	170.86	239.08	187.49
% Capitalization	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%
Net Interest Charges	521.92	780.05	1154.00	1031.19	1308.77	1178.67

TABLE 6-68: INTEREST CHARGES FOR MVVNL FOR FY 2017-18 TO FY 2019-20 (RS. CRORE)

MVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest on Long Term Loans	366.64	328.38	442.27	394.33	471.33	439.07
Interest on Working Capital Loans	202.54	204.53	283.72	320.00	369.13	423.01
Sub Total	569.18	532.92	725.99	714.33	840.46	862.09
Interest on Consumer Security Deposits	39.96	33.09	42.44	35.14	45.14	37.38
Bank Charges	27.76	27.76	28.84	28.84	29.96	29.96
Discount to Consumers	-	-	-	-	-	-
Sub Total	67.72	60.85	71.28	63.98	75.10	67.34
Gross Total Interest Charges	636.90	593.76	797.27	778.31	915.56	929.42
Less: Capitalization of interest on Long Term Loans	282.32	75.52	101.72	90.67	108.31	100.90
% Capitalization	23.00%	23.00%	23.00%	22.99%	23.00%	22.98%
Net Interest Charges	354.59	518.24	695.54	687.64	807.24	828.52



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TABLE 6-69: INTEREST CHARGES FOR PuVVNL FOR FY 2017-18 TO FY 2019-20 (RS. CRORE)

PuVVNL	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest on Long Term Loans	386.85	358.49	527.78	503.48	601.14	608.01
Interest on Working Capital Loans	185.93	190.96	252.18	301.17	296.94	356.72
Sub Total	572.77	549.45	779.96	804.65	898.08	964.73
Interest on Consumer Security Deposits	68.41	56.64	74.95	62.06	82.22	68.08
Bank Charges	0.02	0.02	0.02	0.02	0.03	0.03
Discount to Consumers	-	-	-	-	-	-
Sub Total	68.43	56.66	74.97	62.08	82.25	68.11
Gross Total Interest Charges	641.20	606.11	854.93	866.73	980.33	1032.83
Less: Capitalization of interest on Long Term Loans	88.98	82.45	121.39	115.80	138.26	139.84
% Capitalization	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%
Net Interest Charges	564.91	523.66	733.54	750.93	842.07	892.99

TABLE 6-70: INTEREST CHARGES FOR KESCo FOR FY 2017-18 TO FY 2019-20 (RS. CRORE)

KESCo	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest on Long Term Loans	9.55	8.61	20.22	19.49	27.75	27.49
Interest on Working Capital Loans	49.99	49.30	55.92	57.95	61.94	64.35
Sub Total	59.54	57.90	76.14	77.45	89.69	91.84
Interest on Consumer Security Deposits	12.02	9.95	12.74	10.55	13.52	11.19
Bank Charges	0.00	0.00	0.00	0.00	0.00	0.00
Discount to Consumers	0.00	0.00	0.00	0.00	0.00	0.00
Sub Total	12.02	9.95	12.74	10.55	13.52	11.19
Gross Total Interest Charges	71.56	67.86	88.88	88.00	103.21	103.04
Less: Capitalization of interest on Long Term Loans	2.20	1.98	4.65	4.48	6.38	6.32
% Capitalization	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%
Net Interest Charges	69.37	65.88	84.23	83.51	96.83	96.71

6.9 PROVISION FOR BAD AND DOUBTFUL DEBTS

6.9.1 The Petitioners submitted that they have made the provisions for bad and doubtful debts have been made at 2% of revenue receivables in line with Regulation 29 of Distribution MYT Regulations, 2014. The Petitioner submitted



that in the last Tariff Order, the Commission had disallowed the Petitioner's claim for provision for bad and doubtful debts due to the absence of any clear-cut policy. The Petitioners added that provision for bad and doubtful debts are an accepted accounting principle even in a sector like banking where the provisioning of un-collectable dues is considered as a normal commercial practice.

6.9.2 The Petitioners have requested the Commission to allow the annual provisioning towards bad and doubtful debts as it is an accepted industry norm and recognized by other State Electricity Regulatory Commissions.

6.9.3 The Petitioners submitted that the amount, if any, written off towards bad debts is only adjusted against the accumulated provisions in the books, irrespective of the actual amount of bad debts during any year and hence, it is a legitimate ARR component. Accordingly, the Petitioners have made provisions for bad debts for the first control period in line with the provisions of the Distribution MYT Regulations, 2014.

6.9.4 The Regulation 29 of the Distribution MYT Regulations, 2014 provides for expenses under bad and doubtful Debts to the extent of 2% of the revenue receivables as specified below:

"29. Bad and Doubtful Debts:

*Bad and Doubtful Debts shall be allowed as a legitimate business expense with the ceiling limit of 2% of the revenue receivables **provided the distribution licensee actually identifies and writes off bad debts as per the transparent policy approved by the Commission.** In case there is any recovery of bad debts already written off, the recovered bad debt will be treated as other income." (Emphasis Added)*

6.9.5 However, the Petitioners have to actually identify and write-off the bad debts as per a transparent policy approved by the Commission.

6.9.6 The Commission in its Tariff Order for FY 2014-15 dated October 1, 2014 has disallowed the provision for bad and doubtful debts on account of lack of proper and transparent policy for actual identification and write-off the bad debts. The relevant extract of the Commission's aforesaid Order is reproduced below:



“...The very fact that the Petitioner has not been able to identify and write off any amount towards bad and doubtful debts till now clearly indicates lack of proper policy framework for identification, recognition, and management of provision for bad and doubtful debts. Therefore, in accordance with the Regulations, the Commission disallows the Petitioner’s claim towards provision for bad and doubtful debts for FY 2014-15 ...”

- 6.9.7 The Petitioners have repeatedly pointed out that provisioning towards bad and doubtful debts is an accepted industry norm. However, the Petitioners should also recognize that as per prudent practices, every business should also ensure that the amount of debtors does not increase to an alarming level. Further, every prudent management would ensure to recover the dues and prevent them from becoming bad. It has been observed that despite the Commission’s directions in the regard in the previous Tariff Orders, there has been no improvement on the part of the Petitioners’.
- 6.9.8 The Commission observed that the petitioners have relied on the policy submitted by them during the tariff order for FY 2014-15 and have requested to approve the same. **As discussed in earlier paragraphs it is observed that the so-called policy submitted by the Petitioners is just the basic approach for creation of provision of bad debts instead of the detailed policy to be followed by it for identification of actual bad debts and writing off the same.**
- 6.9.9 The very fact that the Petitioners have not been able to identify and write off any amount towards bad and doubtful debts till now clearly indicates lack of proper policy framework for identification, recognition, and management of provision for bad and doubtful debts. Therefore, in accordance with the Regulations, the Commission has not allowed the Petitioner’s claim towards provision for bad and doubtful debts for the first control period.
- 6.9.10 **In view of the above, the Commission directs the Petitioners to frame guidelines and procedures for identifying, physically verifying and writing off the bad debts and also to fix responsibility of its employees in this regard immediately and submit the same to the Commission for its approval.** As lack of approved transparent policy on identifying and writing off bad debts is hindering allowance of bad debts as an ARR component; **the Commission directs the Licensees to submit ten sample cases of LT & HT consumers where orders have been issued for writing off bad debts, clearly depicting the**
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procedure adopted for writing off bad debts along with policy framework for managing bad debts for the Commission's perusal. The same shall be reviewed at the time of APR.

6.10 NON-TARIFF INCOME

6.10.1 The Petitioners submitted that non-tariff income includes incomes such as interest on loans & advances to employees, income from fixed rate investment deposits and other miscellaneous income from retail sources. The Petitioners submitted that they have projected the non-tariff income for the control period by extrapolating the non-tariff income booked in the provisional account of FY 2015-16 to grow at the rate of inflation index of 3.89%.

6.10.2 The Regulation 33 of the Distribution MYT Regulations, 2014, provides for treatment of non-tariff income, which is as follows:

“Non-Tariff Income

a) All incomes being incidental to electricity business and derived by the Licensee from sources, including but not limited to profit derived from disposal of assets, rents, delayed payment surcharge, meter rent (if any), income from investments other than contingency reserves, miscellaneous receipts from the consumers and income to Licensed business from the Other Business of the Distribution Licensee shall constitute Non-Tariff Income of the Licensee.

b) Interest earned on security deposits, in excess of the rate specified by the Commission shall be considered as Non-Tariff income of the Licensees.

c) The amount received by the Licensee on account of Non-Tariff Income shall be deducted from the aggregate revenue requirement in calculating the net revenue requirement of such Licensee.

Provided further that any expenditure incurred for generating/ earning Non-Tariff Income may be reduced from such income.”

6.10.3 Accordingly, the Commission approves Non-Tariff Income as claimed by the Petitioners for the control period as shown in the Table below:



Table 6-71: NON-TARIFF INCOME FOR DVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Non-Tariff Income	29.78	29.78	30.94	30.94	32.15	32.15

Table 6-72: NON-TARIFF INCOME FOR PVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Non-Tariff Income	26.45	26.45	27.48	27.48	28.56	28.56

Table 6-73: NON-TARIFF INCOME FOR MVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Non-Tariff Income	28.50	28.50	29.61	29.61	30.76	30.76

Table 6-74: NON-TARIFF INCOME FOR PuVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Non-Tariff Income	18.28	18.28	18.99	18.99	19.73	19.73

Table 6-75: NON-TARIFF INCOME FOR KESCo FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Non-Tariff Income	10.37	10.37	10.78	10.78	11.20	11.20

6.10.4 Further, any variation on this account would be taken up at the time of True-up based on the audited accounts.

6.11 INCOME FROM OTHER BUSINESS

6.11.1 The Regulation 33 of the Distribution MYT Regulations, 2014, provides for treatment of non-tariff income, which is as follows:



“Where the Licensee is engaged in any other business, the income from such business will be deducted from the Aggregate Revenue Requirement (ARR) in calculating the revenue requirement of the Licensee in the manner and in proposition as may be specified by the Commission. The proportion of revenue from Other Business that shall be utilized in the Distribution business shall be as stipulated in UPERC (Treatment of Income of Other Business of Transmission Licensees & Distribution Licensees) Regulations, 2004.

Provided that the Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Distribution Business and the Other Business and shall submit the Allocation Statement as approved by the Board of Directors to the Commission along with his application for determination of tariff.

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenues from such Other Business or for any other reason, no amount shall be allowed to be added to the aggregate revenue requirement of the Licensee on account of such Other Business.”

- 6.11.2 It is observed that the petitioners have not submitted any comments on the same. Accordingly, the Commission directs the petitioners to declare the income from other business, if any in terms of Regulation 34 of the Distribution MYT Regulations, 2014 at the time of True-Up.

6.12 RETURN ON EQUITY

- 6.12.1 The Petitioners submitted that as provided in Regulation 31 of the Distribution MYT Regulations, 2014, Return on Equity has to be computed on 30% of the capital base or actual equity, whichever is lower. However, in case of distribution licensees, as major portion of the assets is being funded through GoUP equity, the actual equity as per statement of accounts is higher than the equity being calculated at 30% of the Capital Base.

- 6.12.2 The petitioners submitted that since the Commission in its Distribution MYT Regulations, 2014 has not defined as how the ‘Capital Base’ should be determined for the purpose of equity calculations, the Petitioners have therefore considered the following approach to ascertain the equity balances for each year of the MYT period:

- Closing balance of Gross Fixed Assets for FY 2016-17 has been considered as the opening Gross Capital Base for FY 2017-18.



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- Closing balance of consumer contribution, capital subsidies / grants for FY 2016-17 is then allocated in the ratio of closing CWIP and closing GFA balance for FY 2016-17.
- To work out the Net Capital Balance eligible for the purpose of calculation of return on equity, the allocated balance of consumer contribution, capital subsidies / grants towards GFA balance of FY 2016-17, is deducted from the opening Gross Capital Base for FY 2017-18.
- 30% of the so derived opening capital base is to be considered as the Opening Equity Balance for FY 2017-18
- Thereafter, to work out the addition in equity during FY 2017-18, the increase in GFA during the year is reduced by the % of consumer contribution, capital subsidies / grants considered in the capital expenditure proposed for the year.
- The Closing Equity balance so determined for FY 2017-18 would become the opening equity balance for next year i.e. 2018-19 and so on, considering the additions in equity year on year, as defined above.

6.12.3 The petitioners have computed the Capital Base balances for each year of the MYT Period as depicted in the table below:

TABLE 6-76: OPENING EQUITY BASE FOR DVVNL BY PETITIONER FOR FY 2017-18 (IN RS. CRORE)

Particulars	#	2017-18
Opening GFA Balance	A	7,604.02
Opening balance of consumer contribution, capital subsidies / grants	B	1,569.71
Opening balance of Closing Work-in-Progress	C	1,531.31
Allocation of balance of consumer contribution, capital subsidies / grants		
Balance of consumer contribution towards GFA	D	1,306.59
Balance of consumer contribution towards CWIP	E	1,569.71
Net Opening Balance of Capital Base	F = A-D	6,297.43
Opening Balance of Equity Base	G= 30% of F	1,889.23

TABLE 6-77: OPENING EQUITY BASE FOR PVVNL BY PETITIONER FOR FY 2017-18 (IN RS. CRORE)

Particulars	#	2017-18
Opening GFA Balance	A	10,155.08
Opening balance of consumer contribution, capital subsidies / grants	B	1,749.24
Opening balance of Closing Work-in-Progress	C	2,486.83
Allocation of balance of consumer contribution, capital subsidies / grants		
Balance of consumer contribution towards GFA	D	1,405.15
Balance of consumer contribution towards CWIP	E	1,749.24



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Particulars		2017-18
Net Opening Balance of Capital Base	F = A-D	8,749.93
Opening Balance of Equity Base	G= 30% of F	2,624.98

TABLE 6-78: OPENING EQUITY BASE FOR MVVNL BY PETITIONER FOR FY 2017-18 (IN RS. CRORE)

Particulars	#	2017-18
Opening GFA Balance	A	7757.92
Opening balance of consumer contribution, capital subsidies / grants	B	1455.59
Opening balance of Closing Work-in-Progress	C	3811.11
Allocation of balance of consumer contribution, capital subsidies / grants		
Balance of consumer contribution towards GFA	D	976.084
Balance of consumer contribution towards CWIP	E	479.50
Net Opening Balance of Capital Base	F = A-D	6781.84
Opening Balance of Equity Base	G= 30% of F	2034.55

Table 6-79: Opening Equity Base for PuVVNL BY PETITIONER for FY 2017-18 (IN Rs. Crore)

Particulars	#	2017-18
Opening GFA Balance	A	8,258.99
Opening balance of consumer contribution, capital subsidies / grants	B	1,489.02
Opening balance of Closing Work-in-Progress	C	1,415.72
Allocation of balance of consumer contribution, capital subsidies / grants		
Balance of consumer contribution towards GFA	D	1,271.13
Balance of consumer contribution towards CWIP	E	1,489.02
Net Opening Balance of Capital Base	F = A-D	6,987.86
Opening Balance of Equity Base	G= 30% of F	2,096.36

Table 6-80: Opening Equity Base for KESCo BY PETITIONER for FY 2017-18 (in Rs. Crore)

Particulars	#	2017-18
Opening GFA Balance	A	707.34
Opening balance of consumer contribution, capital subsidies / grants	B	170.03
Opening balance of Closing Work-in-Progress	C	106.12
Allocation of balance of consumer contribution, capital subsidies / grants		
Balance of consumer contribution towards GFA	D	147.85
Balance of consumer contribution towards CWIP	E	22.18
Net Opening Balance of Capital Base	F = A-D	559.49
Opening Balance of Equity Base	G= 30% of F	167.85



6.12.4 Regulation 31 of the Distribution MYT Regulations, 2014 provides for return on equity @16% as specified below:

“31 Treatment of Return on equity

a) Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower:

Provided that assets funded by consumer contribution, capital subsidies / grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in these regulations.

b) 16% (sixteen) post-tax return on equity shall be considered irrespective of whether the Distribution Licensee has claimed return on equity in the ARR petition.”

6.12.5 The Commission has not been allowing any return on equity in previous years considering the under recovery under the distribution segment and not to burden the consumers by allowing return on equity as it will further increase the gap. However, it can be observed that the Distribution MYT Regulations, 2014, provide for 16% post tax return on equity irrespective of whether the distribution licensees have claimed return on equity in the ARR petition.

6.12.6 The Commission has gone through the methodology adopted by the petitioners to calculate the capital base for calculation of return on equity and found it appropriate. Hence, in line with provision of the Distribution MYT Regulations, 2014, the Commission has allowed Return on equity (RoE) considering the capital base calculated by adopting the similar methodology as proposed by the petitioners. The petitioners’ claim and approved RoE is shown below:

TABLE 6-81: RETURN OF EQUITY FOR DVVNL FOR FY 2017-18 TO FY 2019-20 (in Rs. Crore)

Particulars (DVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Equity	1889.23	1888.14	2298.52	2241.23	2851.86	2686.94
Additions (30% of Capitalization)	475.92	410.56	643.41	518.27	600.85	518.67
Less: Consumer Contribution	66.63	57.48	90.08	72.56	84.12	72.61
Closing Equity	2298.52	2241.23	2851.86	2686.94	3368.59	3132.99
Rate of Return on Equity (%)	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Allowable Return on Equity	335.02	330.35	412.03	394.25	497.64	465.59



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TABLE 6-82: RETURN OF EQUITY FOR PVVNL FOR FY 2017-18 TO FY 2019-20 (in Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Equity	2624.97	2623.85	3680.94	3461.72	4677.90	4259.74
Additions (30% of Capitalization)	1227.88	1009.78	1159.25	960.31	979.08	847.84
Less: Consumer Contribution	171.90	171.90	162.29	162.29	137.07	137.07
Closing Equity	3680.94	3461.72	4677.90	4259.74	5519.91	4970.51
Rate of Return on Equity (%)	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Allowable Return on Equity	504.47	486.85	668.71	617.72	815.82	738.42

TABLE 6-83: RETURN OF EQUITY FOR MVVNL FOR FY 2017-18 TO FY 2019-20 (in Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Equity	2034.50	1735.87	2749.49	2182.53	3377.56	2508.02
Additions (30% of Investments)	831.39	519.37	730.31	378.48	680.12	370.11
Less: Consumer Contribution	116.39	72.71	102.24	52.99	95.22	51.81
Closing Equity	2749.49	2182.53	3377.56	2508.02	3962.46	2826.31
Rate of Return on Equity (%)	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Allowable Return on Equity	382.45	313.47	488.72	375.24	583.56	426.75

TABLE 6-84: RETURN OF EQUITY FOR PuVVNL FOR FY 2017-18 TO FY 2019-20 (in Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Equity	2096.36	2092.13	2602.44	2487.08	3245.03	2957.76
Additions (30% of Capitalization)	588.47	459.24	747.20	547.31	649.63	509.70
Less: Consumer Contribution	82.39	64.29	104.61	76.62	90.95	71.36
Closing Equity	2602.44	2487.08	3245.03	2957.76	3803.71	3396.11
Rate of Return on Equity (%)	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Allowable Return on Equity	375.90	366.34	467.80	435.59	563.90	508.31

TABLE 6-85: RETURN OF EQUITY FOR KESCo FOR FY 2017-18 TO FY 2019-20 (in Rs. Crore)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Equity	167.85	167.73	210.46	208.09	263.47	257.36
Additions (30% of Capitalization)	49.55	46.93	59.94	55.72	64.74	59.68
Less: Consumer Contribution	6.94	6.57	6.94	6.45	6.94	6.40
Closing Equity	210.46	208.09	263.47	257.36	321.27	310.65
Rate of Return on Equity (%)	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Allowable Return on Equity	30.26	30.07	37.91	37.24	46.78	45.44



6.13 CONTRIBUTION TO CONTINGENCY RESERVE

- 6.13.1 The Petitioners submitted that the Distribution MYT Regulations, 2014 provides for the contribution to the contingency reserves upto a sum not less than 0.25 per cent and not more than 0.5 per cent of the original cost of fixed assets shall be allowed annually towards such appropriation in the calculation of ARR. The Licensees shall invest the Contingency Reserve so created in securities authorized under the Indian Trusts Act, 1882 within a period of six months of close of the financial year and provided that no diminution in the value of contingency reserve be allowed to be adjusted as a part of tariff. However, the use of such reserve is only with the prior permission of the Commission.
- 6.13.2 The petitioners submitted that since there is a substantial revenue gap between ARR and revenue forecast, any amounts allowed on this account will only go to enhance the already large gap and create extra burden on the consumers. The petitioners have not claimed any contribution to contingency reserve for the year under review.
- 6.13.3 In view of the same, the Commission has not approved any amounts under the said component in the present Order for the control period.

6.14 APPORTIONMENT OF O&M EXPENSES AND INTEREST & FINANCE CHARGES OF UPPCL

- 6.14.1 The petitioners submitted that in FY 2013-14 Tariff Order the Commission had directed the Distribution Companies to consider the apportionment of the O&M expenses of UPPCL and submit the share of each Distribution Licensees and accordingly, the O&M expenses of UPPCL for FY 2015-16 as per provisional accounts have been considered as base expenses and the same have been extrapolated for the control period using the inflation index of 3.89%.
- 6.14.2 The petitioners submitted that considering the above, the same have also been apportioned to all the Distribution Licensees in the power purchase ratio for each relevant year. The petitioners submitted that the share of apportionment of O&M charges of UPPCL for FY 2017-18, FY 2018-19 and 2019-20 is Rs. 41.17 crore, Rs. 42.79 crore and Rs. 43.93 crore respectively and same have been considered as part of the ARR to be recovered from retail consumers.
- 6.14.3 The Commission in its tariff order for FY 2016-17, noted as follows:



“The Commission in this Order while computing the Bulk Supply Tariff for FY 2013-14 has allowed such expenses based on actual based on the audited accounts of UPPCL. Further, as discussed in the Truing-up section, since, the above expenses have been incurred by UPPCL, mostly for procuring the power for the Licensees, the above expenses have been allowed while doing the Truing up of FY 2013-14. However, it may be noted that procurement of power is the responsibility of the Distribution Licensees and the Commission allows considerable amount of O&M Expenses and the interest on working capital to the Licensees for this purpose. The Commission has allowed such expenses for the past years, but in its Tariff Order for FY 2014-15 dated October 1, 2014 the Commission has specifically mentioned that, such expense will not be allowed for future years i.e., FY 2014-15 onwards. The relevant extract of the aforementioned Order is reproduced below:

“The Commission has allowed such expenses for the past years, however for future years, i.e., from FY 2014-15 onwards, the Commission disallows the claim of additional expenses towards allocation of O&M expenses for UPPCL and directs the Petitioner to manage such additional Expenses for procuring the power from the O&M Expenses allowed to it for the relevant year.”

Thus, the Commission has not considered the claim of additional expenses towards allocation of O&M expenses for UPPCL for FY 2016-17.”

- 6.14.4 Thus, from above, it can be observed that the Commission categorically took view to not to allow any additional expenditure on the apportionment of O&M expense for UPPCL for FY 2016-17. Hence, in line with the same, the Commission has disallowed the petitioners’ claim of additional expense towards the apportionment of O&M Expense for UPPCL for the MYT period.

6.15 GoUP SUBSIDY

- 6.15.1 The Petitioners submitted that the Regulation 38 of the Distribution MYT Regulations, 2014 provide that the Commission shall determine the ARR of the licensees without considering the subsidy provided by GoUP.
- 6.15.2 The Petitioners further submitted that they would submit the details of the subsidy along with the tariff proposal. The Commission vide its second deficiency note asked the petitioners to submit the details of the subsidy to be received along with the tariff proposal. The Petitioners in reply to it submitted
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the details of the subsidy to be received along with its break up Discom wise as follows:

TABLE 6-86: DETAILS OF GoUP SUBSIDY AS SUBMITTED BY THE PETITIONERS

FY 2017-18				
Particulars	Subsidy for Rural Consumers - LMV-1	Subsidy for Agriculture Consumers - LMV-5	Subsidy against Electricity Duty	Total
DVVNL	659.38	49.51	241.95	950.85
MVVNL	693.19	32.64	397.01	1122.84
PVVNL	1380.16	104.12	505.33	1989.61
PuVVNL	1027.27	53.73	355.71	1436.70
Total	3760.00	240.00	1500.00	5500.00

FY 2018-19				
Particulars	Subsidy for Rural Consumers - LMV-1	Subsidy for Agriculture Consumers - LMV-5	Subsidy against Electricity Duty	Total
DVVNL	700.91	52.46	241.95	995.32
MVVNL	700.84	34.63	397.01	1132.49
PVVNL	1617.26	105.10	505.33	2227.69
PuVVNL	740.99	47.80	355.71	1144.50
Total	3760.00	240.00	1500.00	5500.00

FY 2019-20				
Particulars	Subsidy for Rural Consumers - LMV-1	Subsidy for Agriculture Consumers - LMV-5	Subsidy against Electricity Duty	Total
DVVNL	426.53	52.27	161.30	640.09
MVVNL	422.54	37.29	264.68	724.51
PVVNL	1007.61	98.55	336.89	1443.05
PuVVNL	403.32	51.89	237.14	692.34
Total	2260.00	240.00	1000.00	3500.00

6.15.3 Clause 38 of the Distribution MYT Regulations, 2014 specifies as under:

“38. Subsidy



a) *The Commission shall determine the ARR and Tariff without considering subsidy.*

Provided that if the State Government declares subsidy for the categories of consumers after notification of Tariff Order, the licensee shall incorporate the same in the tariff and intimate the Commission with the revised Tariff Schedule that shall be charged if the subsidy is received in advance.

Provided further that in case the State Government declares subsidy in advance or during tariff filing proceedings and the licensee incorporates the subsidy in the petition, the Commission shall notify two tariff schedules, one with subsidy and the other without subsidy.

Provided also that the Government's subsidy provided for or declared shall be supported by documentary evidence of time schedule of payment, mode of the payment of the subsidy and categorization of the subsidy amount into subsidized consumer categories.

b) *The Commission may clarify in the tariff order, post the declaration from the Government, the quantum of Government's subsidy as applicable to the fuel cost adjustment along with the range (%) of variable cost upto which the fuel adjustment cost shall not be passed to the consumers, category wise classification, mode of payment and schedule of payment etc.*

c) *In case of no disbursement or delayed disbursement of subsidy by the Government, the licensee shall charge consumers as per the tariff schedule which is approved by the Commission without consideration of subsidy"*

- 6.15.4 Further, the in terms of provision of Regulation 38 of the Distribution MYT Tariff Regulations, 2014, in case the State Government declares subsidy in advance or during tariff filing proceedings and the licensee incorporates the subsidy in the petition, the Commission shall notify two tariff schedules, one with subsidy and the other without subsidy. The Commission opines that it has already been approving two tariff schedules over the past years i.e. Tariff Schedule as approved Rate Schedule (i.e. Tariff Schedule with subsidy) and Approved Average Cost of Supply (i.e. Tariff Schedule without subsidy). The same has been concurred by the petitioners also. Further, the Commission has been repeatedly
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directing the Licensees to submit detailed computation of subsidy allocated to different category of consumers so that tariff schedule with subsidy and with subsidy can be examined properly. However, the Licensees have failed to provide the same.

- 6.15.5 The Commission in its deficiency directed the petitioners that they must submit the tariff proposals (along with the detailed computation) after considering subsidy and without considering subsidy for all the three years of MYT control period i.e. FY 2017-18, FY 2018-19 and FY 2019-20 in accordance with Regulation 12.3 of the MYT Distribution Regulations, 2014. The Petitioners in response replied as under:

“The Petitioner humbly submits that it has already submitted the Tariff Proposal for FY 2017-18. Further it is submitted that the Hon’ble Commission has directed the Licensee to conduct the following studies, which relates to the Tariff Structure of the Licensee:

- *Cost of Service studies which would serve as a tool for alignment of costs and charges and submit details regarding the cost of service studies for each category or voltage level.*
- *Fresh Actuarial Valuation Study Report in respect to employee expenses.*
- *Assessment Study of metered consumers as per the Regulations 16.2 notified vide MYT Regulations, 2014.*
- *Assessment Study of un-metered consumers to establish base line norms as per the Regulations 17.1 notified vide MYT Regulations, 2014.*
- *Study of Agriculture feeders segregated and not segregated in significant numbers to determine base line norms as per the Regulations 17.2, 17.3 notified vide MYT Regulations, 2014*

The Petitioner understands that the above studies are important for the purpose of the counterbalancing of the Tariff’s for each category and sub-category of consumers and is doing its best efforts in this regard. UPPCL on behalf of its discoms has already initiated the process in this direction. Further with the changing scenario of supply hours and expected consumer addition, the Licensee feels that these studies would play a major role in projection of Tariff Rate Schedule for balance MYT period. Since the process for aforementioned studies has just began, and would take some time for



completion of the same, the Licensee seeks the liberty of the Hon'ble Commission to kindly allow it to file the Tariff proposal for FY 2018-19 and 2019-20 at the time of filing of Annual Performance Review in line with the MYT Regulations. It is further suggested, that for the purpose of computation of revenue for FY 2018-19 and 2019-20, the Hon'ble Commission, may consider the present proposal of Tariff Rate Schedule."

6.15.6 The Commission directs the petitioners to conduct the above-mentioned studies at the earliest so that a clear picture of subsidy allocated to different category of consumers so that tariff schedule with subsidy and without subsidy can be examined properly. The petitioners have already mentioned that they will submit the same at the time of Annual Performance Review. Hence, for the purpose of this order, the Commission considers the Tariff without subsidy as the Average Cost of Supply.

6.15.7 Accordingly, the Commission has accepted the total subsidy allocation of Rs. 5,550 Crore, Rs. 5500 Crore and Rs. 3500 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively from GoUP as submitted by the Licensees and its allocation shown above.

6.16 ADDITIONAL SUBSIDY REQUIREMENT

6.16.1 As discussed in the earlier chapters of Trueing up of FY 2014-15, the Distribution Licensees had filed an Appeal before the Hon'ble APTEL on applicability of additional subsidy to which the Hon'ble APTEL gave its Judgment dated November 23, 2015 in favour of the Commission.

6.16.2 It can be observed from the earlier section that; the petitioners have projected the billing determinants for various categories for the first control period. Accordingly, the Commission has also approved the billing determinants for first control period. The Commission in its various Orders has been aggressively pursuing the petitioners to convert all its unmetered consumers of rural and urban area to metered consumers. Most of these consumers would be from the rural areas having lower tariffs and are largely subsidised. Large number of addition of such consumers would require large amount of the subsidy to be provided in order to compensate for the lower tariffs as compared with the Average Cost of Supply. The Commission feels that it would be premature to estimate the additional subsidy requirement for all such consumers as these consumers would be added over the time period of the full year. Also, the actual



subsidy allocation may also vary for each DISCOM and accordingly the values of additional subsidy may also vary. So, the Commission has decided to consider the matter of appropriate allocation of additional subsidy to the DISCOM s for the first control period in the true up exercise based on the actual audited figures and the petitions filed.

6.17 REVENUE FROM SALE OF ELECTRICITY

- 6.17.1 For the first control period, the Petitioners have estimated the revenue from existing tariffs to the tune of Rs. 10742.36 Crore for DVVNL, Rs. 15299.01 Crore for PVVNL, Rs. 10034.32 Crore for MVVNL, Rs. 11038.57 Crore for PuVVNL and Rs. 2706.62 Crore for KESCo, i.e., based on approved Tariff as per Tariff Order dated August 1, 2016.
- 6.17.2 The Commission has computed the revenue at existing tariffs as per the tariff rates approved in Tariff Order dated August 1, 2016 and the approved sales for FY 2017-18. Further, the Commission has also approved revised tariff rates for consumer categories and has computed the resultant revenue by applying the approved tariff rates and the approved sales for FY 2017-18. Further, the revenue for FY 2018-19 and FY 2019-20 has been computed at approved / revised tariff for FY 2017-18 (which will serve as existing tariff for FY 2018-19 and FY 2019-20). The category-wise details of the revenue at revised tariff for FY 2017-18 to FY 2019-20 are annexed in this order. The following Table summarizes the revenue approved by Commission for FY 2017-18 at existing tariff:

Table 6-87: APPROVED TARIFF REVENUE FOR DVVNL (Rs. Crore)

Consumer Categories (DVVNL)	FY 2017-18
	Approved (At Existing Tariff)
LMV-1: Domestic	3360.55
LMV-2: Non-Domestic	825.95
LMV-3: Public Lamps	136.94
LMV-4: Institutions	610.64
LMV-5: Private Tube Wells	1100.72
LMV 6: Small and Medium Power	699.99
LMV-7: Public Water Works	515.05
LMV-8: State Tube Wells	488.75
LMV-9: Temporary Supply	32.67
LMV-10: Departmental Employees	23.12
HV-1: Non-Industrial Bulk Loads	569.58



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Consumer Categories (DVVNL)	FY 2017-18
	Approved (At Existing Tariff)
HV-2: Large and Heavy Power	1905.24
HV-3: Railway Traction	362.37
HV-4: Lift Irrigation	123.35
Sub-total	10754.93
Extra state & Bulk	0.00
Total	10754.93

Table 6-88: APPROVED TARIFF REVENUE FOR PVVNL (Rs. Crore)

Consumer Categories (PVVNL)	FY 2017-18
	Approved (At Existing Tariff)
LMV-1: Domestic	5173.29
LMV-2: Non-Domestic	1248.26
LMV-3: Public Lamps	216.49
LMV-4: Institutions	310.04
LMV-5: Private Tube Wells	366.93
LMV 6: Small and Medium Power	1190.21
LMV-7: Public Water Works	380.24
LMV-8: State Tube Wells	357.05
LMV-9: Temporary Supply	113.59
LMV-10: Departmental Employees	30.65
HV-1: Non-Industrial Bulk Loads	1843.31
HV-2: Large and Heavy Power	3888.60
HV-3: Railway Traction	106.75
HV-4: Lift Irrigation	0.30
Sub-total	15225.69
Extra state & Bulk	-
Total	15225.69

Table 6-89: APPROVED TARIFF REVENUE FOR MVVNL (Rs. Crore)

Consumer Categories (MVVNL)	FY 2017-18
	Approved (At Existing Tariff)
LMV-1: Domestic	3563.01
LMV-2: Non-Domestic	1118.65
LMV-3: Public Lamps	377.98
LMV-4: Institutions	412.88
LMV-5: Private Tube Wells	177.71
LMV 6: Small and Medium Power	508.83
LMV-7: Public Water Works	527.24



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Consumer Categories (MVVNL)	FY 2017-18
	Approved (At Existing Tariff)
LMV-8: State Tube Wells	867.65
LMV-9: Temporary Supply	31.56
LMV-10: Departmental Employees	33.72
HV-1: Non-Industrial Bulk Loads	660.85
HV-2: Large and Heavy Power	1298.99
HV-3: Railway Traction	315.55
HV-4: Lift Irrigation	143.52
Sub-total	10038.13
Extra state & Bulk	28.35
Total	10066.48

Table 6-90: APPROVED TARIFF REVENUE FOR PuVVNL (Rs. Crore)

Consumer Categories (PuVVNL)	FY 2017-18
	Approved (At Existing Tariff)
LMV-1: Domestic	3688.34
LMV-2: Non-Domestic	1171.56
LMV-3: Public Lamps	164.87
LMV-4: Institutions	661.45
LMV-5: Private Tube Wells	411.49
LMV 6: Small and Medium Power	555.90
LMV-7: Public Water Works	498.37
LMV-8: State Tube Wells	1234.34
LMV-9: Temporary Supply	10.52
LMV-10: Departmental Employees	35.58
HV-1: Non-Industrial Bulk Loads	414.83
HV-2: Large and Heavy Power	1022.98
HV-3: Railway Traction	497.11
HV-4: Lift Irrigation	667.56
Sub-total	11034.89
Extra state & Bulk	-
Total	11034.89

Table 6-91: APPROVED TARIFF REVENUE FOR KESCO (Rs. Crore)

Consumer Categories	FY 2017-18
	Approved (At Existing Tariff)
LMV-1: Domestic	1042.14
LMV-2: Non-Domestic	318.99
LMV-3: Public Lamps	60.87
LMV-4: Institutions	60.85



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Consumer Categories	FY 2017-18
	Approved (At Existing Tariff)
LMV-5: Private Tube Wells	0.00
LMV 6: Small and Medium Power	390.65
LMV-7: Public Water Works	88.29
LMV-8: State Tube Wells	0.00
LMV-9: Temporary Supply	0.00
LMV-10: Departmental Employees	4.94
HV-1: Non-Industrial Bulk Loads	167.85
HV-2: Large and Heavy Power	571.75
HV-3: Railway Traction	0.00
HV-4: Lift Irrigation	0.00
Sub-total	2706.32
Extra state & Bulk	-
Total	2706.32

6.18 APPROVED ARR SUMMARY, REVENUE FROM TARIFFS AND RESULTANT GAP

6.18.1 In the preceding Sections, the Commission has detailed the expenses submitted by the Petitioners and that approved by the Commission under various heads for FY 2017-18 to FY 2019-20. The Commission has also approved the revenue from existing tariffs and revenue from revised tariffs.

6.18.2 The Commission has assessed the ARRs for FY 2017-18 to FY 2019-20 on standalone basis. Based on the above, the approved ARR and the revenue from tariffs for FY 2017-18 are summarized in the tables below:

Table 6-92: ARR, REVENUE AND GAP SUMMARY FOR DVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars (DVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Power Purchase Expenses	10335.02	10210.93	12817.89	12786.03	15566.81	15469.14
Apportionment of O&M Expenses of UPPCL#	40.89	0.00	42.59	0.00	43.95	0.00
Transmission Expenses	500.24	559.51	687.22	689.99	886.18	837.48
Gross O&M Expenses	1524.90	1307.33	1977.24	1732.84	2390.39	2113.31
Gross Employee Expenses	851.03	681.21	1126.62	895.63	1353.94	1153.49
Gross Repair and Maintenance Expenses	526.91	510.20	655.77	680.55	802.73	767.72
Gross A&G Expenses	146.96	115.92	194.85	156.67	233.72	192.10
Gross Interest on Long Term Loans	388.85	343.00	519.54	436.00	619.72	520.60
Interest to Consumer	44.96	37.23	48.10	39.83	51.58	42.71
Bank Charges	0.69	0.69	0.72	0.72	0.75	0.75



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Particulars (DVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Interest on Working Capital	204.61	211.20	257.88	294.22	306.28	359.26
Discount to Consumers	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	178.45	168.44	234.55	181.81	295.71	195.55
Prior Period Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	189.32	0.00	202.19	0.00	214.21	0.00
Gross Expenditure	13407.95	12838.33	16787.92	16161.44	20375.56	19538.82
Less: Employee Capitalisation	127.66	95.12	168.99	134.34	203.09	173.02
Less: A&G Capitalisation	22.04	17.39	29.23	23.50	35.06	28.81
Less: Interest Capitalisation	89.44	78.89	119.49	100.28	142.54	119.74
Total Capitalisation	239.14	191.40	317.71	258.12	380.68	321.58
Net Expenditure	13168.81	12646.93	16470.21	15903.32	19994.88	19217.24
Add: Return on Equity	335.02	330.35	412.03	394.25	497.64	465.59
Less: Non-tariff Incomes	29.78	29.78	30.94	30.94	32.15	32.15
Add: Efficiency Gains	-	-	-	-	-	-
Aggregate Revenue Requirement	13474.05	12947.50	16851.30	16266.63	20460.37	19650.68
Revenue from Tariff incl DPS at Existing Tariff*	10742.36	10754.93	12950.78	14713.07	14986.67	17502.93
GoUP Subsidy	957.88	957.88	1007.88	1007.88	640.09	640.09
Net Revenue Gap/ (Surplus)	1773.81	1234.69	2892.64	545.68	4833.61	1507.66

*Revenue for FY 2018-19 and FY 2019-20 at approved/revised tariff for FY 2017-18

Table 6-93: ARR, REVENUE AND GAP SUMMARY FOR PVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars (PVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Power Purchase Expenses	15119.77	14245.87	18204.76	18159.50	21964.64	21826.84
Apportionment of O&M Expenses of UPPCL#	59.82	0.00	60.49	0.00	62.01	0.00
Transmission Expenses	731.84	780.60	976.04	979.97	1250.39	1181.68
Gross O&M Expenses	1792.15	1480.27	2417.41	2077.00	2959.48	2596.36
Gross Employee Expenses	1229.29	950.44	1643.90	1367.72	1994.52	1706.41
Gross Repair and Maintenance Expenses	446.12	432.02	602.42	563.51	748.58	701.55
Gross A&G Expenses	116.74	97.81	171.09	145.77	216.38	188.40
Gross Interest on Long Term Loans	659.15	549.75	944.48	742.87	1039.50	815.16
Interest to Consumer	109.59	90.74	142.07	117.63	189.08	156.56
Bank Charges	51.65	51.65	53.67	53.67	55.76	55.76
Interest on Working Capital	209.07	214.35	231.01	287.88	263.51	338.68
Discount to Consumers	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	276.07	458.76	460.59	555.18	615.24	638.66
Prior Period Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00	0.00	0.00



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Particulars (PVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Provision for Bad and Doubtful Debts	102.67	0.00	112.53	0.00	123.54	0.00
Gross Expenditure	19111.79	17871.99	23603.03	22973.70	28523.15	27609.70
Less: Employee Capitalisation	184.39	142.57	246.58	205.16	299.18	255.96
Less: A&G Capitalisation	17.51	14.67	25.66	21.87	32.46	28.26
Less: Interest Capitalisation	151.61	126.44	217.23	170.86	239.08	187.49
Total Capitalisation	353.51	283.68	489.48	397.88	570.72	471.71
Net Expenditure	18758.27	17588.31	23113.56	22575.82	27952.43	27137.99
Add: Return on Equity	504.47	486.85	668.71	617.72	815.82	738.42
Less: Non-tariff Incomes	26.45	26.45	27.48	27.48	28.56	28.56
Add: Efficiency Gains	-	-	-	-	-	-
Aggregate Revenue Requirement	19236.29	18048.70	23754.78	23166.05	28739.70	27847.86
Revenue from Tariff incl DPS at Existing Tariff*	15299.01	15225.69	19184.26	21911.92	22946.79	26499.18
GoUP Subsidy	2004.70	2004.70	2274.31	2274.31	1443.05	1443.05
Net Revenue Gap/ (Surplus)	1932.57	818.31	2296.20	(1020.18)	4349.86	(94.37)

*Revenue for FY 2018-19 and FY 2019-20 at approved/revised tariff for FY 2017-18

Table 6-94: ARR, REVENUE AND GAP SUMMARY FOR MVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars (MVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Power Purchase Expenses	9888.30	9702.82	13260.31	13227.35	17349.55	17240.70
Apportionment of O&M Expenses of UPPCL#	39.12	0.00	44.06	0.00	48.98	0.00
Transmission Expenses	478.62	531.67	710.94	713.81	987.67	933.39
Gross O&M Expenses	2127.93	1885.85	2960.45	2691.56	3702.46	3421.39
Gross Employee Expenses	1369.02	1243.81	1917.05	1813.16	2402.02	2298.97
Gross Repair and Maintenance Expenses	472.80	396.11	617.12	505.43	751.70	631.34
Gross A&G Expenses	286.11	245.94	426.28	372.97	548.74	491.07
Gross Interest on Long Term Loans	366.64	328.38	442.27	394.33	471.33	439.07
Interest to Consumer	39.96	33.09	42.44	35.14	45.14	37.38
Bank Charges	27.76	27.76	28.84	28.84	29.96	29.96
Interest on Working Capital	202.54	204.53	283.72	320.00	369.13	423.01
Discount to Consumers	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	342.22	256.81	464.06	326.22	564.12	394.69
Prior Period Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	130.97	0.00	141.27	0.00	152.35	0.00
Gross Expenditure	13644.08	12970.92	18378.36	17737.24	23720.69	22919.59
Less: Employee Capitalisation	205.35	186.57	287.56	271.98	360.30	344.84



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Particulars (MVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Less: A&G Capitalisation	42.92	36.89	63.94	55.94	82.31	73.66
Less: Interest Capitalisation	84.33	75.52	101.72	90.67	108.41	100.90
Total Capitalisation	332.60	298.99	453.22	418.59	551.02	519.40
Net Expenditure	13311.49	12671.93	17925.14	17318.64	23169.68	22400.19
Add: Return on Equity	382.45	313.47	488.72	375.24	583.56	426.75
Less: Non-tariff Incomes	28.50	28.50	29.61	29.61	30.76	30.76
Add: Efficiency Gains	-	-	-	-	-	-
Aggregate Revenue Requirement	13665.44	12956.91	18384.25	17664.28	23722.47	22796.17
Revenue from Tariff incl DPS at Existing Tariff*	10034.32	10066.48	13192.15	15282.12	16595.12	19555.14
GoUP Subsidy	1082.68	1082.68	1093.35	1093.35	724.51	724.51
Net Revenue Gap/ (Surplus)	2548.44	1807.74	4098.75	1288.81	6402.84	2516.52

*Revenue for FY 2018-19 and FY 2019-20 at approved/revised tariff for FY 2017-18

Table 6-95: ARR, REVENUE AND GAP SUMMARY FOR PuVVNL FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars (PuVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Power Purchase Expenses	12861.12	12328.24	15524.73	15486.14	18469.28	18353.41
Apportionment of O&M Expenses of UPPCL#	50.88		51.58		52.14	
Transmission Expenses	622.51	675.53	832.35	835.70	1051.41	993.63
Gross O&M Expenses	2518.26	1880.00	2964.66	2283.78	3367.54	2601.99
Gross Employee Expenses	1819.99	1219.23	2093.40	1471.39	2308.88	1628.72
Gross Repair and Maintenance Expenses	565.34	546.04	714.40	673.88	875.21	807.06
Gross A&G Expenses	132.93	114.73	156.86	138.51	183.45	166.22
Gross Interest on Long Term Loans	386.85	358.49	527.78	503.48	601.14	608.01
Interest to Consumer	68.41	56.64	74.95	62.06	82.22	68.08
Bank Charges	0.02	0.02	0.02	0.02	0.03	0.03
Interest on Working Capital	185.93	190.96	252.18	301.17	296.94	356.72
Discount to Consumers	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	312.80	236.57	415.49	284.46	518.14	331.58
Prior Period Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	216.78	0.00	233.75	0.00	246.89	0.00
Gross Expenditure	17223.56	15726.44	20877.48	19756.80	24685.74	23313.46
Less: Employee Capitalisation	273.00	169.88	314.01	207.70	346.33	244.31
Less: A&G Capitalisation	19.94	17.21	23.53	20.78	27.52	24.93
Less: Interest Capitalisation	88.98	82.45	121.39	115.80	138.26	139.84



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Particulars (PuVVNL)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Total Capitalisation	381.91	269.54	458.93	344.28	512.11	409.08
Net Expenditure	16841.65	15456.90	20418.56	19412.52	24173.62	22904.37
Add: Return on Equity	375.90	366.34	467.80	435.59	563.90	508.31
Less: Non-tariff Incomes	18.28	18.28	18.99	18.99	19.73	19.73
Add: Efficiency Gains	-	-	-	-	-	-
Aggregate Revenue Requirement	17199.28	15804.96	20867.36	19829.12	24717.79	23392.95
Revenue from Tariff incl DPS at Existing Tariff*	11038.57	11034.89	14026.30	16589.37	16162.92	19260.41
GoUP Subsidy	1454.74	1454.74	1124.46	1124.46	692.34	692.34
Net Revenue Gap/ (Surplus)	4705.97	3315.32	5716.60	2115.29	7862.53	3440.20

*Revenue for FY 2018-19 and FY 2019-20 at approved/revised tariff for FY 2017-18

Table 6-96: ARR, REVENUE AND GAP SUMMARY FOR KESCO FOR FY 2017-18 TO FY 2019-20 (Rs. Crore)

Particulars (KESCO)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Power Purchase Expenses	1900.91	1889.04	2179.81	2174.39	2439.31	2424.01
Apportionment of O&M Expenses of UPPCL#	7.52	0.00	7.24	0.00	6.89	0.00
Transmission Expenses	92.01	103.51	116.87	117.34	138.86	131.23
Gross O&M Expenses	400.81	271.91	450.37	317.31	495.63	355.43
Gross Employee Expenses	291.33	198.19	324.28	228.00	350.52	247.79
Gross Repair and Maintenance Expenses	51.45	49.57	64.50	63.06	79.72	79.12
Gross A&G Expenses	58.03	24.16	61.59	26.25	65.39	28.53
Gross Interest on Long Term Loans	9.55	8.61	20.22	19.49	27.75	27.49
Interest to Consumer	12.02	9.95	12.74	10.55	13.52	11.19
Bank Charges	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	49.99	49.30	55.92	57.95	61.94	64.35
Discount to Consumers	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	19.17	18.06	26.88	23.34	35.43	29.06
Prior Period Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	45.62	0.00	48.85	0.00	51.31	0.00
Gross Expenditure	2537.60	2350.37	2918.90	2720.37	3270.64	3042.77
Less: Employee Capitalisation	43.70	27.56	48.64	32.03	52.58	37.17
Less: A&G Capitalisation	8.70	3.62	9.24	3.94	9.81	4.28
Less: Interest Capitalisation	2.20	1.98	4.65	4.48	6.38	6.32
Total Capitalisation	54.60	33.16	62.53	40.45	68.77	47.77
Net Expenditure	2483.00	2317.21	2856.37	2679.92	3201.87	2995.00
Add: Return on Equity	30.26	30.07	37.91	37.24	46.78	45.44



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Particulars (KESCO)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Less: Non-tariff Incomes	10.37	10.37	10.78	10.78	11.20	11.20
Add: Efficiency Gains	-	-	-	-	-	-
Aggregate Revenue Requirement	2502.90	2336.90	2883.51	2706.38	3237.46	3029.24
Revenue from Tariff incl DPS at Existing Tariff*	2706.62	2706.32	2977.84	3149.94	3257.99	3451.93
GoUP Subsidy						
Net Revenue Gap/ (Surplus)	(203.72)	(369.42)	(94.33)	(443.55)	(20.53)	(422.68)

*Revenue for FY 2018-19 and FY 2019-20 at approved/revised tariff for FY 2017-18

**Table 6-97: CONSOLIDATED ARR, REVENUE AND GAP SUMMARY FOR ALL DISCOMS (all 5) FOR
FY 2017-18 TO FY 2019-20 (Rs. Crore)**

Particulars (Consolidated 5 Discoms)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Power Purchase by DISCOMs (MUs)	117104	113775	140525	140525	164551	164551
Sales (MUs)	94795	92094	118163	118163	144872	144872
Power Purchase Expenses	50105.13	48376.89	61987.51	61833.40	75789.59	75314.11
Apportionment of O&M Expenses of UPPCL#	198.23	0.00	205.95	0.00	213.97	0.00
Transmission Expenses	2425.22	2650.81	3323.42	3336.80	4314.52	4077.43
Gross O&M Expenses	8364.05	6825.36	10770.13	9102.49	12915.49	11088.47
Gross Employee Expenses	5560.66	4292.87	7105.24	5775.90	8409.87	7035.38
Gross Repair and Maintenance Expenses	2062.62	1933.93	2654.21	2486.43	3257.94	2986.78
Gross A&G Expenses	740.77	598.56	1010.67	840.17	1247.68	1066.32
Gross Interest on Long Term Loans	1811.05	1588.23	2454.28	2096.17	2759.44	2410.34
Interest to Consumer	274.94	227.65	320.30	265.21	381.54	315.91
Bank Charges	80.12	80.12	83.25	83.25	86.50	86.50
Interest on Working Capital	852.15	870.34	1080.70	1261.23	1297.80	1542.02
Discount to Consumers	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	1128.71	1138.64	1601.57	1370.99	2028.64	1589.55
Prior Period Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Other Misc Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Provision for Bad and Doubtful Debts	685.36	0.00	738.58	0.00	788.31	0.00
Gross Expenditure	65924.98	61758.05	82565.70	79349.55	100575.78	96424.33
Less: Employee Capitalisation	834.10	621.69	1065.79	851.21	1261.48	1055.30
Less: A&G Capitalisation	111.12	89.79	151.60	126.02	187.15	159.95
Less: Interest Capitalisation	416.54	365.29	564.48	482.10	634.67	554.29
Total Capitalisation	1361.76	1076.77	1781.87	1459.33	2083.30	1769.54
Net Expenditure	64563.22	60681.28	80783.84	77890.22	98492.49	94654.79
Add: Return on Equity	1628.11	1527.07	2075.17	1860.04	2507.70	2184.51
Less: Non-tariff Incomes	113.39	113.39	117.81	117.81	122.39	122.39
Add: Efficiency Gains	0.00	0.00	0.00	0.00	0.00	0.00



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Particulars (Consolidated 5 Discoms)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Aggregate Revenue Requirement	66077.95	62094.96	82741.20	79632.45	100877.79	96716.91
Revenue from Tariff incl DPS at Existing Tariff*	49820.88	49788.32	62331.33	71646.41	73949.49	86269.59
GoUP Subsidy	5500.00	5500.00	5500.00	5500.00	3500.00	3500.00
Net Revenue Gap (at existing tariff)*	10757.06	6806.65	14909.87	2486.04	23428.30	6947.33

*Revenue for FY 2018-19 and FY 2019-20 at approved/revised tariff for FY 2017-18

6.18.3 Treatment of the above approved revenue gap / (surplus) has been discussed subsequently in this Order.



7. OPEN ACCESS CHARGES

7.1 BACKGROUND:

- 7.1.1 The Commission has issued Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2004 (in short 'UPERC Open Access Regulations') vide notification no. UPERC/Secy./Regulations/05-249 dated 7th June, 2005 to operationalize long term and short term open access in the State. The Regulations also provides that effective from 1st April, 2008 any consumer with demand of above 1 MW can avail open access of transmission and distribution systems.
- 7.1.2 Subsequently, the Commission has also made / finalized the necessary regulatory framework as below:
- a. UPERC (Terms and Conditions for Open Access) (First Amendment) Regulations, 2009 that includes among others detailed procedure(s) for Long-Term Open Access and Short-Term Open Access for use of distribution system, with or without transmission system;
 - b. Model Bulk Power Wheeling Agreement (BPWA) for availing wheeling services of Distribution Licensee(s);
 - c. Procedures for Scheduling, Dispatch, Energy Accounting, UI Accounting and Settlement System of electricity transmitted through the State grid for the electricity drawn by Distribution Licensee(s) from outside and / or within the State.
- 7.1.3 Further, the Commission has also advised the SLDC to develop procedure for energy accounting of electricity drawn from the grid by an open access consumer who is connected with the distribution system or electricity injected into the grid by a generating station embedded in the distribution system.
- 7.1.4 In absence of procedures and guidelines from State Transmission Utility (in short 'STU') and State Load Dispatch Centre (in short 'SLDC'), the Commission, on its own motion, has made detailed procedures for long term and short term open access which covers all aspects, which the Regulations direct by way of an amendment. The "Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Open Access) (First Amendment) Regulations, 2009 dated 18.6.09", came into force from the date it is notified in the Gazette.
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- 7.1.5 The said amendment, which includes procedures for Long-Term Open Access and Short-Term Open Access mainly, focuses on:
- a. Operationalisation of long-term and short-term use of intra-State transmission and distribution system by generating companies including captive plants /renewable energy plants, distribution / trading Licensees and open access customers with sustained development of transmission and distribution systems in 'proper and coordinated' manner for conveyance of electricity.
 - b. Operationalisation of time-block wise accounting of the quantity of electricity transmitted through State grid and stating the responsibilities of STU for weekly metering and of SLDC for scheduling, dispatch and energy accounting including UI accounting.
 - c. Requirement of Bulk Power Transmission Agreement for use of transmission network and Bulk Power Wheeling Agreement for use of distribution network for long-term open access transactions.
- 7.1.6 The Electricity Act, 2003 has defined the Open Access as non-discriminatory provisions for use of transmission lines or distribution system or associated facilities. Having regards to operation constraints and other relevant factors, the Commission directs that the Open Access shall be allowed by the Distribution Licensees as per the provisions outlined by the Commission in its Regulations and amendments from time to time.
- 7.1.7 The Commission has finalized the model Bulk Power Transmission Agreement (BPTA) and Supplementary BPTA for availing transmission services of UPPTCL.
- 7.1.8 The Commission has also finalized model Bulk Power Wheeling Agreement (BPWA) which is to be signed between a Distribution Licensees and long-term customer to agree therein, inter alia, to make payment of wheeling charge, surcharge and additional surcharge, if any, for use of the distribution system.

7.2 OPEN ACCESS CHARGES

- 7.2.1 The Commission in the Tariff Order for UPPTCL for the MYT Control period has determined the Transmission Charges payable by Open Access users for use of UPPTCL transmission network for transmission of electricity. Similarly, the Commission in this Order has also determined the wheeling charges payable by



the Open Access users for utilising the distribution network of the Distribution Licensees for wheeling of electricity.

7.3 WHEELING CHARGES

7.3.1 The Distribution MYT Regulations, 2014, embarks upon maintaining separate books of accounts for Wheeling and Retail Supply Business. Also, for such period until the accounts are segregated and separate books are maintained, the Distribution MYT Regulations mandates the Commission to stipulate the ratio of allocation of all expenses and return component based on the data obtained from the licensees. The extract of the relevant portion of the Regulations is as follows:

“36. Segregation of Wheeling Business and Retail Supply Business

The Distribution Licensee shall maintain separate books of accounts for Wheeling Business and Retail Supply Business. For such period until accounts are segregated and separate books of accounts are maintained, the Commission shall stipulate the ratio of allocation of all expenses and return component, based on data obtained from the Distribution Licensees. The following broad principles shall be followed for allocation of costs towards wheeling business and supply business, out of the total Aggregate Revenue Requirements determined:

(a) Power purchase cost shall be allocated to the Supply business.

(b) Operation and Maintenance expenses shall be segregated between wheeling and supply businesses in such manner as may be determined by the Commission.

(c) Majority of the capital expenditure related expenses, viz., depreciation, interest and return on equity, shall be included under the wheeling business.

Note - The Supply Business would require only a small component of the capital expenditure towards billing and collection activity.”

7.3.2 The Licensees, in their Petitions have followed the allocation in accordance with the approach followed by the Commission in the previous Order. As there is no basis submitted by the Licensees in their filing, the Commission finds merit in considering the allocation into Retail Supply and Wheeling Function as per the



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methodology adopted in the previous Tariff Order. The allocation of ARR for DVVNL, MVVNL, PVVNL and PuVVNL into wheeling function and retail function as approved by the Commission for FY 2017-18 to FY 2019-20 is as shown in the Table below:

Table 7-1: WHEELING & RETAIL SUPPLY ARR FOR FY 2017-18 (Rs. Crore)

Particulars	Allocation %		Allocation FY 2017-18		
	Wheeling	Supply	Wheeling	Supply	Total
Power Purchase Expenses (incl PGCIL charges)	0%	100%	0.00	48376.89	48376.89
Apportionment of O&M Expenses & Interest & Finance Charges of UPPCL	0%	100%	0.00	0.00	0.00
Transmission Charges - Intra state (incl SLDC Charges)	0%	100%	0.00	2650.81	2650.81
Gross O&M Expenses			3888.00	2937.36	6825.36
Gross Employee cost	60%	40%	2575.72	1717.15	4292.87
Gross A&G expenses	40%	60%	773.57	1160.36	1933.93
Gross R&M expenses	90%	10%	538.70	59.86	598.56
Gross Interest & Finance charges	90%	10%	2489.71	276.63	2766.34
Depreciation	90%	10%	1024.78	113.86	1138.64
Total Expenditure			7402.48	54355.57	61758.05
Expense capitalization			599.94	476.83	1076.77
Employee cost capitalized	60%	40%	373.02	248.68	621.69
Interest capitalized	90%	10%	80.81	8.98	89.79
A&G expenses capitalized	40%	60%	146.12	219.17	365.29
Net Expenditure			6802.54	53878.74	60681.28
Provision for Bad & Doubtful debts	0%	100%	0.00	0.00	0.00
Provision for Contingency Reserve	0%	100%	0.00	0.00	0.00
Total net expenditure with provisions			6802.54	53878.74	60681.28
Add: Return on Equity	90%	10%	1374.36	152.71	1527.07
Less: Non Tariff Income	0%	100%	0.00	113.39	113.39
Aggregate Revenue Requirement (ARR)			8176.91	53918.06	62094.96

Table 7-2: WHEELING & RETAIL SUPPLY ARR FOR FY 2018-19 (Rs. Crore)

Particulars	Allocation %		Allocation FY 2018-19		
	Wheeling	Supply	Wheeling	Supply	Total
Power Purchase Expenses (incl PGCIL charges)	0%	100%	0.00	61833.40	61833.40
Apportionment of O&M Expenses & Interest & Finance Charges of UPPCL	0%	100%	0.00	0.00	0.00
Transmission Charges - Intra state (incl SLDC Charges)	0%	100%	0.00	3336.80	3336.80
Gross O&M Expenses					
Gross Employee cost	60%	40%	3465.54	2310.36	5775.90
Gross A&G expenses	40%	60%	994.57	1491.86	2486.43



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Particulars	Allocation %		Allocation FY 2018-19		
	Wheeling	Supply	Wheeling	Supply	Total
Gross R&M expenses	90%	10%	756.15	84.02	840.17
Gross Interest & Finance charges	90%	10%	3335.27	370.59	3705.85
Depreciation	90%	10%	1233.90	137.10	1370.99
Total Expenditure			9785.42	69564.13	79349.55
Expense capitalization			995.02	464.31	1459.33
Employee cost capitalized	60%	40%	510.73	340.48	851.21
Interest capitalized	90%	10%	433.89	48.21	482.10
A&G expenses capitalized	40%	60%	50.41	75.61	126.02
Net Expenditure			8790.40	69099.82	77890.22
Provision for Bad & Doubtful debts	0%	100%	0.00	0.00	0.00
Provision for Contingency Reserve	0%	100%	0.00	0.00	0.00
Total net expenditure with provisions			8790.40	69099.82	77890.22
Add: Return on Equity	90%	10%	1674.03	186.00	1860.04
Less: Non-Tariff Income	0%	100%	0.00	117.81	117.81
Aggregate Revenue Requirement (ARR)			10464.43	69168.02	79632.45

Table 7-3: WHEELING & RETAIL SUPPLY ARR FOR FY 2019-20 (Rs. Crore)

Particulars	Allocation %		Allocation FY 2019-20		
	Wheeling	Supply	Wheeling	Supply	Total
Power Purchase Expenses (incl PGCIL charges)	0%	100%	0.00	75314.11	75314.11
Apportionment of O&M Expenses & Interest & Finance Charges of UPPCL	0%	100%	0.00	0.00	0.00
Transmission Charges - Intra state (incl SLDC Charges)	0%	100%	0.00	4077.43	4077.43
Gross O&M Expenses					
Gross Employee cost	60%	40%	4221.23	2814.15	7035.38
Gross A&G expenses	40%	60%	1194.71	1792.07	2986.78
Gross R&M expenses	90%	10%	959.69	106.63	1066.32
Gross Interest & Finance charges	90%	10%	3919.30	435.48	4354.78
Depreciation	90%	10%	1430.59	158.95	1589.55
Total Expenditure			11725.52	84698.82	96424.33
Expense capitalization			998.85	770.69	1769.54
Employee cost capitalized	60%	40%	633.18	422.12	1055.30
Interest capitalized	90%	10%	143.95	15.99	159.95
A&G expenses capitalized	40%	60%	221.72	332.58	554.29
Net Expenditure			10726.67	83928.12	94654.79
Provision for Bad & Doubtful debts	0%	100%	0.00	0.00	0.00
Provision for Contingency Reserve	0%	100%	0.00	0.00	0.00
Total net expenditure with provisions			10726.67	83928.12	94654.79
Add: Return on Equity	90%	10%	1966.06	218.45	2184.51
Less: Non-Tariff Income	0%	100%	0.00	122.39	122.39
Aggregate Revenue Requirement (ARR)			12692.73	84024.18	96716.91



7.3.3 Based on the above, the wheeling charges for FY 2017-18 to FY 2019-20 are as shown in the Table below:

Table 7-4: WHEELING CHARGES FOR FY 2017-18

S. No	Particulars	Units	Approved FY 2017-18
1	Wheeling ARR	Rs. Crore	8176.91
2	Retail sales (PVVNL, DVVNL, MVVNL, PuVVNL & KESCo)	MU	92093.81
3	Average Wheeling charge	Rs./kWh	0.888

Table 7-5: WHEELING CHARGES FOR FY 2018-19

S. No	Particulars	Units	Approved FY 2018-19
1	Wheeling ARR	Rs. Crore	10464.43
2	Retail sales (PVVNL, DVVNL, MVVNL, PuVVNL & KESCo)	MU	118163.19
3	Average Wheeling charge	Rs./kWh	0.886

Table 7-6: WHEELING CHARGES FOR FY 2019-20

S. No	Particulars	Units	Approved FY 2019-20
1	Wheeling ARR	Rs. Crore	12692.73
2	Retail sales (PVVNL, DVVNL, MVVNL, PuVVNL & KESCo)	MU	144871.94
3	Average Wheeling charge	Rs. / kWh	0.876

7.3.4 The Commission, in order to encourage Open Access transactions in the State, has further tried to segregate the wheeling charges payable by consumers seeking Open Access based on the voltage levels at which they are connected to the distribution network. However, in absence of voltage level wise break-up of expenses and asset details, the Commission has considered an interim allocation of costs at various voltage levels and approved the following wheeling charges payable by Open Access customers based on the voltage level at which they are connected with the distribution network.

7.3.5 The charges have been worked out on the assumption that the wheeling expenses at 11 kV voltage level shall be 80% of the average wheeling charges determined for the Wheeling function of all Distribution Licensees and that for



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wheeling at voltages above 11 kV shall be 50% of the average wheeling charges. Further, as specified in the Tariff Order of UPPTCL for FY 2017-18 to FY 2019-20, the Commission has considered the transmission open access charges for short term open access at the same level as approved for Long term open access. In view of the same the Commission has approved the short-term distribution wheeling charges same as long term wheeling charges.

Table 7-7: APPROVED VOLTAGE-WISE WHEELING CHARGES FOR FY 2017-18

S. No.	Particulars	Units	Approved FY 2017-18
1	Connected at 11 kV		
I	Long Term (@ 80% of Average Wheeling Charge)	Rs. / kWh	0.710
II	Short Term (@ 80% of Average Wheeling Charge)	Rs. / kWh	0.710
2	Connected above 11 kV		
I	Long Term (@ 50% of Average Wheeling Charge)	Rs. / kWh	0.444
II	Short Term (@ 50% of Average Wheeling Charge)	Rs. / kWh	0.444

Table 7-8: APPROVED VOLTAGE-WISE WHEELING CHARGES FOR FY 2018-19

S. No.	Particulars	Units	Approved FY 2018-19
1	Connected at 11 kV		
I	Long Term (@ 80% of Average Wheeling Charge)	Rs. / kWh	0.708
II	Short Term (@ 80% of Average Wheeling Charge)	Rs. / kWh	0.708
2	Connected above 11 kV		
I	Long Term (@ 50% of Average Wheeling Charge)	Rs. / kWh	0.443
II	Short Term (@ 50% of Average Wheeling Charge)	Rs. / kWh	0.443

Table 7-9: APPROVED VOLTAGE-WISE WHEELING CHARGES FOR FY 2019-20

S. No.	Particulars	Units	Approved FY 2019-20
1	Connected at 11 kV		
I	Long Term (@ 80% of Average Wheeling Charge)	Rs. / kWh	0.701
II	Short Term (@ 80% of Average Wheeling Charge)	Rs. / kWh	0.701
2	Connected above 11 kV		
I	Long Term (@ 50% of Average Wheeling Charge)	Rs. / kWh	0.438
II	Short Term (@ 50% of Average Wheeling Charge)	Rs. / kWh	0.438

7.3.6 In addition to the payment of wheeling charges, the customers also have to bear the wheeling losses in kind. The Commission has been seeking voltage level



loss data from the utility but the same has not been forthcoming. Further, it is also logical that the open access customers have to bear only the technical losses in the system, and should not be asked to bear any part of the commercial losses.

7.3.7 The Commission has considered the wheeling loss applicable for Open Access transactions entailing drawl at 11 kV voltage level as 8%, and that for drawl at voltages above 11 kV voltage level as 4% which is in line with the approach adopted by the Commission in its Tariff Order for FY 2016-17 as well as submitted by Petitioners during the proceedings in the matter of ARR / Tariff determination of FY 2017-18 to FY 2019-20.

7.3.8 The open access charges and the losses to be borne by the Open Access customers may be reviewed by the Commission on submission of the relevant information by the Licensees.

7.3.9 The wheeling charges determined above shall not be payable if the Open Access customer is availing supply directly from the state transmission network.

7.4 CROSS SUBSIDY SURCHARGE

7.4.1 The Commission has computed the cross-subsidy surcharge for Open Access consumers in accordance with the methodology specified in Regulations 39 of the Distribution MYT Regulations, 2014.

7.4.2 As per Regulation 39 (f), the cross-subsidy surcharge is to be computed based on the difference between (i) the tariff applicable to the relevant category of consumers and (ii) the cost of the Distribution Licensees to supply electricity to the consumers of the applicable class. In case of a consumer opting for open access, the Distribution Licensees could be in a position to discontinue purchase of power at the margin in the merit order. Accordingly, the Commission has computed the cost of supply to the consumer for this purpose as the aggregate of (a) the weighted average of power purchase costs (inclusive of fixed and variable charges) of top 5% power at the margin, excluding liquid fuel based generation, in the merit order approved by the Commission adjusted for average loss compensation of the relevant voltage level and (b) the distribution wheeling charges as determined in the preceding section.

7.4.3 The Commission has computed the cross-subsidy surcharge for the relevant consumer categories using the following formula:



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$$S = T - [C / (1 - (L / 100)) + D]$$

Where

S is the surcharge

T is the Tariff payable by the relevant category of consumers;

C is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power. In case of UP, this works out to Rs. 5.99 / kWh for FY 2017-18, considering the cost of marginal power purchase sources of Harduaganj, Bajaj Hindustan, IGSTPP, Jhahjhar, Auriya, Anta, Srinagar.

D is the wheeling charges.

L is the system losses for the applicable voltage level, expressed as a percentage, which is considered as 4% for HT Categories (above 11 KV) and 8% for HT Categories (at 11 KV) as submitted by the Licensees in its reply to deficiency.

7.4.4 As per the above formula, the cost of the Distribution Licensees to supply electricity to the consumers of the HV-2 category (above 11 KV) and HV-2 category (at 11 KV) is working out as shown in the Table below:

Table 7-10: COST OF SUPPLY APPROVED BY THE COMMISSION FOR FY 2017-18

S No.	Categories	Wheeling Charge (D)	Wt. Avg. Power Purchase Cost (C)	System Loss (L)	Total Cost
1	HV Categories above 11 KV	0.444	5.99	4.00%	6.67
2	HV Categories at 11 KV	0.710	5.99	8.00%	7.18

Table 7-11: COST OF SUPPLY APPROVED BY THE COMMISSION FOR FY 2018-19

S No.	Categories	Wheeling Charge (D)	Wt. Avg. Power Purchase Cost (C)	System Loss (L)	Total Cost
1	HV Categories above 11 KV	0.443	5.96	4.00%	6.65
2	HV Categories at 11 KV	0.708	5.96	8.00%	7.15

Table 7-12: COST OF SUPPLY APPROVED BY THE COMMISSION FOR FY 2019-20

S No.	Categories	Wheeling Charge (D)	Wt. Avg. Power Purchase Cost (C)	System Loss (L)	Total Cost
1	HV Categories above 11 KV	0.438	6.73	4.00%	7.43
2	HV Categories at 11 KV	0.701	6.73	8.00%	7.96



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- 7.4.5 The impact of migration / shifting of consumers from the network of the incumbent Distribution Licensees on the consumer mix and revenues of a particular Distribution Licensees shall be reviewed by the Commission from time to time as may be considered appropriate.
- 7.4.6 The Commission has approved levy of Regulatory Surcharge for recovery of cumulative regulatory assets created for the Licensees, which is a part of the tariff charged to different consumer categories. Hence, the Cross-Subsidy Surcharge has been computed by subtracting the avoidable cost of supply for the Open Access consumers from the tariff applicable for the relevant consumer, which also includes the applicable Regulatory Surcharge.
- 7.4.7 The category-wise Cross Subsidy Surcharge approved by the Commission for FY 2017-18 to FY 2019-20 is as given in the Table below:

Table 7-13: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2017-18

Sl. No.	Categories	Average Billing Rate	Average Billing Rate (inclusive of Regulatory Surcharge) "T"	Cost of Supply for computing CSS	Cross Subsidy Surcharge "CSS"
1	HV-1 (Supply at 11 kV)	10.01	10.44	7.18	3.26
2	HV-1 (Supply above 11 kV)	10.73	11.19	6.67	4.52
3	HV-2 (Supply at 11 kV)	7.80	8.14	7.18	0.96
4	HV-2 (Supply above 11 kV)	6.98	7.27	6.67	0.60
5	HV-3 (Supply above 11 kV)	8.80	9.18	6.67	2.51
6	HV-4 (Supply at 11 kV)	8.11	8.46	7.18	1.28
7	HV-4 (Supply above 11 kV)	7.93	8.27	6.67	1.60

Table 7-14: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2018-19

Sl. No.	Categories	Average Billing Rate	Average Billing Rate (inclusive of Regulatory Surcharge) "T"	Cost of Supply for computing CSS	Cross Subsidy Surcharge "CSS"
1	HV-1 (Supply at 11 kV)	10.39	10.84	7.15	3.69
2	HV-1 (Supply above 11 kV)	11.27	11.75	6.65	5.10
3	HV-2 (Supply at 11 kV)	7.80	8.14	7.15	0.99
4	HV-2 (Supply above 11 kV)	6.98	7.28	6.65	0.63
5	HV-3 (Supply above 11 kV)	9.34	9.74	6.65	3.10
6	HV-4 (Supply at 11 kV)	8.35	8.71	7.15	1.56
7	HV-4 (Supply above 11 kV)	8.17	8.51	6.65	1.87



Table 7-15: CROSS SUBSIDY SURCHARGE APPROVED BY THE COMMISSION FOR FY 2019-20

Sl. No.	Categories	Average Billing Rate	Average Billing Rate (inclusive of Regulatory Surcharge) "T"	Cost of Supply for computing CSS	Cross Subsidy Surcharge "CSS"
1	HV-1 (Supply at 11 kV)	10.41	10.86	7.96	2.90
2	HV-1 (Supply above 11 kV)	11.37	11.86	7.43	4.43
3	HV-2 (Supply at 11 kV)	7.80	8.14	7.96	0.17
4	HV-2 (Supply above 11 kV)	6.98	7.28	7.43	0.00
5	HV-3 (Supply above 11 kV)	9.36	9.76	7.43	2.32
6	HV-4 (Supply at 11 kV)	8.35	8.71	7.96	0.74
7	HV-4 (Supply above 11 kV)	8.16	8.51	7.43	1.08

7.4.8 The Commission observes the State owned DISCOMs have filed a Review Petition on October 21, 2016 against the ARR & Tariff Order dated August 1, 2016 on the issue of consideration of New Tariff Policy dated January 28, 2016 for calculation of Cross Subsidy Surcharge. The Petitioners have submitted that the Commission in the Tariff Orders for FY 2016-17 dated August 1, 2016 has calculated CSS based on the formula provided in Tariff Policy 2006, whereas the revised Tariff Policy clearly states that State Regulatory Commission shall be guided by the provisions of amended Tariff Policy in discharge of their functions. The Petitioners have also submitted that at the time of filing of the ARR Petitions for FY 2016-17 the Tariff Policy 2006 was in force accordingly licensees were guided by the formula for CSS given in Tariff Regulation 2006 which was in consonance with the Tariff Policy-2006. But, during the Tariff determination process for FY 2016-17, before issuance of Tariff Order for FY 2016-17 dated August 1, 2016, the Central Government notified the revised Tariff Policy on January 28, 2016. Therefore, it would have been legally appropriate to adopt the new formula as described in the Revised Tariff Policy 2016. However, the Commission relied upon the formula prescribed in the Tariff Regulation 2006 which should have been replaced with new one in Tariff Order. The Petitioners have filed revised CSS in line with formula as prescribed in the Tariff Policy, 2016 for consideration of the Commission.

7.4.9 The Commission notes the apprehension of the petitioners. It is to be noted that for computation of the Cross-Subsidy Surcharge, Regulation 6.6 of the Distribution Tariff Regulations, 2006 specifies as under:

Quote



6.6 Surcharge

1. Till such time the cross subsidies are eliminated, the open access consumer shall pay to the distribution licensee a cross subsidy surcharge in addition to wheeling charges. Surcharge to be levied on the open access consumer shall be determined by the Commission keeping in view the loss of cross-subsidy from the consumers or category of consumers who have opted for open access to take supply from a person other than the incumbent distribution licensee.

2. When open access is allowed the surcharge for the purpose of sections 38, 39, 40 and sub-section 2 of section 42 would be computed as the difference between (i) the tariff applicable to the relevant category of consumers and (ii) the cost of the distribution licensee to supply electricity to the consumers of the applicable class. In case of a consumer opting for open access, the distribution licensee could be in a position to discontinue purchase of power at the margin in the merit order. Accordingly, the cost of supply to the consumer for this purpose may be computed as the aggregate of (a) the weighted average of power purchase costs (inclusive of fixed and variable charges) of top 5% power at the margin, excluding liquid fuel based generation, in the merit order approved by the UPERC adjusted for average loss compensation of the relevant voltage level and (b) the transmission and distribution wheeling charges as determined in accordance with the UPERC Terms and Conditions for Determination of Distribution and Transmission Tariff Regulations as amended from time to time.

Cross Subsidy Surcharge formula:

$$S = T - [C (1 + L / 100) + D]$$

Where

S is the cross subsidy surcharge

T is the Tariff payable by the relevant category of consumers;

C is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power



D is the Wheeling charges for transmission and distribution of power.

L is the system Losses for the applicable voltage level, expressed as a percentage

The cross-subsidy surcharge shall be brought down progressively and, as far as possible, at a linear rate to a maximum of 20% of its opening level by the year 2010-11.

...

5. However, in order to facilitate open access, the Commission may adopt a procedure different from the procedure stated above for the calculation of cross subsidy surcharge consistent with the provisions of the EA 2003 and the spirit of the tariff policy after considering the view points of licensee and the open access customer.

Unquote

- 7.4.10 The Commission had computed the cross-subsidy surcharge for Open Access consumers in accordance with the methodology specified in Clause 6.6 of Distribution Tariff Regulations, 2006. As per Clause 6.6, the Cross-Subsidy Surcharge is to be computed based on the difference between (i) the tariff applicable to the relevant category of consumers and (ii) the cost of the Distribution Licensees to supply electricity to the consumers of the applicable class. Further, the Commission has computed the cost of supply to the consumer for this purpose as the aggregate of (a) the weighted average of power purchase costs (inclusive of fixed and variable charges) of top 5% power at the margin, excluding renewable and liquid fuel based generation, adjusted for average loss compensation of the relevant voltage level, and (b) the distribution wheeling charges as determined. Further, The Commission has computed the Cross-Subsidy Surcharge for the relevant consumer categories using the following formula:

$$S = T - [C (1 + L / 100) + D]$$

Where

S is the cross subsidy surcharge

T is the Tariff payable by the relevant category of consumers;



C is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power.

D is the wheeling charges.

L is the system losses for the applicable voltage level, expressed as a percentage, which is considered as 4% for HT Categories (above 11 KV) and 8% for HT Categories (at 11 KV) as submitted by the Licensees in their reply to deficiency.

- 7.4.11 The provision of Cross Subsidy Surcharge as provided in the Tariff Policy, 2016 is as follows:

Quote

SERCs may calculate the cost of supply of electricity by the distribution licensee to consumers of the applicable class as aggregate of (a) per unit weighted average cost of power purchase including meeting the Renewable Purchase Obligation; (b) transmission and distribution losses applicable to the relevant voltage level and commercial losses allowed by the SERC; (c) transmission, distribution and wheeling charges up to the relevant voltage level; and (d) per unit cost of carrying regulatory assets, if applicable.

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.

Unquote

7.4.12 As it can be seen from the above the revised Tariff Policy 2016 in its modified formula for calculating the CSS takes into account the Regulatory Surcharge “R” which was not a part of the formula earlier in the Tariff Policy 2006. Further, the Tariff Policy 2016 also states that proposed formula may not work for all distribution licensees, particularly for those having power deficit and has left it to the State Regulatory Commissions to review and vary the same taking into consideration the different circumstances prevailing in the area of distribution licensees. Accordingly, the Commission considered it appropriate to rely on the said formula for determination of CSS for relevant categories.

7.4.13 Further, the Tariff Policy 2016 states that:

Quote

“2.2 Central Electricity Regulatory Commission (CERC) and State Electricity Regulatory Commissions (SERCs) shall be guided by the tariff policy in discharging their functions including framing the regulations.”

Unquote

7.4.14 Thus, it is not binding on the part of the Commission to follow the Tariff Policy and rather Tariff Policy is a guiding principle. It is the discretion of the Commission to decide in this matter of CSS. Hence, the revised proposal of the Petitioners depicting calculation of CSS for various categories is not currently considered. Further, the Licensees must also be very much aware of the fact that any amendment / addition / deletion in any regulation have to be done in a prescribed manner following the principle of prior publication. Hence, once their proposal with details of the reasons for adopting the formula provided in the new Tariff Policy, 2016 will be considered by the Commission and in case it accepts it, then suggestion / comments from all stakeholders will be invited and if required a public hearing will also be held, and will be put up before the



Commission, it would finally decide upon the said amendment / addition / deletion.

7.4.15 Also, it should be very clear that at the time of passing of the said Tariff Order, the formula used was the one in the UPERC Distribution Tariff Regulations, 2006 which have been notified and hence the submission of the petitioners have no merit and stand disposed of.

7.4.16 Further, the Commission is in receipt of a Petition No. 1264 of 2017 filed by the petitioners regarding various issues. The issues concerned with respect to this order are (i) issue linked with cross-subsidy surcharge & (ii) additional surcharge and have been dealt in this order, while the other issues / prayers related to other issues will be addressed appropriately, separately.

7.4.17 As regards the issue of cross-subsidy surcharge, the Commission has already dealt with the matter in the preceding paragraphs in the matter of the Review Petition dated October 21, 2016 with respect to usage of the formula given in the Tariff Policy, 2016 instead of the Notified Regulations. Accordingly, this issue stands disposed of. The issue of additional surcharge has been discussed in the subsequent paragraphs.

7.5 ADDITIONAL SURCHARGE

7.5.1 The petitioners have filed a Petition no. 1264 of 2017 regarding issue of additional surcharge stating the Commission in its Tariff Order FY 2016-17 dated 01-08-2016 at clause No. 6.5 approved additional surcharge as nil, stating that there is considerable amount of load shedding which implied that there is power deficit scenario. However, under "Power For All" scheme, the petitioners are committed to provide 24X7 power round the year to all consumer. Under this changed scenario, if any consumer opts for open access, the petitioner's commitment to procure the power under long term PPA will have financial impact in terms of payments of fixed cost obligations and this cost will remain stranded. The petitioners accordingly request the Commission to formulate a mechanism for recovery of this stranded cost as is also allowed under clause 42(4) of the Electricity Act as additional surcharge.

7.5.2 Regulation 39 (f) of Distribution MYT Regulations, 2014 provides as under:

".....



ii. Additional Surcharge shall be determined on 'case to case' basis and shall be payable only if the Licensee is able to conclusively demonstrate the incidence of any stranded costs.

iii. Cross-subsidy surcharge and additional surcharge shall be shown as revenue from tariff from the consumer categories which are permitted open access and such amount shall be utilized to meet the cross-subsidy requirements of subsidized categories and fixed costs of the Licensee arising out of his obligation to supply. The Licensee shall provide the details in its annual filings during the transition period and MYT filings during the control period.

...”

- 7.5.3 In view of the Regulations above, and on referring to the Merit Order Dispatch of Power Purchase approved for the MYT Control Period, the Commission observes that a lot of power has been proposed by the petitioners to be bought through power exchanges i.e 862.48 MU in FY 2017-18, 5710.53 MUs in FY 2018-19 and 17180.95 MUs in FY 2019-20. Under this changed scenario, if any / some consumers opt for open access, the petitioner's commitment to procure the power under long term PPA will not have any major financial impact in terms of payments of fixed cost obligations as a lot of power has been bought / procured from the power exchanges and the Licensees do not really have to reduce the power procurement from the tied-up sources, hence no cost will remain stranded. Considering the above, the submission of the petitioners has no merit and stand disposed of.
- 7.5.4 Further, the Commission has approved additional surcharge for the control period i.e. FY 2017-18 to FY 2019-20 as Nil (zero).
- 7.5.5 Further, Other Charges, apart from the charges approved in this order, will also be required to be paid by the Open Access consumers, as specified in other UPERC Regulations and Orders.



8. TARIFF PHILOSOPHY

8.1 CONSIDERATIONS IN TARIFF DESIGN

- 8.1.1 Section 62 of the Electricity Act 2003, read with Section 24 of the Uttar Pradesh Electricity Reforms Act, 1999 sets out the overall principles for the Commission to determine the final tariffs for all categories of consumers defined and differentiated according to consumer's load factor, power factor, voltage, total consumption of energy during any specified period or the time at which supply is required or the geographical position of any area, nature of supply and the purpose for which the supply is required. The overall mandate of the statutory legislations to the Commission is to adopt factors that will encourage efficiency, economical use of the resources, good performance, optimum investments and observance of the conditions of the License.
- 8.1.2 The linkage of tariffs to cost of service and elimination of cross-subsidies is an important feature of the Electricity Act, 2003. Section 61 (g) of the Electricity Act, 2003 states that the tariffs should progressively reflect the cost of supply and it also requires the Commission to reduce cross subsidies within a timeframe specified by it. The need for progressive reduction of cross subsidies has also been underlined in Sections 39, 40 and 42 of the Electricity Act, 2003. The Tariff Policy, 2016 also advocates that the tariff should progressively reflect the efficient and prudent cost of supply.
- 8.1.3 The Commission has approved the retail tariff for FY 2017-18 in view of the guiding principles as stated in the Electricity Act, 2003, Tariff Policy and UPERC Distribution MYT Tariff Regulations 2014. The Commission has also considered the comments / suggestions / objections of the stakeholders and public at large while determining the tariffs. The Commission in its past Orders has laid emphasis on adoption of factors that encourages economy, efficiency, effective performance, autonomy, regulatory discipline and improved conditions of supply. On these lines, the Commission, in this Order too, has applied similar principles keeping in view the ground realities.
- 8.1.4 As regards to the linkage of Tariff with the Cost of Service, the Distribution MYT Tariff Regulations, 2014 states as follows:

c) Allocation of Cost: The Cost to serve shall be allocated to the consumer categories in the following manner:



Step 1: Functionalization of Cost - Total cost shall be divided on the basis of functions performed such as power purchase, distribution etc.

Step 2: Classification of Cost –Each of the functionalized costs shall be further classified, based on its intrinsic nature into Demand related cost, Energy related cost and Customer related cost. Demand related costs shall generally be of fixed nature, related to capacity creation and shall include interest on capital borrowing, depreciation etc. Energy cost shall be related to quantum of electricity consumption of consumer, such as fuel cost, interest on working capital, etc. Consumer related cost shall include operating expenses associated with meter reading, billing and accounting.

Step 3: Allocation of Cost

i. Allocation of Demand Costs: Demand costs of all the functions shall be allocated among consumer categories on the basis of average coincident peak demand of the tariff categories (average of past 12 months). To facilitate determination of average coincident peak demand for the various tariff categories, load research shall be made an integral part of the operations of the Distribution Licensees and systematic load research exercises shall be initiated by the Distribution Licensee.

ii. Allocation of Energy Costs: Energy related costs of Distribution functions shall be allocated to consumer categories on the basis of ratio of electricity consumption of each consumer category to the total electricity consumption under the purview of the Distribution Licensee. Energy related costs of Power purchase shall be allocated to various tariff categories on the basis of block approach on merit order dispatch and incremental principle, where each tariff category shall be allocated the incremental (energy related) power purchase cost on the basis of their respective share in the incremental power purchase. For the purpose of operationalizing the block approach and incremental principle, the Commission shall identify and notify a suitable year as the "base year".

iii. Allocation of Customer Costs: Customer related costs shall be allocated to consumer categories on the basis of the ratio of number of consumers in each category to total number of consumers under the purview of the Distribution Licensee.

d) Summation of allocated Demand cost, Energy cost and Customer cost across functions shall be total Cost to serve for respective consumer



categories. Cost to serve reduced by revenue from a consumer category shall give total subsidy for that category. Total subsidy for a consumer category reduced by Government subsidy, if any, shall be cross-subsidy for that consumer category.

e) The consumers below poverty line who consume power below a specified level, say 30 units per month, shall receive a special support through cross subsidy.

.....

g) Tariff Design

(1) The Commission shall be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity.

(2) After the costs have been allocated based on the method specified in clauses(c) and (d) above, tariffs for different consumer categories shall be designed with due regard to factors provided under section 62(3) of the Act.

8.1.5 In terms of the Distribution MYT Tariff Regulations, 2014, Tariff Policy and the Electricity Act, 2003, the Commission opines that in the ideal scenario, the tariff of any category should be linked to the cost imposed on the system by the said category. However, as the same is not available, the Commission, while determining the tariff for each category, the Commission has looked into the relationship between the tariff and the overall average cost of supply for FY 2017-18. Efforts are made to move the tariff of appropriate consumer categories, towards the band of +/- 20% to meet the declared objectives of the Multi Year Distribution Tariff Regulations, 2014, Tariff Policy, 2016 and the Electricity Act, 2003.

8.1.6 In view of the above, the Commission has determined the retail tariff keeping in the mind the guiding principles as stated in Section 61 of the Electricity Act, 2003. There was unabridged revenue gap considering the existing tariff for FY 2017-18 (including the gap for previous years). Considering the huge amount of revenue gap for the current year and high cost of supply and resultant poor cost coverage in the absence of cost reflective tariff, the Commission has decided to rationalize the tariff for FY 2017-18 by approving revised rates for various categories of consumers to ensure some recovery of the revenue gap. However,



the Commission observes that with the changing scenario of supply hours and expected consumer addition in line with '24x7 Power for All' signed between the Licensees and the Govt. of India, there is still a lot of volatility and uncertainty in the sector and the Commission feels that it would be appropriate to approve the tariff for FY 2017-18 only in this order and the tariff for FY 2018-19 and 2019-20 shall be reviewed at the time of filing of Annual Performance Review, if required.

- 8.1.7 The Tariff has been designed so as to compensate the rising costs of the Licensees without putting excessive load on the consumers. Effort has been made to ensure that the effective Tariff for the consumers having lower consumption will be lesser as compared to the consumers having higher consumption. This would discourage the consumers to use more electricity and will contribute in electricity savings. Accordingly, the Tariffs for LMV-1, LMV-2, LMV-3, LMV-4, LMV-5, LMV-7, LMV-8, LMV-9, LMV-10, HV-1, HV-3 and HV-4 have been revised and increased. There has been no change in the Tariffs for LMV-6 (Small & Medium Power) & HV-2 (Large and Heavy Power) however, the ToD structure for LMV-6 and HV-2 categories have been changed based on the load curves of the categories as submitted by the petitioners and ToD structure has been divided in summer and winter seasons. Further, certain categories of consumers such as Shelter Homes, orphanages, old age homes, Institutions run for mentally retarded and forsaken children have been included under LMV -1 (Domestic Light, Fan & Power) category, previously they were under LMV- 4 (Public institutions). The same has been detailed in the subsequent sections

Metering

- 8.1.8 In its previous Tariff Orders, the Commission linked the tariff for unmetered consumer categories in (LMV-1 and LMV-2) with the contracted load which was earlier linked with number of consumers. The Commission in cognizance to the approach followed in the Tariff Order for FY 2015-16 and FY 2016-17, has decided to continue to levy of fixed charges of the unmetered consumers under LMV-1 and LMV-2 up to 2 kW as per their contracted load in Rs. / kW terms
- 8.1.9 It has been observed in the previous years, that in spite of various incentive / dis-incentives, there has not been any considerable improvement in the metering status in the State and the Distribution Licensees continue to supply electricity to the unmetered consumers which results in huge loss of unaccounted electricity. The Petitioners have not been making its full efforts to



convert the unmetered connections. It is further observed that the licensees have proposed to convert all the unmetered consumers to the metered category by FY 2018 - 19. **Therefore, the Commission in this Order is directing the Licensees to comply with the directions given by the Commission to put its sincere efforts for converting the unmetered consumers to metered consumers thereby ensuring that metering is achieved up to the satisfactory level, failing which the Commission may take a strict view for appropriate action.**

Time of Day Tariff

- 8.1.10 The Time of Day tariff (TOD) is a widely accepted Demand side Management (DSM) measure for energy conservation by price. The TOD structure prompts the consumer to change their consumption profile so as to shift their loads during off peak hours when the power is relatively cheaper. TOD tariff encourages the distribution licensees to move towards separation of peak and off-peak tariffs which would help in reducing consumption as well as costly power purchase at the peak time. The Tariff is set in such a way that it inherently provides incentives and disincentives for the use of electricity in different time periods. The basic objective of implementing time of day tariffs is to flatten the load curve over a period of a day resulting in a reduction in the peaking power requirement and also to enhance power requirement during off peak period. The Licensees have proposed TOD structure for LMV-6 and HV-2 category in the submission dated September 11, 2017 as depicted below:

Summer Months (April to September)		
Hours of the Day	Total No of Hours	Discount/ Penalty
05.00 -11.00 hours	6	(-)15%
11.00- 17.00 hours	6	-
17.00- 23.00 hours	6	(+)15%
23.00- 05.00 hours	6	-
Winter Months (October to March)		
05.00 -11.00 hours	6	-
11.00- 17.00 hours	6	-
17.00- 23.00 hours	6	(+)15%
23.00- 05.00 hours	6	(-)15%

- 8.1.11 Proposed TOD structure by the petitioners for street lights i.e LMV-3 category is kept as approved by the Commission in its Tariff order for FY 2016-17 as stated below:



Hours of the Day	Discount/ Penalty
18.00 -06.00 hours	-
06.00- 18.00 hours	(+) 20%

- 8.1.12 However, the petitioners have submitted that they do not want any separate TOD structure for arc furnace / induction furnace, Rolling / Re Rolling Mill industrial consumers. The petitioners further submitted that this change in TOD structure would require re-programming / installation of software in the TOD meters. Accordingly, if accepted a transition period of 3 months should be allowed.
- 8.1.13 It may be noted that by implementing the TOD Tariff, the peak load gets shifted and the Distribution Licensees gain in the form of reduction in power purchase expenses as the additional energy supplied to the consumers during peak hours are typically purchased from a costlier source. It is also noted that the consumers have raised their objections on the removal of special concession given to them in TOD in the previous Tariff Order for FY 2017-18. It is important to note that to promote industries in the state of Uttar Pradesh, the licensees have not proposed any hike in tariff of LMV-6 and HV-2 consumers despite a rise in ACOS and gap between the ARR and Revenue. Accordingly, the Commission, based on the load curves of the categories as submitted by the petitioners approves the ToD structure as proposed by the petitioners. The Commission also notes that the change in TOD structure may require reprogramming / installation of software in the TOD meters, hence the revised TOD structure and rates will be applicable as and when reprogramming / installation of software of the consumer TOD meters has been done. However, the Licensees shall complete this work within a period of 2 months.
- 8.1.14 The Commission in this Tariff Order has not continued with the optional TOD structure because the TOD structure in itself has been made sufficient with introduction of four different time slabs and different Structure in summer and winter months. The Commission in this Order has done away with the TOD structure for the Induction Furnaces / Arc Furnaces, Rolling / Re-Rolling Mill industrial consumers. This might have some tariff increase for such consumers, but still the tariff of HV-2 category consumers is such that it will be inside the range of +- 20% of ACOS. The TOD structure has been detailed in the Rate Schedule which is provided subsequently in this Order.



LMV-1

Unmetered (Rural)

8.1.15 The petitioners in their tariff proposal for FY 2017-18 submitted that the existing unmetered rate as provided in the tariff order FY 2016-17 is Rs. 180/kW/month up to 2 kW. At an average cost of supply of Rs. 7.22/kWh, the rate for unmetered category exhibits a consumption of 25 to 30 units per month, i.e. less than a unit per day. The petitioners further submitted that with present rural supply of 18 hours per day, it will be difficult to provide supply. Accordingly, the rate proposed was of Rs. 650/kW/month and proposed as Rs. 800/kW/month after March 2018.

8.1.16 The Commission has considered the same and has revised the tariff for the LMV-1 unmetered (rural) category accordingly. The rates and other terms and conditions as depicted in the Rate Schedule shall apply.

Life-line consumers

8.1.17 The petitioners in their Tariff proposal for FY 2017-18 submitted that in accordance to the Tariff Policy 2016 and National Electricity Policy 2006 the consumptions norms for lifeline consumers should be restricted to 30 units per month and since no subsidy is provided by the Govt. of UP for this particular category of consumers, the through rate for this category is around Rs. 3.47/kWh as against cost of supply of Rs. 7.22/kWh, which results in huge uncovered revenue gap. Accordingly, the petitioners have proposed that the lifeline consumption limit should be reduced to 100 units with 1 kW load to make it more aligned with other States and the prescription under the Tariff Policy. The state wise comparison for this category is provided below:

State	Gujarat	Maharashtra	Haryana	Madhya Pradesh	Uttar Pradesh (Existing)	Uttar Pradesh (Proposed)	Rajasthan
Max. Consumption allowed / month	30	30	100	30	150	100	50
EC (Rs./kWh)	1.5	1.05	0-50 kWh – 2.70 51-100 kWh – 4.50	3.1	0-50 kWh – 2.00 50-150 kWh – 3.90	0-50 kWh – 2.00 50-100 kWh – 3.90	3.5
FC (Rs./month)	Nil	12	Nil	Nil	50	50	100



- 8.1.18 Further, the petitioners have proposed that the maximum consumption limit for lifeline consumer should be reduced to 100 units with 1 kW load. In view of the same, the Commission accepts that for Lifeline consumers with low paying capabilities, minimum consumption will not be more than 100 units per month, hence the rate for load upto 1 kW and consumption upto 100 units per month for Lifeline consumers has been fixed by the Commission in the Rate Schedule.

Single point buyer

- 8.1.19 This category has been existing since long and there was no provision of additional charge in the previous years. However, for the 1st time, an additional charge of 10% was approved in FY 2015-16. Further, it came to the knowledge of the Commission that the same was quite high and there were large number of mal-practices being done by the builders / developers. Seeing all this, in public interest, the Commission reduced these additional charges from 10% to 5% in FY 2016-17 and introduced a more transparent and consumer friendly mechanism for supply of electricity through Single Point connection. Further, in the public hearings, the Commission was swamped with a large no. of grievances of Multi Storey occupants against the Builders and RWA`s wherein it was informed that they were charging high rate and there was no transparency in their operations. The Commission is concerned about the same and is working with the participation of the stakeholders and Licensees to find solution to the problem of the consumers. In this regard, first meeting, chaired by the Chairman of the Commission, was also held on 26.10.2017 which was attended by the officials of all the Licensees and the Commission. Further, more meetings will be held to find a solution to the problem of the consumers. However, in this order, the rates and other terms and conditions as depicted in the Rate Schedule shall apply.

LMV-5: PTW Consumers

- 8.1.20 Uttar Pradesh is an agrarian economy. To cope up with the growing demand of various means of irrigation for agriculture in the State, electrification of private tube wells has always been of much importance. The GoUP provides support in form of subsidy for these consumers. Under this scheme GoUP allots area wise targets for Energisation of Private Tube Wells & accordingly allocates fund for this purpose.
- 8.1.21 Under System Improvement initiatives the Licensees have submitted to have undertaken Rural Feeder Segregation program to ensure supply as per



scheduled hours to the agriculture sector. The Distribution Licensees in tariff proposal for FY 2017-18 to the Commission have proposed tariff increase for LMV-5 (small power for private tube wells / pumping sets for irrigation purposes) category. Further the petitioners have added a new sub-category under LMV-5 i.e. “Energy efficient pumps” and has submitted that this category has been introduced to promote the increased usage of Energy efficient pumps in the rural areas in order to curb unnecessary electricity consumption.

- 8.1.22 During the public hearing process various farmer and farmer associations requested the Commission not to make any tariff hike in light of the draught and unseasonal rains that have destroyed the crops.
- 8.1.23 The Commission after considering all the submissions has decided to increase the tariff for the consumers getting supply under the LMV-5 category. The rates and other terms and conditions as depicted in the Rate Schedule shall apply.

Tariff for Industrial consumers (LMV-6 & HV-2)

- 8.1.24 In order to promote the industries in the state, No tariff increase has been done for LMV-6 & HV-2 category consumers. The rates and other terms and conditions has depicted in the Rate Schedule.
- 8.1.25 The petitioners vide letter dated 9 October 2017 proposed to add Kolhu consumers in Seasonal industries under LMV-6 category. The Commission has approved the same as it is a pro-consumer initiative.

Miscellaneous Charges

- 8.1.26 The petitioners vide letter dated 9 October 2017 proposed to change the Disconnection and Reconnection charges for the consumers. The Commission has not considered the same in this order and the petitioner must approach the Commission with proper justification and reasons for increasing the Disconnection and Reconnection charges.

Tariff for LMV-10 Departmental Employees

- 8.1.27 The tariff for LMV-10 (Departmental Employees and Pensioners) category was historically approved by the Commission who were a special subsidized category. The Licensees though various submissions have informed the Commission that, they had certain commitment towards their employees at the time of unbundling of U.P. State Electricity Board, regarding supply of electricity at concessional rate.



8.1.28 Section 23 (7) of Uttar Pradesh Electricity Reforms Act, 1999 provides that “terms and condition of service of the personnel shall not be less favourable to the terms and condition which were applicable to them before the transfer”. The benefits for employees / pensioners as provided in section 12 (b) (ii) of the Uttar Pradesh Reform Transfer Scheme, 2000 provides for “concessional rate of electricity”, which means concession in rate of electricity to the extent it is not inferior to what was existing before January 14, 2000.

8.1.29 The Commission in its Tariff Order dated June 18, 2015 had directed that from January 1, 2016 onwards, the tariff for LMV-10 (Departmental Employees and Pensioners) consumers shall be same as that of “other metered consumers” under LMV-1 (Domestic Light, Fan and Power). The relevant extract has been reproduced below:

“RATE (B): (January 1, 2016 Onwards)

Tariff for consumers under this category shall be same as that of “other metered consumers” under LMV-1 category.

The Licensees are permitted to provide the “rebate” as it deems fit to the consumers eligible to get supply under this category. However, the Licensees shall have to bear the burden from its own resources, if it wants to provide the “rebate” to such consumers. The amount of “rebate” given, energy billed and amount billed must be clearly accounted by the Licensees and shall ensure appropriate modification in its billing software in this regard. The actual amount billed plus the rebate so recognized shall be considered as total revenue from this category while undertaking the truing up of the relevant financial year.”

8.1.30 The Commission in its Tariff Order dated August 1st, 2016 has stated that:

Quote

7.1.34 *Also, the Commission after considering the representations from various stakeholders along with the submissions made in the matter of Petition Nos. 1042/2015 dated September 21, 2015 filed by Uttar Pradesh Rajya Vidyut Pensioners Parishad and 1061/2015 dated April 12, 2015 filed by Uttar Pradesh Rajya Vidyut Parishad Adhiyanta Sangh opined as follows regarding the LMV-10 consumers:*

- a) *The tariff prescribed by the Commission in its Tariff Order for FY 2015-16 does not provide any special dispensation for LMV-10 (departmental employees and pensioners) consumers of the licensee. As such, they are like any other domestic consumers and revenue recognition for them*



should be based on tariff prescribed for domestic consumers i.e. LMV-1 (Domestic Light, Fan and Power). The concessional supply of power to its employees will have to be borne by the licensee and cannot be allowed to devolve on other consumers.

- b) The Commission in its Tariff Order for FY 2015-16 has already directed the Licensees to make the tariff of the said category of consumers same as that of "other metered consumers" under LMV-1 category from January 1, 2016 onwards.*
- c) **The Commission hereby directs the Licensees to charge such consumers same as that under LMV-1 (Domestic Light, Fan and Power) category. However the Licensees are authorised to provide the "rebate" as it deems fit to the consumers eligible to get supply under this category.***
- d) The Commission would again like to caution the Petitioner that any further allowance or incentives or benefits granted to its departmental employees & pensioners will have to be borne by the licensee from its own resources or through increased efficiency.*
- e) The Licensee is hereby directed to make separate accounting field for the amount of "rebate" given, energy billed and amount billed to such category of consumers on a monthly basis and shall ensure appropriate modification in its billing software in this regard.*

Unquote

- 8.1.31 The Commission after considering all the submissions made in the matter of Petition Nos. 1042/2015 dated September 21, 2015 filed by Uttar Pradesh Rajya Vidyut Pensioners Parishad and 1061/2015 dated April 12, 2015 filed by Uttar Pradesh Rajya Vidyut Parishad Adhiyanta Sangh is of the view that the tariff approved by the Commission in its Tariff Order for FY 2015-16 does not provide any special dispensation for LMV-10 (departmental employees and pensioners) consumers of the licensees. As such, they are like any other domestic consumer and revenue recognition for them should be based on tariff prescribed for domestic consumers i.e. LMV-1 (Domestic Light, Fan and Power). The concessional supply of power to its employees will have to be borne by the licensees and cannot be allowed to devolve on other consumers. The Petition



Nos. 1042/2015 dated September 21, 2015 filed by Uttar Pradesh Rajya Vidyut Pensioners Parishad and 1061/2015 dated April 12, 2015 filed by Uttar Pradesh Rajya Vidyut Parishad Adhiyanta Sangh are disposed of hereby.

8.1.32 The Commission is also in receipt of a Petition (Petition No. 1042 / 2016) filed by Uttar Pradesh Rajya Vidyut Pensioner Parishad in the matter of “Review Petition under Regulation 150 of the UPERC (Conduct of Business) Regulations, 2004 against Rate Schedule LMV-10 applicable from 28.6.2015 and from 1.1.2016”. In the aforementioned Petition, sufficient fees have not been submitted by the Petitioners. Hence, the same was not taken up for processing till now. Further, the Commission is also in receipt of another Petition (Petition No. 1061 / 2015) filed by Uttar Pradesh Rajya Vidyut Parishad Abhiyanta Sangh Parishad in the matter of “Review Petition under Regulation 150 of the UPERC (Conduct of Business) Regulations, 2004 against the determination of Aggregate Revenue Requirement (ARR) and Tariff for the year 2015-16 vide Order dated 18.6.2015 (in regard to rate schedule LMV-10 applicable from 29.6.2015 and from 1.1.2016”. In the aforementioned Petition, sufficient fees have not been submitted by the Petitioners. Hence, the same was not taken up for processing till now. In both the Petitions, the Petitioners have prayed the following:

- 1) Review and recall its Order of revision of Rate Schedule LMV-10 applicable from 28.6.2015.
- 2) Review and recall Rate Schedule LMV-10 so far as it makes Rate Schedule LMV-1 applicable with effect from 1.1.2016 to inter alia retired pensioners / family pensioners of the erstwhile Electricity Board later transferred to transferees.
- 3) Till the pendency of the present review Petition not to give effect to order dated 18.6.2015 and also not to review or recall the Rate Schedule LMV-1 so far it makes applicable the Rate Schedule LMV-1 on the Serving and Pensioners / Family Pensioners.
- 4) Not to Order revision of Rate Schedule LMV-10 applicable to retired employees of erstwhile Electricity Board later transferred by operation of law hence onwards.

8.1.33 The Commission opines that it has clearly stated that the Tariff for LMV- 10 consumers will be same as of “other metered consumers” under LMV-1 (Domestic Light, Fan and Power). Further, as part of the Licensees own internal mechanism to give benefit to its employees, the Commission permitted the



Licensees to give a 'rebate' as they deem fit. The relevant Para in the Tariff Order for FY 2015-16 under LMV-10 Rate schedule has been reproduced below:

Quote

RATE (B): (January 1, 2016 Onwards)

Tariff for consumers under this category shall be same as that of "other metered consumers" under LMV-1 category.

The Licensees are permitted to provide the "rebate" as it deems fit to the consumers eligible to get supply under this category. However, the Licensees shall have to bear the burden from its own resources, if it wants to provide the "rebate" to such consumers. The amount of "rebate" given, energy billed and amount billed must be clearly accounted by the Licensees and shall ensure appropriate modification in its billing software in this regard. The actual amount billed plus the rebate so recognized shall be considered as total revenue from this category while undertaking the truing up of the relevant financial year.

Unquote

8.1.34 Further the Commission observes that the State owned Discoms have filed a Review Petition (Petition No. 1142 / 2016) on October 21, 2016 against the Commission Tariff Order dated August 1, 2016 for FY 2016-17 on the issue was determination of concessional Tariff for the departmental employees under the LMV-10 category. The Petitioners in the above matter have made their submissions based on the following three issues:

- a) Whether Tariff determination for any category of consumer of electricity is the sole jurisdiction of the Commission or not?
- b) Whether for any particular category of consumer, the Commission can delegate this power to any other body or not?
- c) The method in which concessional rate of electricity is to be provided as per statutory provision.

8.1.35 Regarding first issue, the Petitioners have submitted that the Commission alone has been bestowed with the responsibility of tariff determination for any category of consumer. Regarding second issue, the Petitioners have submitted that it is violative of cardinal principle of law - "Nemo judex in causa sua (or nemo judex in sua causa)" which is a Latin phrase and literally means that "no-one should be a judge in his own cause." It has been further submitted that it is



a principle of natural justice that no person can judge a case in which they have an interest. Therefore, Licensees determining rebate in tariff for its own employees and pensioners is violative of First Principle of Natural Justice. The Petitioners have further submitted that as per statutory principles also, the power of tariff determination cannot be further delegated. In view of the same, the Petitioners have submitted that the Commission cannot leave the tariff fixation power for LMV-10 category on the Licensees. Regarding second issue, the Petitioners have further submitted that since, the rights of the employees towards concessional rate of electricity are well recognized by the Commission in its previous Tariff Orders, any rebate on this account is to be treated as legitimate expense of the licensees and allowed under the applicable expense head of the ARR by the Commission. The Petitioners have further requested the Commission to allow ROE to the extent to cover the quantum of concession required for LMV-10 category in a legally cogent manner.

- 8.1.36 It is observed that the Petitioners have submitted that the return on equity may be allowed to cover subsidization of departmental employees under LMV-10 dispensation to the extent of required concession. Regulation 4.10 of the Distribution Tariff Regulations, 2006 provides for return on equity @16% as specified below:

Quote

4.10 Return on Equity:

- 1. Return on equity shall be allowed @16%, on the equity base determined in accordance with regulation 4.7. However, the Commission may reduce/raise the rate of return subject to performance of the distribution licensee vis-à-vis performance benchmarks set by the Commission.*
- 2. Equity invested in foreign currency shall be allowed a return up to the prescribed limit in the same currency and the payment on this account shall be made in Indian Rupees based on the prevailing exchange rate.*
- 3. The premium raised by the distribution licensee while issuing share capital and investment of internal resources created out of free reserves, if any, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing return on equity, provided such share capital, premium amount and internal resources are actually utilized for meeting the capital expenditure of*



the distribution system and forms part of the approved financial package.

Return on equity shall be chargeable from the first year of operation. In case of infusion of equity during the year, return on equity shall be charged on pro-rata basis.

Unquote

- 8.1.37 Under the provisions of the Distribution Tariff Regulations, 2006 Licensees are permitted return on equity @ 16% on the equity base determined in accordance with Regulation 4.7 of the Distribution Tariff Regulations, 2006. However, the Commission may reduce/raise the rate of return subject to performance of the distribution licensees vis-à-vis performance benchmarks set by the Commission. As discussed in the Tariff Orders for FY 2016-17 the Commission was of the view that there is huge under recovery under the distribution segment and the Commission don't want to burden the consumers by allowing return on equity as it will further increase the gap. Also, it is wrong on the part of the Petitioners to say that the Commission did not set the Tariffs of LMV-10 category; it did so by saying that it will be same as of "other metered consumers" under LMV-1 (Domestic Light, Fan and Power). However, as part of the Licensees own internal mechanism to give benefit to its employees, the Commission permitted the Licensees to give a discount as they deem fit. The relevant Para in the Tariff Order for FY 2016-17 has been reproduced below:

Quote

7.1.34

- c) **The Commission hereby directs the Licensees to charge such consumers same as that under LMV-1 (Domestic Light, Fan and Power) category. However, the Licensees are authorised to provide the "rebate" as it deems fit to the consumers eligible to get supply under this category.**

....."

Unquote

- 8.1.38 The Petitioners in their Petition have not clearly stated as to under which ground they have raised this issue for review. In view of the request of the



Petitioners to allow ROE to the extent to cover the quantum of concession required for LMV-10 consumers can't be considered which will be violation of Regulation 4.10 of the Distribution Tariff Regulations, 2006. As it is clear from the above, the Commission does not find any merit in the submission of the petitioners and hereby disposes them of.

- 8.1.39 It is further observed that despite the directions of the Commission the petitioners have re-submitted the tariff proposal of LMV-10 and further proposed the tariff hike on those rates. The Commission hereby directs the Licensees to charge such consumers same as that under LMV-1 (Domestic Light, Fan and Power) category. However, the Licensees are authorised to provide the "rebate" as it deems fit to the consumers eligible to get supply under this category. The Commission would again like to caution the Petitioners that any further allowance or incentives or benefits granted to its departmental employees & pensioners will have to be borne by the licensees from their own resources or through increased efficiency. The Licensees are hereby directed to make separate accounting field for the amount of "rebate" given, energy billed and amount billed to such category of consumers on a monthly basis and shall ensure appropriate modification in its billing software in this regard. Further, **the Commission in this Order is directing the Licensees to comply with the directions given by the Commission in its previous orders to put its sincere efforts and ensure that all departmental employees under LMV-10 category are metered and billed under LMV-1 (Domestic Light, Fan and Power) category, failing which the Commission may take a strict view for appropriate action.**

Applicability of tariff category

- 8.1.40 The applicability, character and point of supply and other terms & conditions of different consumer categories have been defined in the Rate Schedule annexed in this Tariff Order. In case of any inconformity, the Rate Schedule shall prevail over the details given in the various sections of this Order.



9. REVENUE AT REVISED TARIFF AND REVENUE GAP

9.1 REVENUE FROM SALE OF POWER AT APPROVED TARIFF

9.1.1 As detailed in the previous Chapter, the Commission has revised the Tariff for different categories. The Tariff so published shall become the notified Tariff applicable in the area of supply and shall come into force after seven days from the date of such publication of the Tariff, and unless amended or revoked, shall continue to be in force till issuance of the next Tariff Order. Considering the period of applicability, the revenue at revised Tariff (8 months for existing tariff and 4 months for revised tariff) for FY 2017-18 is worked out as under:

TABLE 9-1: REVENUE FROM SALE OF POWER AT APPROVED (REVISED) TARIFF FOR FY 2017-18 FOR DVVNL (Rs. Crore)

Consumer categories	Approved Revenue FY 2017-18
LMV-1: Domestic	3571.36
LMV-2: Non-Domestic	869.28
LMV-3: Public Lamps	145.31
LMV-4: Institutions	637.78
LMV-5: Private Tube Wells	1174.35
LMV 6: Small and Medium Power	699.99
LMV-7: Public Water Works	525.55
LMV-8: State Tube Wells	520.06
LMV-9: Temporary Supply	40.20
LMV-10: Departmental Employees	27.51
HV-1: Non-Industrial Bulk Loads	579.55
HV-2: Large and Heavy Power	1905.24
HV-3: Railway Traction	373.97
HV-4: Lift Irrigation	125.26
Sub-total	11195.42
Extra State & Bulk	0.00
Total	11195.42

TABLE 9-2: REVENUE FROM SALE OF POWER AT APPROVED (REVISED) TARIFF FOR FY 2017-18 FOR PVVNL (Rs. Crore)

Consumer categories	Approved Revenue FY 2017-18
LMV-1: Domestic	5468.71
LMV-2: Non-Domestic	1300.16



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Consumer categories	Approved Revenue FY 2017-18
LMV-3: Public Lamps	231.75
LMV-4: Institutions	323.45
LMV-5: Private Tube Wells	437.16
LMV 6: Small and Medium Power	1190.21
LMV-7: Public Water Works	388.12
LMV-8: State Tube Wells	383.00
LMV-9: Temporary Supply	126.90
LMV-10: Departmental Employees	36.47
HV-1: Non-Industrial Bulk Loads	1878.96
HV-2: Large and Heavy Power	3888.60
HV-3: Railway Traction	110.76
HV-4: Lift Irrigation	0.32
Sub-total	15764.57
Extra State & Bulk	0.00
Total	15764.57

**TABLE 9-3: REVENUE FROM SALE OF POWER AT APPROVED (REVISED) TARIFF FOR FY 2017-18
FOR MVVNL (Rs. Crore)**

Consumer categories	Approved Revenue FY 2017-18
LMV-1: Domestic	3793.14
LMV-2: Non-Domestic	1165.73
LMV-3: Public Lamps	404.50
LMV-4: Institutions	430.93
LMV-5: Private Tube Wells	200.77
LMV 6: Small and Medium Power	508.83
LMV-7: Public Water Works	537.47
LMV-8: State Tube Wells	923.61
LMV-9: Temporary Supply	32.29
LMV-10: Departmental Employees	40.12
HV-1: Non-Industrial Bulk Loads	672.99
HV-2: Large and Heavy Power	1298.99
HV-3: Railway Traction	325.82
HV-4: Lift Irrigation	145.70
Sub-total	10480.87
Extra State & Bulk	28.06
Total	10508.94



TABLE 9-4: REVENUE FROM SALE OF POWER AT APPROVED (REVISED) TARIFF FOR FY 2017-18 FOR PuVVNL (Rs. Crore)

Consumer categories	Approved Revenue FY 2017-18
LMV-1: Domestic	4013.55
LMV-2: Non-Domestic	1247.97
LMV-3: Public Lamps	175.57
LMV-4: Institutions	690.16
LMV-5: Private Tube Wells	488.01
LMV 6: Small and Medium Power	555.90
LMV-7: Public Water Works	508.18
LMV-8: State Tube Wells	1305.77
LMV-9: Temporary Supply	10.77
LMV-10: Departmental Employees	42.33
HV-1: Non-Industrial Bulk Loads	422.25
HV-2: Large and Heavy Power	1022.98
HV-3: Railway Traction	512.83
HV-4: Lift Irrigation	677.70
Sub-total	11673.95
Extra State & Bulk	0.00
Total	11673.95

TABLE 9-5: REVENUE FROM SALE OF POWER AT APPROVED (REVISED) TARIFF FOR FY 2017-18 FOR KESCO (Rs. Crore)

Consumer categories	Approved Revenue FY 2017-18
LMV-1: Domestic	1071.61
LMV-2: Non-Domestic	329.46
LMV-3: Public Lamps	63.77
LMV-4: Institutions	63.40
LMV-5: Private Tube Wells	0.00
LMV 6: Small and Medium Power	390.65
LMV-7: Public Water Works	90.48
LMV-8: State Tube Wells	0.00
LMV-9: Temporary Supply	0.00
LMV-10: Departmental Employees	5.79
HV-1: Non-Industrial Bulk Loads	170.85
HV-2: Large and Heavy Power	571.75
HV-3: Railway Traction	0.00



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Consumer categories	Approved Revenue FY 2017-18
HV-4: Lift Irrigation	0.00
Sub-total	2757.75
Extra State & Bulk	0.00
Total	2757.75

9.1.2 The increase in revenue due to revision of Tariff for DVVNL would be Rs. 440.49 Crore, for PVVNL would be Rs. 538.88 Crore, for MVVNL would be Rs. 442.45 Crore, for PuVVNL would be Rs. 639.06 Crore and for KESCo would be Rs. 51.43 Crore. The details of Revenue and ABR at revised tariff for FY 2017-18, FY 2018-19 and FY 2019-20 have been annexed in this Order.

9.1.3 The estimated gap / surplus after incorporating impact of revised Tariff for FY 2017-18 for the period of 4 months is given in the Table below:

TABLE 9-6: ESTIMATION OF ARR GAP/SURPLUS AT REVISED TARIFF FOR DVVNL FOR FY 2017-18 (Rs. Crore)

Particulars	Petitioner	Approved
Revenue Gap for FY 2014-15*	911.91	(1,157.10)
Revenue Gap / (Surplus) for FY 2017-18 (at existing Tariff)	1,773.81	1,234.69
Increase in Revenue due to revision in Tariff	1,877.72	440.49
Total Revenue for FY 2017-18 (Excluding Regulatory Surcharge)	12,620.08	11,195.42
Net Revenue Gap for MYT Period after tariff increase (Including gap for FY 2014-15)	808.00	(362.90)

* Revenue Gap after considering additional subsidy computed

TABLE 9-7: ESTIMATION OF ARR GAP/SURPLUS AT REVISED TARIFF FOR PVVNL FOR FY 2017-18 (Rs. Crore)

Particulars	Petitioner	Approved
Revenue Gap for FY 2014-15*	1,508.44	(543.19)
Revenue Gap / (Surplus) for FY 2017-18 (at existing Tariff)	1,932.57	818.31
Increase in Revenue due to revision in Tariff	2,801.39	538.88
Total Revenue for FY 2017-18 (Excluding Regulatory Surcharge)	18,100.41	15,764.57
Net Revenue Gap for MYT Period after tariff increase (Including gap for FY 2014-15)	639.62	(263.76)

* Revenue Gap after considering additional subsidy computed



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**TABLE 9-8: ESTIMATION OF ARR GAP/SURPLUS AT REVISED TARIFF FOR MVVNL FOR FY
2017-18 (Rs. Crore)**

Particulars	Petitioner	Approved
Revenue Gap for FY 2014-15*	863.86	48.73
Revenue Gap / (Surplus) for FY 2017-18 (at existing Tariff)	2,548.44	1,807.74
Increase in Revenue due to revision in Tariff	2,074.82	442.45
Total Revenue for FY 2017-18 (Excluding Regulatory Surcharge)	12,109.14	10,508.94
Net Revenue Gap for MYT Period after tariff increase (Including gap for FY 2014-15)	1,337.48	1,414.02

* Revenue Gap after considering additional subsidy computed

**TABLE 9-9: ESTIMATION OF ARR GAP/SURPLUS AT REVISED TARIFF FOR PuVVNL FOR FY
2017-18 (Rs. Crore)**

Particulars	Petitioner	Approved
Revenue Gap for FY 2014-15*	1,772.47	393.31
Revenue Gap / (Surplus) for FY 2017-18 (at existing Tariff)	4,705.97	3,315.32
Increase in Revenue due to revision in Tariff	3,286.74	639.06
Total Revenue for FY 2017-18 (Excluding Regulatory Surcharge)	14,325.31	11,673.95
Net Revenue Gap for MYT Period after tariff increase (Including gap for FY 2014-15)	3,191.70	3,069.57

* Revenue Gap after considering additional subsidy computed

**TABLE 9-10: ESTIMATION OF ARR GAP/SURPLUS AT REVISED TARIFF FOR KESCo FOR FY
2017-18 (Rs. Crore)**

Particulars	Petitioner	Approved
Revenue Gap for FY 2014-15	167.45	115.92
Revenue Gap / (Surplus) for FY 2017-18 (at existing Tariff)	(203.72)	(369.42)
Increase in Revenue due to revision in Tariff	164.17	51.43
Total Revenue for FY 2017-18 (Excluding Regulatory Surcharge)	2,870.79	2,757.75
Net Revenue Gap for MYT Period after tariff increase (Including gap for FY 2014-15)	(200.44)	(304.93)

* Revenue Gap after considering additional subsidy computed

**TABLE 9-11: ESTIMATION OF CONSOLIDATED ARR GAP/SURPLUS AT REVISED TARIFF FOR
ALL (5) DISOMS FOR FY 2017-18 (Rs. Crore)**

Particulars	Petitioner	Approved
Revenue Gap for FY 2014-15*	5,224.13	(1,142.33)
Revenue Gap / (Surplus) for FY 2017-18 (at existing Tariff)	10,757.06	6,806.65
Increase in Revenue due to revision in Tariff	10,204.84	2,112.31



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Particulars	Petitioner	Approved
Total Revenue for FY 2017-18 (Excluding Regulatory Surcharge)	60,025.73	51,900.63
Net Revenue Gap for FY 2017-18 after tariff increase (Including gap for FY 2014-15)#	5,776.35	3,552.01
Revenue Gap for FY 2018-19 (at revised tariff of FY 2017-18)		2486.04
Revenue Gap for FY 2019-20 (at revised tariff of FY 2017-18)		6947.33

* Revenue Gap after considering additional subsidy computed

Revenue Gap excluding Regulatory Asset value of previous years

9.1.4 The approved Revenue Gap of FY 2017-18, FY 2018-18 and FY 2019-20 shall be taken up at the time of APR of FY 2017-18, True Up of FY 2015-16, and tariff determination for FY 2018-19 and FY 2019-20 taking into consideration the Regulatory Assets also.

9.1.5 The Commission observes that the State owned DISCOMs have filed a Review Petition on October 21, 2016 against Commission's order dated August 1, 2016 for FY 2016-17 on the issue of treatment of Revenue Gap for FY 2016-17 of DVVNL, MVVNL and PuVVNL. The Petitioners have submitted that as per revenue gap / surplus figure approved by the Commission PVVNL & KESCo have surplus revenue while other Discoms i.e. DVVNL, MVVNL & PuVVNL have net revenue gaps of Rs 1601.90 Crore, Rs 513.26 Crore & Rs 1050.51 Crore respectively. They have submitted that UPERC (Terms and Conditions for Determination of Distribution Tariff) Regulation-2006, in case of under recoveries, recognises creation of regulatory assets and accordingly the Commission, consistent with past practice, should have recognised regulatory assets of Rs 1,601.90 Crore, Rs 513.26 Crore & Rs 1,050.51 Crore respectively for the DVVNL, MVVNL & PuVVNL and added it to the existing regulatory assets of previous years of DVVNL, MVVNL & PuVVNL to be recovered in future years along-with carrying cost. However, the Commission in the Tariff Orders for FY 2016-17, after determining revenue gap for DVVNL, MVVNL & PuVVNL reduced the same to zero with the remark that licensees should recover the revenue gap for FY 2016-17 through efficiency improvement measures without pointing out the specific areas of inefficiencies. The relevant paragraph from the Tariff Order for FY 2016-17 is as below:

Quote

8.4.11: Further, the Petitioner has submitted that given the significant amount of revenue gap, the whole impact may not be able to be passed through a revision in retail tariffs, as it may lead to massive tariff shock. In



view, of the same the Petitioner has requested the Commission to find out a suitable way in which the Petitioner can recover its revenue gap and also the least burden can be passed on to the retail consumers to protect them from tariff shock. The Commission directs that the Petitioner to optimally utilize its resources and undertake various efficiency improvement measures to recover its revenue gap for FY 2016-17, which is the best way possible to recover the balance gap thereby passing least burden to the consumers.

Unquote

- 9.1.6 The Petitioners have further submitted that the expenses in the books of accounts of licensees are generally more than what the Commission approves in the Tariff Orders. Whereas, the Commission approves various expenses on the normative basis escalating the base year values by inflationary indexes, as per the methodology prescribed in the Tariff Regulations, the actual expenses of the licensees are much more due to significant expansion of network and the consumer base during recent years, which are not considered by the Commission. For distribution companies to run on commercial conditions ideally Commission should recognise these ground facts and allow all the genuine expenses of the licensees in the ARR. The Petitioners have also submitted that Regulation 2.1.5 of the UPERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2006, expressly provides for passing of all uncontrollable expenses in the ARR and recovering them through retail tariff of consumers. It is provided under the regulations that:

Quote

uncontrollable costs shall include (but not limited to) fuel cost, increase in interest rates, increase in cost on account of inflation, taxes and cess, variation in power purchase unit costs including on account of Hydro- thermal Mix in case of adverse natural events.

Unquote

- 9.1.7 The Petitioners have submitted that by putting the phrase “but not limited to” in the body of the clause, the Commission has made it an inclusive clause and not an exhaustive clause and such a provision has been made to help the licensees to recover all their legitimate costs so that they could operate on commercial lines. The Petitioners have submitted that the operative norms set by the Commission itself are very stringent and the expenses are being allowed
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on the basis of these strict norms and there is hardly any scope left for performance improvement. Under the circumstances, if gap determined on such strict norms is further reduced to zero that too when licensees are not allowed any return on equity, then leave aside working on commercial consideration, the survival of licensees will be at stake. Presently, the licensees are not being allowed RoE, their legitimate claim, to avoid hardship on the general consumers in terms of tariff shock. They have also submitted that such indiscriminate disallowance will put a question mark on the sanctity and purpose of determination of the ARR, as it outside the scope of the provisions of tariff regulations and is far from fair towards the licensees. The Petitioners in the instant Petition has submitted that Electricity Act, 2003 mandates the Commission to remain impartial and balance the interest of both consumers as well as the licensees and use of such discretion in favour of consumer will defeat the very purpose of creation of legislation and subordinate legislation which are meant to curb the discretion only. The Petitioners have requested the Commission to consider the legitimate claims of DVVNL, MVVNL & PuVVNL and not reduce the revenue gap, determined based on stringent normative parameters, to zero on as simple a prescription as performance improvement without pointing out specific areas of inefficiency.

- 9.1.8 The Commission observes that National Tariff Policy, 2006 & 2016, and UPERC Distribution Tariff Regulations, 2006 emphasise that the revenue gap is a matter of great concern and its creation should always be avoided and if the revenue gap is created, then a proper mechanism to recover such gap in a time bound manner has to be in place. The mechanism so developed should be able to recover the revenue gap thereby passing no or least burden to the consumers. The relevant extract of the UPERC Distribution Tariff Regulations, 2006 is provided below:

Quote

6.12 Regulatory Asset:

1. Creation of Regulatory Asset only for the purposes of avoiding tariff increase shall not be allowed and it shall only be created to take care of natural causes or force majeure conditions or major tariff shocks. The Commission shall have the discretion of providing regulatory asset.

Unquote



- 9.1.9 The Commission opines that the revenue gap can be recovered mainly by following means:
1. Tariff Hike
 2. Creation of Regulatory Asset and imposition of Regulatory Surcharge
 3. Improving Operational Efficiency
- 9.1.10 The Commission in the Tariff Order for FY 2016-17 dated August 1 2016 has allowed an overall tariff hike of 3.18% over the previous year without imposing any hike for the domestic consumers (as proposed by the Discoms). The tariff of industrial consumers in the State of Uttar Pradesh is one of the highest in the Northern States of India. Further increase in the tariff will impose extra burden on the financially distressed industries. Thus, further tariff hike can't be a legitimate solution.
- 9.1.11 It can be observed from the Tariff Orders that the DISCOMs have already accumulated huge regulatory asset till FY 2016-17, which is yet to be recovered from the consumers and further creation of Regulatory Asset in FY 2016-17 will again increase the burden on the consumers. Regulatory Assets can't be allowed to be created every year as a regular practice or easy solution. The Commission could not have allowed further creation of regulatory asset despite the under performance of the Distribution Licensees on various fronts like achieving the target distribution loss level, adding new consumers, converting unmetered consumers into metered consumers, optimising power purchase cost, improving billing and collection efficiencies etc.
- 9.1.12 Thus, in absence of any proposal from the DISCOMs to recover the revenue gap for FY 2016-17 and executing rest available options, the Commission was left with the only option to direct the DISCOMs to optimally utilize its resources and undertake various efficiency improvement measures like reduction of AT&C loss, conversion of unmetered consumers to metered ones, optimising power purchase cost, improving billing and collection efficiencies etc. to recover its revenue gap for FY 2016-17, which is the best way possible to recover the balance gap thereby passing least burden to the consumers.
- 9.1.13 Further, the Petitioners have submitted that the Commission has not pointed out the specific areas of inefficiencies and has reduced the balance revenue gap to zero with a direction to recover such amount through efficiency improvement measures. It is pertinent to mention here that the UPERC Distribution Tariff Regulations, 2006 lists over achievement of loss reduction
-



target, better collection efficiency, saving in O & M Expenditure etc. under improvement in operational efficiency measures. The relevant extract of the UPERC Distribution Tariff Regulations, 2006 is provided below for reference:

Quote

Provided further that the profit arising out of improvement in operational efficiency such as over achievement of loss reduction target, better collection efficiency, saving in O & M Expenditure etc. shall be shared between the distribution licensee and the consumers as specified in Para 4.11 of these regulations.

Unquote

- 9.1.14 Further the Commission in the Tariff Orders for FY 2016-17 has pointed out the areas of inefficiencies and has also directed the Petitioners to improve upon the same. A list of directives has been provided in the Tariff Orders for FY 2016-17. Some of them are provided below for reference:

“5.2.12 Hence, the Commission reiterates that the Licensees should adhere to the time line outlined in Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 for conducting a detailed study to provide accurate and effective consumption norms as specified by the Commission in its earlier Orders.”

“5.2.38

.....In this regard, the Commission directs the Licensees to put all efforts to get all the rural consumers metered and submit monthly progress report to the Commission.....”

“5.2.41

.....Therefore, the Commission once again directs the Licensee to comply with the direction given by the Commission in this Order and accordingly put its sincere efforts for converting the unmetered consumers to metered consumers. The Licensee must ensure that metering is achieved up to the satisfactory level, failing which the Commission may take a strict view for appropriate action.”

“5.2.44

.....



In this regard, the Commission expressing its utmost concern directs the Distribution Licensees to ensure that all their unmetered consumers of LMV-1(a) i.e. Consumers getting supply as per “Rural Schedule” shall be converted into metered connection by December 31, 2015 beyond which the Tariff for unmetered category of LMV-1(a) shall be increased by 10%.”

- 9.1.15 In view of the above, the submission of the Petitioners that the Commission has not pointed out the areas of inefficiencies lacks merit and cannot be considered.
- 9.1.16 The Petitioners have also submitted that while determining tariff for the ensuing year the Commission has not considered the actual expenses incurred by the Licensees in terms of significant expansion of network and consumer base. The Commission has been determining the Tariff and Aggregate Revenue Requirement for the Distribution Licensees under the provisions of UPERC Distribution Tariff Regulations and Electricity Act, 2003. The Commission in its Tariff Orders for FY 2016-17 has also modified the rate of interest for working capital and carrying cost in view of the changing market conditions and other ground realities affecting the ARR of the Discoms. The Commission in the Tariff Order for FY 2016-17 has also relaxed the Distribution Loss targets for the Discoms by setting the Distribution Loss target above the projected Distribution Loss by the Discoms keeping it in line with the agreed loss level under UDAY scheme. Thus, it is wrong on the part of the Petitioners to say that the Commission has not considered the ground realities while determining / approving the tariff / ARR for FY 2016-17. The Petitioners have submitted that the operative norms set by the Commission itself are very stringent and the expenses are being allowed on the basis of these strict norms and there is hardly any scope left for performance improvement.
- 9.1.17 As discussed above, the Commission in its Tariff Orders for FY 2016-17 has already pointed out the areas of improvement. It is again very surprising that the State Discoms of Uttar Pradesh which are among the Discoms having highest Distribution Loss in Northern Region and having poor ranking in the Annual Integrated Rating released by Ministry of Power released on June, 2016 consider that the operative norms set by the Commission are very stringent and there is hardly any scope left for performance improvement. The ratings are as follows:

Sl. No.	Name of Distribution Licensee	Rating
1	Madhyanchal Vidyt Vitran Nigam Limited, Lucknow. (MVVNL)	C



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Sl. No.	Name of Distribution Licensee	Rating
2	Purvanchal Vidyut Vitran Nigam Limited, Varanasi. (PuVVNL)	C
3	Dakshinanchal Vidyut Vitran Nigam Limited, Agra. (DVVNL)	C+
4	Paschimanchal Vidyut Vitran Nigam Limited, Meerut. (PVVNL)	B
5	Kanpur Electricity Supply Company Limited (KESCO)	C+

Note:

B: Below Average Operational and Financial Performance Capability

C+: Low Operational and Financial Performance Capability

C: Very Low Operational and Financial Performance Capability

9.1.18 Taking into consideration, all the above, the Commission finds no merit in the submissions of the petitioners and the same are hereby disposed of.

9.2 AVERAGE COST OF SUPPLY

9.2.1 As discussed earlier, the Commission has taken into consideration the percentage increase in Tariff with respect to Average Cost of Supply while approving the tariff. For instance, during FY 2017-18, the average billing rate (ABR) at existing Tariff would have been Rs. 5.41 / kWh (Consolidated for Distribution Licensees' namely DVVNL, MVVNL, PVVNL, PuVVNL and KESCO), while the average cost of supply is Rs. 6.74 / kWh (Consolidated for Distribution Licensees' namely DVVNL, MVVNL, PVVNL, PuVVNL and KESCO) as against the ACOS of Rs. 6.97 / kWh projected by the Licensees. Thus, the Tariff would have been 80.18 % of ACOS approved by the Commission. After revision of the Tariff, as approved in this Order, the average billing rate (ABR) would be Rs. 5.64 / kWh, thus, the Tariff would be 83.58 % of ACOS, which is a step towards achieving / keeping the Tariff within +/- 20% of Average Cost of Supply in terms of Tariff Policy, 2016.

9.2.2 In the instant Tariff Order, the cross-subsidy structure has marginally changed as the ACOS has not undergone any significant change, however, for the recovery of accumulated revenue gap the tariff has been increased to some extent. The table below summarises the per unit revenue realisation (average billing rate) as a percentage of ACOS (Consolidated for Distribution Licensees' namely DVVNL, MVVNL, PVVNL and PuVVNL).



TABLE 9-12: REVENUE REALIZED AS % OF ACOS

Consumer Categories	Existing Tariff		Revised Tariff	
	Average Revenue	Average Revenue / unit % of ACOS	Average Revenue	Average Revenue / unit % of ACOS
	(Rs. / kWh)		(Rs. / kWh)	
LMV-1: Domestic	4.34	64.43%	4.63	68.60%
LMV-2: Non-Domestic	7.64	113.24%	8.01	118.78%
LMV-3: Public Lamps	7.07	104.91%	7.54	111.90%
LMV-4: Institutions	8.27	122.64%	8.63	128.00%
LMV-5: Private Tube Wells	1.52	22.53%	1.70	25.20%
LMV 6: Small and Medium Power	8.66	128.37%	8.66	128.37%
LMV-7: Public Water Works	8.66	128.42%	8.83	131.02%
LMV-8: State Tube Wells	6.28	93.18%	6.68	99.02%
LMV-9: Temporary Supply	8.39	124.46%	9.36	138.87%
LMV-10: Departmental Employees	1.86	27.51%	2.21	32.72%
HV-1: Non-Industrial Bulk Loads	9.88	146.52%	10.06	149.25%
HV-2: Large and Heavy Power	7.49	111.08%	7.49	111.08%
HV-3: Railway Traction	8.53	126.44%	8.80	130.54%
HV-4: Lift Irrigation	7.89	117.02%	8.01	118.81%
Total	5.41	80.18%	5.64	83.58%

9.2.3 **The Licensees should ensure that they must at least achieve & maintain the category wise ABRs approved, failing which the Commission may take an appropriate view and necessary action.**

9.3 REGULATORY SURCHARGE

9.3.1 The Commission through its various Orders / deficiencies had repeatedly asked the petitioners to submit the consumer category and sub - category wise details of Regulatory Surcharge (separately for Regulatory Surcharge – 1 (RS - 1) & Regulatory Surcharge – 1 (RS - 2)) collected for each year since inception. The Commission had directed the petitioners to submit the actual details of the Regulatory Surcharge in the Tariff Order for FY 2016-17 as under:

Quote

“The Licensees are directed to depict the Regulatory Surcharge separately and distinctly in the electricity bills of the consumers. The Commission directs the Licensee to maintain separate accounting fields for the regulatory surcharge and capture the amounts collected as Regulatory Surcharge in both of its



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financial and commercial statements. This would enable the Licensee to correctly report the amounts collected towards Regulatory Surcharge.

The Distribution Licensees are directed to submit the actual Regulatory Surcharge recovered in FY 2016-17 on account of the Revenue Gap / Regulatory Asset admitted by the Commission in this Order along with the actual Distribution Losses achieved in FY 2016-17.”

Unquote

- 9.3.2 In view of the above, the petitioners vide their Letter No. 3215 / RAU / MYT dated September 15, 2017 submitted the billed & collected amounts of RS – 1 & RS – 2, which are as follows:

Regulatory Surcharge Billed Amount (for RS -1 & RS-2):

Particulars	Rs. Crore									
	DVVNL		MVVNL		PVVNL		PuVVNL		KESCO	
	RS-1	RS-2	RS-1	RS-2	RS-1	RS-2	RS-1	RS-2	RS-1*	RS-2
FY 2013-14	110.11	0.00	137.05	0.00	261.70	0.00	133.15	0.00	0.00	0.00
FY 2014-15	132.35	47.97	40.49	12.32	126.23	61.53	54.28	28.91	0.00	17.54
FY 2015-16	129.60	239.14	41.13	53.68	184.78	278.47	70.62	120.46	0.00	69.17
Total	372.06	287.11	218.67	66.00	572.71	340.00	258.05	149.37	0.00	86.71

*For KESCO, RS-1 was not applicable.

Regulatory Surcharge Amount Realized (for RS -1 & RS-2):

Particulars	Rs. Crore									
	DVVNL		MVVNL		PVVNL		PuVVNL		KESCO	
	RS-1	RS-2	RS-1	RS-2	RS-1	RS-2	RS-1	RS-2	RS-1*	RS-2
FY 2013-14	94.13	0.00	119.05	0.00	228.26	0.00	98.91	0.00	0.00	0.00
FY 2014-15	95.15	33.59	28.59	9.57	113.09	57.26	46.49	22.21	0.00	12.68
FY 2015-16	87.38	155.46	32.06	43.69	156.37	235.65	53.74	70.98	0.00	52.41
Total	276.66	189.05	179.70	53.26	497.72	292.91	199.14	93.19	0.00	65.09

*For KESCO, RS-1 was not applicable.

- 9.3.3 Further, the petitioners again vide Letter No. 3622 / RAU / MYT dated October 17, 2017 again submitted the amount collected towards Regulatory Surcharge as per the audited accounts (for FY 2013-14 & FY 2014-15) and un-audited



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accounts (for FY 2015-16) which are as follows, wherein the data for KESCO was not submitted:

Particulars	DVVNL	MVVNL	PVVNL	PuVVNL	KESCO
FY 2013-14 (Audited)	56.78	0.00	251.95	81.95	No Submission
FY 2014-15 (Audited)	72.05	5.28	289.42	25.63	No Submission
FY 2015-16 (Un- Audited)	120.15	38.18	545.54	83.12	No Submission
Total	248.99	43.46	1086.91	190.70	0.00

- 9.3.4 The Commission observes that each submission made by the petitioners provides a different value of RS – 1 & RS – 2 and there is significant variance in comparison to the amount approved in the Tariff Orders of the Commission.
- 9.3.5 Further, the submission dated October 17, 2017 of the petitioners exhibits zero (0) crore for MVVNL for FY 2013-14. The Commission feels that the same is not correct and not admissible and even if it is true then this amount of zero crore tantamount to non-compliance of the Commission Order on applicability of Regulatory Surcharge.
- 9.3.6 Further, the petitioners did not submit the consumer category and sub-category wise details of Regulatory Surcharge separately for RS - 1 & RS – 2 collected for each year, even after clear directions from the Commissions. Also, the amounts towards deemed recovery of RS -1 & RS – 2 have not being submitted.
- 9.3.7 It is evident from the above that no clear conclusion can be drawn on the amount of Regulatory Surcharge recovered based on the submission of the petitioners and this lackluster approach of the petitioners is leading nowhere, despite of clear directions from the Commission for proper accounting of RS -1 & RS -2.
- 9.3.8 **The Commission is unable to take a view with regard to the collection and recovery of Regulatory Surcharge - 1 & Regulatory Surcharge - 2 in absence of correct data and directs the Licensees to submit the consumer category and sub-category wise Regulatory Surcharges (separately for Regulatory Surcharge-1 & Regulatory Surcharge-2) billed for each year since the inception at the earliest. Also, the amounts towards deemed recovery of RS -1 & RS – 2 have not being submitted. In absence of this information, the Commission would be forced to draw a presumption about liquidation of Regulatory Assets.**



9.3.9 The Licensees must compute RS - 1 & RS - 2 billed for each consumer category and sub-category based on the RS (RS-1 & RS-2 separately) applicable on the “Rate” to all categories of consumer’s and must be equal to the summation of RS Billed as per the audited accounts (if not available then provisional accounts) as illustrated in the below table:

Category & Sub-category wise consumer	‘Rate’ – Billed Revenue based on			Regulatory Surcharge Billed (RS -1 & RS-2 separately)
	Fixed Charge	Energy Charge	Minimum Charge	
A	B	C	D	E = RS*(B+C) or RS*D

9.3.10 Further, for prudence check of the Regulatory Surcharge amounts (RS -1 & RS - 2) by the Commission, the Licensees must submit the bifurcation of various components of revenue i.e. Fixed Charge, Energy Charge, Minimum Charge, etc., the summation of various components of revenue must result into the total billed revenue.

9.3.11 Accordingly, in the absence of unavailability of actual figures of collection and recovery of Regulatory Surcharge - 1 & Regulatory Surcharge - 2, the Commission did an in-house analysis taking into consideration the amount of Regulatory Assets created till the previous Tariff Order for FY 2016-17 dated August 1, 2016, the true - up exercise for FY 2014-15 and the data submitted by the Licensees for FY 2017-18. The Commission observes that approximately Regulatory Assets of Rs. 33000 Crore (PuVVNL- Rs. 14500 Crore, DVVNL - Rs. 8600 Crore, MVVNL – 9500 Crore, KESCO – Rs. 400 Crore approximately) till FY 2017-18 is required to be amortized, which in itself is a huge amount.

9.3.12 In view of the above, the Commission opines that the recovery of Regulatory Surcharge needs to continue and directs the Licensees to continue levying the



rates for Regulatory Surcharge -2 (RS-2) as per the table below, till issuance of any further Orders by the Commission in this regard.

TABLE 9-13: REGULATORY SURCHARGE APPLICABLE FOR MYT PERIOD

Distribution Licensee	Regulatory Surcharge – 2
DVVNL	4.28%
MVVNL	4.28%
PVVNL*	0.00%
PuVVNL	4.28%
KESCO	For the consumers of LMV-1 & LMV-5 categories - 3.91% For all other categories - 4.13%.

**Note: - In the supply area of PVVNL, no Regulatory Surcharge shall be applicable in view of total liquidation of regulatory assets of PVVNL during FY 2016-17 as was discussed in the Tariff Order for FY 2016-17 dated August 1, 2016. However, the Commission will review this again, once the actual figures of RS recovered for PVVNL and other Licensees are available.*

- 9.3.13 The Licensees are directed to depict the Regulatory Surcharge separately and distinctly in the electricity bills of the consumers. The Commission directs the Licensees to maintain separate accounting fields for the regulatory surcharge and capture the amounts billed and collected as Regulatory Surcharge in both of its financial and commercial statements. This would enable the Licensees to correctly report the amounts collected towards Regulatory Surcharge.



10. DIRECTIVES

10.1 DIRECTIVES PROVIDED BY COMMISSION AND THEIR COMPLIANCE BY LICENSEES

10.1.1 The Commission had issued several directives to the Licensees in the previous Tariff Order dated May 31, 2013, October 1, 2014 and June 18, 2015. The status of compliance as submitted by the Licensees is as detailed in the following Table:

Table 10-1: STATUS OF COMPLIANCE OF DIRECTIVES OF TARIFF ORDER FOR FY 2013-14 DATED MAY 31, 2013

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
1	The Commission directs the Licensees to pressingly pursue the proposal for allocation of PPAs to Discoms with GoUP and expedite the process of allocation.	Immediate	As per the existing provisions of statutory framework, the allocation of PPAs to Discoms is the specific prerogative of Govt. of Uttar Pradesh. In line with this frame work UPPCL previously in 2007 had sent a proposal to Govt. of UP for issuing of notification of allocation of PPAs, which however remained awaited. Since, the consumer profile and their energy consumption pattern are dynamic in nature, hence the proposal sent to Govt. of UP in year 2007 needs to be re-examined for current context. UPPCL in March, 2016 constituted for allocation of existing PPAs and Energy being received from State Sector Projects to the Discoms.	The Commission has addressed the same in its directives for FY 2017-18



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
2	The Commission directs the Licensee to pressingly pursue the GoUP for finalisation of the Transfer Scheme and submit a copy of the same.	Within 3 months	-	-
3	The Commission reiterates its direction to the Licensee to ensure proper maintenance of detailed fixed assets registers as specified in the Distribution Tariff Regulations. As the fixed asset registers are pending since the creation of Discom, the Commission directs the Licensee to submit a status report and provide the proposed timelines / milestones for clearing the backlog. The Commission understands that clearing the backlog would take substantive time. In order to ensure that fixed asset registers are timely and regularly prepared going forward, the Commission directs the Licensee to prepare the fixed asset registers duly accounting for the yearly capitalisation from FY 2012-13 onwards. The capitalisation for the period before that may be shown on gross level basis. This dispensation is merely to ensure that the proper asset registers capturing all necessary details of the asset, including the costs incurred, date of commissioning, location of asset, and all other technical	Immediate	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	details are maintained for the ensuing years. However, the Licensee would also be required to clear the backlog in a time bound manner. Upon finalisation of the Transfer Scheme and clearing of backlog, the Licensee may update the fixed asset registers appropriately by passing necessary adjustments.			
4	The Commission directs the Licensee to frame an appropriate policy on capitalization of (i) employee costs, and (ii) A&G expenses.	Along with the petition for FY 2014-15	-	-
5	The Commission directs the Licensee to submit Fresh Actuarial Valuation Study Report in respect to employee expenses.	Along with the petition for FY 2014-15	-	-
6	As lack of approved transparent policy on identifying and writing off bad debts is hindering allowance of bad debts as an ARR component; the Commission directs the Licensee to submit ten sample cases of LT & HT consumers where Orders have been issued for writing off bad debts, clearly depicting the procedure adopted for writing off bad debts along with policy framework for managing bad debts for the Commission's perusal.	Within 1 month	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
7	The Commission directs the Licensee to evolve principles for prudent segregation of ARR towards wheeling function and retail supply function embedded in the distribution function in accordance with Clause 2.1.2 of the Distribution Tariff Regulations.	Within 4 months	The Petitioners submitted that UPPCL has been requested to carry out a joint study for all discoms for segregation of ARR towards wheeling function and retail supply function embedded in the distribution function in accordance with Clause 2.1.2 of the Distribution Tariff Regulations.	The Commission has addressed the same in its directives for FY 2017-18
8	The Commission directs the Licensee to submit a long term business plan in accordance with Clause 2.1.7 of the Distribution Tariff Regulations. The Licensee in such business plan shall identify capex projects for the ensuing year and subsequent four years and submit detailed capital investment plan along with a financing plan for undertaking the identified projects in order to meet the requirement of load growth, refurbishment and replacement of equipment, reduction in distribution losses, improvement of voltage profile, improvement in quality of supply, system reliability, metering, communication and computerization, etc.	Within 3 months	The Petitioners submitted that they are submitting the MYT Business plan along with this MYT tariff Petition.	Noted
9	The Commission directs the Licensee to conduct benchmarking studies to determine the desired performance standards in accordance with Clause 2.1.8 of the Distribution Tariff Regulations.	Within 3 months	The Petitioners submitted that the Licensees have already appointed an expert advisory firm to undertake the benchmarking studies to determine the desired performance	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
			standards in accordance with Regulation 4.2.1 of the MYT Regulations, 2014. The report has already been submitted.	
10	The Commission directs the Licensee to conduct proper loss estimate studies for assessment of technical and commercial losses under its supervision so that the Commission may set the base line losses in accordance with Clause 3.2.3 and Clause 3.2.4 of the Distribution Tariff Regulations and submit the report to the Commission. The study shall segregate voltage-wise distribution losses into technical loss (i.e. Ohmic/Core loss in the lines, substations and equipment) and commercial loss (i.e. unaccounted energy due to metering inaccuracies/inadequacies, pilferage of energy, improper billing, no billing, unrealized revenues etc.).	Within 3 months	The Petitioners submitted that Madhya Pradesh Electricity Regulatory Commission has approved tariff on the basis of voltage wise cost of service for FY 2017-18. Hence Madhya Pradesh has been approached to take advantage their experience in this regard and efforts are being made to expedite the same.	The Commission has addressed the same in its directives for FY 2017-18
11	The Commission directs the Licensee to conduct Cost of Service studies which would serve as a tool for alignment of costs and charges and submit details regarding the cost of service studies for each category or voltage level.	Within 6 months	The Petitioners submitted that this study is linked with the Voltage wise line loss as per point 10 above. Action shall be taken after completion of above study.	The Commission has addressed the same in its directives for FY 2017-18
12	Commission directs the Licensee to submit a road map for 100% metering in its licensed area. However, based on	Within 2 months	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	the ground realities, if the Distribution Licensee seeks exemption towards its metering obligation for any particular category of consumers, it must provide the Commission revised norms specific for its supply area, based on fresh studies, for assessment of consumption for these categories. Sales forecast for un-metered categories shall be validated with norms approved by the Commission on the basis of above study carried out by the Licensee.			
13	The Commission directs the Licensee to install electronic meters in the residential consumers under LMV-10 category and submit a progress report every month.	Within one month	-	-
14	The Commission directs the Licensee to submit data related to its peak demand and off peak demand in MW along with its sales projections in accordance with Clause 3.1.4 of the Distribution Tariff Regulations.	Along with the petition for FY 2014-15	-	-
15	The Commission directs the Licensee to reconcile the inter-unit balances lying un-reconciled either itself or through independent chartered accountant firms.	Along with the petition for FY 2014-15	-	-
16	The Commission directs the Licensee to file submissions in respect of FPPCA in a timely and regular manner.	Every quarter as per the time frame	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
		prescribed in the Regulations		
17	The Commission directs the Licensee to depict the regulatory surcharge distinctly in the electricity bills of the consumers and create separate accounting fields to capture the amounts collected as regulatory surcharge in both of its financial and commercial statements. The Commission directs the Licensee to provide the details of the regulatory surcharge so collected for FY 2013-14 duly certified by the statutory auditor.	By 30th September 2014	-	-



Table 10-2: STATUS OF COMPLIANCE OF DIRECTIVES OF TARIFF ORDER FOR FY 2014-15 DATED OCTOBER 1, 2014

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
1	The Licensee are directed to arrange for quarterly meetings between the MDs of the Licensees and the consumer representatives for solving various grievances of the consumers and submit a status report containing details of such meetings along with the next ARR filing.	Immediate	The Petitioners submitted that as per directives of Government and Corporation MD's and all other officers mandatorily sit in their offices from 10.00 AM to 12.00 noon to meet the consumer/ representatives. All higher have been directed to open their Twitter accounts and action is being taken on various consumer grievances.	The Commission has addressed the same in its directives for FY 2017-18
2	For DVVNL, as regards the supply to the Taj Trapezium Zone, the Commission directs the Licensee to comply with the directions of the Hon'ble Supreme Court of India.	Immediate	The Petitioners submitted that in FY 2014-15 the average supply given in TTZ area was as given below 1. Distt. Agra Rural – 16.25 Hrs. Tehsil- 17.53 Hrs. Distt. Hqtr – 23.01 Hrs. 2. Distt. Firozabad Rural – 15.16 Hrs. Tehsil- 19.58 Hrs.	The Commission has addressed the same in its directives for FY 2017-18



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
			Distt. Hqtr – 22.09 Hrs. 3. Distt. Mathura Rural – 11.15 Hrs. Tehsil- 16.12 Hrs. Distt. Hqtr – 21.03 Hrs.	
3	The Commission directs the Licensee to pay the applicable interest on consumer's security deposit as per the Orders of the Commission and submit the compliance report with the next ARR filing. Licensees are directed to ensure the timely payment of the interest on security deposit to the consumers.	Immediate	The Petitioners submitted that actual interest on security deposit of consumers in FY 2014-15 and 2015-16 was Rs. 9.09 Crore & Rs. 8.52 Crore (for DVVNL), Rs. 23.25 Crore & Rs. 0.06 Crore Lakh (for MVVNL), Rs. 165.40 Crore & Rs. 227.17 Crore (for PVVNL), Rs. -95.39 Crore & Rs. 41.69 Crore (for PuVVNL), Rs. 23.25 Crore & Rs. 0.06 Crore (for KESCO) respectively.	The Commission has addressed the same in its directives for FY 2017-18
4	As regards the various complaints of the stakeholders brought to the notice of the Commission during public hearing, the Licensee is directed to look into the matters and take appropriate action on the same. Further, the Licensee must ensure that proper advertising regarding CGRF is done to bring awareness amongst the consumers. The chairperson of the CGRF should	Immediate	The Petitioners submitted that in compliance of directives of Commission for wide publicity of CGRF for consumer aware-ness advertisement/ information is being printed regularly on the electricity bills of the consumers. Apart from this the information regarding CGRF has been uploaded on the Licensees web site.	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	also be part of such public hearings so that a direct interaction may take place and the grievances of the consumers could be settled in a more appropriate manner			
5	To provide accurate and effective consumption norms, the Commission directs the Petitioners to conduct a detailed study which should include all the relevant details pointed out by the Commission.	Within 6 months from issue of this Order	-	-
6	As regards the Commission's directives to submit a road map for 100% metering in its licensed area given in the Tariff Order dated 31st May, 2013, the Licensees has not complied with the directions of the Commission. The Commission once again directs the Licensee to comply with the direction given by the Commission in this Order and accordingly put it sincere efforts to achieve 100% metering.	3 months from issue of this Order	-	-
7	The Commission directs the Distribution Licensees to formulate a mechanism so as to make their officials accountable by providing incentives or disincentives for achievement or non-achievement of the distribution loss and the collection efficiency targets.	Within 2 months from the issue of this Order	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	The Policy should include all the relevant details pointed out by the Commission in this Order			
8	The Commission further directs the Petitioners to sign the MoUs to be implemented at all levels and submit the copy of the same to the Commission within 2 months from the date of this Order.	Within 2 months from the date of issuance of this Order	-	-
9	The Commission directs the Petitioners to provide the actual power purchase data in the format specified by the Commission along with the ARR Petition for FY 2015-16.	Next ARR filing	The Licensees submitted that the data has already been submitted.	Noted
10	As regards timely filing of FPPCA the Commission once again directs the Licensee that they should file FPPCA in a timely and regular manner in accordance with the Distribution Tariff Regulations, 2006 failing which the Commission may have to resort to take strict action against the Licensees.	Immediate	-	-
11	As regards the increasing number of unmetered consumers the Commission accords a final opportunity to the Distribution Licensee and directs	By 31st March, 2015	The Petitioners submitted that as per directives of Commission work-plan for 100% metering of un-metered consumers has been prepared and	The Licensees must adhere to the timeline specified by them.



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	them to ensure that all their unmetered consumers get converted into metered connection.		has already been submitted to the Hon'ble commission. As per the work plan division wise targets have been fixed for achieving 100% metering before June 2018.	
12	As regards the RPO Obligation the Licensee are directed to ensure that they procure renewable energy in accordance with Regulation 4 of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 during FY 2014-15 to meet their obligation.	Next ARR filing	-	-
13	As regards the choice of connection, the Licensee, in accordance with the provisions of the Electricity Supply Code 2005 and its amendments wherein the consumer has the choice to opt the supplier, is directed to release connections to all such consumers who desire to disconnect their connections from the single point supplier and instead wish to take connections directly from the Licensee and submit the status report on the same along with next ARR filing	Next ARR filing	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
14	The Licensee is directed to provide the monthly MRI reports to all the applicable consumers through email. The consumers would be required to register their email to the Licensee and submit the status report on the same along with next ARR filing	Immediate	The Petitioners submitted that MRI reports are regularly being provided to the consumers. MRI are provided to consumer as per their requirement on E-mail.	The Commission has addressed the same in its directives for FY 2017-18
15	The Licensee is directed to file a separate Petition for approval of prior period expenses / incomes. The Petition should clearly indicate the head-wise year-wise bifurcation of prior period expenses / incomes clearly indicating the impact of such expenses / incomes on various ARR components, and such impact should not exceed the normative expenses for any particular year.	1 month from the date of issuance of this Order	-	-
16	The Licensee is directed to submit a note detailing the area-wise actual number of supply hours provided to rural areas by the end of FY 2014-15.	By end of FY 2014-15	-	-
17	The Licensee is directed to depict the Regulatory Surcharge separately and distinctly in the electricity bills of the consumers. The Commission directs the Licensee to maintain separate accounting fields for	Immediate	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	both the regulatory surcharges approved vis-a vis the Commission's Order dated 6th June, 2014 and that approved in this Order, and capture the two different amounts collected as Regulatory Surcharges in both of its financial and commercial statements. This would enable the Licensee to correctly report the amounts collected towards Regulatory Surcharges.			
18	The Distribution Licensee is directed to submit the actual Regulatory Surcharge recovered in FY 2014-15 on account of the Revenue Gap / Regulatory Asset admitted by the Commission in this Order along with the actual Distribution Losses achieved in FY 2014-15 and additional target consumers added in FY 2014-15 by 15th April, 2015.	By 15th April, 2015	-	-
19	For KESCO, the Commission directs the Petitioner to ensure to convert all the 18 consumers under LMV-3 category into metered connections within one month of the issue of this Order failing which the Commission will resort to take stringent action against the Petitioner.	Within one month from issue of this Order	The Petitioner submitted that the instant directive is common to Serial No. 8 of the directive provided in the tariff order for FY 2015-16 and has been responded therein.	The Commission has addressed the same in its directive for FY 2015-16 under point no. 38



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
20	For KESCO, as regards the observed uncertainty in the billing determinants for LMV-10 category, the Commission directs the Petitioner to provide detailed explanation in this regard along with all the necessary supporting documents for verification of such data while filing for Truing-up of FY 2012-13. However, for the purpose of the present Order the Commission has accepted the Petitioner's submission regarding the consumption parameters for FY 2012-13.	Next ARR filing	The Petitioner submitted that UPPCL on behalf of all Discoms has filed a petition in regard with LMV-10. The same is pending for disposal before the Hon'ble Commission. Thus, the said issue would be taken up once the aforementioned petition is finalized.	Noted



Table 10-3: STATUS OF COMPLIANCE OF DIRECTIVES OF TARIFF ORDER FOR FY 2015-16 DATED JUNE 18, 2015

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
1	The Commission directs the Licensee to pressingly pursue the GoUP for finalisation of the Transfer Scheme and submit a copy of the same.	Within 3 months	-	-
2	The Commission reiterates its direction to the Licensees to ensure proper maintenance of detailed fixed assets registers as specified in the Distribution Tariff Regulations. As the fixed asset registers are pending since the creation of Discom, the Commission directs the Licensee to submit a status report and provide the proposed timelines / milestones for clearing the backlog.	Immediate	-	-
3	The Commission directs the Licensees to frame an appropriate policy on capitalization of (i) employee costs, and (ii) A&G expenses.	Along with the petition for FY 2016-17	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
4	The Commission directs the Licensees to submit Fresh Actuarial Valuation Study Report in respect to employee expenses.	Along with the petition for FY 2016-17	The Petitioners submitted that the matter has been taken up with the UPPCL and requested to conduct the study at UPPCL level.	The Commission has addressed the same in its directives for FY 2017-18.
5	As lack of approved transparent policy on identifying and writing off bad debts is hindering allowance of bad debts as an ARR component; the Commission directs the Licensee to submit ten sample cases of LT & HT consumers where orders have been issued for writing off bad debts, clearly depicting the procedure adopted for writing off bad debts along with policy framework for managing bad debts for the Commission's perusal.	Within 1 month	-	-
6	The Commission directs the Licensee to submit data related to its peak demand and off peak demand in MW along with its sales projections in accordance with Clause 3.1.4 of the Distribution Tariff Regulations.	Along with the petition for FY 2016-17	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
7	The Commission directs the Licensee to reconcile the inter-unit balances lying un-reconciled either itself or through independent chartered accountant firms.	Along with the petition for FY 2016-17	-	-
8	For DVVNL, in regards to the supply in the Taj Trapezium Zone, the Commission directs the Licensee to comply with the directions of the Hon'ble Supreme Court of India.	Immediate	The Petitioner submitted that in FY 2015-16 the average supply given in TTZ area was as given below 1. Distt. Agra Rural – 15.25 Hrs. Tehsil- 18.11 Hrs. Distt. Hqtr – 23.14 Hrs. 2. Distt. Firozabad Rural – 14.38 Hrs. Tehsil- 19.09 Hrs. Distt. Hqtr – 22.22 Hrs. 3. Distt. Mathura Rural – 10.30 Hrs. Tehsil- 15.30 Hrs. Distt. Hqtr – 20.31 Hrs.	The Commission has addressed the same in its directives for FY 2017-18



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
9	The Commission directs the Licensee to pay the applicable interest on consumer's security deposit as per the Orders of the Commission and submit the compliance report with the next ARR filing. Licensees are directed to ensure the timely payment of the interest on security deposit to the consumers.	Immediate	The actual interest on security deposit of consumers in FY 2014-15 and 2015-16 was Rs. 9.09 Crore & Rs. 8.52 Crore (for DVVNL), Rs. 23.25 Crore & Rs. 0.06 Crore (for MVVNL), Rs. 165.40 Crore & Rs. 227.17 Crore (for PVVNL), Rs. -95.39 Crore & Rs. 41.69 Crore (for PuVVNL), Rs. 23.25 Crore & Rs. 0.06 Crore (for KESCO) respectively.	The Commission has addressed the same in its directives for FY 2017-18
10	As regards the Commission's directives to submit a road map for 100% metering in its licensed area given in the Tariff Order dated 31st May, 2013, the Licensees has not complied with the directions of the Commission. The Commission once again directs the Licensee to comply with the direction given by the Commission in this Order and accordingly put it sincere efforts to achieve 100% metering.	3 months from issue of this Order	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
11	The Commission further directs the Petitioners to sign the MoUs to be implemented at all levels and submit the copy of the same to the Commission	Within three months from the date of issuance of this Order	-	-
12	The Commission directs the Petitioners to provide the actual power purchase data in the format specified by the Commission along with the ARR Petition for FY 2016-17	Next ARR filing	The actual power purchase data has been submitted during the proceedings of ARR Tariff petition FY 2016-17.	Noted
13	As regards timely filing of FPPCA the Commission once again directs the Licensees that they should file FPPCA in a timely and regular manner in accordance with the Distribution Tariff Regulations, 2006 failing which the Commission may have to resort to take strict action against the Licensees like disallowance of additional power purchase expenses and the associated carrying cost on account of additional Power Purchase expenses or any other action that the	Immediate	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	Commission may deem fit while doing the Truing up.			
14	As regards the RPO Obligation the Licensee is directed to ensure that they procure renewable energy in accordance with Regulation 4 of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 during FY 2014-15 to meet their obligation.	Next ARR filing	The Discom has filed a petition before the Commission seeking relaxation of target of Renewable Purchase obligation. The said petition is still pending before the Commission for disposal.	The Commission has addressed the same in its directives for FY 2017-18
15	As regards the choice of connection, the Licensee, in accordance with the provisions of the Electricity Supply Code 2005 wherein the consumer has the choice to opt the supplier, is directed to release connections to all such consumers who desire to disconnect their connections from the single point supplier and instead wish to take connections directly from the Licensee and submit the status report on the same along with next ARR filing	Next ARR filing	The Petitioners submitted that the directive of Commission are being complied with wherever feasible technically & commercially.	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
16	The Licensee is directed to file a separate Petition for approval of prior period expenses / incomes. The Petition should clearly indicate the head-wise year-wise bifurcation of prior period expenses / incomes clearly indicating the impact of such expenses / incomes on various ARR components, and such impact should not exceed the normative expenses for any particular year.	1 month from the date of issuance of this Order	The Petitioners hereby state that in compliance to the Commission directives, it is in the process of summarizing the head-wise year-wise bifurcation of prior period expenses / incomes and would approach the commission for approval of the same with a separate Petition.	The Commission has addressed the same in its directives for FY 2017-18
17	The Licensee is directed to submit a note detailing the area-wise actual number of supply hours provided to rural areas by the end of FY 2015-16.	By end of FY 2015-16	The Petitioners submitted the district-wise monthly details of actual no. of supply hrs. provided to rural areas in FY 2015-16.	The Commission has addressed the same in its directives for FY 2017-18
18	The Distribution Licensees are directed to submit the actual Regulatory Surcharge recovered in FY 2015-16 on account of the Revenue Gap / Regulatory Asset admitted by the Commission in this Order along with the actual Distribution Losses achieved in FY 2015-16 and additional target consumers added in FY 2015-16 by 15th April, 2016.	By 15th April, 2016	The Petitioners submitted the requisite details pertaining to Regulatory Asset.	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
19	The Commission directs the Licensee to evolve principles for prudent segregation of ARR towards wheeling function and retail supply function embedded in the distribution function in accordance with Clause 2.1.2 of the Distribution Tariff Regulations.	As per the Time frame stipulated in MYT Regulations, 2014	-	-
20	The Commission directs the Licensee to submit a long term business plan in accordance with Clause 2.1.7 of the Distribution Tariff Regulations. The Licensee in such business plan shall identify capex projects for the ensuing year and subsequent four years and submit detailed capital investment plan along with a financing plan for undertaking the identified projects in order to meet the requirement of load growth, refurbishment and replacement of equipment, reduction in distribution losses, improvement of voltage profile, improvement in quality of supply, system reliability, metering, communication and computerization, etc.	As per the Time frame stipulated in MYT Regulations, 2014	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
21	The Commission directs the Licensee to conduct benchmarking studies to determine the desired performance standards in accordance with Clause 2.1.8 of the Distribution Tariff Regulations.	As per the Time frame stipulated in MYT Regulations, 2014	-	-
22	The Petitioners should file its Annual ARR/ Tariff Petition for FY 2016-17 as per the Regulations 12.2, 12.7, 12.8, 12.9 notified vide MYT Regulations, 2014	As per the Time frame stipulated in MYT Regulations, 2014	-	-
23	The Petitioners should complete the Assessment Study of metered consumers as per the Regulations 16.2 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission	As per the Time frame stipulated in MYT Regulations, 2014	-	-
24	The Petitioners should complete the Assessment Study of un-metered consumers	As per the Time frame	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	to establish base line norms as per the Regulations 17.1 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission	stipulated in MYT Regulations, 2014		
25	The Petitioners should complete the Study of Agriculture feeders segregated and not segregated in significant numbers to determine base line norms as per the Regulations 17.2, 17.3 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission	As per the Time frame stipulated in MYT Regulations, 2014	-	-
26	The Commission reiterates that the Licensees should conduct a detailed study to provide accurate and effective consumption norms as specified by the Commission in its earlier Orders and as per the provisions outlined in Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 in the time bound manner.	As per the Time frame stipulated in MYT Regulations, 2014	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
27	The Petitioners should submit Incremental Power Purchase Cost as per the Regulations 20.1 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission	Within 28 days of quarter end , for each quarter of Tariff Period 1.4.2015 to 31.3.2020	The Petitioners submitted that all efforts are being made to submit FPPCA regularly.	The Commission has addressed the same in its directives for FY 2017-18
28	The Petitioners should submit Roadmap for Reduction of Cross Subsidy as per the Regulation 39 notified vide MYT Regulations, 2014	Immediately	-	-
29	The Petitioners should record and maintain Division wise, Circlewise AT&C Losses and submit the quarterly report to the Commission.	Quarterly for FY 2015-16	The Petitioners submitted the same is being filed along with the MYT Petition.	The Commission has addressed the same in its directives for FY 2017-18
30	The Petitioners should submit month wise details of number of supply hours for rural and urban area for FY 2014-15.	Within one month from issue of this Order	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
31	Licensee should provide online facility for submission of application for new connection, name change, load enhancement and load reduction	Within 3 months	The Petitioners submitted that presently online billing has been started in rural as well as urban areas. The initial problems of online billing are being address and rectify. After stabilization of online billing facility for submission of new connection application and load enhancement & load deduction shall be taken-up which shall be integrated with the billing system also.	The Commission has addressed the same in its directives for FY 2017-18
32	Licensee should develop the mobile application for online payments of bills including other services for facilitation to consumers	Within 3 months	The Petitioners submitted that links have been provided on the official website of the Licensees for all consumer services including online bill payment, online complaints registration, complaints status, reporting of theft etc.	The Commission has addressed the same in its directives for FY 2017-18
33	The Petitioners should submit Standards of Performance parameters as per the tariff	Within one month from	The Petitioners submitted that action will be taken as per MYT Regulation.	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
	formats of Distribution Tariff Regulations, 2006.	issue of this Order		
34	The Petitioners should submit additional consumers added in FY 2014-15 apart from the normal consumer addition.	Within three month of issue of this Order	-	-
35	The Commission directs the Petitioners to frame guidelines and procedures for identifying, physically verifying and writing off the bad debts and also to fix responsibility of its employees in this regard and submit the same to the Commission for its approval	Within three months of issue of this Order	-	-
36	The Commission directs the Licensees that, from FY 2013-14 onwards it should clearly depict the total power purchase cost incurred at UPPCL level, total power purchase cost paid by the Licensees to UPPCL and power cost payable to UPPCL in its true-up petitions for future years.	Next ARR filing	-	-



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance as submitted by Petitioners in the Petition	Commission's Direction
37	The Commission directs the Licensee that Open Access shall be allowed as per the provisions outlined by the Commission in its Regulations and amendments from time to time.	Immediate	The Petitioners submitted that directive of Commission are being complied-with.	Noted
38	For KESCO, the Commission directs the Petitioner to ensure to convert all the 18 consumers under LMV-3 category into metered connections within one month of the issue of this Order failing which the Commission will resort to take stringent action against the Petitioner.	Within one month from issue of this Order	The Discom is trying its best to convert these consumers from un-metered to metered category. Further a special drive has been launched by UPPCL for 100% metering wherein government consumers are also covered.	The Commission has addressed the same in its directives for FY 2017-18



Table 10-4: STATUS OF COMPLIANCE OF DIRECTIVES OF TARIFF ORDER FOR FY 2016-17 DATED AUGUST 1, 2016

The Commission once again directs the Licensees to comply with the balance directives issued in the previous Tariff Orders. The compliance report on the said directives shall be submitted to the Commission within one month from the date of issue of this Tariff Order

Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
1	The Commission directs the Licensees to pressingly pursue the GoUP for finalisation of the Transfer Scheme and submit a copy of the same.	Immediate	The Petitioners submitted the notification of the Transfer Scheme.	The Licensees namely DVVNL, MVVNL, PuVVNL & PVVNL have submitted the Transfer Scheme. However, KESCO is directed to submit a copy of the same at the earliest
2	The Commission again reiterates its direction to the Licensees to ensure proper maintenance of detailed fixed assets registers as specified in the Distribution Tariff Regulations. As the fixed asset registers are pending since the creation of	Yearly Basis	The Petitioners submitted that the Fixed asset registers of FY 2012-13, 2013-14 & 2014-15 have already been prepared on the basis of audited accounts and for FY 2015-16 have been prepared on the basis of provisional	The Licensees must regularly maintain the fixed assets registers and submit the same to the Commission on Timely Basis



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	Discom, the Commission directs the Licensees to submit a status report and provide the proposed timelines / milestones for clearing the backlog. Also, the Petitioners must submit the Fixed Asset Register from FY 2012-13 to FY 2015-16 along with the petition for FY 2017-18.		account and the same are being submitted along with MYT Petition.	
3	The Commission directs the Licensees to frame an appropriate policy on capitalization of (i) employee costs, and (ii) A&G expenses.	Immediate	The Petitioner's policy on capitalization of (i) Employee costs, and (ii) A&G expenses is annexed.	The Licensees must re-submit the Annexure with a specified reference number to the Annexure.
4	The Commission directs the Licensees to submit Fresh Actuarial Valuation Study Report in respect to employee expenses.	Immediate	The Petitioners submitted that UPPCL has been requested to organized this study at their level.	The Licensees must expedite the process and submit the tentative timelines for the same.
5	As lack of approved transparent policy on identifying and writing off bad debts is hindering allowance of bad debts as an ARR component; the Commission directs	Immediate	The Petitioners submitted that the existing policy for writing off bad and doubtful debt is provided for approval.	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	the Licensees to submit ten sample cases of LT & HT consumers where orders have been issued for writing off bad debts, clearly depicting the procedure adopted for writing off bad debts along with policy framework for managing bad debts for the Commission's perusal.			
6	The Commission directs the Licensees to evolve principles for prudent segregation of ARR towards wheeling function and retail supply function embedded in the distribution function in accordance with Regulation 36 of the Multi Year Tariff Regulations, 2014. Further the Licensees are directed to submit the draft Term of Reference for the approval of the Commission.	Immediate	The Petitioners submitted that UPPCL has been requested to formulate the draft terms of reference common for all Discoms at their level.	Petitioners should expedite the process and submit the tentative timelines for the same.
7	The Commission directs the Licensees to submit a business plan for the control period i.e. from April 1, 2017 to March 31,	Immediate	The Petitioners submitted they are submitting their MYT Business plan along with this MYT tariff Petition.	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	<p>2020 in accordance with Regulation 5, 12.1 & 13.1 of the Multi Year Tariff Regulations, 2014. The Licensees in such business plan shall submit but not limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets. The licensees should note that the specified timeline of June 1, 2016 for submission of the same under the Multi Year Tariff Regulation is over. The Licensees should submit the same at the earliest.</p>			
8	<p>The Commission directs the Licensees to conduct benchmarking studies to determine the desired performance standards in accordance with Regulation 4.2.1 of the Multi Year Tariff Regulations, 2014. The licensees should note that specified timeline of September 30, 2015</p>	Immediate	<p>The Petitioners submitted that the Benchmarking report has been submitted to the Commission.</p>	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	for submission of the same under the Multi Year Tariff Regulation, 2014 is over. The Licensees should submit the same at the earliest.			
9	The Commission directs the Licensees to ensure 100 % compliance of the Commission's Orders and targets to achieve 100% metering. The Licensees should submit the Quarterly progress report in this regard	Immediate	The Petitioners submitted that action has been taken as per Commission directives.	The Licensees must submit the Quarterly progress report of the metering done in their respective areas.
10	The Commission directs the Licensees to submit data related to its peak demand and off peak demand in MW along with its sales projections in accordance with Clause 3.1.4 of the Distribution Tariff Regulations. Licensees should submit the same for their licensee area.	Immediate	The Commission has notified Distribution MYT Tariff Regulations, 2014 and Clause 3.1.4 of the Distribution Tariff Regulations is not in effect from the date of notification of new regulations. Hence no action is required in regard to this directive.	Noted
11	The Commission once again directs the Licensees to reconcile the inter-unit	Immediate	The Petitioners submitted the details of inter-unit balances.	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	<p>balances lying un-reconciled either itself or through independent chartered accountant firms. The Commission has trued-up the ARR for various years. However, it has been observed that the amount shown in head of inter-unit balance is very high and a detailed reconciliation and breakup of the same should be submitted to the Commission. The above details should be submitted for FY 2011-12, FY 2012-13, 2013-14, 2014-15 and 2015-16.</p>			
12	<p>The Commission once again directs the licensees that they should file FPPCA in a timely and regular manner failing which the Commission may have to resort to take strict action against the Licensees like disallowance of additional power purchase expenses and the associated carrying cost on account of additional Power Purchase</p>	Immediate	<p>The Petitioners submitted that UPPCL on behalf of all the state owned Discoms is filing the FPPCA Petitions before the Commission. The FPPCA Petition for the quarter 1 to 2 of FY 2016-17 has already been submitted before the Commission.</p>	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	expenses or any other action that the Commission may deem fit while doing the Truing up.			
13	The Commission directs the Licensees to submit the consumer category and sub-category wise Regulatory Surcharges separately for Regulatory Surcharge-1 & Regulatory Surcharge-2 collected for each year since inception at the earliest.	Immediate	The Petitioners submitted the consumer category wise regulatory surcharge RS-1 & RS-2 collected since inception upto FY 2015-16.	Noted
14	The Commission reiterates that the Licensees should adhere to the time line outlined in Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 for conducting a detailed study to provide accurate and effective consumption norms as specified by the Commission in its earlier directions. The licensees should note that specified timeline of December 1, 2015 for submission of the same under the	Immediate	The Petitioners submitted that the un-metered consumption norm study requires atleast 1 year time as per MYT Regulations. Further the Licensees have already submitted its plan for 100% metering by June, 2018, thus this study won't be relevant once all consumers are metered.	Petitioners must note that the specified timeline of December 1, 2015 for submission of the consumption norms study under the Multi Year Tariff Regulation, 2014 has expired. However, the Licensees must strictly adhere to its



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	Multi Year Tariff Regulation, 2014 has expired. The Licensees should submit the same at the earliest.			plan for 100% metering by June, 2018
15	The Commission once again directs the Distribution Licensees to formulate a mechanism so as to make their officials accountable by providing incentives or disincentives for achievement or non-achievement of the distribution loss and the collection efficiency targets. The Licensees should submit the same at the earliest.	Immediate	The Petitioners submitted that they are moving fast for 100% Metering, On-line billing and other consumer related facilities. Most of these have been targeted to be completed by FY 19. Since it is a transition period, formulation of incentive or dis-incentive norms for the concerned officials will be useful after this transition period is over.	Petitioners should submit a draft mechanism / formulation of incentive or dis-incentive norms at the earliest.
16	The Commission directs the Petitioners to sign the MoUs to be implemented at all levels and submit the copy of the same to the Commission	Immediate	The Petitioners submitted that they are moving fast for 100% Metering, On-line billing and other consumer related facilities. Most of these have been targeted to be completed by FY 19. Since it is a transition period, formulation of incentive or dis-incentive norms for the concerned officials will be useful after this transition period is over.	Petitioners should expedite the process and submit the status at the earliest.



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
17	The Petitioners should complete the Assessment Study of metered consumers as per the Regulations 16.2 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission. The licensees should note that specified timeline of September 30, 2015 for submission of the same under the Multi Year Tariff Regulation, 2014 has expired. The Licensees should submit the same at the earliest.	Immediate	The Petitioners submitted that in order to have uniformity in consumption norms across the state, UPPCL has been requested to undertake this study on behalf of all the state owned distribution companies.	Petitioners must note that uniformity in consumption norms across the state should not be the basis for such study as consumption will vary across different part of the state. Petitioners should expedite the process and submit the tentative timelines for the same.
18	The Petitioners should complete the Assessment Study of un-metered consumers to establish base line norms as per the Regulations 17.1 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission. The licensees should note that specified timeline of December 1, 2015 for	Immediate	The Petitioners submitted as per the Regulations provisions the period of this study is three years. Discoms had already submitted the 100% metering targets. As 100% metering will be achieved before study period, it will not be possible to carry out this study.	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	submission of the same under the Multi Year Tariff Regulation, 2014 is over. The Licensees should submit the same at the earliest.			
19	The Petitioners should complete the Study of Agriculture feeders segregated and not segregated in significant numbers to determine base line norms as per the Regulations 17.2, 17.3 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission. The licensees should note that specified timeline of December 1, 2015 for submission of the same under the Multi Year Tariff Regulation, 2014 is over. The Licensees should submit the same at the earliest.	Immediate	The Petitioners submitted that UPPCL has been requested to undertake this study on behalf of all the state owned distribution companies.	Petitioners should expedite the process and submit the tentative timelines for the same.
20	The Petitioners should submit Roadmap for Reduction of Cross Subsidy as per the Regulation 39 notified vide MYT	Immediate	The Petitioners submitted that the Action for voltage wise cost of services has been informed to the commission in the reply of	Petitioners should expedite the process and



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	Regulations, 2014. The licensees should note that specified timeline of October , 2014 for submission of the same under the Multi Year Tariff Regulation, 2014 is over . The Licensees should submit the same at the earliest.		preceding directives. (Madhya Pradesh Electricity Regulatory Commission has approved tariff on the basis of voltage wise cost of service for FY 2017-18. Hence Madhya Pradesh has been approached to take advantage their experience in this regard and efforts are being made to expedite the same.	submit the tentative timelines for the same.
21	The Petitioners should submit month wise details of number of supply hours for rural and urban area for FY 2014-15 & FY 2015-16	Within one month from issue of this Order	The district-wise monthly details of actual no. of supply hrs. provided to rural & urban areas in FY 2014-15 & 2015-16 are being submitted.	The Petitioners must again submit month wise details of number of supply hours for rural and urban area for FY 2014-15 & FY 2015-16 at the earliest.
22	Petitioners should submit information with regard to the performance parameters like number of consumers added, number of unmetered consumers converted to metered consumers and actual distribution loss in FY 2014-15 & FY 2015-16. The	At the earliest	The Petitioners submitted that the requisite data is provided in the Load Forecast model and the instant True-up/MYT petition.	Petitioners must separately submit information with regard to the performance parameters like number of consumers added,



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
	Petitioners are hereby directed to submit the relevant information at the earliest from the issuance of this Order.			number of unmetered consumers converted to metered consumers and actual distribution loss in FY 2014-15 & FY 2015-16
23	The Commission directs the Petitioners to frame guidelines and procedures for identifying, physically verifying and writing off the bad debts and also to fix responsibility of its employees in this regard and submit the same to the Commission for its approval.	Immediate	The existing policy for writing off bad and doubtful debt is being submitted	Noted
24	The Commission directs the Licensees that it should clearly depict the total power purchase cost incurred at UPPCL level, total power purchase cost paid by the Licensees to UPPCL and power cost payable to UPPCL for the year 2016.	At the time of next ARR filings	The Petitioners submitted the requisite details of total power purchase cost incurred at UPPCL level, total power purchase cost paid by the Licensees to UPPCL and power cost payable to UPPCL for the year 2016.	Noted



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Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
25	The Commission directs Licensees to submit every month a report comprising the details of the power purchased from all the sources demonstrating that the Merit Order Dispatch Principle has been strictly followed and that the procurement was optimal in regard to cost taking into consideration of the power available at the power exchanges etc.	Monthly Basis	The Petitioners submitted that the responsibility of submission of report comprising the details of the power purchased from all the sources demonstrating that the Merit Order Dispatch Principle has been strictly followed is of SLDC. A letter in this regard has already been written to SLDC.	Petitioners must note that no submission has been received from SLDC; Petitioners must ensure regular submission of reports in this matter
26	The Petitioners should file the MYT Petition for the Control FY 2017-18 to FY 2019-20 as per the Regulations 12.2, 12.7, 12.8 & 12.9 as per MYT Regulations, 2014	As per MYT timeline	The Petitioners submitted that the MYT Petition for the Control FY 2017-18 to FY 2019-20 is being submitted to the Commission.	Noted
27	The Commission directs the Petitioners to submit a proposal for "Rate Schedule" linked to number of hours of supply.	At the time of next ARR filings	The Petitioners submitted as the supply hours are being regularly increased and intended to supply 24 Hrs with the progress of 100% metering targets. No separate rate schedule will be required.	Noted



Sl. No	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance	Commission's Direction
28	The Licensees are directed to explore the possibility of having TOD tariff structure for domestic and non-domestic categories and submit their proposal.	At the time of next ARR filings	The Petitioners submitted that the Discoms are moving fast for 100% Metering, On-line billing and other consumer related facilities. Strict targets for consumer addition and metering has been planned to be completed by FY 19. Since it is a transition period, formulation of TOD tariff structure for domestic and non-domestic categories will be useful after this transition period is over.	Noted

10.1.2 Further, some of the directives issued by the Commission in the present Tariff Order are in continuation or similar to the directives issued in the previous Tariff Order. In case the Licensees have not complied with the same earlier, it shall be necessary for them to provide reasons for non-compliance and further comply with the same as per the time-lines prescribed in the present Tariff Order.

10.1.3 The directives to the Licensees as issued under the present Tariff Order along with the time frame for compliance are given in the Table below:



Table 10-5: DIRECTIVES ISSUED UNDER THE PRESENT TARIFF ORDER

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order
1	The Commission directs the Licensees to pressingly pursue the proposal for allocation of PPAs to Discoms with GoUP and expedite the process of allocation and submit the tentative timelines for the same.	Immediate
2	The Commission again directs the Licensees / UPPCL to evolve principles for prudent segregation of ARR towards wheeling function and retail supply function embedded in the distribution function in accordance with Clause 2.1.2 of the Distribution Tariff Regulations.	Within 4 months
3	The Commission again directs the Licensees to conduct proper loss estimate studies for assessment of technical and commercial losses under its supervision so that the Commission may set the base line losses in accordance with Clause 3.2.3 and Clause 3.2.4 of the Distribution Tariff Regulations and submit the report to the Commission. The study shall segregate voltage-wise distribution losses into technical loss (i.e. Ohmic / Core loss in the lines, substations and equipment) and commercial loss (i.e. unaccounted energy due to metering inaccuracies/inadequacies, pilferage of energy, improper billing, no billing, unrealized revenues etc.). Further, the Licensees must immediately submit the draft report of PFC Consulting Ltd. in the above matter.	Within 6 months
4	The Commission again directs the Licensees to expedite the process of conducting Cost of Service studies which would serve as a tool for alignment of costs and charges and submit details regarding the cost of service studies for each category or voltage level.	Within 6 months
5	The Commission directs the Licensees to install electronic meters in the residential consumers under LMV-10 category and submit a progress report every month.	Immediate



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6	The Licensees are directed to arrange for quarterly meetings between the MDs of the Licensees and the consumer representatives for solving various grievances of the consumers and submit a quarterly status report containing details of such meetings.	Immediate
7	For DVVNL, in regards the supply to the Taj Trapezium Zone, the Commission directs DVVNL to comply with the directions of the Hon'ble Supreme Court of India and also submit the details of the actual load shedding done in the Taj Trapezium area for FY 2016-17 at the earliest.	Immediate
8	The Commission again directs the Licensees to ensure the timely payment of the interest on security deposit to the consumers as per the Orders of the Commission and submit the compliance report. Licensees should submit the details of the actual interest on consumer security deposit paid to the consumers in FY 2016-17. Further, MVVNL & KESCO must again the submit the details of the actual interest on consumer security deposit paid to the consumers for FY 2014-15 & FY 2015-16.	Immediate
9	The Licensees (namely MVVNL, PVVNL, PuVVNL & KESCO) are directed to provide the monthly MRI reports to all the applicable consumers through email. The consumers would be required to register their email to the Licensees and submit the status report on the same at the earliest.	Immediate
10	The Commission directs the Licensees to submit the tentative timelines for submitting the Fresh Actuarial Valuation Study Report in respect to employee expenses.	Within 3 months
11	The Licensees must should submit the RPO obligation met in FY 2014-15, FY 2015-16 & FY 2016-17 and must demonstrate that how it is going to comply with the RPO obligation in FY 2017-18 separately showing the procurement and obligation from solar & non solar sources.	Immediate
12	The Licensees are directed to file a separate Petition for approval of prior period expenses / incomes. The Petition should clearly indicate the head-wise year-wise bifurcation of prior period expenses / incomes clearly indicating the impact of such expenses / incomes on various ARR components, and such impact should not exceed the normative expenses for any particular year.	3 months from the date of issuance of this Order



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13	The Licensees are directed to submit a note detailing the area-wise (circle wise) actual number of supply hours provided to rural areas for FY 2015-16 & FY 2016-17 at the earliest.	Immediate
14	The Petitioners should submit Incremental Power Purchase Cost as per the Regulations 20.1 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission within 28 days of quarter end , for each quarter of Tariff Period 1.4.2017 to 31.3.2020.	Immediate
15	The Petitioners should record and maintain Division wise, Circle wise AT&C Losses and submit the quarterly report to the Commission for FY 2015-16 & FY 2016-17.	Immediate
16	Licensees should provide online facility for submission of application for new connection, name change, load enhancement and load reduction and submit a report on the same.	Within 3 months from the issuance of this Order
17	The Licensees should submit the complete details of the mobile application option for online payments of bills including other services for facilitation to consumers.	Immediate
18	For KESCO, the Commission directs the Petitioner to ensure to convert all the 18 consumers under LMV-3 category into metered connections within one month of the issue of this Order failing which the Commission will resort to take stringent action against the Petitioner.	Within one month from issue of this Order
19	The Commission directs the Licensees to do underground cabling works in Noida and Ghaziabad and must apprise the Commission about the progress of the same on periodic basis. Further, the Licensees should explore similar areas where underground cabling should be done and must execute the same. The undergrounding works of at least 11kV and below network must be completed in one-year time.	Quarterly
20	The Commission directs the Licensees to submit a draft mechanism formulation of incentive or dis-incentive norms at the earliest as formulation of incentive or dis-incentive norms for the concerned officials.	Immediate
21	The Commission directs the Licensees to submit a trajectory of targets for improving Collection Efficiency during the Control Period, at the time of Annual Performance Review (APR)	At the time of APR



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22	The Commission directs the Licensees to procure renewable energy in accordance with Regulation 4 of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 as amended from time to time to meet their obligation and submit a quarterly action plan for achievement of RPO compliance targets for the MYT Control Period. The Licensees are directed to submitted the above figures for FY 2016 - 17 along with the Annual Performance Review.	At the time of APR
23	The Commission directs the Licensees to submit the consumer category and sub-category wise Regulatory Surcharges (separately for Regulatory Surcharge-1 & Regulatory Surcharge-2) billed for each year since the inception at the earliest. Also, the amounts towards deemed recovery of RS -1 & RS – 2 must also be submitted.	Immediate
24	The Commission once again directs the Licensees that they should file FPPCA / Incremental Cost in a timely and regular manner failing which the Commission may have to resort to take strict action against the Licensees.	As per MYT Distribution Tariff Regulation,2014
25	Any other compliances / milestones as per MYT Distribution Tariff Regulations, 2014 and Commissions Orders.	-

- 10.1.4 The Commission would like to mention here that the list given above may not be exhaustive and the Licensee are directed comply with all directives given in the text of this Order.
- 10.1.5 The Commission directs the Licensees to follow the directions scrupulously and send the periodical reports by 30th of every month about the compliance of these directions in the format titled 'Action Taken Report on the Directions Issued by the Commission' provided at Annexure -12.4 of this Order.



11. APPLICABILITY OF THE ORDER

The Licensees, in accordance to Regulation 13.3. of the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 and Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014, shall publish the tariff approved by the Commission in at least two (2) English and two (2) Hindi daily newspapers having wide circulation in the area of supply and shall put up the approved tariff / rate schedule on its internet website and make available for sale, a booklet both in English and Hindi containing such approved tariff / rate schedule, as the case may be, to any person upon payment of reasonable reproduction charges.

The tariff so published shall be in force after seven days from the date of such publication of the tariffs and shall, unless amended or revised, continue to be in force for such period as may be stipulated therein. The Commission may issue clarification / corrigendum / addendum to this Order as it deems fit from time to time with the reasons to be recorded in writing.

(S. K. Agarwal)

Chairman

Date: _____, 2017

Place: Lucknow



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2017-18 to FY 2019-20 and True-up of FY 2014-15*

12. ANNEXURES



12.1 RATE SCHEDULE FOR FY 2017-18

Rate Schedule for FY 2017-18

(Applicable for DVVNL, PVVNL, MVVNL, PuVVNL, KESCO)

A. GENERAL PROVISIONS:

These provisions shall apply to all categories unless specified otherwise and are integral part of the Rate Schedule.

1. NEW CONNECTIONS:

All new connections shall be given in kW, KVA, or BHP as agreed to be supplied by the licensee. Further, if the contracted load (Kw / kVA) of already existing consumer is in fractions then the same shall be treated as next higher kW / kVA load. If the contracted load is in kW and is being converted into kVA, the conversion factor of 0.90 will be used ($kVA = kW / 0.90$) for tariff application purposes and the same shall be rounded off up to two decimal places.

2. READING OF METERS:

As per applicable provisions of Electricity Supply Code 2005 and its amendments.

3. BILLING WHEN METER IS NOT MADE ACCESSIBLE:

A penalty of Rs. 50 / kW or as decided by the Commission through an Order shall be levied for the purposes of Clause 6.2 (c) of the applicable Electricity Supply Code 2005 and its amendments.

4. BILLING IN CASE OF DEFECTIVE METERS:

As per the applicable provisions of Electricity Supply Code 2005 and its amendments.

5. KVAH TARIFF:

'kVAh based tariffs' shall be applicable on all consumers having contracted load of 10 kW / 13.4 BHP and above, under different categories with TVM / TOD / Demand recording meters (as appropriate).



The rates prescribed in different categories in terms of kW and kWh will be converted into appropriate kVA and kVAh by multiplying Fixed / Demand Charges and Energy Charges by an average power factor of 0.90. Similarly, the Fixed / Demand Charges expressed in BHP can be converted into respective kVA rates in accordance with formula given below:

$$\text{Fixed Charges in kVA} = (\text{Fixed Charges in BHP} / 0.746) * 0.90$$

$$\text{Fixed Charges in kVA} = (\text{Fixed Charges in kW} * 0.90)$$

$$\text{Energy Charges in kVAh} = (\text{Energy Charges in kWh} * 0.90)$$

The converted rates (i.e. Energy charge in Rs. / kVAh and Fixed / Demand charges in Rs. / kVA) will be rounded up to two decimal places.

Further, for converting energy slabs of different categories specified in kWh to kVAh, average power factor of 0.90 will be used as a converting factor for converting each energy slab (specified in kWh) into energy slabs (in kVAh). The converted energy slabs (in kVAh) will be rounded to next higher kVAh.

Note 1: In case of kVAh billing only kVAh reading will be used for billing purpose.

Note 2: If the average power factor of a consumer in a billing cycle is leading and is within the range of 0.95 - 1.00, then for tariff application purposes such leading power factor shall be treated as unity. The bills of such consumers shall be prepared on kWh basis. However, if the leading power factor is below 0.95 (lead) then the consumer shall be billed as per the kVAh reading indicated by the meter. However, the aforesaid provision of treating power factor below 0.95 (lead) as the commensurate lagging power factor, for the purposes of billing, shall not be applicable on HV-3 category and shall be treated as unity. Hence, for HV-3, "lag only" logic of the meter should be used which blocks leading kVAh.

6. BILLABLE LOAD / DEMAND:

For all consumers having TVM / TOD / Demand recording meters installed, the billable load / demand during a month shall be the actual maximum load / demand as recorded by the meter (can be in parts of kW or kVA) or 75% of the contracted load / demand (kW or kVA), whichever is higher.

In case the Licensee's meter reader does not note the actual maximum load / demand, then the Licensee will raise the bill at 75% of the contracted load and in cases where the consumer approaches the Licensee with a meter reading but does not provide the proof of actual maximum load / demand displayed on his meter, then in such case the Licensee will raise the bill at 100% of the contracted load.



Further in case a consumer feels that his maximum load / demand reading has been noted wrong, the consumer may approach the licensee with a photo of the actual maximum load / demand reading displayed on his meter of the concerned month. The licensee shall accept the same for the purpose of computation of billable demand, however if the licensee wishes to, it can get the same verified within 5 days.

7. SURCHARGE / PENALTY:

(i) DELAYED PAYMENT:

If a consumer fails to pay his electricity bill by the due date specified therein, a late payment surcharge shall be levied at 1.25% on the dues (excluding late payment surcharge) per month; up-to first three months of delay and subsequently at 2.00% on the dues (excluding late payment surcharge) per month of delay. Late payment surcharge shall be calculated proportionately for the number of days for which the payment is delayed beyond the due date specified in the bill and levied on the unpaid amount of the bill excluding delayed payment surcharge. Imposition of this surcharge is without prejudice to the right of the Licensee to disconnect the supply or take any other measure permissible under the law.

(ii) CHARGES FOR EXCEEDING CONTRACTED DEMAND:

- a) If the maximum load / demand in any month of a **domestic consumer** having TVM / TOD / Demand recording meter exceeds the contracted load / demand, then such excess load / demand shall be levied equal to 100% of the normal rate apart from the normal fixed / demand charge as per the maximum load / demand recorded by the meter. Further, if the consumer is found to have exceeded the contracted load / demand for continuous previous three months, the consumer shall be served a notice of one month advising him to get the contracted load enhanced as per the provisions of the Electricity Supply Code, 2005 and amendments thereof. However, the consumer shall be charged for excess load for the period the load is found to exceed the contracted load. The Licensee shall merge the excess load with the previously sanctioned load, and levy additional charges calculated as above, along with additional security. Subsequent action regarding the increase in contracted load, or otherwise shall be taken only after due examination



of the consumer's reply to the notice and a written order in this respect by the Licensee.

- b) If the maximum load / demand in any month, for the consumers of **other category (except (a) above)** having TVM / TOD / Demand recording meter exceeds the contracted load / demand, then such excess load / demand shall be levied equal to 200% of the normal rate apart from the normal fixed / demand charges as per the maximum load / demand recorded by the meter.
- c) Any surcharge / penalty shall be over and above the minimum charge, if the consumption bill of the consumer is being prepared on the basis of minimum charge.
- d) Provided where no TVM / TOD / Demand recording meter is installed, the excess load / demand charge shall be levied as per the Electricity Supply Code, 2005 as amended from time to time.

8. POWER FACTOR SURCHARGE:

- i. Power factor surcharge shall not be levied where consumer is being billed on kVAh consumption basis.
- ii. It shall be obligatory for all consumers to maintain an average power factor of 0.90 or more during any billing period. No new connections of motive power loads / inductive loads above 3 kW, other than under LMV-1 and LMV-2 category, and / or of welding transformers above 1 kVA shall be given, unless shunt capacitors having I.S.I specifications of appropriate ratings are installed, as described in section H - 'LIST OF POWER FACTOR APPARATUS' of this Rate Schedule.
- iii. In respect of the consumers with or without TVM / TOD / Demand recording meters, excluding consumers under LMV-1 category up to contracted load of 10 kW and LMV-2 category up to contracted load of 5 kW, if on inspection it is found that capacitors of appropriate rating are missing or in-operational and Licensee can prove that the absence of capacitor is bringing down the power factor of the consumer below the obligatory norm of 0.90; then a surcharge of 15% on the 'RATE' shall be levied on such consumers. Licensee may also initiate action under the relevant provisions of the Electricity Act, 2003, as amended from time to time.



Notwithstanding anything contained above, the Licensee also has a right to disconnect the power supply, if the power factor falls below 0.75.

- iv. Power factor surcharge shall however, not be levied during the period of disconnection on account of any reason whatsoever.

9. PROTECTIVE LOAD AND PROTECTIVE LOAD CHARGE:

Consumers getting supply on independent feeder at 11kV & above voltage, emanating from sub-station, may opt for facility of protective load and avail supply during the period of scheduled rostering imposed by the Licensee, except under emergency rostering. An additional charge @ 100% of base demand charges shall be levied on the sanctioned protective load (as per Electricity Supply Code, 2005 and its amendments) per month as protective load charge. However, consumers of LMV-4 (A) - Public Institutions will pay the additional charge @ 25% of base demand charges only. During the period of scheduled rostering, the load shall not exceed the sanctioned protective load. In case the consumer exceeds the sanctioned protective load during scheduled rostering, he shall be liable to pay twice the prescribed additional charges for such excess load.

10. ROUNDING OFF:

All bills will be rounded off to the nearest rupee i.e. up to 49 paisa shall be rounded down to previous rupee and 50 paisa upwards shall be rounded up to next rupee. The difference due to such rounding shall be adjusted in subsequent bills.

11. OPTION OF MIGRATION TO HV-1 & HV-2 CATEGORY:

The consumer under LMV-2 and LMV-4 with contracted load above 50 kW and getting supply at 11 kV & above voltage shall have an option to migrate to the HV-1 category and LMV-6 consumers with contracted load above 50 kW and getting supply at 11 kV & above voltage shall have an option to migrate to the HV-2 category. Furthermore, the consumers shall have an option of migrating back to the original category on payment of charges prescribed in Cost Data Book for change in voltage level.

12. PRE-PAID METERS / AUTOMATIC METER READING SYSTEM:

- (i) Any consumer having prepaid meters shall also be entitled to a discount of 1.25% on the 'RATE' as defined in the Tariff Order.



- (ii) The token charges for code generation for prepaid meters shall be Rs. 10/- per token or as decided by the Commission from time to time.
- 13. CONSUMERS NOT COVERED UNDER ANY RATE SCHEDULE OR EXPRESSLY EXCLUDED FROM ANY CATEGORY:**
- For consumers of light, fan & power (excluding motive power loads) not covered under any rate schedule or expressly excluded from any LMV rate schedule will be categorized under LMV-2.
- 14.** A consumer under metered category may undertake any extension work, in the same premises, on his existing connection without taking any temporary connection as long as his demand does not exceed his contracted demand and the consumer shall be billed in accordance with the tariff applicable to that category of consumer.
- 15. SOLAR WATER HEATER REBATE:**
- If consumer installs and uses solar water heating system of 100 litres or more, a rebate of Rs. 100 /- per month or actual bill for that month whichever is lower shall be given. The same shall be subject to the condition that consumer gives an affidavit to the licensee to the effect that he has installed such system and is in working condition, which the licensee shall be free to verify from time to time. If any such claim is found to be false, in addition to punitive legal action that may be taken against such consumer, the licensee will recover the total rebate allowed to the consumer with 100% penalty and debar him from availing such rebate for the next 12 months.
- 16. REBATE ON PAYMENT ON OR BEFORE DUE DATE:**
- A rebate at the rate of 1.00 % on the 'RATE' shall be given in case the payment is made on or before the due date. The consumers having any arrears in the bill shall not be entitled for this rebate. The consumers who have made advance deposit against their future monthly energy bills shall also be eligible for the above rebate applicable on the 'RATE'.
- 17. REBATE TO CONSUMERS WHO SHIFT FROM UNMETERED TO METERED CONNECTION:**
- In case any rural consumer shifts from unmetered to metered category, he shall be entitled to rebate of 10% on the 'RATE' which shall be applicable from date of installation of meter till end of FY 2017-18.
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18. SCHEME FOR ADVANCE DEPOSIT FOR FUTURE MONTHLY ENERGY BILLS:

If a consumer intends to make advance deposit against his future monthly energy bills, the Licensee shall accept such payment and this amount shall be adjusted only towards his future monthly energy bills. On such advance deposit the consumers shall be paid interest, at the interest rate applicable on security deposit, for the period during which advance exists for each month on reducing balance method and amount so accrued shall be adjusted in the electricity bills which shall be shown separately in the bill of each month. Further, quarterly report regarding the same must be submitted to the Commission.

19. FACILITATION CHARGE FOR ONLINE PAYMENT:

- (i) No transaction charge shall be collected from the consumers making their payment through internet banking.
- (ii) The Licensees shall bear the transaction charges for transactions up to Rs. 4,000 for payment of bill through internet using Credit Card / Debit Card.

20. MINIMUM CHARGE:

Minimum charge is the charge in accordance with the tariff in force from time to time and come into effect only when sum of fixed / demand charges and energy charges are less than a certain prescribed amount i.e. Minimum Charges. For each month, consumer will pay an amount that is higher of the following:

- Fixed / Demand charges (if any) plus Energy Charge on the basis of actual consumption for the month and additional charges such as Electricity Duty, Regulatory Surcharges, FPPCA / Incremental Cost Surcharges and any other charges as specified by the Commission from time to time.
- Monthly minimum charge as specified by the Commission and computed at the contracted load and additional charges such as Electricity Duty, Regulatory Surcharges, FPPCA / Incremental Cost Surcharges and any other charges as specified by the Commission from time to time.

21. EXEMPTION FROM MINIMUM CHARGE FOR USING SOLAR POWER:

If a consumer under LMV-2 (Non - domestic light, fan and power) category installs a rooftop solar plant under the provisions of UPERC (Rooftop Solar PV Grid Interactive Systems Gross / Net Metering) Regulations, 2015 with maximum peak capacity of the grid connected rooftop solar PV system not exceeding 100% of the sanctioned load / demand of the consumer, then such consumer shall be exempted



from payment of monthly minimum charges. Such exemption shall be in force till the time the solar plant remains fully operational.

22. INTEREST ON DUES PAYABLE TO CONSUMER BY THE LICENSEE:

If a consumer becomes eligible for dues from the Licensee which may arise out of rectification / adjustment / settlement of bill(s), then such consumer will also be entitled to get interest at rate applicable for interest on security deposits on all the dues payable by the Licensee to the consumer. The Licensee shall compute the interest amount for the period during which such pending amounts exists and adjust such interest towards the future monthly bills of consumers. After adjustment of the interest amount in a particular month, the balance amount, will be carried forward to next month for adjustment with interest on balance amount. The details of such interest amount and adjustment made during the month shall be shown separately in the bill. Further, separate accounting of interest paid must be maintained by the Licensees.

23. DEFINITION OF RURAL SCHEDULE:

Rural Schedule means supply schedule as defined and notified by State Load Despatch Centre (SLDC), Lucknow from time to time.



B. RETAIL TARIFFS FOR FINANCIAL YEAR 2017-18

RATE SCHEDULE LMV – 1:

DOMESTIC LIGHT, FAN & POWER:

1. APPLICABILITY:

This schedule shall apply to:

- a) Premises for residential / domestic purpose, Accommodation for Paying Guests for Domestic purpose (Excluding Guest Houses), Janata Service Connections, Kutir Jyoti Connections, Jhuggi / Hutments, Places of Worship (e.g. Temples, Mosques, Gurudwaras, Churches) and Electric Crematoria, Shelter Homes, orphanages, old age homes, Institutions run for mentally retarded and forsaken children.
- b) Mixed Loads
 - i. **50 kW and above**
 - a. Registered Societies, Residential Colonies / Townships, Residential Multi-Storied Buildings with mixed loads (getting supply at single point) with the condition that at least 70% of the total contracted load shall be exclusively for the purposes of domestic light, fan and power. The above mixed load, within 70%, shall also include the load required for lifts, water pumps and common lighting,
 - b. Military Engineer Service (MES) for Defence Establishments (Mixed load without any load restriction).
 - ii. **Less than 50 kW**

Except for the case as specified in Regulation 3.3 (e) of Electricity Supply Code, 2005 as amended from time to time, if any portion of the load is utilized for conduct of business for non-domestic purposes then the entire energy consumed shall be charged under the rate schedule of higher charge

2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.



3. RATE:

Rate, gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

(a) Consumers getting supply as per 'Rural Schedule':

Description	Description	Fixed charge	Energy charge)
i) Un-metered	All Load	Rs. 300 / kW / month*	Nil

*Note: The RATE will be Rs. 400 / kW / month from 1st April, 2018 onwards.

Description	Consumption Range	Fixed* Charge	Energy Charge
ii) Metered	For first 100 kWh / month*	Rs. 80.00 / kW / month	Rs. 3.00 / kWh
	For next 101 - 150 kWh / month		Rs. 3.50 / kWh
	For next 151 – 300 kWh / month		Rs. 4.50 / kWh
	For next 301 – 500 kWh / month		Rs. 5.00 / kWh
	For above 500 kWh / month (Starting from 501 st unit)		Rs. 5.50 / kWh

*For consumers with contracted load upto 1 KW and not consuming more than 100 units per month, fixed charges shall be Rs. 50.00 / kW / month

(b) Supply at Single Point for bulk loads (50 kW and above, Supplied at any Voltage):

Description	Fixed Charge	Energy Charge
For Townships, Registered Societies, Residential Colonies, multi-storied residential complexes (including lifts, water pumps and common lighting within the premises) with loads 50 kW and above with the restriction that at least 70% of the total contracted load is meant exclusively for the domestic light, fan and power purposes and for Military Engineer Service (MES) for Defence Establishments (Mixed load without any load restriction).	Rs. 95.00 / kW / Month	Rs. 6.10 / kWh

The body seeking the supply at Single point for bulk loads under this category shall be considered as a deemed franchisee of the Licensee. Such body shall charge not more than 5% additional charge on the above specified 'Rate' from its consumers apart from



other applicable charges such as Regulatory Surcharge, Penalty, Rebate and Electricity Duty on actual basis.

The 5% additional charge shall be towards facilitating supply of electricity to the individual members to recover its expenses towards supply of electricity, distribution loss, electrical maintenance in its supply area, billing, accounting and audit etc.

The deemed franchisee is required to provide to all its consumers and the licensee, a copy of the detailed computation of the details of the amounts realized from all the individual consumers and the amount paid to the licensee for every billing cycle on half yearly basis. If he fails to do so, then the consumers may approach the Consumer Grievance Redressal Forum (CGRF) having jurisdiction over their local area for the redressal of their grievances.

The deemed franchisee shall arrange to get its account(s) audited by a Chartered Accountant mandatorily. The audited accounts will be made available to all the consumers of the deemed franchisee within 3 months of the closure of that financial year. If he fails to do so, then the consumers may approach the Consumer Grievance Redressal Forum (CGRF) having jurisdiction over their local area for the redressal of their grievances.

The deemed franchisee should separately meter the electricity supplied from back up arrangements like DG sets etc. The bill of its consumers should clearly depict the units and rate of electricity supplied through back up arrangement and electricity supplied through Licensee.

The deemed franchisee shall not disconnect the supply of electricity of its consumers on the pretext of defaults in payments related to other charges except for the electricity dues regarding the electricity consumed by its consumers and electricity charges for lift, water lifting pump, streetlight if any, corridor / campus lighting and other common facilities.

In case the deemed franchisee exceeds the contracted load / demand under the provisions of Clause 7(ii) – 'Charges for Exceeding Contracted demand' of the General Provisions of this Rate Schedule, only in such case the deemed franchisee will recover the same from the individual members who were responsible for it on the basis of their individual excess demands.

**(c) OTHER METERED DOMESTIC CONSUMERS:**

1. **Lifeline consumers:** Consumers with contracted load of 1 kW, energy consumption up to 100 kWh / month.

Description	Fixed Charge	Energy Charge
Loads upto 1 kW only and for consumption up to 100 kWh / month	Rs. 50.00 / kW / month	Rs. 3.00 / kWh

2. **Others:** Other than Lifeline consumers (i.e. consumers who do not qualify under the criteria laid above for lifeline consumers.)

Description	Consumption Range	Fixed Charge	Energy Charge
All loads	For first 150 kWh / month	Rs. 100.00 / kW / month	Rs. 4.90 / kWh
	For next 151 - 300 kWh / month		Rs. 5.40 / kWh
	For next 301 – 500 kWh / month		Rs. 6.20 / kWh
	For above 500 kWh / month (Starting from 501 st unit)		Rs. 6.50 / kWh

Note:

For all consumers under this category the maximum demand during the month recorded by the meter has to be essentially indicated in their monthly bills. However, this condition would be mandatory only in case meter reading is done by the Licensee. Accordingly, if the bill is being prepared on the basis of reading being submitted by the consumer then the consumer would not be liable to furnish maximum demand during the month and his bill would not be held back for lack of data of maximum demand.



RATE SCHEDULE LMV- 2:

NON - DOMESTIC LIGHT, FAN AND POWER:

1. APPLICABILITY:

This schedule shall apply to all consumers using electric energy for Light, Fan and Power loads for Non-Domestic purposes, like all type of Shops including Patri Shopkeepers, Hotels, Restaurants, Private Guest Houses, Private Transit Hostels, Private Students Hostels, Marriage Houses, Show-Rooms, Commercial / Trading Establishments, Cinema and Theatres, Banks, Cable T.V. Operators, Telephone Booths / PCO (STD / ISD), Fax Communication Centres, Photo Copiers, Cyber Café, Private Diagnostic Centres including X-Ray Plants, MRI Centres, CAT Scan Centres, Pathologies and Private Advertising / Sign Posts / Sign Boards, Commercial Institutions / Societies, Automobile Service Centres, Coaching Institutes, Private Museums, Power Looms with less than 5 kW load and for all companies registered under the Companies Act, 1956 with loads less than 75 kW.

2. Character and Point of Supply:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate, gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

(a) Consumers getting supply as per 'Rural Schedule'

Description	Description	Fixed charge	Energy charge)
i) Un-metered	All Load	Rs. 1000 / kW / month	Nil
ii) Metered	All Load	Rs. 95 / kW / month	Rs. 5.00 / kWh

**(b) Private Advertising / Sign Posts / Sign Boards / Glow Signs / Flex*:**

For all commercial (road side / roof tops of buildings) advertisement hoardings such as Private Advertising / Sign Posts / Sign Boards / Glow Signs / Flex, the rate of charge shall be as below:

Description	Fixed Charge	Energy Charge
Metered	-	Rs. 18.00 / kWh

**Note: Minimum charge payable by a consumer under the category "(b) Private Advertising / Sign Posts / Sign Boards / Glow Signs / Flex category" shall be Rs. 1800 / kW / Month.*

Note:

1. For application of these rates Licensee shall ensure that such consumption is separately metered.

(c) In all other cases, including urban consumers and consumers getting supply through rural feeders but exempted from scheduled rostering / restrictions or through co-generating radial feeders in villages / towns.

Contracted Load	Fixed Charge
Up to 2 kW	Rs. 300.00 / kW / month
Above 2 kW to 4 kW	Rs. 350.00 / kW / month
Above 4 kW	Rs. 430.00 / kW / month

Consumption Range	Energy Charge
For first 300 kWh / month	Rs. 7.00 / kWh
For next 301 – 1000 kWh / month	Rs. 8.00 / kWh
For above 1000 kWh / month (Starting from 1001 st unit)	Rs. 8.30 / kWh

Note: Minimum charge payable by a consumer under the category "(c) In all other cases" shall be Rs. 575 / kW / month (From April to September) and Rs. 425 / kW / month (From October to March).



Note:

For all consumers under this category the maximum demand during the month recorded by the meter has to be essentially indicated in their monthly bills. However, this condition would be mandatory only in case meter reading is done by the Licensee. Accordingly, if the bill is being prepared on the basis of reading being submitted by the consumer then the consumer would not be liable to furnish maximum demand during the month and his bill would not be held back for lack of data on maximum demand.

4. REBATE TO POWER LOOMS:

Rebate to Power Loom consumers shall be applicable in accordance with the Government order dated June 14, 2006 and the Commission's order dated July 11, 2006 subject to adherence of provision of advance subsidy.



RATE SCHEDULE LMV -3:

PUBLIC LAMPS:

1. APPLICABILITY:

This schedule shall apply to Public Lamps including Street Lighting System, Road Traffic Control Signals, Lighting of Public Parks, etc. The street lighting in Harijan Bastis and Rural Areas are also covered by this rate schedule.

2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate gives the fixed and energy charges (including the TOD rates as applicable to the hour of operation) at which the consumer shall be billed during the billing period applicable to the category:

(a) Un-metered Supply:

Description	Gram Panchayat	Nagar Palika and Nagar Panchayat	Nagar Nigam
To be billed on the basis of total connected load calculated as the summation of individual points	Rs. 2000 / kW or part thereof per month	Rs. 3000 / kW or part thereof per month	Rs. 4000 / kW or part thereof per month



(b) Metered Supply:

Description	Gram Panchayat		Nagar Palika and Nagar Panchayat		Nagar Nigam	
	Fixed Charges	Energy Charges	Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
All loads	Rs. 160 / kW / month	Rs. 7.00 / kWh	Rs. 200 / kW / month	Rs. 7.50 / kWh	Rs. 220 / kW / month	Rs. 7.75 / kWh

TOD Rates applicable for the metered supply (% of Energy Charges):

18:00 hrs – 06:00 hrs	0%
06:00 hrs – 18:00 hrs	(+) 20%

4. For 'Maintenance Charges', 'Provision of Lamps' and 'Verification of Load' Point refer section E - 'PUBLIC LAMPS' of this Rate Schedule.



RATE SCHEDULE LMV- 4:

LIGHT, FAN & POWER FOR PUBLIC INSTITUTIONS AND PRIVATE INSTITUTIONS:

1. APPLICABILITY:

Applicable for load less than 75 kW.

LMV- 4 (A) - PUBLIC INSTITUTIONS:

This schedule shall apply to:

- (a) Government Hospitals / Government Research Institutions / Offices of the Government Organizations other than companies registered under Companies Act 1956.
- (b) Government & Government aided (i) Educational Institutions (ii) Hostels (iii) Libraries
- (c) Religious and charitable trusts & Institutions having a valid registration under Section 12 AA & 30G issued by the Income Tax department including hospitals, colleges and those providing services free of cost or at the charges / structure of charges not exceeding those in similar Government operated institutions.
- (d) Railway Establishments (excluding railway traction, industrial premises & Metro) such as Booking Centres, Railway Stations & Railway Research and Development Organization, Railway rest houses, Railway holiday homes, Railway inspection houses.
- (e) All India Radio and Doordarshan
- (f) Guest houses of Government., Semi-Government, Public Sector Undertaking Organisations

LMV-4 (B) - PRIVATE INSTITUTIONS:

This schedule shall apply to non-Government hospitals, nursing homes / dispensaries / clinics, private research institutes, and schools / colleges / educational institutes & charitable institutions / trusts not covered under (A) above.



2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate, gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

Description	Contracted Load	Fixed Charge
(A) For Public Institutions	Up to 2 kW	Rs. 275 / kW / month
	Above 2 kW to 4 kW	Rs. 290 / kW / month
	Above 4 kW	Rs. 300 / kW / month
(B) For Private Institutions	Up to 3 kW	Rs. 310 / kW / month
	Above 3 kW	Rs. 390 / kW / month

Description	Consumption Range	Energy Charge
(A) For Public Institutions	For first 1000 kWh / month	Rs. 7.80/ kWh
	For next 1001 – 2000 kWh / month	Rs. 8.10/ kWh
	For above 2000 kWh / month (Starting from 2001 st unit)	Rs. 8.30/ kWh
(B) For Private Institutions	For first 1000 kWh / month	Rs. 8.60 / kWh
	For above 1000 kWh / month (Starting from 1001 st unit)	Rs. 8.90 / kWh



RATE SCHEDULE LMV- 5:

SMALL POWER FOR PRIVATE TUBE WELLS / PUMPING SETS FOR IRRIGATION PURPOSES:

1. APPLICABILITY:

This schedule shall apply to all power consumers getting supply as per Rural / Urban Schedule for Private Tube-wells / Pumping Sets for irrigation purposes having a contracted load up to 25 BHP and for additional agricultural processes confined to Chaff-Cutter, Thresher, Cane Crusher and Rice Huller. All new connections under this category shall necessarily have the ISI marked energy efficient mono-bloc pump sets with capacitors of adequate rating to qualify for the supply. All existing pump sets shall be required to install capacitors of adequate rating.

2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

(A) For consumers getting supply as per Rural Schedule:

(i) Un-metered Supply

Fixed Charge	Energy Charge
Rs. 150 / BHP / month	Nil
Consumer under this category will be allowed a maximum lighting load of 120 Watts.	

**(ii) Metered Supply**

Fixed Charge	Minimum Charges	Energy Charge
Rs. 60.00 / BHP / month	Rs. 150 / BHP / month	Rs. 1.75 / kWh

Note: Minimum amount payable by a consumer under the category "Rural Schedule (Metered Supply) shall be Rs. 150 per BHP per month, till the installation of the meter. Regulatory Surcharge, Duty, Taxes etc. will be payable extra.

(iii) Energy Efficient Pumps

Fixed Charge	Minimum Charges	Energy Charge
Rs. 60.00 / BHP / month	Rs. 130 / BHP / month	Rs. 1.50 / kWh

Note: Minimum amount payable by a consumer under the category "Rural Schedule (Energy Efficient Pumps) shall be Rs. 130 per BHP per month, till the installation of the meter. Regulatory Surcharge, Duty, Taxes etc. will be payable extra

(B) For consumers getting supply as per **Urban Schedule** (Metered Supply) including consumers getting supply through rural feeders exempted from scheduled rostering or through co-generating radial feeders in villages and towns.

Fixed Charge	Minimum Charges	Energy Charge
Rs. 120.00 / BHP / month	Rs. 200 / BHP / month	Rs. 5.50 / kWh

Note: Minimum amount payable by a consumer under the category "Urban Schedule (Metered Supply) shall be Rs. 200 per BHP per month, till the installation of the meter. Regulatory Surcharge, Duty, Taxes etc. will be payable extra.

For PTW consumers of Bundelkhand Area located in Gram Sabha, the minimum amount payable by a consumer shall be Rs. 150.00 per BHP per month, till the installation of the meter. Regulatory Surcharge, Duty, Taxes etc. will be payable extra.



RATE SCHEDULE LMV– 6:

SMALL AND MEDIUM POWER:

1. APPLICABILITY:

This schedule shall apply to all consumers of electrical energy having a contracted load less than 100 HP (75 kW) for industrial / processing or agro-industrial purposes, power loom (load of 5 kW and above) and to other power consumers, not covered under any other rate schedule. Floriculture, Mushroom and Farming units with contracted load less than 100 BHP (75kW) shall also be covered under this rate schedule. This schedule shall also apply to pumping sets above 25 BHP.

2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate, gives the fixed and energy charges (including the TOD rates as applicable to the hour of operation) at which the consumer shall be billed during the billing period applicable to the category:

(A) Consumers getting supply other than Rural Schedule:

Contracted Load	Fixed Charge
Up to 4 kW	Rs. 245 / kW / month
Above 4 kW to 9 kW	Rs. 255 / kW / month
Above 9 kW	Rs. 275 / kW / month

Consumption Range	Energy Charge
Up to 1000 kWh / month	Rs. 7.00 / kWh on entire consumption
Up to 2000 kWh / month	Rs. 7.35 / kWh on entire consumption
For above 2000 kWh / month	Rs. 7.60 / kWh on entire consumption

**TOD Structure:****Summer Months (April to September) ***

Hours	% of Energy Charges
05:00 hrs – 11:00 hrs	(-) 15%
11:00 hrs – 17:00 hrs	0%
17:00 hrs – 23:00 hrs	(+) 15%
23:00 hrs – 05:00 hrs	0%

Winter Months (October to March) *

Hours	% of Energy Charges
05:00 hrs – 11:00 hrs	0%
11:00 hrs – 17:00 hrs	0%
17:00 hrs – 23:00 hrs	(+) 15%
23:00 hrs – 05:00 hrs	(-) 15%

**Note: As the change in TOD structure may require reprogramming / installation of software in the TOD meters, the above rates will be applicable as and when reprogramming / installation of software of the consumer TOD meters has been done. However, the Licensee shall complete this work within a period of 2 months.*

(B) Consumers getting supply as per Rural Schedule:

The consumer under this category shall be entitled to a rebate of 7.5% on 'RATE (Excluding the TOD rates as applicable to the hour of operation)' as given for 'Consumers getting supply other than Rural Schedule'. Further, no 'TOD RATE' shall be applicable for this category.

4. PROVISIONS RELATED TO SEASONAL INDUSTRIES:

Seasonal industries will be determined in accordance with the criteria laid down below. No exhaustive list can be provided but some examples of industries exhibiting such characteristics are sugar, ice, rice mill, kolhu and cold storage. The industries which operate during certain period of the year, i.e. have seasonality of operation, can avail the benefits of seasonal industries provided:



- i) The load of such industry is above 13.4 BHP (for motive power loads) & 10 kW (other loads) and have Tri-vector Meters / TOD meters installed at their premises, however for Kolhu consumers such load is of 10 HP or above.
- ii) The continuous period of operation of such industries shall be at least 4 (four) months but not more than 9 (nine) months in a financial year.
- iii) Any prospective consumer, desirous of availing the seasonal benefit, shall specifically declare his season at the time of submission of declaration / execution of agreement mentioning the period of operation unambiguously.
- iv) The seasonal period once notified cannot be reduced during the next consecutive 12 months. The off-season tariff is not applicable to composite units having seasonal and other category loads.

The off-season tariff is also not available to those units who have captive generation exclusively for process during season and who avail Licensees supply for miscellaneous loads and other non-process loads.
- v) The consumer opting for seasonal benefit has a flexibility to declare his off-season maximum demand subject to a maximum of 25% of the contracted demand. The tariff rates (demand charge per kW / kVA and energy charge per kWh / kVAh) for such industries during off-season period will be the same as for normal period. Further, during the off-season period, fixed charges shall be levied on the basis of maximum demand recorded by the meter (not on normal billable demand or on percentage contracted demand). Rates for the energy charges shall however be the same as during the operational season. Further, first violation in the off-season would attract normal billable demand charges and energy charges calculated at the unit rate 50% higher than the applicable tariff during normal period but only for the month in which the consumer has defaulted. However, on second violation in the off-season, the consumer will be charged at the normal billable demand for the entire off-season and energy charges calculated at the unit rate 50% higher than the applicable tariff during normal period.



5. REBATE TO POWER LOOMS:

Rebate to Power Loom consumers shall be applicable in accordance with the Government order dated June 14, 2006 and the Commission's order dated July 11, 2006 subject to adherence of provision of advance subsidy.

6. FACTORY LIGHTING:

The electrical energy supplied shall also be utilized in the factory premises for lights, fans, coolers, etc. which shall mean and include all energy consumed for factory lighting in the offices, the main factory building, stores, time keeper's office, canteen, staff club, library, crèche, dispensary, staff welfare centres, compound lighting, etc. No separate connection for the same shall be provided.



RATE SCHEDULE LMV- 7:

PUBLIC WATER WORKS:

1. APPLICABILITY:

This schedule shall apply to Public Water Works, Sewage Treatment Plants and Sewage Pumping Stations functioning under Jal Sansthan, Jal Nigam or other local bodies.

2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

(A) Consumers getting supply other than "Rural Schedule":

Rate gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

Fixed Charge	Energy Charge
Rs. 350.00 / kW / month	Rs. 8.30 / kWh

(B) Consumers getting supply as per "Rural Schedule":

The consumer under this category shall be entitled to a rebate of 7.5% on 'RATE' as given for 'Consumer getting supply other than Rural Schedule'.



RATE SCHEDULE LMV – 8:

STATE TUBE WELLS / PANCHAYTI RAJ TUBE WELL & PUMPED CANALS:

1. APPLICABILITY:

- (i) This schedule shall apply to supply of power for all State Tube wells, including Tube wells operated by Panchayti Raj, World Bank Tube wells, Indo Dutch Tube wells, Pumped Canals and Lift Irrigation schemes with contracted load less than 100 BHP (75 kW).
- (ii) Laghu Dal Nahar having load above 100 BHP (75 kW).

2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

Description	Fixed Charge	Energy Charge
Metered	Rs. 300.00 / BHP / month	Rs. 7.40 / kWh
Un-metered	Rs. 3000.00 / BHP / month	Nil

4. For finding out net load during any quarter of the year for this category refer section F - 'STATE TUBE – WELLS' of this Rate Schedule.



RATE SCHEDULE LMV – 9:

TEMPORARY SUPPLY:

1. APPLICABILITY:

A) Un-metered Supply for Illumination / Public Address / Temporary Shops in Melas:

This schedule shall apply to temporary supply of light, fan & power up to 20 KW, Public address system and illumination loads during functions, ceremonies and festivities and temporary shops, not exceeding three months.

B) Metered Supply for all other purposes:

This schedule shall apply to all temporary supplies of light, fan and power load for the purpose other than mentioned in (A) above.

This schedule shall also apply for power taken for construction purposes including civil work by all consumers and Govt. Departments.

2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE (SEPARATELY FOR EACH POINT OF SUPPLY):

Rate gives the fixed and energy charges at which the consumer shall be billed during the billing period applicable to the category:

A. Un-metered:

(i) Fixed charges for illumination / public address / ceremonies for load up to 20 kW per connection plus Rs. 100 per kW per day for each additional kW.	Rs. 4250.00 / day
(ii) Fixed charges for temporary shops set-up during festivals / melas or otherwise and having load up to 2KW	Rs. 500.00 / day / shop



B. Metered*:

Description	Energy Charge
Individual Residential construction	Rs. 7.50 / kWh
	From 3 rd year onwards: Base Tariff applicable for current year plus additional 10% of the applicable Energy Charge.
Others	Rs. 8.50 / kWh
	From 3 rd year onwards: Base Tariff applicable for current year plus additional 10% of the applicable Energy Charge.

**Minimum bill payable by a consumer under the category "Metered" shall be Rs. 400.00 / kW / week.*

Note: Charge as specified at section A - 'GENERAL PROVISIONS', shall be paid by the consumer in advance.



RATE SCHEDULE LMV- 10:

DEPARTMENTAL EMPLOYEES AND PENSIONERS:

1. APPLICABILITY:

This schedule shall apply only to such employees (including the cases of retired / voluntary retired or deemed retired) of Licensees / successor entities of erstwhile Uttar Pradesh State Electricity Board (UPSEB), who own electricity connection in their own name and opt for the same for their own use for light, fan and power for domestic appliances, where the energy is being fed directly from Licensee mains. The Schedule shall also apply to spouse of employees served under Licensees / successor entities of erstwhile UPSEB.

2. RATE:

For all such consumers LMV-1 rate schedule will be applicable. However, the Licensees are authorised to provide “rebate” as they deem fit to the consumers eligible to get supply under this category.

3. ELECTRICITY DUTY:

Electricity duty on the above shall be levied in addition at the rates as may be notified by the State Government from time to time.

4. OTHER PROVISIONS:

- (i) For serving / retired employees and their spouse, the supply will only be given at one place where Licensee’s mains exist. The electric supply under this tariff will be given only at one place, within the area of erstwhile UPSEB / its successor companies.
- (ii) Concerned executive engineers will take an affidavit from all employees and pensioners that the electricity supplied to their premises is being used exclusively for the purpose of domestic consumption of themselves and their dependants. It will have to be certified by the employees/pensioners



that such electricity is not being used for any other purpose or to any individual to whom his house has been rented out. Without any prejudice to any legal action as provided in the legal framework, any misuse to above effect shall invalidate him from the facility of LMV-10 on permanent basis.

- (iii) In the event of transfer of the employee, this tariff shall be applied at the new place of posting only when a certificate has been obtained from the concerned Executive Engineer of the previous place of posting, that the supply under this tariff has been withdrawn at previous place of posting. Further, the employee shall also be required to submit an affidavit that he is not availing the benefit of LMV-10 connection anywhere else in the state.
- (iv) Those who are not availing this tariff shall also give a declaration to this effect. This declaration shall be pasted / kept in his service book / personal file / Pensioners record. If the declaration is found wrong, necessary action against the employee shall be taken as per the provisions of service rules. If declaration has already been given at the present place of posting then further declaration is not necessary due to this revision. Pensioners shall also have to give a similar declaration for availing departmental tariff at only one place. In case this declaration is found wrong, this tariff shall be withdrawn forever.
- (v) No other concession shall be admissible on this tariff.
- (vi) The schedule of miscellaneous charges as appended with Licensee's General Tariff as amended from time to time and Electricity Supply (Consumers) Regulation, 1984 as enforced from time to time shall also be applicable on the employee / pensioner receiving supply under this schedule.
- (vii) Retired employees drawing pension from the Treasury / Bank will have to pay the monthly electricity charges as per the rates given in the rate schedule applicable to their category.



RATE SCHEDULE HV- 1:

NON - INDUSTRIAL BULK LOADS

1. APPLICABILITY:

This rate schedule shall apply to:

- (a) Commercial loads (as defined within the meaning of LMV-2) with contracted load of 75 kW & above and getting supply at single point on 11 kV & above voltage levels.
- (b) Private institutions (as defined within the meaning of LMV-4 (b)) with contracted load of 75 kW & above and getting supply at single point on 11 kV & above voltage levels.
- (c) Non domestic bulk power consumer (other than industrial loads covered under HV-2) with contracted load 75 kW & above and getting supply at single point on 11 kV & above voltage levels and feeding multiple individuals (owners / occupiers / tenants of some area within the larger premises of the bulk power consumer) through its own network and also responsible for maintaining distribution network.
- (d) Public institutions (as defined within the meaning of LMV-4 (a)) with contracted load of 75 kW & above and getting supply at single point on 11 kV & above voltage levels. The institution / consumer seeking the supply at Single point for non-industrial bulk loads under this category shall be considered as a deemed franchisee of the Licensee.
- (e) Registered Societies, Residential Colonies / Townships, Residential Multi-Storied Buildings with mixed loads (getting supply at single point) with contracted load 75 kW & above and getting supply at single point on 11 kV & above voltage levels and having less than 70% of the total contracted load exclusively for the purposes of domestic light, fan and power. Figure of 70%, shall also include the load required for lifts, water pumps and common lighting,
- (f) For Offices / Buildings / Guesthouses of UPPCL / UPRVUNL / UPJVNL / UPPTCL / Distribution Licensees having loads above 75 kW and getting supply at 11 kV & above voltages.



2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate, gives the demand and energy charges at which the consumer shall be billed during the billing period applicable to the category:

- (a) **Commercial Loads / Private Institutions / Non - domestic bulk power consumer with contracted load 75 kW & above and getting supply at Single Point on 11 kV & above:**

	For supply at 11kV		For supply above 11 kV	
Contracted Load	Upto 100 kVA	Above 100 kVA	Upto 100 kVA	Above 100 kVA
Demand Charges	Rs. 360.00 / kVA / month	Rs. 400.00 / kVA / month	Rs. 360.00 / kVA / month	Rs. 400.00 / kVA / month

	For supply at 11kV		For supply above 11 kV	
Consumption Range	For first 2500 kVAh / month	For above 2500 kVAh / month (Starting from 2501 st kVAh)	For first 2500 kVAh / month	For above 2500 kVAh / month (Starting from 2501 st kVAh)
Energy Charges	Rs. 7.90 / kVAh	Rs. 8.25 / kVAh	Rs. 7.70 / kVAh	Rs. 8.05 / kVAh

- (b) **Public Institutions, Registered Societies, Residential Colonies / Townships, Residential Multi-Storied Buildings including Residential Multi-Storied Buildings with contracted load 75 kW & above and getting supply at Single Point on 11 kV & above voltage levels:**

	For supply at 11kV		For supply above 11 kV	
Contracted Load	Upto 100 kVA	Above 100 kVA	Upto 100 kVA	Above 100 kVA
Demand Charges	Rs. 325.00 / kVA / month	Rs. 340.00 / kVA / month	Rs. 325.00 / kVA / month	Rs. 340.00 / kVA / month



	For supply at 11kV		For supply above 11 kV	
Consumption Range	For first 2500 kVAh / month	For above 2500 kVAh / month (Starting from 2501 st kVAh)	For first 2500 kVAh / month	For above 2500 kVAh / month (Starting from 2501 st kVAh)
Energy Charges	Rs. 7.50 / kVAh	Rs. 7.70 / kVAh	Rs. 7.30 / kVAh	Rs. 7.50 / kVAh

The body seeking the supply at Single point for bulk loads under this category shall be considered as a deemed franchisee of the Licensee. Such body shall charge not more than 5% additional charge on the above specified 'Rate' from its consumers apart from other applicable charges such as Regulatory Surcharge, Penalty, Rebate and Electricity Duty on actual basis.

The 5% additional charge shall be towards facilitating supply of electricity to the individual members to recover its expenses towards supply of electricity, distribution loss, electrical maintenance in its supply area, billing, accounting and audit etc.

The deemed franchisee is required to provide to all its consumers and the licensee, a copy of the detailed computation of the details of the amounts realized from all the individual consumers and the amount paid to the licensee for every billing cycle on half yearly basis. If he fails to do so, then the consumers may approach the Consumer Grievance Redressal Forum (CGRF) having jurisdiction over their local area for the redressal of their grievances.

The deemed franchisee shall arrange to get its account(s) audited by a Chartered Accountant mandatorily. The audited accounts will be made available to all the consumers of the deemed franchisee within 3 months of the closure of that financial year. If he fails to do so, then the consumers may approach the Consumer Grievance Redressal Forum (CGRF) having jurisdiction over their local area for the redressal of their grievances.

The deemed franchisee should separately meter the electricity supplied from back up arrangements like DG sets etc. The bill of its consumers should clearly depict



the units and rate of electricity supplied through back up arrangement and electricity supplied through Licensee.

The deemed franchisee shall not disconnect the supply of electricity of its consumers on the pretext of defaults in payments related to other charges except for the electricity dues regarding the electricity consumed by its consumers and electricity charges for lift, water lifting pump, streetlight if any, corridor / campus lighting and other common facilities.

In case the deemed franchisee exceeds the contracted load / demand under the provisions of Clause 7(ii) – ‘Charges for Exceeding Contracted demand’ of the General Provisions of this Rate Schedule, only in such case the deemed franchisee will recover the same from the individual members who were responsible for it on the basis of their individual excess demands.



RATE SCHEDULE HV- 2:

LARGE AND HEAVY POWER:

1. APPLICABILITY:

This rate schedule shall apply to all consumers with contracted load of 75 kW (100 BHP) and above for industrial and / or processing purposes as well as to Arc / induction furnaces, rolling / re-rolling mills, mini-steel plants and Floriculture, Mushroom and Farming units and to any other HT consumer not covered under any other rate schedule.

Supply to Induction and Arc furnaces shall be made available only after ensuring that the loads sanctioned are corresponding to the load requirement of tonnage of furnaces. The minimum load of one-ton furnace shall in no case be less than 400 kVA and all loads will be determined on this basis. No supply will be given on loads below this norm.

For all HV-2 consumers, conditions of supply, apart from the rates, as agreed between the Licensee and the consumer shall continue to prevail as long as they are in line with the existing Regulations & Acts.

2. CHARACTER AND POINT OF SUPPLY:

As per the applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate, gives the demand and energy charges (including the TOD rates as applicable to the hour of operation) at which the consumer shall be billed during the billing period applicable to the category:

**(A) Urban Schedule:**

	For supply up to 11 kV	For supply above 11 kV and up to 66 kV	For supply above 66 kV and up to 132 kV	For supply above 132 kV
BASE RATE				
Demand Charges	Rs. 250.00 / kVA / month	Rs. 240.00 / kVA / month	Rs. 220.00 / kVA / month	Rs. 220.00 / kVA / month
Energy Charges	Rs. 6.65 / kVAh	Rs. 6.35 / kVAh	Rs. 6.15 / kVAh	Rs. 5.95 / kVAh

TOD Structure:**Summer Months (April to September) ***

Hours	% of Energy Charges
05:00 hrs – 11:00 hrs	(-) 15%
11:00 hrs – 17:00 hrs	0%
17:00 hrs – 23:00 hrs	(+) 15%
23:00 hrs – 05:00 hrs	0%

Winter Months (October to March) *

Hours	% of Energy Charges
05:00 hrs – 11:00 hrs	0%
11:00 hrs – 17:00 hrs	0%
17:00 hrs – 23:00 hrs	(+) 15%
23:00 hrs – 05:00 hrs	(-) 15%

**Note: As the change in TOD structure may require reprogramming / installation of software in the TOD meters, the above rates will be applicable as and when reprogramming / installation of software of the consumer TOD meters has been done. However, the Licensee shall complete this work within a period of 2 months.*

(B) Rural Schedule:

This schedule shall be applicable only to consumers getting supply up to 11 kV as per 'Rural Schedule'. The consumer under this category shall be entitled to a



rebate of 7.5% on 'BASE RATE' as given for 11 kV consumers under urban schedule. Further, no 'TOD RATE' shall be applicable for this category.

(C) Consumers already existing under HV-2 category with metering arrangement at low voltage:

Existing consumer under HV-2 with metering at 0.4 kV shall be required to pay as per schedule applicable to 11 kV consumers under HV-2 category.

4. PROVISIONS RELATED TO SEASONAL INDUSTRIES:

Seasonal industries will be determined in accordance with the criteria laid down below. No exhaustive list can be provided but some examples of industries exhibiting such characteristics are sugar, ice, rice mill and cold storage. The industries which operate during certain period of the year, i.e. have seasonality of operation, can avail the benefits of seasonal industries provided:

- i. The continuous period of operation of such industries shall be at least 4 (four) months but not more than 9 (nine) months in a financial year.
- ii. Any prospective consumer, desirous of availing the seasonal benefit, shall specifically declare his season at the time of submission of declaration / execution of agreement mentioning the period of operation unambiguously.
- iii. The seasonal period once notified cannot be reduced during the next consecutive 12 months. The off-season tariff is not applicable to composite units having seasonal and other category loads.
- iv. The off-season tariff is also not available to those units who have captive generation exclusively for process during season and who avail Licensees supply for miscellaneous loads and other non-process loads.
- v. The consumer opting for seasonal benefit has a flexibility to declare his off seasonal maximum demand subject to a maximum of 25% of the contracted demand. The tariff rates (demand charge per kW / kVA and energy charge per kWh / kVAh) for such industries during off-season period will be the same as for normal period. Further, during the off season fixed charges shall be levied on the basis of maximum demand recorded by the meter (not on normal billable demand or on percentage contracted demand). Rates for the energy charges shall however be the same as during the operational season. Further,



first violation in the off-season would attract full billable demand charges and energy charges calculated at the unit rate 50% higher than the applicable tariff during normal period but only for the month in which the consumer has defaulted. However, on second violation in the off-season, the consumer will forfeit the benefit of seasonal rates for the entire season and energy charges shall be calculated at the unit rate 50% higher than the applicable tariff during normal period.

5. FACTORY LIGHTING:

The electrical energy supplied shall also be utilized in the factory premises for lights, fans, coolers, etc. which shall mean and include all energy consumed for factory lighting in the offices, the main factory building, stores, time keeper's office, canteen, staff club, library, crèche, dispensary, staff welfare centres, compound lighting, etc. No separate connection for the same shall be provided.



RATE SCHEDULE HV – 3:

A: RAILWAY TRACTION:

1. APPLICABILITY:

This schedule shall apply to the Railways for Traction loads only.

2. CHARACTER OF SERVICE AND POINT OF SUPPLY:

Alternating Current, single phase, two phase or three phase, 50 cycles, 132 kV or below depending on the availability of voltage of supply and the sole discretion of the Licensee. The supply at each sub-station shall be separately metered and charged.

3. RATE:

Rate, gives the demand and energy charges at which the consumer shall be billed for consumption during the billing period applicable to the category:

Description	Charges
(a) Demand Charge	
For supply at and above 132 kV	Rs. 365.00 / kVA / month
Below 132 kV	Rs. 375.00 / kVA / month
(b) Energy Charge (all consumption in a month)	
For supply at and above 132 kV	Rs. 7.65 / kVAh
Below 132 kV	Rs. 7.90 / kVAh

Note: Minimum charge payable by a consumer under this category shall be Rs. 850.00 / kVA / month.

4. DETERMINATION OF THE DEMAND:

Demand measurement at a particular time will be made on basis of simultaneous maximum demands recorded in summation kilovolt-ampere meter installed at contiguous substation serviced by same grid transformer.



The maximum demand for any month shall be defined as the highest average load measured in Kilo Volt amperes during any fifteen consecutive minutes period of the month.

B: METRO RAIL CORPORATION:

1. APPLICABILITY:

This schedule shall apply to the Metro Rail Corporation.

2. CHARACTER OF SERVICE AND POINT OF SUPPLY:

Alternating Current, single phase, two phase or three phase, 50 cycles, 132 kV or below depending on the availability of voltage of supply and the sole discretion of the Licensee. The supply at each sub-station shall be separately metered and charged.

3. RATE:

Rate, gives the energy charges at which the consumer shall be billed for consumption during the billing period applicable to the category:

Demand Charges	Rs. 200.00 / kVA / month
Energy Charges	Rs. 6.50 / kVAh

Note: Minimum charge payable by a consumer under this category shall be Rs. 800 / kVA / month.

- Penalty @ Rs. 540 / kVA / month will be charged on excess demand, if maximum demand exceeds contracted load.

4. DETERMINATION OF THE DEMAND:

Demand measurement shall be made by suitable kilovolt ampere indicator at the point of delivery. The demand for any month shall be defined as the highest average load measured in Kilo Volt Amperes during any fifteen consecutive minutes period of the month.



RATE SCHEDULE HV – 4:

LIFT IRRIGATION WORKS:

1. APPLICABILITY:

This Rate Schedule shall apply to medium and large pumped canals with contracted load of 100 BHP (75kW) and above.

2. CHARACTER OF SERVICE & POINT OF SUPPLY:

As per applicable provisions of Electricity Supply Code, 2005 and its amendments.

3. RATE:

Rate, gives the demand and energy charges at which the consumer shall be billed during the billing period applicable to the category:

(a) Demand Charges:

Voltage Level	Rate of Charge
For supply at 11 kV	Rs. 320.00 / kVA / month
For supply at 33 kV and 66 kV	Rs. 310.00 / kVA / month
For supply at 132 kV	Rs. 300.00 / kVA / month

(b) Energy Charges:

Voltage Level	Rate of Charge
For supply at 11 kV	Rs. 7.70 / kVAh
For supply at 33 kV and 66 kV	Rs. 7.55 / kVAh
For supply at 132 kV	Rs. 7.35 / kVAh

c) Minimum Charges:

Minimum charge payable by a consumer under this category shall be Rs. 1000.00 / kVA / month irrespective of supply voltage



4. DETERMINATION OF THE DEMAND:

Demand measurement shall be made by suitable kilovolt ampere indicator at the point of supply. In the absence of suitable demand indicator, the demand as assessed by the Licensee shall be final and binding. If, however, the number of circuits is more than one, demand and energy measurement will be done on the principle of current transformer summation metering.



C. REGULATORY SURCHARGE RATES:

DISCOM	Regulatory Surcharge Rate (%)**
DVVNL	4.28%
PVVNL	0.00%
MVVNL	4.28%
PuVVNL	4.28%
KESCO	3.91%- LMV-1 and LMV-5 category 4.13%- for all others expect LMV-1 and LMV-5 category

** This surcharge shall be applicable on the 'RATE' as defined in the Rate Schedule above.



D. PUBLIC LAMPS:

1. MAINTENANCE CHARGE :

In addition to the “Rate of Charge” mentioned above, a sum of Rs. 10.00 per light point per month will be charged for operation and maintenance of street lights. This Maintenance Charge will cover only labour charges, where all required materials are supplied by the local bodies. However, the local bodies will have an option to operate and maintain the public lamps themselves and in such case, no maintenance charge shall be recovered. This charge shall not apply to the consumers with metered supply.

2. PROVISION OF LAMPS:

Streets where distribution mains already exist, the Licensee will provide a separate single-phase, 2-wire system for the street lights including light fitting and incandescent lamps of rating not exceeding 100 Watts each. In case the above maintenance charge is being levied, the labour involved in replacements or renewal of lamps shall be provided by the Licensee. However, all the required materials shall be provided by the local bodies. The cost of all other types of street light fittings shall be paid by the local bodies.

The cost involved in extension of street light mains (including cost of sub - stations, if any) in areas where distribution mains of the Licensee have not been laid, will be paid for by the local bodies.

3. VERIFICATION OF LOAD:

The number of light points including that of traffic signals together with their wattage will be verified jointly by the representatives of Licensee and Town Area / Municipal Board / Corporation at least once in a year. However, additions will be intimated by the Town Area / Municipal Board / Corporation on monthly basis. The Licensee will carry out the checking of such statements to satisfy themselves of the correctness of the same. The monthly bills shall be issued on the basis of verified number of points at the beginning of the year and additions, if any, during the months as intimated above. The difference, if any, detected during joint verification in the following year shall be reconciled and supplementary bills shall be issued.

Further, if the authorized representative of concerned local body does not participate in the work of verification of light points, a notice will be sent by



concerned Executive Engineer in writing to such local bodies for deputing representative on specific date(s), failing which the verification of the light points shall be done by the concerned representative of Licensee which shall be final and binding upon such local body.

E. STATE TUBE-WELLS

NET LOAD:

- (i) Net load hereinafter shall mean the total load connected during the quarter less the load of failed and abandoned tube-wells accounted for during that quarter.
- (ii) The connected load as on 31st March of the preceding year will be worked out on the basis of 'Net load' reported by the Executive Engineers of concerned Divisions after joint inspection and verification of the same by the concerned officers of the State Government / Panchayat, joint meter reading shall also be taken during the inspection on quarterly basis. The monthly bills for three months of the first quarter will be issued on the connected load worked out as such at the above rates. The same process shall be repeated for subsequent quarters.



F. SCHEDULE OF MISCELLANEOUS CHARGES

Sl. No.	NATURE OF CHARGES	UNIT	RATES (₹)
1.	Checking and Testing of Meters:		
	a. Single Phase Meters	Per Meter	50.00
	b. Three Phase Meters	Per Meter	50.00
	c. Recording Type Watt-hour Meters / Prepaid Meters	Per Meter	175.00
	d. Maximum Demand Indicator	Per Meter	350.00
	e. Tri-vector Meters	Per Meter	1000.00
	f. Ammeters and Volt Meters	Per Meter	50.00
	g. Special Meters / Net Meters	Per Meter	400.00
	h. Initial Testing of Meters	Per Meter	Nil
2.	Disconnection and Reconnection of supply for any reason whatsoever (Disconnection & Reconnection to be separately treated as single job)		
	a. Consumer having load above 100 BHP/75kW	Per Job	1000.00
	b. Power consumers up to 100BHP/75kW	Per Job	500.00
	c. All other categories of consumers.	Per Job	300.00
3.	Replacement of Meters:		
	a. By higher capacity Meter	Per Job	50.00
	b. Installation of Meter and its subsequent removal in case of Temporary Connections	Per Job	75.00
	c. Changing of position of Meter Board at the consumer's request	Per Job	100.00
4.	Service of Wireman:		
	a. Replacement of Fuse	Per Job	20.00
	b. Inserting and Removal of Fuse in respect of night loads.	Per Job	25.00
	c. Hiring of services by the consumer during temporary supply or otherwise.	Per wireman /day of 6 Hrs. Per Meter	60.00
			100.00



Sl. No.	NATURE OF CHARGES	UNIT	RATES (₹)
5.	Resealing of Meters on account of any reason in addition to other charges payable in terms of other provision of charging of penalties, etc.)		
6.	Checking of Capacitors (other than initial checking) on consumer's request:	Per Job	100.00
	a. At 400 V / 230 V	Per Job	200.00
	b. At 11 kV and above.		



G. LIST OF POWER FACTOR APPARATUS

FOR MOTORS:

Sl. No.	Rating of Individual Motor	KVAR Rating of Capacitor			
		750 RPM	1000 RPM	1500 RPM	3000 RPM
1.	Up to 3 HP	1	1	1	1
2.	5 HP	2	2	2	2
3.	7.5 HP	3	3	3	3
4.	10 HP	4	4	4	3
5.	15 HP	6	5	5	4
6.	20 HP	8	7	6	5
7.	25 HP	9	8	7	6
8.	30 HP	10	9	8	7
9.	40 HP	13	11	10	9
10.	50 HP	15	15	12	10
11.	60 HP	20	20	16	14
12.	75 HP	24	23	19	16
13.	100 HP	30	30	24	20
14.	125 HP	39	38	31	26
15.	150 HP	45	45	36	30
16.	200 HP	60	60	48	40

FOR WELDING TRANSFORMERS:

Sl. No.	Name Plate Rating in KVA of Individual Welding Transformer	Capacity of the Capacitors (KVAR)
1.	1	1
2.	2	2
3.	3	3
4.	4	3
5.	5	4
6.	6	5
7.	7	6
8.	8	6



Sl. No.	Name Plate Rating in KVA of Individual Welding Transformer	Capacity of the Capacitors (KVAR)
9.	9	7
10.	10	8
11.	11	9
12.	12	9
13.	13	10
14.	14	11
15.	15	12
16.	16	12
17.	17	13
18.	18	14
19.	19	15
20.	20	15
21.	21	16
22.	22	17
23.	23	18
24.	24	19
25.	25	19
26.	26	20
27.	27	21
28.	28	22
29.	29	22
30.	30	23
31.	31	24
32.	32	25
33.	33	25
34.	34	26
35.	35	27

**12.2 LIST OF PERSONS WHO HAVE ATTENDED PUBLIC HEARING AT KANPUR, NOIDA, VARANASI AND LUCKNOW RESPECT OF PROCEEDINGS FOR BUSINESS PLAN, ARR & TARIFF DETERMINATION FOR MYT CONTROL PERIOD FY 2017-18 TO FY 2019-20****LIST OF PERSONS WHO HAVE ATTENDED PUBLIC HEARING AT KANPUR**

List of Persons who attended Public Hearing at Kanpur on September 20, 2017		
Sl. No.	Name	Organisation
1	Shri Devendra Singh	CE, DVVNL
2	Shri N.C. Agarwal	D(P/A), DVVNL
3	Shri Amit Bhargava	Director (Tariff), UPERC
4	Shri Vikas Chandra Agarwal	Director (D, L&L), UPERC
5	Shri Atul Chaturvedi	DD(Admin), UPERC
6	Shri Madhusudan Raizada	Consultant, UPERC
7	Shri Sanjay Srivastava	Secretary, UPERC
8	Shri D.K. Singh	Director Comm., DVVNL
9	Shri Vijai Kumar	CE (L-1), DVVNL
10	Shri S. Srivastava	EE, Kesco
11	Shri Vivek Agarwal	EE, Kesco
12	Shri Hemant Tiwari	UPERC
13	Shri Manoj Banka	President P.I.D, Industry Asso.
14	Shri Niraj Agarwal	CE (RAU), UPPCL
15	Shri V.P.C. Saxcena	Member (T), CGRF Kanpur
16	Shri C.K. Kulshreshtha	CGRF
17	Shri R.S. Tripathi	CGRF
18	Shri Ram Swaroop	EE, KESCO
19	Shri Sumit Trivedi	CA, KESCO
20	Shri Rampal	Consumer
21	Shri Awadesh Kumar	UPRVUP
22	Shri Rama Shanker Awasthi	Consumer
23	Shri Prateek Aggarwal	Consultant, UPERC
24	Shri Neeraj Agarwal	DD (A &FA),UPERC
25	Shri Chanmeet Singh Syal	Consultant, UPERC
26	Shri Ghanshyam Khanal	KESCO
27	Shri Roop Narain	KESCO
28	Shri Mohd Firoz	KESCO
29	Shri Dilip Kumar	KESCO
30	Shri Dharmendra Singh	Jala
31	Shri Rajbala	EE, KESCO



List of Persons who attended Public Hearing at Kanpur on September 20, 2017		
Sl. No.	Name	Organisation
32	Shri Sanjay Gupta	FITA
33	Shri A.K.Arora	Resident Manager, Noida Power Co Ctd
34	Shri A.K. Shukla	UPPCL
35	Shri Shailendra Kumar	SE, KESCO
36	Shri S.C. Gupta	Member (T), C.G.R.F. Agra
37	Shri Vishnu Kumar	CGRF Agra
38	Shri Raj	Consumer
39	Shri S .K. Singh	KESCO
40	Shri Yogesh Agarwal	Consumer, Rauin Import Ltd.
41	Shri Rohit Agarwal	Consumer, Rimjhim Ispat
42	Shri M. Ahmadh	Consumer
43	Shri C. K. Tripathi	KESCO
44	Shri Ram Baran Singh	Consumer, Up Kisan Sabha
45	Shri Nankau Yadav	Consumer, Up Kisan Sabha
46	Shri Mukut Singh	Consumer, Up Kisan Sabha
47	Shri Subodh Kumar	Consumer, Up Kisan Sabha
48	Shri Arvind	Consumer
49	Shri Rajesh Grower	Consumer
50	Shri Brijesh Awasthi	Consumer
51	Shri Dr Raj	Consumer
52	Shri Vijay	Consumer
53	Shri Umang Agarwal	Fita Industrial Trade Association
54	Shri Raj Soni	KESCO
55	Shri Arun Kumar	KESCO
56	Shri A.K. Singh	KESCO
57	Shri Ambeeth	KESCO
58	Shri Shashank	KESCO
59	Shri Samar Nafer	DVVNL
60	Shri R. K. Singh	KESCO
61	Shri K.G. Sarswat	DVVNL
62	Shri R.B. Singh	DVVNL
63	Shri B.P. Singh	KESCO
64	Shri Adil Jaiswal	KESCO
65	Shri Pranjal Kumar	KESCO
66	Shri Shyam Narain	KESCO
67	Shri Neeraj Kumar	KESCO
68	Shri J C. Yadav	KESCO
69	Shri Jasvir Singh	KESCO



List of Persons who attended Public Hearing at Kanpur on September 20, 2017		
Sl. No.	Name	Organisation
70	Shri Rajkumar Verma	Consumer
71	Jaslin Singh	Consumer
72	Shri Amit Rajput	Consumer
73	Shri Syed Afjal	Consumer
74	Shri Arjun Singh	Consumer
75	Shri Ashwani Omar	Consumer
76	Shri S. H. Ululehesji	Consumer
77	Shri Q M Zaidi	Consumer
78	Shri Ladli Prasad	Consumer
79	Shri Harmendra Moorjam	Consumer
80	Shri Prem Manohotra	Consumer

LIST OF PERSONS WHO HAVE ATTENDED PUBLIC HEARING AT NOIDA

List of Persons who attended Public Hearing at Noida on September 22, 2017		
Sl. No.	Name	Organisation
1	Shri KK Tevatia	EE
2	Shri Devender Tiger	Consumer
3	Shri Ajay Prakash Sharma	Consumer
4	Shri Amit Bhargava	Director (Tariff), UPERC
5	Shri Vikas Chandra Agarwal	Director (D, L&L), UPERC
6	Shri Madhusudan Raizada	Consultant, UPERC
7	Shri Sanjay Srivastava	Secretary, UPERC
8	Shri Atul Chaturvedi	DD(Admin), UPERC
9	Shri Sarabjeeet Singh	DD (TE), UPERC
10	Shri Prateek Aggarwal	Consultant, UPERC
11	Shri Hemant Tiwari	UPERC
12	Shri Chanmeet Singh Syal	Consultant, UPERC
13	Shri Rama Shankar Awasthi	Consumer
14	Shri Kapavdhi bhardawaj	Consumer
15	Shri Harish jonega	Consumer
16	Komal Kumar	Consumer
17	Shri Virendra Rula	Consumer
18	Shri Rahul Nagiya	Consumer
19	Shri P.S Jain	Consumer
20	Shri A.D Panday	Consumer
21	Mandakani Ghosh	Consumer



List of Persons who attended Public Hearing at Noida on September 22, 2017		
Sl. No.	Name	Organisation
22	Shri Mukesh Goel	Consumer
23	Shri Sanjeev Sharma	Consumer
24	Shri S.P Sharma	Consumer
25	Shri Z Rehman	Consumer
26	Shri M. Sourab	Consumer
27	Shri N.K Sagar	Consumer
28	Shri Kumar Ashok Shroof	Consumer
29	Shri Ajay Kumar Gupta	Consumer
30	Shri Vinay Gupta	Consumer
31	Shri Anil Agrawal	Consumer
32	Shri Rakesh singh	Consumer
33	Shri Surendra Singh	Consumer
34	Shri Rajnikant	Consumer
35	Shri Anil Kumar	Consumer
36	Shri Jeevan Singh	Consumer
37	Shri Sushil Agrawal	Consumer
38	Shri Sunil Sethi	Consumer
39	Shri Anjan Pachuari	Consumer
40	Anita Singh	Consumer
41	Shri Sushil Kumar Jain	Consumer
42	Shri R.K Roshan	Consumer
43	Shri Anil	Consumer
44	Shri Vinod Gupta	Consumer
45	Shri Sardar Balgir Singh	Consumer
46	Shri Vinay Khandelwal	Consumer
47	Shri Sauil Anit	Consumer
48	Shri Amit Gupta	Consumer
49	Shri Bijendra Singh	Consumer
50	Shri Ajay	Consumer
51	Shri Rajendra	Consumer
52	Shri Anil Kumar	Consumer
53	Shri Sarmat Doy	Consumer
54	Shri Rajesh Srivastwa	Consumer
55	Shri Ankit Jain	Consumer
56	Shri Manoj	Consumer
57	Shri Vinay Goel	Consumer
58	Shri Moolchand	Consumer
59	Shri Hidesh Shidhaki	Consumer



List of Persons who attended Public Hearing at Noida on September 22, 2017		
Sl. No.	Name	Organisation
60	Shri Kuldeep Kumar Tyagi	Consumer
61	Shri Rahul Kumar	Consumer
62	Shri Raman Goel	Consumer
63	Shri Vinod Kumar	Consumer
64	Shri Vijay Verma	Consumer
65	Radha Verma	Consumer
66	Shri Pravesh Singh	Consumer
67	Shri Shubhash Chaudhary	Consumer
68	Shri Hakim singh	Consumer
69	Shri Rajiv Nager	Consumer
70	Shri Ramnivash Nager	Consumer
71	Daini Goyal	Consumer
72	Shri Gajanan Mali	Consumer

LIST OF PERSONS WHO HAVE ATTENDED PUBLIC HEARING AT VARANASI

List of Persons who attended Public Hearing at Varanasi on October 5, 2017		
Sl. No.	Name	Organisation
1	Shri Atul Nigam	M.D. UPPCL (PuVVNL)
2	Shri Mohit Arya	Director (Comm.) PuVVNL
3	Shri Amit Bhargava	Director (Tariff), UPERC
4	Shri Vikas Chandra Agarwal	Director (D, L&L), UPERC
5	Shri Madhusudan Raizada	Consultant, UPERC
6	Shri Sanjay Srivastava	Secretary, UPERC
7	Shri Anil Mittal	CE(Comm.) PuVVNL
8	Shri A.K. Kohli	PuVVNL
9	Shri A.K Awasthi	Director (F) PuVVNL
10	Shri A.K. Srivastava	CE (D) Varanasi
11	Shri Tariq Matin	C.E. (D) Mirjapur
12	Shri S.B. Verma	C.E. (D) Azamgarh
13	Shri S.S. Sharma	C.E. (Comm.) PuVVNL
14	Shri R.K. Singh	SE (Comm.) Puvvnl
15	Shri A.K. Lal	SE (Comm.) Puvvnl
16	Shri D.K. Lal	EE, PuVVNL
17	Shri M.K. Pathak	S.E. EDC PuVVNL
18	Shri Anand Pandey	SE (Administration)



List of Persons who attended Public Hearing at Varanasi on October 5, 2017		
Sl. No.	Name	Organisation
19	Shri Girish Verma	PuVVNL
20	Shri Ram Kumar	PuVVNL
21	Shri Shyam Bihari Rai	Consumer'
22	Er. V.N. Rai	Member (T) C.G.R.F., Varanasi
23	Shri R.D. Singh	PuVVNL
24	Shri Niraj Agrawal	CE(RAU), UPPCL
25	Shri Sayed Abbas Rizvi	EE (RAU)
26	Shri S. Ary	Consumer
27	Shri Mohit Goyal	Consultant (RAU)
28	Shri Alok Srivastava	Sub-Editor - Kashivarta
29	Shri Gujan Srivastava	Amar Ujala
30	Shri R. K. Sinha	PuVVNL
31	Shri A.K. Srivastava	PuVVNL
32	Shri D.K. Dohare	PuVVNL
33	Shri Shiv Prakash	Consumer
34	Shri Rakesh Puri	PuVVNL
35	Shri L.N. Jha	Consumer
36	Shri Rayash Kumar Verma	Consumer
37	Shri R.K. Upadhay	I.I.A.
38	Shri Afeet Singh Bagga	Consumer
39	Shri Pramod	Consumer
40	Shri Vikas Kapoor	PuVVNL
41	Shri Bablu Kumar Agrhari	Consumer
42	Shri Avdhash Kumar Upadhaya	C.G.R.F., Varanasi
43	Shri Ashok Kumar	C.G.R.F., Varanasi
44	Shri Ramjanam Singh	C.G.R.F., Varanasi
45	Dr. Devendra	Consumer
46	Shri Ajay Mishra	Consumer
47	Shri Prateek Aggarwal	Consultant, UPERC
48	Shri Hemant Tiwari	UPERC
49	Shri Chanmeet Singh	Consultant, UPERC
50	Shri Shomnath Pandey	Consumer
51	Shri Shirish Gujrati	PuVVNL
52	Shri Ajit Jaiswal	PuVVNL
53	Shri Saurabh Jain	PuVVNL
54	Shri Sandeep Yadav	PuVVNL
55	Shri Setvendra Shukla	Consumer
56	Shri Ashish Asthana	Consumer



List of Persons who attended Public Hearing at Varanasi on October 5, 2017		
Sl. No.	Name	Organisation
57	Shri Mukesh Kumar	PuVVNL
58	Shri Bunt Singh	Consumer
59	Shri Vivek Pandey	Consumer
60	Shri Vinod Yadav	Consumer
61	Shri Prendra Patel	Consumer
62	Shri Shivendra Kashyap	Consumer
63	Shri Omprakash	Aditya Nager, 8381999099
64	Shri Arvind Kumar Srivastava	Consumer
65	Shri Manish Kumar Gupta	Consumer
66	Shri Jitendra Gupta	Consumer
67	Shri Ratan Gupta	Consumer
68	Shri Kushnagar Singh	Consumer
69	Shri Sunil Singh	Consumer
70	Shri Mukesh Agrawal	Consumer
71	Shri Vivek Upadhyay	Consumer
72	Shri Balender Singh	Consumer
73	Shri Nand Kumar Agrawal	Consumer
74	Shri Ravindra Kumar Mukherjee	Consumer
75	Shri Kaushal Kuamr Triwari	Consumer
76	Shri Rajesh Kumar	PuVVNL, Varanasi
77	Shri Avnish Kumar Sinha	PuVVNL, Varanasi
78	Shri Manoj Agarwal	PuVVNL, Varanasi
79	Shri Ashutosh Rai	Consumer
80	Shri Radeep Kumar Patel	Consumer
81	Shri Rajesh Kumar	Consumer
82	Shri Rohit Kumar Singh	Consumer
83	Shri Arun Kumar Singh	Consumer
84	Shri Himanshu Singh	Consumer
85	Shri Ajeet Kumar	PuVVNL
86	Shri Dharmendra Pal	Consumer
87	Shri Rakesh Yadav	PuVVNL
88	Shri Arbind Kumar	PuVVNL
89	Shri A.P. Yadav	PuVVNL
90	Shri Sanjay Chaubey	Consumer
91	Shri Chandra Prakash Dubey	Consumer
92	Shri Anil Dubey	Consumer
93	Shri Surya Mani Tiwari	Consumer
94	Shri Shubhendu Shah	PuVVNL



List of Persons who attended Public Hearing at Varanasi on October 5, 2017		
Sl. No.	Name	Organisation
95	Shri Deepak Kumar	PuVVNL
96	Shri R.K. Rastogi	PuVVNL
97	Shri B.K. Singh	PuVVNL
98	Shri Amit Tripathi	PuVVNL
99	Shri Vijay Kumar	PuVVNL
100	Shri Krishan Mohan	PuVVNL
101	Shri Amit Kumar Varma	PuVVNL
102	Shri Manish Mishra	PuVVNL
103	Shri Nitesh Ojha	PuVVNL
104	Shri Sanjay Singh	Consumer
105	Shri Ashish Jaiswal	Consumer
106	Shri R.K. Srivastava	PuVVNL
107	Shri C.P. Singh	Consumer
108	Shri Nihant Singh	Consumer
109	Shri Bhupendra Nr. Singh	Consumer
110	Shri Mudit Tiwari	PuVVNL
111	Shri Sunil Kumar Yadav	PuVVNL
112	Shri R.K. Yadav	PuVVNL
113	Shri Sunil Kumar	PuVVNL
114	Shri Ram Naresh	PuVVNL
115	Shri Chandra Bhan	PuVVNL
116	Shri Deepak Kumar Singh	Consumer

LIST OF PERSONS WHO HAVE ATTENDED PUBLIC HEARING AT LUCKNOW

List of Persons who attended Public Hearing at Lucknow on October 12, 2017		
Sl. No.	Name	Organisation
1	Shri Avadhesh Kumar Verma	UPRVUP
2	Shri Neeraj Agarwal	C.E. (RAU), UPPCL
3	Shri M.P. Sharma	MNRE Govt. of India
4	Shri A.K. Arora	Noida Power Co. Ltd. GR, Noida
5	Shri Amit Bhargava	Director (Tariff), UPERC
6	Shri Vikas Chandra Agarwal	Director (D, L&L), UPERC
7	Shri Atul Chaturvedi	DD(Admin), UPERC
8	Shri Madhusudan Raizada	Consultant, UPERC
9	Shri Sanjay Srivastava	Secretary, UPERC
10	Shri C.P. Yadav	S.E., LESA
11	Shri Munesh Chopra	E.E., LESA



List of Persons who attended Public Hearing at Lucknow on October 12, 2017		
Sl. No.	Name	Organisation
12	Shri A.K. Kaushal	E.E. (Com.) MVVNL
13	Shri C.B. Singh	EE (Com.) MVVNL
14	Shri Mukesh Kumar	MVVNL
15	Shri Deepak Mishra	MVVNL
16	Shri Rohit Kumar	MVVNL
17	Shri Saurabh Saxena	MVVNL
18	Shri B.K. Awashthi	Consumer
19	Shri Shivakanth Tripathi	Consumer
20	Shri Ratnesh Kumar Yadav	Consumer
21	Shri Amit Chaturvedi	UPPCL
22	Shri Rama Shankar Awashthi	Consumer
23	Shri A.P. Srivastava	Member (Tech.) C.G.R.F.
24	Shri V.P. Verma	Member (Tech.) C.G.R.F.
25	Shri Ashok Kumar	C.E. (Com) MVVNL
26	Shri Ashutosh Kumar	CE, LESA, MVVNL
27	Shri Ajai Srivastava	Assocham UP
28	Shri Satish Ch. Singh	Chairman, C.G.R.F., Lko
29	Shri M.L. Agarwal	Member (Tech) C.G.F.R.
30	Shri A.K. Shukla	E.E.(Comm.) UPPTCL
31	Shri Sarabjeet Singh	DD (TE), UPERC
32	Shri Neeraj Agarwal	DD (A & FA), UPERC
33	Shri Sajal Singh	DD (IT), UPERC
34	Shri Prateek Aggarwal	Consultant, UPERC
35	Shri Hemant Tiwari	UPERC
36	Shri Chanmeet Singh Syal	Consultant, UPERC
37	Shri Nitesh Tyagi	Consultant, UPERC
38	Kumari Suchismita Mohapatra	Consultant, UPERC
39	Kumari Sonakshi Verma	Consultant, UPERC
40	Shri Chandras Pal	UPERC
41	Shri Kamal Kant	UPERC
42	Shri Himanshu	UPERC
43	Shri Sanjay Kumar Chaurasia	E.E. (Comm) UPPTCL Lko.
44	Shri R.K. Saxena	SE (Comm.) UPPCL Lko.
45	Shri Vivek Srivastava	SE (Com) MVVNL, Lko.
46	Shri P.C. Mishra	Chairman C.G.R.F.
47	Shri B.N. Ram	Tech. Member Faizabad
48	Shri Mohan Pandey	CE (F & F) Nagar Nigam, Lko.
49	Shri Rakesh Srivastava	AGM, Torent Power, Ltd, Agra



List of Persons who attended Public Hearing at Lucknow on October 12, 2017		
Sl. No.	Name	Organisation
50	Shri Dheeraj Rai	Consumer
51	Shri K.D. Singh	Consumer
52	Shri Amit Mishra	Dainik Jagran
53	Shri Ganesh Chaturvedi	I.I.A.
54	Shri Awadhesh Kumar Agarwal	I.I.A.
55	Shri D.C. Verma	UPPCL
56	Shri S.M. Garg	MVVNL
57	Shri V.N. Gupta	Assocham UP-9936407902
58	Shri M.S.	Consumer



12.3 APPROVED MONTHLY POWER PURCHASE FOR THE MYT CONTROL PERIOD

APPROPRIATION OF APPROVED POWER PURCHASE FOR FY 2017-18

FY 2017-18													
UPPCL	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Allocation of Approval Power Purchase (MU)	10490.35	11527.96	11492.53	11507.42	11609.13	9727.96	9674.76	8638.95	8983.30	9173.66	8066.03	9395.75	120288.75
Allocated Approved Power Purchase Cost (Rs. Crs)	4218.93	4636.23	4621.98	4627.97	4668.88	3912.32	3890.93	3474.35	3612.84	3689.40	3243.94	3778.72	48376.89

APPROPRIATION OF APPROVED POWER PURCHASE FOR FY 2018-19*

FY 2018-19*													
UPPCL	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Allocation of Approval Power Purchase (MU)	12919.34	14197.48	14154.09	14173.35	14299.74	11981.71	11914.20	10639.90	11063.38	11298.74	9933.80	11570.80	148145.64
Allocated Approved Power Purchase Cost (Rs. Crs)	5392.31	5925.78	5907.67	5915.71	5968.46	5000.96	4972.78	4440.91	4617.66	4715.90	4146.19	4829.45	61833.40

* Power Purchase and Cost is subject to Annual Performance Review



APPROPRIATION OF APPROVED POWER PURCHASE FOR FY 2019-20*

FY 2019-20*													
UPPCL	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Allocation of Approval Power Purchase (MU)	15087.43	16580.87	16528.86	16550.86	16698.91	13992.11	13914.09	12426.65	12919.79	13194.88	11600.41	13512.97	173005.82
Allocated Approved Power Purchase Cost (Rs. Crs)	6512.36	7088.89	7066.64	7076.06	7139.34	5982.09	5948.74	5312.81	5523.65	5641.26	4959.57	5777.24	75314.11

** Power Purchase and Cost is subject to Annual Performance Review*



12.4 ACTION TAKEN REPORT ON THE DIRECTIONS ISSUED BY THE COMMISSION IN THE ARR / TARIFF ORDER FOR FY 2017-18

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance
1	The Commission directs the Licensees to pressingly pursue the proposal for allocation of PPAs to Discoms with GoUP and expedite the process of allocation and submit the tentative timelines for the same.	Immediate	
2	The Commission again directs the Licensees / UPPCL to evolve principles for prudent segregation of ARR towards wheeling function and retail supply function embedded in the distribution function in accordance with Clause 2.1.2 of the Distribution Tariff Regulations.	Within 4 months	
3	The Commission again directs the Licensees to conduct proper loss estimate studies for assessment of technical and commercial losses under its supervision so that the Commission may set the base line losses in accordance with Clause 3.2.3 and Clause 3.2.4 of the Distribution Tariff Regulations and submit the report to the Commission. The study shall segregate voltage-wise distribution losses into technical loss (i.e. Ohmic/Core loss in the lines, substations and equipment) and commercial loss (i.e. unaccounted energy due to metering inaccuracies/inadequacies, pilferage of energy, improper billing, no billing, unrealized revenues etc.). Further, the	Within 6 months	



Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance
	Licensees must immediately submit the draft report of PFC Consulting Ltd. in the above matter.		
4	The Commission again directs the Licensees to expedite the process of conducting Cost of Service studies which would serve as a tool for alignment of costs and charges and submit details regarding the cost of service studies for each category or voltage level.	Within 6 months	
5	The Commission directs the Licensees to install electronic meters in the residential consumers under LMV-10 category and submit a progress report every month.	Within one month	
6	The Licensees are directed to arrange for quarterly meetings between the MDs of the Licensees and the consumer representatives for solving various grievances of the consumers and submit a quarterly status report containing details of such meetings.	Immediate	
7	For DVVNL, in regards the supply to the Taj Trapezium Zone, the Commission directs DVVNL to comply with the directions of the Hon'ble Supreme Court of India and also submit the details of the actual load shedding done in the Taj Trapezium area for FY 2016-17 at the earliest.	Immediate	
8	The Commission again directs the Licensees to ensure the timely payment of the interest on security deposit to the consumers as per the Orders of the	Immediate	



Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance
	Commission and submit the compliance report. Licensees should submit the details of the actual interest on consumer security deposit paid to the consumers in FY 2016-17. Further, MVVNL & KESCO must again the submit the details of the actual interest on consumer security deposit paid to the consumers for FY 2014-15 & FY 2015-16.		
9	The Licensees (namely MVVNL, PVVNL, PuVVNL & KESCO) are directed to provide the monthly MRI reports to all the applicable consumers through email. The consumers would be required to register their email to the Licensees and submit the status report on the same at the earliest.	Immediate	
10	The Commission directs the Licensees to submit the tentative timelines for submitting the Fresh Actuarial Valuation Study Report in respect to employee expenses.	Within 3 months	
11	The Licensees must should submit the RPO obligation met in FY 2014-15, FY 2015-16 & FY 2016-17 and must demonstrate that how it is going to comply with the RPO obligation in FY 2017-18 separately showing the procurement and obligation from solar & non-solar sources.	Immediate	
12	The Licensees are directed to file a separate Petition for approval of prior period expenses / incomes. The Petition should clearly indicate the head-wise year-wise bifurcation of prior period expenses / incomes clearly indicating the	3 months from the date of issuance of this Order	



Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance
	impact of such expenses / incomes on various ARR components, and such impact should not exceed the normative expenses for any particular year.		
13	The Licensees are directed to submit a note detailing the area-wise (circle wise) actual number of supply hours provided to rural areas for FY 2015-16 & FY 2016-17 at the earliest.	Immediate	
14	The Petitioners should submit Incremental Power Purchase Cost as per the Regulations 20.1 notified vide MYT Regulations, 2014 and subsequently submit the report to the Commission within 28 days of quarter end , for each quarter of Tariff Period 1.4.2017 to 31.3.2020	Immediate	
15	The Petitioners should record and maintain Division wise, Circle wise AT&C Losses and submit the quarterly report to the Commission for FY 2015-16 & FY 2016-17	Immediate	
16	Licensees should provide online facility for submission of application for new connection, name change, load enhancement and load reduction and submit a report on the same.	Within 3 months from the issuance of this Order	
17	The Licensees should submit the complete details of the mobile application option for online payments of bills including other services for facilitation to consumers.	Immediate	



Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance
18	For KESCO, the Commission directs the Petitioner to ensure to convert all the 18 consumers under LMV-3 category into metered connections within one month of the issue of this Order failing which the Commission will resort to take stringent action against the Petitioner.	Within one month from issue of this Order	
19	The Commission directs the Licensees to do underground cabling works in Noida and Ghaziabad and must apprise the Commission about the progress of the same on periodic basis. Further, the Licensees should explore similar areas where underground cabling should be done and must execute the same. The undergrounding works of at least 11kV and below network must be completed in one-year time.	Quarterly	
20	The Commission directs the Licensees to submit a draft mechanism formulation of incentive or dis-incentive norms at the earliest as formulation of incentive or dis-incentive norms for the concerned officials.	Immediate	
21	The Commission directs the Licensees to submit a trajectory of targets for improving Collection Efficiency during the Control Period, at the time of Annual Performance Review (APR).	At the time of APR	
22	The Commission directs the Licensees to procure renewable energy in accordance with Regulation 4 of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 as amended from	At the time of APR	



Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order	Status of Compliance
	time to time to meet their obligation and submit a quarterly action plan for achievement of RPO compliance targets for the MYT Control Period.The Licensees are directed to submitte the above figures for FY 2016 - 17 along with the Annual Performance Review.		
23	The Commission directs the Licensees to submit the consumer category and sub-category wise Regulatory Surcharges (separately for Regulatory Surcharge-1 & Regulatory Surcharge-2) billed for each year since the inception at the earliest. Also, the amounts towards deemed recovery of RS - 1 & RS – 2 must also be submitted.	Immediate	
24	The Commission once again directs the Licensees that they should file FPPCA / Incremental Cost of Power Procurement in a timely and regular manner failing which the Commission may have to resort to take strict action against the Licensees.	As per MYT Distribution Tariff Regulations,2014	
25	Any other compliances / milestones as per MYT Distribution Tariff Regulations, 2014 and Commissions Orders.	-	



12.5 CATEGORY WISE AVERAGE BILLING RATE FOR THE MYT CONTROL PERIOD

CATEGORY-WISE ABR FOR FY 2017-18

Consolidated 5 Discoms	FY 2017-18		
	Units Sold (MU)	Revenue (Rs Crore)	ABR (Rs/kWh)
LMV-1: Domestic Light, Fan & Power			
Dom: Rural Schedule (unmetered)	8,224.35	1,578.70	1.92
Dom: Rural Schedule (metered)	8,426.41	2,859.26	3.39
Dom: Supply at Single Point for Bulk Load	1,418.36	871.99	6.15
Other Metered Domestic Consumers	19,063.94	12,053.62	6.32
Life Line Consumers/BPL	1,603.44	554.80	3.46
SUBTOTAL (LMV-1)	38,736.51	17,918.37	4.63
LMV-2: Non-Domestic Light, Fan & Power			
Non-Dom: Rural Schedule (unmetered)	183.95	93.68	5.09
Non-Dom: Rural Schedule (metered)	1,414.18	635.39	4.49
Non-Dom: Private Advertising/SignPost/SignBoard/GlowSign	24.73	44.55	18.02
Non-Dom: Other Metered Non-Domestic Supply	4,511.12	4,138.97	9.18
SUBTOTAL (LMV-2)	6,133.99	4,912.59	8.01
LMV-3: Public Lamps			
Unmetered - Gram Panchayat	108.18	64.91	6.00
Unmetered - Nagar Palika & Nagar Panchayat	265.52	201.60	7.59
Unmetered - Nagar Nigam	218.18	222.22	10.19
Metered - Gram Panchayat	141.86	89.14	6.28
Metered - Nagar Palika & Nagar Panchayat	163.33	112.71	6.90
Metered - Nagar Nigam	456.04	330.32	7.24
SUBTOTAL (LMV-3)	1,353.11	1,020.89	7.54
LMV-4: Light, fan & Power for Institutions			
Inst: Public	1,886.13	1,553.66	8.24
Inst: Private	600.01	592.06	9.87
SUBTOTAL (LMV-4)	2,486.14	2,145.72	8.63
LMV-5: Private Tube Wells/ Pumping Sets			
PTW: Rural Schedule (unmetered)	6,724.58	473.54	0.70
PTW: Rural Schedule (metered)	4,826.56	686.67	1.42
PTW: Urban Schedule (metered)	1,988.00	1,140.08	5.73



*Approval of Business Plan, MYT ARR and Tariff for State
Discoms for FY 2017-18 to FY 2019-20 and True-up of FY 2014-15*

Consolidated 5 Discoms	FY 2017-18		
	Units Sold (MU)	Revenue (Rs Crore)	ABR (Rs/kWh)
SUBTOTAL (LMV-5)	13,539.15	2,300.29	1.70
LMV 6: Small and Medium Power upto 100 HP (75 kW)			
Power Loom: Rural schedule	182.85	154.68	8.46
Power Loom: Urban schedule	327.06	272.86	8.34
Other than power loom: Rural schedule	572.66	495.46	8.65
Other than power loom: Urban schedule	2,782.79	2,422.57	8.71
SUBTOTAL (LMV-6)	3,865.36	3,345.57	8.66
LMV-7: Public Water Works			
Rural Schedule: Jal Nigam	347.96	290.85	8.36
Rural Schedule: Jal Sansthan	171.83	144.46	8.41
Rural Schedule: Other PWWs	161.01	139.66	8.67
Urban Schedule: Jal Nigam	297.60	268.57	9.02
Urban Schedule: Jal Sansthan	704.19	631.79	8.97
Urban Schedule: Other PWWs	637.80	574.47	9.01
SUBTOTAL (LMV-7)	2,320.40	2,049.80	8.83
LMV-8: State Tube Wells & Pump Canals upto 100 HP			
Metered STW	3,084.63	2,232.35	7.24
Unmetered: STW/Panch.Raj/WB/ID/P.Canals/LI upto 100 BHP	1,599.81	868.64	5.43
Unmetered: Laghu Dal Nahar above 100 BHP	7.27	31.45	43.27
SUBTOTAL (LMV-8)	4,691.71	3,132.44	6.68
LMV-9: Temporary Supply			
Metered TS: Individual residential consumers	71.76	55.15	7.68
Metered TS: Others	149.13	131.67	8.83
Unmetered TS: Ceremonies	0.04	3.94	1048.56
Unmetered TS: Temp shops	3.51	19.39	55.31
SUBTOTAL (LMV-9)	224.43	210.15	9.36
LMV-10: Departmental Employees			
SUBTOTAL (LMV-10)	690.07	152.22	2.21
HV-1: Non-Industrial Bulk Loads			
HV1 Urban Schedule: Supply at 11 kV	3,234.13	3,277.82	10.14
HV1 Urban Schedule: Supply above 11 kV & upto 66 kV	278.41	297.82	10.70
HV1 Urban Schedule: Supply above 66 kV & upto 132 kV	1.16	2.23	19.20



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Discoms for FY 2017-18 to FY 2019-20 and True-up of FY 2014-15*

Consolidated 5 Discoms	FY 2017-18		
	Units Sold (MU)	Revenue (Rs Crore)	ABR (Rs/kWh)
HV1 Urban Schedule: Supply above 132 kV	-	-	-
HV1 Rural Schedule: Supply at 11 kV	187.39	146.73	7.83
HV1 Rural Schedule: Supply above 11 kV & upto 66 kV	-	-	-
SUBTOTAL (HV-1)	3,701.10	3,724.60	10.06
HV-2: Large and Heavy Power above 100 BHP (75 kW)			
HV2 Urban Schedule: Supply at 11 kV	6,966.81	5,444.75	7.82
HV2 Urban Schedule: Supply above 11 kV & upto 66 kV	3,126.76	2,210.96	7.07
HV2 Urban Schedule: Supply above 66 kV & upto 132 kV	682.34	473.81	6.94
HV2 Urban Schedule: Supply above 132 kV	478.46	307.85	6.43
SUBTOTAL (HV-2)	11,599.08	8,687.56	7.49
HV-3: Railway Traction			
HV3 Supply at 132 kV and above	1,166.72	1,021.48	8.76
HV3 Supply below 132 kV	304.29	276.31	9.08
HV3 For Metro traction	32.48	25.58	7.88
SUBTOTAL (HV-3)	1,503.50	1,323.38	8.80
HV-4: Lift Irrigation & P. Canals above 100 BHP (75 kW)			
HV4 Supply at 11kV	533.56	432.83	8.11
HV4 Supply above 11kV & upto 66kV	638.10	503.54	7.89
HV4 Supply above 66 kV & upto 132kV	12.99	12.61	9.71
SUBTOTAL (HV-4)	1,184.66	948.98	8.01
GRAND TOTAL	92,093.81	51,900.63	5.64

CATEGORY-WISE ABR FOR FY 2018-19*

Consolidated 5 Discoms	FY 2018-19		
	Units Sold (MU)	Revenue (Rs Crore)	ABR (Rs/kWh)
LMV-1: Domestic Light, Fan & Power			
Dom: Rural Schedule (unmetered)	2,162.44	600.68	2.78
Dom: Rural Schedule (metered)	25,916.30	11,336.17	4.37
Dom: Supply at Single Point for Bulk Load	1,649.50	1,078.23	6.54
Other Metered Domestic Consumers	22,848.50	15,026.05	6.58
Life Line Consumers/BPL	2,563.51	869.04	3.39



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Consolidated 5 Discoms	FY 2018-19		
	Units Sold (MU)	Revenue (Rs Crore)	ABR (Rs/kWh)
SUBTOTAL (LMV-1)	55,140.24	28,910.18	5.24
LMV-2: Non-Domestic Light, Fan & Power			
Non-Dom: Rural Schedule (unmetered)	24.15	16.77	6.94
Non-Dom: Rural Schedule (metered)	1,941.42	1,077.32	5.55
Non-Dom: Private Advertising/SignPost/SignBoard/GlowSign	29.07	52.40	18.03
Non-Dom: Other Metered Non-Domestic Supply	5,380.26	5,110.62	9.50
SUBTOTAL (LMV-2)	7,374.91	6,257.11	8.48
LMV-3: Public Lamps			
Unmetered - Gram Panchayat	114.06	76.04	6.67
Unmetered - Nagar Palika & Nagar Panchayat	282.08	235.07	8.33
Unmetered - Nagar Nigam	230.69	256.32	11.11
Metered - Gram Panchayat	199.14	141.54	7.11
Metered - Nagar Palika & Nagar Panchayat	198.42	157.33	7.93
Metered - Nagar Nigam	549.39	455.24	8.29
LMV-3: Public Lamps	1,573.79	1,321.55	8.40
LMV-4: Light, fan & Power for Institutions			
Inst: Public	2,242.42	1,978.39	8.82
Inst: Private	704.68	738.83	10.48
SUBTOTAL (LMV-4)	2,947.10	2,717.22	9.22
LMV-5: Private Tube Wells/ Pumping Sets			
PTW: Rural Schedule (unmetered)	1,744.41	142.73	0.82
PTW: Rural Schedule (metered)	12,224.40	2,461.67	2.01
PTW: Urban Schedule (metered)	2,163.90	1,316.09	6.08
SUBTOTAL (LMV-5)	16,132.70	3,920.50	2.43
LMV 6: Small and Medium Power upto 100 HP (75 kW)			
Power Loom: Rural schedule	225.01	187.39	8.33
Power Loom: Urban schedule	393.24	323.06	8.22
Other than power loom: Rural schedule	680.53	573.91	8.43
Other than power loom: Urban schedule	3,310.34	2,829.26	8.55
SUBTOTAL (LMV-6)	4,609.12	3,913.61	8.49
LMV-7: Public Water Works			
Rural Schedule: Jal Nigam	391.22	339.76	8.68



Approval of Business Plan, MYT ARR and Tariff for State Discoms for FY 2017-18 to FY 2019-20 and True-up of FY 2014-15

Consolidated 5 Discoms	FY 2018-19		
	Units Sold (MU)	Revenue (Rs Crore)	ABR (Rs/kWh)
Rural Schedule: Jal Sansthan	186.10	162.90	8.75
Rural Schedule: Other PWWs	180.11	161.97	8.99
Urban Schedule: Jal Nigam	333.46	313.00	9.39
Urban Schedule: Jal Sansthan	731.85	682.32	9.32
Urban Schedule: Other PWWs	682.15	638.77	9.36
SUBTOTAL (LMV-7)	2,504.90	2,298.71	9.18
LMV-8: State Tube Wells & Pump Canals upto 100 HP			
Metered STW	6,818.49	5,234.01	7.68
Unmetered: STW/Panch.Raj/WB/ID/P.Canals/LI upto 100 BHP	324.12	198.82	6.13
Unmetered: Laghu Dal Nahar above 100 BHP	0.34	2.88	84.24
SUBTOTAL (LMV-8)	7,142.95	5,435.71	7.61
LMV-9: Temporary Supply			
Metered TS: Individual residential consumers	87.88	70.67	8.04
Metered TS: Others	152.51	162.62	10.66
Unmetered TS: Ceremonies	0.04	4.60	1,171.72
Unmetered TS: Temp shops	3.51	26.44	75.43
SUBTOTAL (LMV-9)	243.94	264.33	10.84
LMV-10: Departmental Employees			
SUBTOTAL (LMV-10)	789.60	236.40	2.99
HV-1: Non-Industrial Bulk Loads			
HV1 Urban Schedule: Supply at 11 kV	3,744.11	3,936.92	10.51
HV1 Urban Schedule: Supply above 11 kV & upto 66 kV	310.26	348.51	11.23
HV1 Urban Schedule: Supply above 66 kV & upto 132 kV	1.17	2.37	20.27
HV1 Urban Schedule: Supply above 132 kV	-	-	-
HV1 Rural Schedule: Supply at 11 kV	194.88	157.29	8.07
HV1 Rural Schedule: Supply above 11 kV & upto 66 kV	-	-	-
SUBTOTAL (HV-1)	4,250.43	4,445.09	10.46
HV-2: Large and Heavy Power above 100 BHP (75 kW)			
HV2 Urban Schedule: Supply at 11 kV	7,521.30	5,878.30	7.82
HV2 Urban Schedule: Supply above 11 kV & upto 66 kV	3,370.90	2,383.88	7.07
HV2 Urban Schedule: Supply above 66 kV & upto 132 kV	744.94	517.76	6.95
HV2 Urban Schedule: Supply above 132 kV	492.83	317.22	6.44
SUBTOTAL (HV-2)	12,499.08	9,365.67	7.49



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Consolidated 5 Discoms	FY 2018-19		
	Units Sold (MU)	Revenue (Rs Crore)	ABR (Rs/kWh)
HV-3: Railway Traction			
HV3 Supply at 132 kV and above	1,263.18	1,176.37	9.31
HV3 Supply below 132 kV	321.30	309.29	9.63
HV3 For Metro traction	32.48	29.03	8.94
SUBTOTAL (HV-3)	1,616.96	1,510.37	9.34
HV-4: Lift Irrigation & P. Canals above 100 BHP (75 kW)			
HV4 Supply at 11kV	568.10	474.50	8.35
HV4 Supply above 11kV & upto 66kV	691.78	562.34	8.13
HV4 Supply above 66 kV & upto 132kV	12.99	13.11	10.09
SUBTOTAL (HV-4)	1,272.86	1,049.96	8.25
GRAND TOTAL	1,18,163.19	71,646.41	6.06

**Subject to Annual Performance Review (APR) and Tariff Revisions*

CATEGORY-WISE ABR FOR FY 2019-20*

Consolidated 5 Discoms	FY 2019-20		
	Units Sold (MU)	Revenue (Rs Crore)	ABR (Rs/kWh)
LMV-1: Domestic Light, Fan & Power			
Dom: Rural Schedule (unmetered)	-	-	-
Dom: Rural Schedule (metered)	40,280.26	17,602.72	4.37
Dom: Supply at Single Point for Bulk Load	1,900.51	1,235.38	6.50
Other Metered Domestic Consumers	26,229.18	17,052.26	6.50
Life Line Consumers/BPL	3,452.58	1,158.16	3.35
	-	-	-
SUBTOTAL (LMV-1)	71,862.53	37,048.52	5.16
LMV-2: Non-Domestic Light, Fan & Power			
Non-Dom: Rural Schedule (unmetered)	-	-	-
Non-Dom: Rural Schedule (metered)	2,346.91	1,289.33	5.49
Non-Dom: Private Advertising/SignPost/SignBoard/GlowSign	33.60	60.55	18.02
Non-Dom: Other Metered Non-Domestic Supply	6,350.96	5,897.43	9.29
SUBTOTAL (LMV-2)	8,731.48	7,247.31	8.30
LMV-3: Public Lamps			
Unmetered - Gram Panchayat	-	-	-



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Unmetered - Nagar Palika & Nagar Panchayat	-	-	-
Unmetered - Nagar Nigam	-	-	-
Metered - Gram Panchayat	1,279.58	903.93	7.06
Metered - Nagar Palika & Nagar Panchayat	616.28	486.40	7.89
Metered - Nagar Nigam	880.84	726.21	8.24
SUBTOTAL (LMV-3)	2,776.70	2,116.54	7.62
LMV-4: Light, fan & Power for Institutions	-	-	-
Inst: Public	2,636.34	2,303.81	8.74
Inst: Private	822.11	847.37	10.31
SUBTOTAL (LMV-4)	3,458.45	3,151.18	9.11
LMV-5: Private Tube Wells/ Pumping Sets			
PTW: Rural Schedule (unmetered)	-	-	-
PTW: Rural Schedule (metered)	16,481.53	3,322.32	2.02
PTW: Urban Schedule (metered)	2,356.59	1,433.82	6.08
SUBTOTAL (LMV-5)	18,838.12	4,756.13	2.52
LMV 6: Small and Medium Power upto 100 HP (75 kW)			
Power Loom: Rural schedule	275.47	226.47	8.22
Power Loom: Urban schedule	467.56	379.30	8.11
Other than power loom: Rural schedule	800.33	660.80	8.26
Other than power loom: Urban schedule	3,899.19	3,282.02	8.42
SUBTOTAL (LMV-6)	5,442.55	4,548.59	8.36
LMV-7: Public Water Works			
Rural Schedule: Jal Nigam	441.38	383.07	8.68
Rural Schedule: Jal Sansthan	202.00	176.98	8.76
Rural Schedule: Other PWWs	201.72	180.40	8.94
Urban Schedule: Jal Nigam	374.16	351.39	9.39
Urban Schedule: Jal Sansthan	761.51	710.09	9.32
Urban Schedule: Other PWWs	730.08	683.82	9.37
SUBTOTAL (LMV-7)	2,710.84	2,485.75	9.17
LMV-8: State Tube Wells & Pump Canals upto 100 HP			
Metered STW	8,318.82	6,376.86	7.67
Unmetered: STW/Panch.Raj/WB/ID/P.Canals/LI upto 100 BHP	-	-	-
Unmetered: Laghu Dal Nahar above 100 BHP	-	-	-
SUBTOTAL (LMV-8)	8,318.82	6,376.86	7.67
LMV-9: Temporary Supply			



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Metered TS: Individual residential consumers	105.60	79.20	7.50
Metered TS: Others	156.48	168.14	10.75
Unmetered TS: Ceremonies	0.04	4.74	1,155.54
Unmetered TS: Temp shops	3.51	26.44	75.43
SUBTOTAL (LMV-9)	265.62	278.52	10.49
LMV-10: Departmental Employees			
SUBTOTAL (LMV-10)	898.65	251.30	2.80
HV-1: Non-Industrial Bulk Loads			
HV1 Urban Schedule: Supply at 11 kV	4,349.28	4,577.00	10.52
HV1 Urban Schedule: Supply above 11 kV & upto 66 kV	347.45	394.04	11.34
HV1 Urban Schedule: Supply above 66 kV & upto 132 kV	1.18	2.40	20.27
HV1 Urban Schedule: Supply above 132 kV	-	-	-
HV1 Rural Schedule: Supply at 11 kV	203.36	164.19	8.07
HV1 Rural Schedule: Supply above 11 kV & upto 66 kV	-	-	-
SUBTOTAL (HV-1)	4,901.27	5,137.63	10.48
	-	-	-
HV-2: Large and Heavy Power above 100 BHP (75 kW)			
HV2 Urban Schedule: Supply at 11 kV	8,127.53	6,352.24	7.82
HV2 Urban Schedule: Supply above 11 kV & upto 66 kV	3,641.03	2,575.22	7.07
HV2 Urban Schedule: Supply above 66 kV & upto 132 kV	820.17	570.51	6.96
HV2 Urban Schedule: Supply above 132 kV	507.74	326.94	6.44
SUBTOTAL (HV-2)	13,492.44	10,113.61	7.50
HV-3: Railway Traction			
HV3 Supply at 132 kV and above	1,369.83	1,277.93	9.33
HV3 Supply below 132 kV	339.30	326.70	9.63
HV3 For Metro traction	32.48	29.03	8.94
SUBTOTAL (HV-3)	1,741.61	1,629.34	9.36
HV-4: Lift Irrigation & P. Canals above 100 BHP (75 kW)			
HV4 Supply at 11kV	605.22	505.44	8.35
HV4 Supply above 11kV & upto 66kV	750.04	609.74	8.13
HV4 Supply above 66 kV & upto 132kV	12.99	13.11	10.09
SUBTOTAL (HV-4)	1,368.25	1,128.29	8.25
GRAND TOTAL	1,44,871.94	86,269.59	5.95

**Subject to Annual Performance Review (APR) and Tariff Revisions*



12.6 CAPITAL EXPENDITURE PLAN SUBMITTED BY THE PETITIONERS FOR MYT CONTROL PERIOD

1. Proposed Capital Expenditure by DVVNL for the MYT Period:

New Capital Expenditure Works Proposed for FY 2017-18 (Rs Crore)

S No	Details of Works	Unit	Physical Target	Total
A	Business Plan			
1	Construction of 33/11 KV Substation	No.	40.00	232.00
2	Augmentation of 33/11 KV Substation	No.	80.00	56.00
3	Construction of 33 KV Link Line	Km.	90.00	13.50
4	Strengthening of 33 KV line	Km.	80.00	6.40
5	Construction of 11/0.4 KV Substation	No.	500.00	24.00
6	Augmentation of 11/0.4 KV Substation	No.	1040.00	41.10
7	Construction of 11 KV Line & Bifurcation	Km.	400.00	32.00
8	Strengthening of 11 KV line	Km.	300.00	18.00
9	Replacement of damage 11 KV Switchgear	No.	200.00	14.00
10	Construction of 11 KV Line	Km.	315.00	15.75
11	Replacement of damage conductor in L.T. Line	Km.	800.00	32.00
12	Replacement of damage Pole	No.	2500.00	2.50
13	Earthing & Fencing of Distribution Transformer	No.	200.00	0.84
14	Metering of Distribution Transformer	No.	5000.00	5.00
15	Replacement of Weasel Conductor by ABC	Km.	100.00	11.00
16	Gaurding of 33 KV & 11 KV Lines	Km.	8.00	0.45
17	Installation of Meters for reducing Line Losses	No.	50000.00	10.00
18	Double Metering of Consumers	No.	20.00	0.08
19	Construction of Workshop	No.	1.00	5.25



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S No	Details of Works	Unit	Physical Target	Total
20	Strengthening of Workshop's Equipments	No.	3.00	2.73
21	Construction of Pole Unit	No.	-	-
22	M &R of Residential & Non-Residential Buildings.	No.	-	5.00
23	Replacement of damage Capacitors	No.	-	-
24	Other Misc.Works	No.	4.00	2.76
Total				530.36
B	Vyapar Vikas Nidhi Scheme			
1	Construction of 33/11 KV Substation	No.	16	86.88
2	Augmentation of 33/11 KV Substation	No.	24	14.40
3	Construction of 33 KV Underground line through Cable	Km.	7.20	2.16
4	Construction of 11/0.4 KV Substation	No.	320	22.40
5	Augmentation of 11/0.4 KV Substation	No.	183	10.94
6	Construction of 11 KV Underground line through Cable	Km.	10.00	1.40
7	Construction of L.T. Underground line through Cable	Km.	28.20	0.42
8	Replacement of damage 11 KV Switchgear	No.	162	8.10
9	Replacement of Weasel Conductor by ABC	Km.	266.00	13.30
Total				160.00
A+B	Total Business + VVNS			690.36
C	Dr. Ram Manohar Lohiya			18.00
D	P.T.W.			97.00
E	R-APDRP - Part B Scada			100.00
F	DDUGJY - Starts from 2016-17			591.02
G	IPDS - Starts from 2016-17			229.57
H	U/G Cabelling			200.00



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S No	Details of Works	Unit	Physical Target	Total
I	Deposit Works			269.63
	Total Capital Expenditure			2195.59

New Capital Expenditure Works Proposed for FY 2018-19 (Rs Crore)

S No	Details of Works	Unit	Physical Target	Total
A	Business Plan			
1	Construction of 33/11 KV Substation	No.	48.00	297.60
2	Augmentation of 33/11 KV Substation	No.	95.00	76.00
3	Construction of 33 KV Link Line	Km.	96.00	16.32
4	Strengthening of 33 KV line	Km.	84.00	8.40
5	Construction of 11/0.4 KV Substation	No.	550.00	24.50
6	Augmentation of 11/0.4 KV Substation	No.	1090.00	44.85
7	Construction of 11 KV Line & Bifurcation	Km.	410.00	36.90
8	Strengthening of 11 KV line	Km.	310.00	21.70
9	Replacement of damage 11 KV Switchgear	No.	210.00	16.80
10	Construction of 11 KV Line	Km.	315.00	15.75
11	Replacement of damage conductor in L.T. Line	Km.	800.00	32.00
12	Replacement of damage Pole	No.	2500.00	2.50
13	Earthing & Fencing of Distribution Transformer	No.	200.00	0.84
14	Metering of Distribution Transformer	No.	5000.00	5.00
15	Replacement of Weasel Conductor by ABC	Km.	100.00	11.00
16	Gaurding of 33 KV & 11 KV Lines	Km.	8.00	0.45
17	Installation of Meters for reducing Line Losses	No.	50000.00	10.00



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S No	Details of Works	Unit	Physical Target	Total
18	Double Metering of Consumers	No.	20.00	0.08
19	Construction of Workshop	No.	1.00	5.25
20	Strengthening of Workshop's Equipments	No.	3.00	2.73
21	Construction of Pole Unit	No.	-	0.00
22	M &R of Residential & Non-Residential Buildings.	No.	-	5.00
23	Replacement of damage Capacitors	No.	-	-
24	Other Misc.Works	No.	4.00	2.76
Total				636.43
B	Vyapar Vikas Nidhi Scheme			
1	Construction of 33/11 KV Substation	No.	17.00	98.60
2	Augmentation of 33/11 KV Substation	No.	26.00	18.20
3	Construction of 33 KV Underground line through Cable	Km.	7.50	2.63
4	Construction of 11/0.4 KV Substation	No.	328.00	26.24
5	Augmentation of 11/0.4 KV Substation	No.	185.00	11.10
6	Construction of 11 KV Underground line through Cable	Km.	10.00	1.40
7	Construction of L.T. Underground line through Cable	Km.	29.00	0.44
8	Replacement of damage 11 KV Switchgear	No.	162.00	8.10
9	Replacement of Weasel Conductor by ABC	Km.	266.00	13.30
Total				180.00
A+B	Total Business + VVNS			816.43
C	Dr. Ram Manohar Lohiya			20.00
D	P.T.W.			106.70
E	R-APDRP - Part B Scada			100.00
F	DDUGJY - Starts from 2016-17			788.03



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S No	Details of Works	Unit	Physical Target	Total
G	IPDS - Starts from 2016-17			306.08
H	U/G Cabelling			200.00
I	Deposit Works			327.21
	Total Capital Expenditure			2664.45

New Capital Expenditure Works Proposed for FY 2019-20 (Rs Crore)

S No	Details of Works	Unit	Physical Target	Total
A	Business Plan			
1	Construction of 33/11 KV Substation	No.	51.00	316.20
2	Augmentation of 33/11 KV Substation	No.	98.00	78.40
3	Construction of 33 KV Link Line	Km.	98.00	16.66
4	Strengthening of 33 KV line	Km.	86.00	8.60
5	Construction of 11/0.4 KV Substation	No.	580.00	25.30
6	Augmentation of 11/0.4 KV Substation	No.	1110.00	47.85
7	Construction of 11 KV Line & Bifurcation	Km.	420.00	37.80
8	Strengthening of 11 KV line	Km.	320.00	22.40
9	Replacement of damage 11 KV Switchgear	No.	220.00	17.60
10	Construction of 11 KV Line	Km.	325.00	16.25
11	Replacement of damage conductor in L.T. Line	Km.	810.00	32.40
12	Replacement of damage Pole	No.	2510.00	2.51
13	Earthing & Fencing of Distribution Transformer	No.	220.00	0.92
14	Metering of Distribution Transformer	No.	5000.00	10.00
15	Replacement of Weasel Conductor by ABC	Km.	120.00	13.80



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S No	Details of Works	Unit	Physical Target	Total
16	Gaurding of 33 KV & 11 KV Lines	Km.	10.00	0.52
17	Installation of Meters for reducing Line Losses	No.	55000.00	16.50
18	Double Metering of Consumers	No.	22.00	0.11
19	Construction of Workshop	No.	1.00	6.80
20	Strengthening of Workshop's Equipments	No.	4.00	3.85
21	Construction of Pole Unit	No.	1.00	3.83
22	M &R of Residential & Non-Residential Buildings.	No.	-	5.25
23	Replacement of damage Capacitors	No.	-	0.00
24	Other Misc.Works	No.	5	3.30
Total				686.85
B	Vyapar Vikas Nidhi Scheme			
1	Construction of 33/11 KV Substation	No.	19.00	115.90
2	Augmentation of 33/11 KV Substation	No.	28.00	21.00
3	Construction of 33 KV Underground line through Cable	Km.	7.80	2.96
4	Construction of 11/0.4 KV Substation	No.	330.00	29.70
5	Augmentation of 11/0.4 KV Substation	No.	195.00	12.68
6	Construction of 11 KV Underground line through Cable	Km.	15.00	2.40
7	Construction of L.T. Underground line through Cable	Km.	35.00	0.51
8	Replacement of damage 11 KV Switchgear	No.	175.00	10.50
9	Replacement of Weasel Conductor by ABC	Km.	287.00	14.35
Total				210.00
A+B	Total Business+VVNS			896.85
C	Dr. Ram Manohar Lohiya			22.00
D	P.T.W.			117.37



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S No	Details of Works	Unit	Physical Target	Total
E	R-APDRP - Part B Scada			
F	DDUGJY - Starts from 2016-17			
G	IPDS - Starts from 2016-17			
H	U/G Cabelling			200.00
I	Deposit Works			173.07
	Total Capital Expenditure			1409.29

2. Proposed Capital Expenditure by MVVNL

New Capital Expenditure Works Proposed for FY 2017-18 (Rs. Crore)

S No	Details of Works	Unit	Physical Target	Total
A	Business Plan			
1	Construction of 33/11 KV S/S	Nos.	15.00	75.00
2	Enhancement of 33/11 KV S/S	Nos.	30.00	24.00
3	Construction of 33 KV Lines	KM	600.00	66.00
4	Strengthening of 33 KV Line	KM	150.00	7.50
5	Construction of 11/0.4 KV S/S	Nos.	4,000.00	100.00
6	Enhancement of 11/0.4 KV	Nos.	6,000.00	90.00
7	Construction and bifurcation of 11 KV Lines	KM	500.00	20.00
8	Strengthening of 11 KV Line	KM	500.00	7.50
9	Replacement of Damage 11 KV switch gear	Nos.	80.00	3.20
10	Construction of LT Lines	KM	315.00	6.00
11	Replacement of Jarjar Conductor	KM	810.00	16.00
12	Replacement of Damage Poles	Nos.	2,800.00	2.10



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13	Works of the fencing/earthing of T/F	Nos.	500.00	2.50
14	Metering of Distribution Transformer	Nos.	5,000.00	5.00
15	ABC works	KM	200.00	6.00
16	Guarding of 33/11 KV Lines	KM	100.00	3.00
17	Installation of meters for reducing of commercial losses	Nos.	2,000,000.00	500.00
18	Double metering of consumer	Nos.	400.00	1.00
19	Construction of workshop	Nos.	1.00	0.40
20	Strengthening of workshop	Nos.	3.00	1.00
21	Construction of pole unit	Nos.	-	-
22	Other Work	Nos.	10.00	5.00
23	Installation of Capacitor Bank	Nos.	10.00	1.00
Total				942.20
B	Vyapar Vikash Nidhi			
1	Construction of 33/11 KV S/S	Nos.	6.00	30.00
2	Enhancement Capacity of 33/11 KV S/S	Nos.	12.00	19.60
3	33 KV Underground Cable work	KM	160.00	80.00
4	Construction of 11/0.4 KV S/S	Nos.	200.00	10.00
5	Enhancement Capacity of 11/0.4 KV S/S	Nos.	300.00	9.00
6	11 KV Underground Cable work	KM	100.00	15.00
7	LT Underground Cable work	KM	27.00	0.41
8	11 KV switch gear	Nos.	50.00	2.00
9	ABC works	KM	266.00	13.30
	Total			179.31
C	Dr. Ram Manohar Lohiya			9.67
D	P.T.W.			68.00
E	DDUGJY			738.74
F	IPDS			432.00
G	Others			44.43



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	RGGVY			-
	Deposit Works			338.01
	Total Capital Expenditure			2,752.36

New Capital Expenditure Works Proposed for FY 2018-19 (Rs. Crore)

S No	Details of Works		Physical Target	Total
A	Business Plan			
1	Construction of 33/11 KV S/S	Nos.	15.00	75.00
2	Enhancement of 33/11 KV S/S	Nos.	35.00	30.00
3	Construction of 33 KV Lines	KM	600.00	66.00
4	Strengthening of 33 KV Line	KM	160.00	8.00
5	Construction of 11/0.4 KV S/S	Nos.	4,000.00	100.00
6	Enhancement of 11/0.4 KV	Nos.	6,000.00	90.00
7	Construction and bifurcation of 11 KV Lines	KM	500.00	20.00
8	Strengthening of 11 KV Line	KM	550.00	8.00
9	Replacement of Damage 11 KV switch gear	Nos.	90.00	3.60
10	Construction of LT Lines	KM	315.00	3.30
11	Replacement of Jarjar Conductor	KM	790.00	15.30
12	Replacement of Damage Poles	Nos.	2,600.00	2.10
13	Works of the fencing/earthing of T/F	Nos.	550.00	2.75
14	Metering of Distribution Transformer	Nos.	5,000.00	5.00
15	ABC works	KM	200.00	10.00
16	Guarding of 33/11 KV Lines	KM	100.00	3.00
17	Installation of meters for reducing of commercial losses	Nos.	2,000,000.00	500.00
18	Double metering of consumer	Nos.	400.00	1.00
19	Construction of workshop	Nos.	1.00	0.40
20	Strengthening of workshop	Nos.	3.00	1.00



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S No	Details of Works		Physical Target	Total
21	Construction of pole unit	Nos.	-	-
22	Other work/Civil Works	Nos.	10.00	5.00
23	Installation of Capacitor Bank	Nos.	10.00	1.00
Total				950.45
B	Vyapar Vikash Nidhi		-	
1	Construction of 33/11 KV S/S	Nos.	6.00	30.00
2	Enhancement Capacity of 33/11 KV S/S	Nos.	12.00	9.60
3	33 KV Underground Cable work	KM	180.00	90.00
4	Construction of 11/0.4 KV S/S	Nos.	250.00	12.50
5	Enhancement Capacity of 11/0.4 KV S/S	Nos.	325.00	9.75
6	11 KV Underground Cable work	KM	125.00	18.75
7	LT Underground Cable work	KM	28.00	0.42
8	11 KV switch gear	Nos.	50.00	2.00
9	ABC works	KM	265.00	13.25
	Total			186.27
C	Dr. Ram Manohar Lohiya			10.00
D	P.T.W.			68.00
E	DDUGJY			-
F	IPDS			-
G	Others			-
H	RGGVY			-
I	Deposit Works			170.06
Total Capital Expenditure				1,384.78



New Capital Expenditure Works Proposed for FY 2019-20

S No	Details of Works		Physical Target	Total (Rs. Crore)
A	Business Plan			
1	Construction of 33/11 KV S/S	Nos.	16	75.00
2	Enhancement of 33/11 KV S/S	Nos.	40	30.00
3	Construction of 33 KV Lines	KM	630	66.00
4	Strengthening of 33 KV Line	KM	150	8.00
5	Construction of 11/0.4 KV S/S	Nos.	4000	100.00
6	Enhancement of 11/0.4 KV	Nos.	6100	90.00
7	Construction and bifurcation of 11 KV Lines	KM	500	20.00
8	Strengthening of 11 KV Line	KM	600	8.00
9	Replacement of Damage 11 KV switch gear	Nos.	100	3.60
10	Construction of LT Lines	KM	320	3.30
11	Replacement of Jarjar Conductor	KM	805	15.30
12	Replacement of Damage Poles	Nos.	2500	2.10
13	Works of the fencing/earthing of T/F	Nos.	600	2.75
14	Metering of Distribution Transformer	Nos.	5000	5.00
15	ABC works	KM	200	10.00
16	Guarding of 33/11 KV Lines	KM	100	3.00
17	Installation of meters for reducing of commercial losses	Nos.	1000000	500.00
18	Double metering of consumer	Nos.	450	1.00
19	Construction of workshop	Nos.	1	0.40
20	Strengthening of workshop	Nos.	4	1.00
21	Construction of pole unit	Nos.	1	1.00
22	Other work/Civil Work	Nos.	10	5.00
23	Installation of Capacitor Bank	Nos.	10	1.00
Total			0	951.45



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S No	Details of Works	Physical Target	Total (Rs. Crore)
B	Vyapar Vikash Nidhi		
1	Construction of 33/11 KV S/S	6	30.00
2	Enhancement Capacity of 33/11 KV S/S	12	9.60
3	33 KV Underground Cable work	180	90.00
4	Construction of 11/0.4 KV S/S	300	12.50
5	Enhancement Capacity of 11/0.4 KV S/S	350	9.75
6	11 KV Underground Cable work	150	18.75
7	LT Underground Cable work	32	0.42
8	11 KV switch gear	50	2.00
9	ABC works	275	13.25
	Total		186.27
C	Dr. Ram Manohar Lohiya		
D	P.T.W.		68.00
E	DDUGJY		-
F	IPDS		-
G	Others		-
	RGVY		-
	Deposit Works		168.80
	Total Capital Expenditure		1,374.52



3. Proposed Capital Expenditure by PVVNL for the MYT Period

New Capital Expenditure Works Proposed for FY 2017-18 (Rs. Crore)

Sl. No.	Name of Scheme	Unit	2017-18	
			Physical	Finance
1	Energization of PTW Connection (Under Normal Scheme)	Nos.	15000	102.00
2	Electrification of Village under Dr. Ram Manohar Lohia Samgra Gram Vikas Yojna	Nos.	315	65.00
	Total			167.00
(A)	Business Plan			
3	33 KV Work			
(a)	Construction of New 33/11 KV Substation and its associated 33 kV lines	Nos.	31	102.14
(b)	Construction of New 33/11 KV G I Substation and its associated 33 kV lines	Nos.	5	42.49
(c)	Increasing Capacity of 33/11 kV Substation	Nos.	63	52.09
(d)	Construction of 33 kV Link Line	Km./Nos.	78	53.05
(e)	Strengthening of 33 kV Lines	Km	600	17.25
(f)	Installation of Capacitor Banks on 33/11 kV Substation	Nos.	150	34.50
(g)	Guarding of 33 kV Lines	Km.	720	6.33
(h)	Installation/Replacement of 33 kV VCB	Nos.	100	6.90
(i)	Underground Cabling Work - 33 kV	Km.	200	115.00
	Total			429.75
4	11 kV New work			
(a)	11 kV new line (Bifurcation of feeders, link line etc.)	Km.	1000	48.30
(b)	11/0.4 kV Substations	Nos.		
	25 kVA		1500	21.56
	63 kVA		1550	32.09
	100 kVA		1750	50.31
	250 kVA		350	24.15



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Sl. No.	Name of Scheme	Unit	2017-18	
			Physical	Finance
	400 kVA		120	12.42
(c)	11/0.4 KV Substation Increasing capacity	Nos.		
	25 kVA to 63 kVA		1600	13.80
	63 kVA to 100 kVA		2000	13.80
	100 kVA to 250 kVA		1000	46.00
	250 kVA to 400 kVA		200	10.35
(d)	Strengthening of 11 kv line	Km.	6000	138.00
(e)	Replacement of 11kv Switchgears	Nos.	500	28.75
(f)	Installation of New 11 kv Switchgears	Nos.	200	13.80
(g)	Strengthening of 11/0.4 kv Substation	Nos.		
(h)	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.		
	Construction of LT Lines	Km.	1000	28.75
	Replacement of Damaged Conductors of LT Lines	Km.	7500	92.00
	Replacement of Damaged Poles	Nos.	16000	7.48
	Earthing /Fencing work of Distribution Transformers	Nos.	9700	55.78
(i)	Distribution Transformers Metering	Nos.	7100	4.60
(j)	Laying of ABC	Km.	4200	230.00
(k)	Guarding of 11 KV Lines	Km.	1690	11.50
(l)	Underground Cabling Work - 11 kv	Km.	1000	345.00
	Total			1228.43
	33 KV/11 KV Works Under Business Plan			1658.18
	Consumer Metering Work			
(a)	Providing of double meter with modem	Nos.	1000	5.75
(b)	Installation of Single Phase Meter	Nos.	1800000	360.00
(c)	Installation of Three Phase Meter	Nos.	40000	16.00



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Sl. No.	Name of Scheme	Unit	2017-18	
			Physical	Finance
(d)	Installation of Pre-Paid Meter	Nos.	15000	0.75
	Total			382.50
(B)	Vyapar Vikas Nidhi			
7	33 KV Work			
(a)	Construction of New 33/11 KV Substation and its associated 33 kV lines	Nos.	4	21.16
(b)	Increasing Capacity of 33/11 kV Substation	Nos.	16	11.30
(c)	33 KV Link Line	Km.	79.1	18.62
(d)	Replacement of (33 KV) damaged conductor, poles, Substation apparatus etc.)	Km./Nos.	170	6.77
	Total			57.85
8	11 kV New work			
(a)	11 KV new line (Bifurcation of feeders, link line etc.)	Km.	244	11.17
(b)	11/0.4 kV Substation	Nos.	816	35.47
(c)	11/0.4 kV Substation Increasing capacity	Nos.	859	27.54
(d)	Strengthening of 11 kV line	Km.	998	22.84
(e)	Strengthening of 11/0.4 kV Substation	Nos.	2095	13.91
(f)	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.	1121.5	17.86
(g)	Installation/Replacement of 33 KV VCB	Nos.	25	2.00
(h)	Installation/Replacement of damage/very old 11 kv OCB/VCB and other equipments as well as replacement by high capacity.	Nos.	145	8.67
	Total			139.46
9	L.T. ABC	Km.	1743	85.23
10	Underground Cabling Work - 11 kv & 33 KV	Km.	184.3	94.50
11	Consumer Metering Work			



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Sl. No.	Name of Scheme	Unit	2017-18	
			Physical	Finance
(a)	Providing of double meter with modem	Nos.	620	2.06
(b)	Installation of Single Phase Meter	Nos.	19490	2.24
(c)	Installation of Three Phase Meter	Nos.	15290	5.28
	Total			189.30
	TOTAL Vyapar Vikas Nidhi			769.11
(C)	Other Works			
11	Civil Works - Construction of Buildings & Boundary Walls offices & Colonies		20	5.45
12	Construction of New Workshop		5	1.50
13	Strengthening of Workshop, Stores		15	4.40
14	Construction of Erector Hostel		2	2.30
15	SCADA Control Room Centre		4	1.15
16	Construction Boundary Wall of 33/11 KV Substation & Offices		48	8.28
17	Manufacturing of PCC Poles	Nos.	96000	19.99
18	Material Purchase for Repairing of Transformer (Workshop)		41000	100.12
19	Labour Charges for Repairing of Transformer (Workshop)		41000	20.47
20	Major T&P item like cable for locater, test lab equipment, centrifuging etc.			10.00
21	Workshop & Store strengthening	Nos.	10	1.38
22	HHB Billing	Nos.	25500000	23.06
23	MRI Billing	Nos.	170000	6.33
24	Cloud Based Rural Billing	Nos.	16347504	15.01
25	Network & Software Procurement for Cloud Based Billing	Nos.	14400000	8.05
26	Meter Checking Scheme	Nos.	750000	24.73
27	Computer Hardware	Nos.	340	2.35
28	Installation of Mobile Application Dash Board	Nos.	1	8.05



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Sl. No.	Name of Scheme	Unit	2017-18	
			Physical	Finance
29	IT Enabled service for Consumers	Nos.	1	2.30
30	IT based Cloud Services & IT Application	Nos.	1	2.30
31	GIS Platform, Door to Door Survey	Nos.	5	3.45
32	IT Platform Command Centre for improvement of Billing Efficiency	Nos.	1	6.90
33	Provision of New Cash Vans	Nos.	800	14.95
34	Provision of New Billing Centers	Nos.	140	80.00
35	Provision of New Kiosk Machine	Nos.	135	3.38
36	Provision of New LED Lighting at Substation	Nos.	17000	0.87
37	Fault location machine & testing Facility	Nos.	57	150.00
38	DR (Data Restoration) Centre upgradation	Nos.	1	100.00
	Total			626.74
	Grand Total B.Plan+V.V.N.+Other Works			2838.53
(D)	Central Government Schemes			
23	IPDS Scheme			887.19
24	DDUGJY Scheme			1289.87
25	Feeder Segregation Work			54.66
26	RGVY Phase-I			-
27	RGVY Phase-II (11th Plan)			175.06
28	RGVY Phase-II (12th Plan)			497.91
29	RAPDRP PART-A			107.67
30	RAPDRP PART-B (Non SCADA)			55.58
31	RAPDRP PART-B SCADA			193.36
32	RAPDRP PART-B (Consultancy Charges)			1.97
	Total			3263.27
33	Deposit Works			907.87
	Grand Total			7,392.10



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New Capital Expenditure Works Proposed for FY 2018-19 (PVVNL) (Rs. Crore)

Sl.No.	Name of Scheme	Unit	2018-2019	
			Physical	Finance
	Capital			
1	Energization of PTW Connection (Under Normal Scheme)	Nos.	15000	102.00
2	Electrification of Village under Dr. Ram Manohar Lohia Samgra Gram Vikas Yojna	Nos.	315	65.00
	Total			167.00
(A)	Business Plan			
3	33 KV Work			
(a)	Construction of New 33/11 KV Substation and its associated 33 kV lines	Nos.	19	61.28
(b)	Construction of New 33/11 KV G I Substation and its associated 33 kV lines	Nos.	3	25.49
(c)	Increasing Capacity of 33/11 KV Substation	Nos.	38	31.26
(d)	Construction of 33 KV Link Line	Km./Nos.	47	31.83
(e)	Strengthening of 33 KV Lines	Km	360	10.35
(f)	Installation of Capacitor Banks on 33/11 KV Substation	Nos.	90	20.70
(g)	Guarding of 33 KV Lines	Km.	432	3.80
(h)	Installation/Replacement of 33 KV VCB	Nos.	100	7.48
(i)	Underground Cabling Work - 33 kV	Km.	120	69.00
	Total			160.21
4	11 KV New work			
(a)	11 KV new line (Bifurcation of feeders, link line etc.)	Km.	500	34.50
(b)	11/0.4 KV Substations	Nos.		
	25 KVA		900	12.94
	63 KVA		930	19.25
	100 KVA		1050	30.19
	250 KVA		210	14.49
	400 KVA		72	7.45



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Sl.No.	Name of Scheme	Unit	2018-2019	
			Physical	Finance
	Capital			
(c)	11/0.4 KV Substation Increasing capacity	Nos.		
	25 KVA to 63 KVA		960	8.28
	63 KVA to 100 KVA		1200	8.28
	100 KVA to 250 KVA		600	27.60
	250 KVA to 400 KVA		120	6.21
(d)	Strengthening of 11 KV line	Km.	3600	82.80
(e)	Replacement of 11KV Switchgears	Nos.	300	17.25
(f)	Installation of New 11KV Switchgears	Nos.	120	8.28
(g)	Strengthening of 11/0.4 KV Substation	Nos.		
(h)	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.		
	Construction of LT Lines	Km.	600	17.25
	Replacement of Damaged Conductors of LT Lines	Km.	4500	55.20
	Replacement of Damaged Poles	Nos.	9600	4.49
	Earthing/Fencing work of Distribution Transformers	Nos.	5820	33.47
(i)	Distribution Transformers Metering	Nos.	4260	2.76
(j)	Laying of ABC	Km.	2520	138.00
(k)	Guarding of 11 KV Lines	Km.	1014	6.90
(l)	Underground Cabling Work - 11 Kv	Km.	600	207.00
	Total			742.58
	33 KV/11 KV Works Under Business Plan			902.79
	Consumer Metering Work			
(a)	Providing of double meter with modem	Nos.	600	3.45
(b)	Installation of Single Phase Meter	Nos.	1080000	216.00
(c)	Installation of Three Phase Meter	Nos.	24000	9.60
(d)	Installation of Pre-Paid Meter	Nos.	9000	0.45



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Sl.No.	Name of Scheme	Unit	2018-2019	
			Physical	Finance
	Capital			
	Total			229.05
(B)	Vyapar Vikas Nidhi			
7	33 KV Work			
(a)	Construction of New 33/11 KV Substation and its associated 33 kV lines	Nos.	2	12.70
(b)	Increasing Capacity of 33/11 KV Substation	Nos.	10	6.78
(c)	33 KV Link Line	Km.	47	11.17
(d)	Replacement of (33 KV) damaged conductor, poles, Substation apparatus etc.)	Km./Nos.	102	4.06
	Total			34.71
8	11 KV New work			
(a)	11 KV new line (Bifurcation of feeders, link line etc.)	Km.	146	6.70
(b)	11/0.4 KV Substation	Nos.	490	21.28
(c)	11/0.4 KV Substation Increasing capacity	Nos.	515	16.52
(d)	Strengthening of 11 KV line	Km.	599	13.70
(e)	Strengthening of 11/0.4 KV Substation	Nos.	1257	8.35
(f)	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.	673	10.72
(g)	Installation/Replacement of 33 KV VCB	Nos.	30	2.40
(h)	Installation/Replacement of damage/very old 11 Kv OCB/VCB and other equipment as well as replacement by high capacity.	Nos.	87	5.20
	Total			84.87
9	L.T. ABC	Km.	1046	51.14
10	Underground Cabling Work - 11 kv & 33 KV	Km.	111	56.70
11	Consumer Metering Work			
(a)	Providing of double meter with modem	Nos.	372	1.24



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Sl.No.	Name of Scheme	Unit	2018-2019	
			Physical	Finance
	Capital			
(b)	Installation of Single Phase Meter	Nos.	11694	1.34
(c)	Installation of Three Phase Meter	Nos.	9174	3.17
	Total			113.58
	TOTAL Vyapar Vikas Nidhi			462.22
(C)	Other Works			
11	Civil Works - Construction of Buildings & Boundary Walls offices & Colonies		12.00	3.27
12	Construction of New Workshop		3.00	0.90
13	Strengthening of Workshop, Stores		9.00	2.64
14	Construction of Erector Hostel		1.00	1.38
15	SCADA Control Room Centre		2.00	0.69
16	Construction Boundary Wall of 33/11 KV Substation & Offices		29.00	4.97
17	Manufacturing of PCC Poles	Nos.	100000	21.00
18	Material Purchase for Repairing of Transformer (Workshop)		24600.00	60.07
19	Labour Charges for Repairing of Transformer (Workshop)		24600.00	12.28
20	Major T&P item like cable for locater, test lab equipment, centrifuging etc.			10.00
21	Workshop & Store strengthening	Nos.	6	0.83
22	HHB Billing	Nos.	15300000	13.83
23	MRI Billing	Nos.	102000	3.80
24	Cloud Based Rural Billing	Nos.	9808502	9.00
25	Network & Software Procurement for Cloud Based Billing	Nos.	8640000	4.83
26	Meter Checking Scheme	Nos.	450000	14.84
27	Computer Hardware	Nos.	204	1.41
28	Installation of Mobile Application Dash Board	Nos.	1	4.83
29	IT Enabled service for Consumers	Nos.	1	1.38



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Sl.No.	Name of Scheme	Unit	2018-2019	
			Physical	Finance
	Capital			
30	IT based Cloud Services & IT Application	Nos.	1	1.38
31	GIS Platform, Door to Door Survey	Nos.	3	2.07
32	IT Platform Command Centre for improvement of Billing Efficiency	Nos.	1	4.14
33	Provision of New Cash Vans	Nos.	480.00	8.97
34	Provision of New Billing Centers	Nos.	140.00	40.00
35	Provision of New Kiosk Machine	Nos.	135.00	0.75
36	Provision of New LED Lighting at Substation	Nos.	17000.00	0.15
37	Fault location machine & testing Facility	Nos.	57.00	3.00
38	DR (Data Restoration) Centre upgradation	Nos.	1.00	5.00
	Total			237.40
	Grand Total B.Plan+V.V.N.+Other Works			1540.36
(D)	Central Government Schemes			
23	IPDS Scheme			147.87
24	DDUGJY Scheme			644.93
25	Feeder Segregation Work			-
26	RGVY Phase-I			-
27	RGVY Phase-II (11th Plan)			-
28	RGVY Phase-II (12th Plan)			-
29	RAPDRP PART-A			97.00
30	RAPDRP PART-B (Non Scada)			-
31	RAPDRP PART-B Scada			-
32	RAPDRP PART-B (Consultancy Charges)			-
	Total			889.80
	Deposit Works			372.29
	Grand Total			3,031.50



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New Capital Expenditure Works Proposed for FY 2019-20 (PVVNL) (Rs. Crore)

Sl.No.	Name of Scheme	Unit	2019-2020	
			Physical	Finance
	Capital			
1	Energisation of PTW Connection (Under Normal Scheme)	Nos.	15000	102.00
2	Electrification of Village under Dr. Ram Manohar Lohia Samgra Gram Vikas Yojna	Nos.	315	65.00
	Total			167.00
(A)	Business Plan			
3	33 KV Work			
(a)	Construction of New 33/11 KV Substation and its associated 33 kv lines	Nos.	15	49.03
(b)	Construction of New 33/11 KV G I Substation and its associated 33 kv lines	Nos.	2	20.39
(c)	Increasing Capacity of 33/11 KV Substation	Nos.	30	25.00
(d)	Construction of 33 KV Link Line	Km./Nos.	38	25.47
(e)	Strengthening of 33 KV Lines	Km	288	8.28
(f)	Installation of Capacitor Banks on 33/11 KV Substation	Nos.	72	16.56
(g)	Guarding of 33 KV Lines	Km.	346	3.04
(h)	Installation/Replacement of 33 KV VCB	Nos.	100	8.05
(i)	Underground Cabling Work - 33 kv	Km.	96	55.20
	Total			128.17
4	11 KV New work			
(a)	11 KV new line (Bifurcation of feeders, link line etc.)	Km.	500	34.50
(b)	11/0.4 KV Substations	Nos.		
	25 KVA		720	10.35
	63 KVA		744	15.40
	100 KVA		840	24.15
	250 KVA		168	11.59
	400 KVA		58	5.96



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Sl.No.	Name of Scheme	Unit	2019-2020	
			Physical	Finance
	Capital			
(c)	11/0.4 KV Substation Increasing capacity	Nos.		
	25 KVA to 63 KVA		768	6.62
	63 KVA to 100 KVA		960	6.62
	100 KVA to 250 KVA		480	22.08
	250 KVA to 400 KVA		96	4.97
(d)	Strengthening of 11 KV line	Km.	2880	66.24
(e)	Replacement of 11KV Switchgears	Nos.	240	13.80
(f)	Installation of New 11KV Switchgears	Nos.	96	6.62
(g)	Strengthening of 11/0.4 KV Substation	Nos.		
(h)	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.		
	Construction of LT Lines	Km.	480	13.80
	Replacement of Damaged Conductors of LT Lines	Km.	3600	44.16
	Replacement of Damged Poles	Nos.	7680	3.59
	Earthing/Fencing work of Dstribution Transformers	Nos.	4656	26.77
(i)	Distribution Transformers Metering	Nos.	3408	2.21
(j)	Laying of ABC	Km.	2016	110.40
(k)	Guarding of 11 KV Lines	Km.	811	5.52
(l)	Underground Cabling Work - 11 kv	Km.	480	165.60
	Total			600.96
	33 KV/11 KV Works Under Business Plan			729.13
	Consumer Metering Work			
(a)	Providing of double meter with modem	Nos.	480	2.76
(b)	Installation of Single Phase Meter	Nos.	864000	172.80
(c)	Installation of Three Phase Meter	Nos.	19200	7.68
(d)	Installation of Pre-Paid Meter	Nos.	7200	0.36



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Sl.No.	Name of Scheme	Unit	2019-2020	
			Physical	Finance
	Capital			
	Total			183.24
(B)	Vyapar Vikas Nidhi			
7	33 KV Work			
(a)	Construction of New 33/11 KV Substation and its associated 33 kv lines	Nos.	2	10.16
(b)	Increasing Capacity of 33/11 KV Substation	Nos.	8	5.42
(c)	33 KV Link Line	Km.	38	8.94
(d)	Replacement of (33 KV) damaged conductor, poles, Substation apparatus etc.)	Km./Nos.	82	3.25
	Total			27.77
8	11 KV New work			
(a)	11 KV new line (Bifurcation of feeders, linkline etc.)	Km.	117	5.36
(b)	11/0.4 KV Substation	Nos.	392	17.02
(c)	11/0.4 KV Substation Increasing capacity	Nos.	412	13.22
(d)	Strengthening of 11 KV line	Km.	479	10.96
(e)	Strengthening of 11/0.4 KV Substation	Nos.	1006	6.68
(f)	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.	538	8.57
(g)	Installation/Replacement of 33 KV VCB	Nos.	35	2.80
(h)	Installation/Replacement of damage/very old 11 kv OCB/VCB and other equipments as well as replacement by high capacity.	Nos.	70	4.16
	Total			68.78
9	L.T. ABC	Km.	837	40.91
10	Underground Cabling Work - 11 kv & 33 KV	Km.	89	45.36
11	Consumer Metering Work			
(a)	Providing of double meter with modem	Nos.	298	0.99



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Sl.No.	Name of Scheme	Unit	2019-2020	
			Physical	Finance
	Capital			
(b)	Installation of Single Phase Meter	Nos.	9355	1.08
(c)	Installation of Three Phase Meter	Nos.	7339	2.53
	Total			90.87
	TOTAL Vyapar Vikas Nidhi			370.65
(C)	Other Works			
11	Civil Works - Construction of Buildings & Boundary Walls offices & Colonies		10.00	2.62
12	Construction of New WorkShop		2.00	0.72
13	Strengthening of Workshop, Stores		7.00	2.11
14	Construction of Erector Hostel		1.00	1.10
15	SCADA Control Room Centre		2.00	0.55
16	Construction Boundary Wall of of 33/11 KV Substation & Offices		23.00	3.97
17	Manufacturing of PCC Poles	Nos.	100000	21.00
18	Material Purchase for Repairing of Transformer (Workshop)		19680.00	48.06
19	Labour Charges for Repairing of Transformer (Workshop)		19680.00	9.83
20	Major T&P item like cable for locater, test lab equipment, centrifuging etc.			10.00
21	Workshop & Store strengthening	Nos.	5	0.66
22	HHB Billing	Nos.	12240000	11.07
23	MRI Billing	Nos.	81600	3.04
24	Cloud Based Rural Billing	Nos.	7846802	7.20
25	Network & Software Procurement for Cloud Based Billing	Nos.	6912000	3.86
26	Meter Checking Scheme	Nos.	360000	11.87
27	Computer Hardware	Nos.	163	1.13
28	Installation of Mobile Application Dash Board	Nos.	1	3.86
29	IT Enabled service for Consumers	Nos.	1	1.10



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Sl.No.	Name of Scheme	Unit	2019-2020	
			Physical	Finance
	Capital			
30	IT based Cloud Services & IT Application	Nos.	1	1.10
31	GIS Platform, Door to Door Survey	Nos.	2	1.66
32	IT Platform Command Centre for improvement of Billing Efficiency	Nos.	1	3.31
33	Provision of New Cash Vans	Nos.	384.00	7.18
34	Provision of New Billing Centers	Nos.	40.00	40.00
35	Provision of New Kiosk Machine	Nos.	135.00	1.00
36	Provision of New LED Lighting at Substation	Nos.	17000.00	0.20
37	Fault location machine & testing Facility	Nos.	57.00	3.00
38	DR (Data Restoration) Centre upgradation	Nos.	1.00	10.00
	Total			211.20
	Grand Total B.Plan+V.V.N.+Other Works			1294.75
(D)	Central Government Schemes			
23	IPDS Scheme			-
24	DDUGJY Scheme			-
25	Feeder Segregation Work			-
26	RGVY Phase-I			-
27	RGVY Phase-II (11th Plan)			-
28	RGVY Phase-II (12th Plan)			-
29	RAPDRP PART-A			94.00
30	RAPDRP PART-B (Non Scada)			-
31	RAPDRP PART-B Scada			-
32	RAPDRP PART-B (Consultancy Charges)			-
	Total			94.00
	Deposit Works			220.08
	Grand Total			1,792.07



4. Proposed Capital Expenditure by PuVVNL for the MYT Period

New Capital Expenditure Works Proposed for FY 2017-18 (Rs. Crore)

Sl. No.	Particulars	Unit	Physical Target	Total
Business Plan				
(A) Strengthening of System				
1	Construction of New 33/11 KV Substation	No.	6	26.40
2	Capacity enhancement of 33/11 KV Substation	No.	24	24.00
3	Construction of 33 KV line/link line	KM.	180	19.80
4	Strengthening of 33 KV Line	KM.	145	10.73
5	Guarding of 33 KV line	KM.	42	0.23
6	Construction of 33 KV Underground cable	KM.	13	5.72
7	Construction of 11 / 0.4 KV Substation	No.	2200	55.00
8	Capacity enhancement of 11 / 0.4 KV distribution transformer	No.	2200	35.20
9	Construction and bifurcation of 11 KV Line	KM.	285	9.12
10	Strengthening of 11 KV Line	KM.	385	3.12
11	Replacement of damaged 11 KV switchgear/ Installation of new switchgear	No.	155	8.22
12	Construction of LT lines	KM.	100	6.60
13	Replacement of Jarjar tar of LT line	KM.	1000	9.50
14	Replacement of Jarjar poles of LT line	No.	3900	5.46
15	Earthing / Fencing of transformer	No.	1450	7.98
16	Details of installation of Lt AB cable	KM.	400	14.00
17	Guarding of 11 KV line	KM.	95	0.52
18	Laying of 11 KV under Ground Cable	KM.	40	10.20
19	Laying of HT ABC Cable	KM.	40	1.60
Total				253.39
(B) Metering				
1	Metering of Distribution Transformers	No.	500	0.75



*Approval of Business Plan, MYT ARR and Tariff for
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Sl. No.	Particulars	Unit	Physical Target	Total
2	Reducing of commercial losses / Installation of meter in place of unmetered consumers of rural area.	No.	2400000	288.00
Total				288.75
(C) Capacitor Bank				
1	Installation of Capacitor Bank at 33 / 11 KV Substations.	No.	20	6.60
Total				6.60
(D) Other work				
1	Strengthening of residential / Non- residential buildings.	No.	6	0.15
2	Construction of boundary wall of 33 / 11 KV substations/ offices.	No.	25	1.38
3	Strengthening of equipments of workshops	No.	2	0.22
Total				1.75
Grand Total Business Plan				550.49
2	Vypar Vikas Nidhi			
(A) Strengthening of System				
1	Construction of New 33/11 KV Substation	No.	6	28.20
2	Capacity enhancement of 33/11 KV Substation	No.	12	13.20
3	Construction of 33 KV line/link line			0.00
(i)	Over head	KM.	40	4.40
(ii)	Under ground	KM.	10	3.20
4	Replacement of 33 KV VCB and CT	KM.	8	0.35
5	Strengthening of 33 KV Line	KM.	24	1.65
6	Guarding of 33 KV line	KM.	15	0.08
7	Construction of 11 / 0.4 KV Substation	No.	150	6.75
8	Capacity enhancement of 11 / 0.4 KV distribution transformer	No.	200	5.00
9	Construction and bifurcation of 11 KV Line	KM.	100	4.00
10	Strengthening of 11 KV Line	KM.	150	1.50



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Sl. No.	Particulars	Unit	Physical Target	Total
11	Replacement of damaged 11 KV switchgear/ Installation of new switchgear	No.	92	5.54
12	Construction of LT lines	KM.	100	6.00
13	Replacement of Jarjar tar of LT line	KM.	200	1.80
14	Replacement of Jarjar poles of LT line	No.	1000	1.40
15	Earthing / Fencing of transformer	No.	400	24.00
16	Detail of installation of LT AB cables	KM.	200	10.00
17	Guarding of 11 KV line	KM.	14	0.07
18	Laying of 11 KV underground cables	KM.	15	3.00
Total				120.13
(B) Metering				
1	Metering of Distribution Transformers	No.	638	1.60
2	Reducing of commercial losses / Installation of meter in place of unmetered consumers of rural area.	No.	54560	7.09
Total				8.69
(C) Capacitor Bank				
1	Installation of Capacitor Bank at 33 / 11 KV Substations.	No.	8	2.56
Total				2.56
Grand Total Vypar Vikas Nidhi				131.38
Total BP and VVN				681.87
3	PTW			40.00
4	RML/ Village Electrification			75.00
5	Under Ground High Court Allahabad			8.79
6	Under Ground Ghazipur Town			32.24
7	Under Ground Jaunpur Town			39.69
8	Under Ground Ballia Town			46.13
9	Under Ground Kasia (Kushinagar)			23.15
10	RAPDRP Part-B			200.40
11	DDUGJY 11 th PLAN			330.42



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Sl. No.	Particulars	Unit	Physical Target	Total
12	DDUGJY 12th PLAN			738.85
13	IPDS			508.24
14	Deposit Works			381.47
	Total			3106.25

New Capital Expenditure Works Proposed for FY 2018-19 (PuVVNL) (Rs.Crore)

Sl. No.	Particulars	Unit	Physical Target	Total
	Business Plan			
(A) Strengthening of System				
1	Construction of New 33/11 KV Substation	No.	12	57.60
2	Capacity enhancement of 33/11 KV Substation	No.	26	28.60
3	Construction of 33 KV line/link line	KM.	200	24.00
4	Strengthening of 33 KV Line	KM.	155	12.56
5	Guarding of 33 KV line	KM.	46	0.28
6	Construction of 33 KV Underground cable	KM.	15	7.20
7	Construction of 11 / 0.4 KV Substation	No.	2400	66.00
8	Capacity enhancement of 11 / 0.4 KV distribution transformer	No.	2400	42.00
9	Construction and bifurcation of 11 KV Line	KM.	310	10.85
10	Strengthening of 11 KV Line	KM.	420	3.86
11	Replacement of damaged 11 KV switchgear/ Installation of new switchgear	No.	170	9.86
12	Construction of LT lines	KM.	110	7.92
13	Replacement of Jarjar tar of LT line	KM.	1100	12.10
14	Replacement of Jarjar poles of LT line	No.	4300	6.45
15	Earthing / Fencing of transformer	No.	1500	9.00
16	Details of installation of Lt AB cable	KM.	450	17.55
17	Guarding of 11 KV line	KM.	100	0.60
18	Laying of 11 KV under Ground Cable	KM.	44	11.88



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Sl. No.	Particulars	Unit	Physical Target	Total
19	Laying of HT ABC Cable	KM.	44	1.94
Total				
(B) Metering				
1	Metering of Distribution Transformers	No.	550	0.88
2	Reducing of commercial losses / Installation of meter in place of unmetered consumers of rural area.	No.	50000	6.00
Total				
(C) Capacitor Bank				
1	Installation of Capacitor Bank at 33 / 11 KV Substations.	No.	20	7.00
Total				
(D) Other work				
1	Strengthening of residential / Non- residential buildings.	No.	6	0.16
2	Construction of boundary wall of 33 / 11 KV substations/ offices.	No.	25	1.50
3	Strengthening of equipments of workshops	No.	2	0.22
Total				
Grand Total Business Plan				103.80
2	Vypar Vikas Nidhi			
(A) Strengthening of System				
1	Construction of New 33/11 KV Substation	No.	6	29.40
2	Capacity enhancement of 33/11 KV Substation	No.	12	14.40
3	Construction of 33 KV line/link line			0.00
(i)	Over head	KM.	40	4.80
(ii)	Under ground	KM.	15	5.10
4	Replacement of 33 KV VCB and CT	KM.	8	0.39
5	Strengthening of 33 KV Line	KM.	27	1.81
6	Guarding of 33 KV line	KM.	15	0.08
7	Construction of 11 / 0.4 KV Substation	No.	180	8.55



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Sl. No.	Particulars	Unit	Physical Target	Total
8	Capacity enhancement of 11 / 0.4 KV distribution transformer	No.	230	5.75
9	Construction and bifercation of 11 KV Line	KM.	125	5.31
10	Strengthening of 11 KV Line	KM.	200	2.50
11	Replacement of damaged 11 KV switchgear/ Installation of new switchgear	No.	102	6.10
12	Construction of LT lines	KM.	100	6.00
13	Replacement of Jarjar tar of LT line	KM.	250	2.50
14	Replacement of Jarjar poles of LT line	No.	1000	1.50
15	Earthing / Fencing of transformer	No.	500	35.00
16	Detail of installation of LT AB cables	KM.	254	13.98
17	Guarding of 11 KV line	KM.	16	0.08
18	Laying of 11 KV underground cables	KM.	20	4.00
Total				
(B) Metering				
1	Metering of Distribution Transformers	No.	702	1.75
2	Reducing of commercial losses / Installation of meter in place of unmetered consumers of rural area.	No.	60016	8.40
Total				
(C) Capacitor Bank				
1	Installation of Capacitor Bank at 33 / 11 KV Substations.	No.	8	2.72
Total				
Grand Total Vypar Vikas Nidhi				
Total BP and VVN				506.12
3	PTW			44.00
4	RML/ Village Electrification			75.00
5	Under Ground High Court Allahabad			11.73
6	Under Ground Ghazipur Town			43.02
7	Under Ground Jaunpur Town			52.96



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Sl. No.	Particulars	Unit	Physical Target	Total
8	Under Ground Ballia Town			61.41
9	Under Ground Kasia (Kushinagar)			30.88
10	RAPDRP Part-B			140.40
11	DDUGJY 11 th PLAN			300.00
12	DDUGJY 12th PLAN			700.00
13	IPDS			512.91
14	Deposit Works			346.98
	Total			2825.41

New Capital Expenditure Works Proposed for FY 2019-20 (PuVVNL) (Rs. Crore)

Sl. No.	Particulars	Unit	Physical Target	Total
	Business Plan			
(A) Strengthening of System				
1	Construction of New 33/11 KV Substation	No.	12	62.40
2	Capacity enhancement of 33/11 KV Substation	No.	28	33.88
3	Construction of 33 KV line/link line	KM.	200	26.00
4	Strengthening of 33 KV Line	KM.	170	15.30
5	Guarding of 33 KV line	KM.	50	0.33
6	Construction of 33 KV Underground cable	KM.	17	8.84
7	Construction of 11 / 0.4 KV Substation	No.	2603	80.69
8	Capacity enhancement of 11 / 0.4 KV distribution transformer	No.	2600	50.70
9	Construction and bifurcation of 11 KV Line	KM.	340	13.09
10	Strengthening of 11 KV Line	KM.	460	4.60
11	Replacement of damaged 11 KV switchgear/ Installation of new switchgear	No.	190	12.16
12	Construction of LT lines	KM.	125	9.88
13	Replacement of Jarjar tar of LT line	KM.	1250	15.00
14	Replacement of Jarjar poles of LT line	No.	4700	7.99



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Sl. No.	Particulars	Unit	Physical Target	Total
15	Earthing / Fencing of transformer	No.	1700	11.22
16	Details of installation of Lt AB cable	KM.	500	21.75
17	Guarding of 11 KV line	KM.	110	0.73
18	Laying of 11 KV under Ground Cable	KM.	50	15.00
19	Laying of HT ABC Cable	KM.	55	2.70
Total				
(B) Metering				
1	Metering of Distribution Transformers	No.	600	1.02
2	Reducing of commercial losses / Installation of meter in place of unmetered consumers of rural area.	No.	50000	6.50
Total				
(C) Capacitor Bank				
1	Installation of Capacitor Bank at 33 / 11 KV Substations.	No.	23	9.20
Total				
(D) Other work				
1	Strengthening of residential / Non- residential buildings.	No.	7	0.21
2	Construction of boundary wall of 33 / 11 KV substations/ offices.	No.	25	1.65
3	Strengthening of equipments of workshops	No.	2	0.24
Total				
Grand Total Business Plan				123.32
2	Vyapar Vikas Nidhi			
(A) Strengthening of System				
1	Construction of New 33/11 KV Substation	No.	6	30.00
2	Capacity enhancement of 33/11 KV Substation	No.	12	15.60
3	Construction of 33 KV line/link line			0.00
(i)	Over head	KM.	40	4.80
(ii)	Under ground	KM.	15	5.25



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Sl. No.	Particulars	Unit	Physical Target	Total
4	Replacement of 33 KV VCB and CT	KM.	9	0.44
5	Strengthening of 33 KV Line	KM.	29	1.99
6	Guarding of 33 KV line	KM.	20	0.10
7	Construction of 11 / 0.4 KV Substation	No.	200	10.00
8	Capacity enhancement of 11 / 0.4 KV distribution transformer	No.	250	6.25
9	Construction and bifurcation of 11 KV Line	KM.	150	6.75
10	Strengthening of 11 KV Line	KM.	250	3.75
11	Replacement of damaged 11 KV switchgear/ Installation of new switchgear	No.	112	7.27
12	Construction of LT lines	KM.	100	6.00
13	Replacement of Jarjar tar of LT line	KM.	300	3.30
14	Replacement of Jarjar poles of LT line	No.	1000	1.60
15	Earthing / Fencing of transformer	No.	600	42.00
16	Detail of installation of LT AB cables	KM.	280	16.77
17	Guarding of 11 KV line	KM.	17	0.09
18	Laying of 11 KV underground cables	KM.	25	5.00
Total				
(B) Metering				
1	Metering of Distribution Transformers	No.	772	1.93
2	Reducing of commercial losses / Installation of meter in place of unmetered consumers of rural area.	No.	66018	9.90
Total				
(C) Capacitor Bank				
1	Installation of Capacitor Bank at 33 / 11 KV Substations.	No.	10	3.50
Total				
Grand Total Vypar Vikas Nidhi				
Total BP and VVN				
3	PTW			48.00



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Sl. No.	Particulars	Unit	Physical Target	Total
4	RML/ Village Electrification			75.00
5	Under Ground High Court Allahabad			11.73
6	Under Ground Ghazipur Town			43.02
7	Under Ground Jaunpur Town			52.96
8	Under Ground Ballia Town			61.41
9	Under Ground Kasia (Kushinagar)			30.88
10	RAPDRP Part-B			0.00
11	DDUGJY 11 th PLAN			0.00
12	DDUGJY 12th PLAN			0.00
13	IPDS			106.00
14	Deposit Works			143.13
	Total			1165.48

5. Proposed Capital Expenditure by KESCO for the MYT Period

New Capital Expenditure Works Proposed for FY 2017-18 (Rs Crore)

Sl.No.	Name of Scheme	Unit	2017-18	
			Physical	Finance
	Capital			
(A)	Business Plan			
	33 KV Work			
	Construction of 33 KV Link Line/Double Supply	Km./Nos.		90.00
	Digitization and Asset Mapping, Business Intelligence too, Consumer mapping (Enterprise resource planning)	Nos.		25.00
	Installation of MDAS in KESCO.	Nos.		1.00
	Consultancy services for making revised electrification master plan of Kanpur Nagar.	Nos.		0.25
	Total			116.25
	33/11 KV Line guarding & HT/LT line replacement	Km.	600.00	75.00
	33 KV/11 KV Works Under Business Plan			191.25
(B)	Vyapar Vikas Nidhi			



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Sl.No.	Name of Scheme	Unit	2017-18	
			Physical	Finance
	Capital			
	Replacement of damage/very old 11 kv OCB/VCB and other equipments as well as replacement by high capacity/Metering of Bulk consumers from LT to HT	Nos.		5.00
	Total			5.00
	L.T. ABC	Km.		
	Underground Cabling Work - 11 kv & 33 kv/LT	Km.		15.00
	Total			15.00
	TOTAL Vyapar Vikas Nidhi			20.00
(C)	Other Works			
	Civil Works - Construction of Buildings & Boundry Walls offices & Colonies			10.00
	Total			10.00
	Grand Total B.Plan+V.V.N.+Other Works			221.25
	Deposit Works			30.98
	Grand Total			252.23

New Capital Expenditure Works Proposed for FY 2018-19 KESCO (Rs Crore)

S No	Name of Scheme	Unit	Physical	Finance
(A)	Business Plan			
	Control Room			10.00
	Laying of optic fibre			25.00
	Strengthening of 11 KV line	Km.		10.00
	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.		20.00
	Replacement of damage/very old 11 kv OCB/VCB and other equipment as well as replacement by high capacity.	Nos.		5.00
	Total			70.00
	L.T. ABC	Km.		10.00
	Underground Cabling Work - 11 kv & 33 Kv	Km.		20.00
	33 KV/11 KV Works Under Business Plan			100.00



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S No	Name of Scheme	Unit	Physical	Finance
(B)	Vyapar Vikas Nidhi			
	33 KV Work			
	Replacement of (33 KV) damaged conductor, poles, Substation apparatus etc.)	Km./Nos.		10.00
	Total			10.00
	11 KV New work			
	Strengthening of 11 KV line	Km.		15.00
	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.		10.00
	Total			25.00
	L.T. ABC	Km.		2.00
	Underground Cabling Work - 11 kv & 33 kv/LT	Km.		15.00
	Total			17.00
	TOTAL Vyapar Vikas Nidhi			52.00
(C)	Other Works			
	Civil Works - Construction of Buildings & Boundry Walls offices & Colonies			5.00
	Workshop & Store strengthening/Civil building work	Nos.		5.00
	Provision of New Cash Vans	Nos.		2.00
	Provision of New Billing Centers	Nos.		2.00
	Total			14.00
	Grand Total B.Plan+V.V.N.+Other Works			166.00
	Deposit Works			23.24
	Grand Total			189.24

New Capital Expenditure Works Proposed for FY 2019-20 KESCO (Rs Crore)

S No	Name of Scheme	Unit	Physical	Finance
(A)	Business Plan			
1	33 KV Work			



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S No	Name of Scheme	Unit	Physical	Finance
	Construction of New 33/11 KV Substation and its associated 33 kv lines	Nos.		15.00
	Construction of New 33/11 KV G I Substation and its associated 33 kv lines	Nos.		30.00
	Replacement of (33 KV) damaged conductor, poles, Substation apparatus etc.)	Km./Nos.		10.00
	Total			55.00
	L.T. ABC	Km.		20.00
	Underground Cabling Work - 11 kv & 33 kv	Km.		25.00
	33 KV/11 KV Works Under Business Plan			100.00
(B)	Vyapar Vikas Nidhi			
	33 KV Work			
	Replacement of (33 KV) damaged conductor, poles, Substation apparatus etc.)	Km./Nos.		10.00
	Strengthening of L.T. line. (Replacement of damages conductor/pole, Additional pole in long span & other access etc.	Km.		10.00
	Replacement of damage/very old 11 kv OCB/VCB and other equipments as well as replacement by high capacity/Metering of Bulk consumers from LT to HT	Nos.		3.00
	Total			13.00
	L.T. ABC	Km.		2.00
	Underground Cabling Work - 11 kv & 33 kv/LT	Km.		20.00
	Total			22.00
	TOTAL Vyapar Vikas Nidhi			45.00
(C)	Other Works			
	Civil Works - Construction of Buildings & Boundary Walls offices & Colonies			5.00
	Total			5.00
	Grand Total B.Plan+V.V.N.+Other Works			150.00
	Deposit Works			21.00
	Grand Total			171.00



12.7 SUMMARY OF BECHNMARKING STUDIES CONDUCTED BY THE PETITIONERS

Benchmarking Study for Electricity Distribution Companies of Uttar Pradesh

EXECUTIVE SUMMARY

Prepared for:

UTTAR PRADESH POWER CORPORATION COMPANY LIMITED

Prepared by:

MERCADOS ENERGY MARKETS INDIA PRIVATE LIMITED

31 August 2017

$$Max \sum_n \left\{ \int_0^{d^a} D^a(x) dx - \int_0^{s^a} S^a(y) dy \right\}$$



INTRODUCTION

The Hon'ble UPERC has notified the Uttar Pradesh Electricity Regulatory Commission (Multi Year Distribution Tariff) Regulations, 2014 (UPERC MYDT Regulations, 2014) on 12.5.2014 which inter-alia provides the procedure and guidelines for determination of distribution and retail tariff in the State of Uttar Pradesh. It is for the first time, that the Hon'ble Commission has issued tariff regulations for Multi Year Tariff control period encompassing the financial years 2017-18 to 2019-20 as before the said period, the tariff was being framed on annual basis.

Regulation 4.2.1 of the UPERC MYDT Regulations, 2014 mandates the distribution licensees to undertake studies involving benchmarking of the performance of the Discoms with the other distribution licensees of the country, with the objective to establish the baseline norms and determine the performance standards for the distribution licensees of the State. The underlying objective is that in order to make the MYT regulations a success, it is imperative to define the improvement trajectory from the actual level up to the desired level.

In view of the above, five Electricity Distribution Companies (Discoms) of the State namely Paschimanchal Vidyut Vitran Nigam Limited (PVVNL), Purvanchal Vidyut Vitran Nigam Limited (PuVVNL), Dakshinanchal Vidyut Vitran Nigam Limited (DVVNL), Madhyanchal Vidyut Vitran Nigam Limited (MVVNL) and Kanpur Electricity Supply Company (KESCO) undertook benchmarking studies to fulfil the objectives of the UPERC MYDT Regulations, 2014.

Benchmarking

Benchmarking is a process that develops performance indices for specific entities and compares them to industry norms for the purpose of measuring entity performance and identifying areas needing improvement. It can provide useful ways to understand what drives the efficiency of a company.

This benchmarking process can reveal potential areas where a particular Discom's performance is lacking and point to directions for further detailed examination to identify any underlying contributing causes or mitigating factors to the performance gap. Having a clear assessment of its strengths and weaknesses, a Discom can formulate a better strategy to improve its competitive position in the market place.

SIGNIFICANCE OF THE PROJECT

The objective is to determine the current position of each State-owned Discom of Uttar Pradesh in terms of overall efficiency considering the factors such as operational, O&M expenses and financial parameters. The outcomes of this Benchmarking Study will help the respective Discom to: i) identify the areas for improvement, ii) develop strategy to improve upon the identified areas.

Based on the results, State owned Discoms of Uttar Pradesh may set a target for themselves and also assist the Hon'ble Commission to set the targets for each of the Discoms for the Control Period.

APPROACH AND METHODOLOGY

The approach towards this benchmarking study focuses on the identification of functional areas for performance measurement, selection of measurable and controllable parameters and benchmarking of the Discoms against these parameters in their peer group. The overall approach towards this benchmarking study can be defined as a five-stage process (Figure 1):

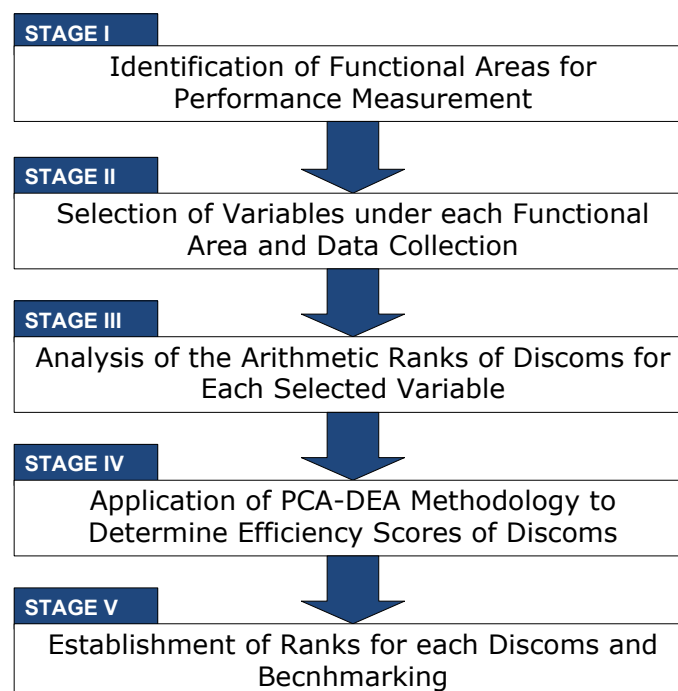


Figure 1: Overall Approach for the Study

STAGE I: Identification of the Functional Areas

In Stage I, a detailed literature survey was conducted by reviewing the current benchmarking practices in the energy and utilities domain, recent reports on the performance of the Indian utilities, and the annual reports of the Discoms. The objective was to identify broad functional areas for performance measurement of the Discoms. The following four functional areas were identified: i) Operational Performance, ii) Operational & Maintenance Expenses, iii) Financial Performance, and iv) Capital Cost.

STAGE II: Selection of Variables and Data Collection

In the next stage, parameters linked with each of the four Functional Areas were identified. An initial list of thirty-eight (38) such parameters was prepared. Afterwards, questionnaire survey with industry experts was conducted to select most relevant parameters under each of the identified functional areas. The objective was to reduce redundancies and to select quantifiable and controllable parameters. The outcome of this exercise was a list of seventeen (17) selected parameters out of the initial list of 38.

Afterwards, a pool of thirty-three (33) State-owned Discoms was created which includes the five Discoms of UP viz. PUVNL, PuVVNL, DVVNL, MVVNL and KESCO. FY 2014-15 was selected as the base year for the study to allow maximum coverage of selected parameters data. The data pertaining to all the 33 State-owned Discoms was collected from multiple sources such as: Audited Accounts, Reports of Ministry of Power and Dash Boards maintained by Ministry of Power.

STAGE III: Analysis of the Arithmetic Ranks for Selected Variables

After the completion of data collection, analysis of the Discoms rankings as per each of the selected parameter was performed. All the 33 Discoms were ranked according to their quantitative performance against each of the selected 17 parameters. The objective was to make observations and draw inferences on the Parameter-wise ranking of each Discom of UP against other selected Discoms.

STAGE IV: Application of PCA-DEA Methodology to Estimate Efficiency Scores

A key requirement of benchmarking study is to identify the impact of each of the inputs in determining the output or performance of the entity. Among the entire set of input parameters, there could be certain input parameters, which contribute more towards the overall performance improvement (output parameters). Therefore, measurement of relationship between the input and output parameters is critical to develop high-impact actionable plans for performance improvement.

Extensive literature survey along-with interactions with academicians and industry experts on benchmarking models were conducted to identify various techniques available for performance measurement. Out of the identified techniques, a combination of

Principal Component Analysis (PCA) and Data Envelopment Analysis (DEA) was found to be most suitable technique for the study. Based on the inputs given by experts and stakeholders, out of the 17 selected parameters in Stage II, fifteen (15) parameters were identified as input parameters and two (2) parameters were selected as output parameters.

DEA is a non-parametric method in operations research and economics for the estimation of production frontiers. It is used to empirically measure productive efficiency of decision making units (or DMUs) or Discoms in this instant study. In order to assess the weight of each input variable in determining the Output Variable, Principal Component Analysis (PCA) needs to be applied before solving with DEA. PCA is a statistical procedure that uses an orthogonal transformation to convert a set of observations of possibly correlated variables into a set of values of linearly uncorrelated variables called principal components. This transformation is defined in such a way that the first principal component has the largest possible variance (that is, accounts for as much of the variability in the data as possible), and each succeeding component in turn has the highest variance possible under the constraint that it is orthogonal to the preceding components. The six-step PCA-DEA methodology conducted for the study is presented in the following figure.

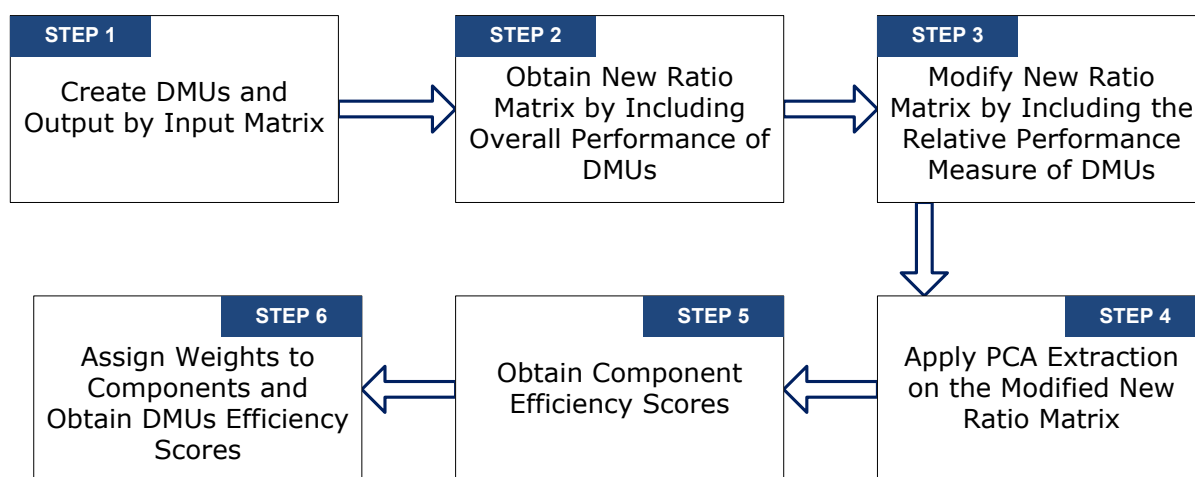


Figure 1: PCA-DEA Methodology

STAGE V: Establishment of Discom Ranks and Benchmarking

In the final stage, the Discoms were ranked as per the efficiency scores obtained through the PCA-DEA methodology. Based on the relative impact of the input parameters on the performance, areas for improvement were identified. Afterwards, meetings/presentations with the UPERC and Discoms officials were conducted to obtain feedback and establish the ranks for Discoms. After incorporating feedbacks and making necessary changes, the final recommendations were prepared including identification of critical areas for improvement.

KEY OBSERVATIONS AND FINDINGS

The ranking of each Discoms as against each of the 17 selected parameters (outcome of the exercise conducted during Stage III of the study) is presented as below:

Table 1: Summary of Parameter-wise Ranking of Discoms

S. No	Parameter Type	Parameter	Parameter-wise Discoms Ranking				
			DVVNL	MVVNL	PVVNL	PuVVNL	KESCO
1	Input	Feeders with high SAIDI (%)	27	28	33	18	1
2		Feeders with high SAIFI (%)	29	25	30	17	1
3		Feeder Monitoring (%)	27	26	22	13	32
4		HT to LT Ratio	18	32	31	33	13
5		Lead time for New Connections (%)	31	32	10	7	6
6		Lead time for Complaint Redressal (%)	10	31	22	20	1
7		R&M Expenses as % GFA	30	32	29	31	33
8		O&M Expense per unit of Energy Sales (Rs./kWh)	9	23	2	11	20
9		Average Power Purchase Cost (Rs./kWh)	31	28	30	32	29
10		ACS-ARR Gap (Rs./kWh)	31	29	19	28	21
11		Age of Debtors (Days)	30	29	21	33	31
12		Age of Creditors (Days)	26	28	16	31	12
13		Collection Efficiency (%)	31	33	9	30	29
14		E Payment (%)	23	24	12	25	26
15		AT&C Losses (%)	33	32	14	28	27
16	Output	PAT as % of expenditure	28	19	23	22	26
17		Distribution Loss (%)	32	18	15	19	25

The distribution companies of Uttar Pradesh recorded mixed positions with leading the charts in terms of Employee Cost, O&M expenses, Reliability indices, HT to LT ratio and customer service in terms of compliance redressal and granting new connections and lagging the race in terms of R&M Expenses, Average Power Purchase Cost, Age of Creditors and Age of Debtors.

Consolidated table explaining the parameters of the Uttar Pradesh Discoms is presented as below (as outcome of the process followed during Stage IV of the study):

Table 2: Final Efficiency based ranking of sample Discoms

S. No	State	Discom	Rank	S. No	State	Discom	Rank
1	Andhra Pradesh	APEPDCL	5	18	Madhya Pradesh	Central	17
2		APSPDCL	12	19		East	28
3	Bihar	NBPDCL	30	20		West	22
4		SBPDCL	26	21	Maharashtra	MSEDCL	13
5	Chhattisgarh	CSPDCL	20	22	Punjab	PSPCL	11
6	Gujarat	DGVCL	1	23	Rajasthan	AVVNL	7
7		MGVCL	3	24		JVVNL	15
8		PGVCL	4	25		JdVVNL	9
9		UGVCL	2	26	Telangana	TSSPDCL	10
10	Haryana	DHVBN	19	27		TSNPDCL	16
11		UHVBN	21	28	West Bengal	WBSEDCL	27
12	Jharkhand	JBVNL	31	29	Uttar Pradesh	DVVNL	32
13	Karnataka	BESCOM	18	30		MVVNL	33
14		GESCOM	8	31		PVVNL	23
15		HESCOM	25	32		PuVVNL	29
16		MESCOM	14	33		KESCO	6
17		CHESCOM	24				

Key findings of this study for each State owned Discom of Uttar Pradesh are presented as below:

Paschimanchal Vidyut Vitran Nigam Limited

- i. PVVNL ranks 23rd in the league of 33 Discoms as per its overall efficiency score.
- ii. The Discom leads in terms of O&M expenses owing to its lower employee expenses.
- iii. The Discom is lagging in the parameters like feeders with high SAIDI and SAIFI, and compliant redressal indicating poor consumer service.
- iv. The HT to LT ratio ranking is low for the Discom indicating need for improvement in the network infrastructure planning.

Purvanchal Vidyut Vitran Nigam Limited

- i. PuVVNL ranks 29th in the league of 33 Discoms as per its overall efficiency score.
- ii. The Discom leads in terms of O&M expenses owing to its lower employee expenses.

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- iii. The HT to LT ratio ranking is low for the Discom indicating need for improvement in the network infrastructure planning.
 - iv. The Discom is lagging in parameters such as Collection efficiency, Age of Debtors indicating poor financial conditions and lower realisation of revenues.
 - v. The Discom is lagging in compliant redressal indicating poor consumer service.

Dakshinanchal Vidyut Vitran Nigam Limited

- i. DVVNL ranks 32nd in the league of 33 Discoms as per its overall efficiency score.
- ii. The Discom leads in terms of O&M expenses owing to its lower employee expenses.
- iii. The Discom is lagging in the parameters like Collection Efficiency, ACS-ARR Gap, indicating poor financial conditions.
- iv. The Discom is lagging HT to LT ratio indicating need for improvement in the network infrastructure planning.
- v. The Discom is lagging in the parameters such as release of new connections and compliant redressal indicating poor consumer service.

Kanpur Electricity Supply Company

- i. KESCO ranks 6th in the league of 33 Discoms as per its overall efficiency score.
- ii. KESCO lag in the parameters like R%M expenses as % of GFA and AT&C losses indicating technical and commercial inefficiencies.
- iii. The Discoms fares top in terms of compliant redressal, lead time in releasing connection requests leading to good consumer satisfaction.
- iv. The Discom also lags in terms of ACS-ARR gap which results in poor financial health of the Discom.

Madhyanchal Vidyut Vitran Nigam Limited:

- i. MVVNL ranks 33rd in the league as per its overall efficiency score.
- ii. The Discom leads in terms of O&M expenses owing to its lower employee expenses.
- iii. MVVNL is lagging HT to LT ratio indicating need for improvement in the network infrastructure planning.
- iv. MVVNL is lagging in the parameters like such as collection efficiency, ACS-ARR Gap indicating stressed financial conditions and lower realization of revenues.
- v. MVVNL scores low in lead time for release of new connections and compliant redressal indicating poor consumer service.

CONCLUSIONS

The lower Employee Cost (O&M costs) per unit of energy sales is contrasted by lower efficiency scores in respect of operational performance, commercial performance, financial performance and customer service. In view thereof, the lower Employee cost per unit of energy sales reflects under-staffing. The shortage is even more pronounced in respect of technical staff as compared to non-technical staff, which is reflected from both lower Employee cost per unit of energy sales as well as lower efficiency scores.

Discoms also need to improve upon its feeder monitoring practices in order to reduce the feeder wise losses and interruptions. Discoms should start monitoring its feeders on full scale with accurate CTs PTs and energy meters. This practice will help Discoms in address losses and improving customer satisfaction by providing reliable power supply to customers.

The high age of creditors reflects the strained financial condition of the UP Discoms. The power producers provide a rebate of 2% on timely payment of energy bills, which the UP Discoms are not able to avail. Payable management also has an impact on optimizing the power procurement cost. The UP Discoms may not be in a position to improve the age of creditors unless it attains the overall efficiency on all key parameters such as T&D losses, collection efficiency etc. Lower creditor days improves the credit rating of Discoms which has an impact on the cost of lending as well as loading of lower risk premium by various generators when bidding in power procurement tenders in UP.

For improving other important parameters such as APPC, UP Discoms may implement an Energy/Load Management and cost optimization system and build a time block wise demand-supply model to strategize on the power procurement at competitive prices. UP Discoms should also develop standard operating procedures for load management, bidding for bilateral contracts and determination of quantum and rate of bid to be filed in the power exchanges. This measure will help the UP Discoms, in improving the APPC positioning.