UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION

LUCKNOW

PETITION NO. 1169/2017 & 1170/2017

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

AND

TRUE UP OF ARR AND REVENUE FOR FY 2014-15

FOR

UTTAR PRADESH POWER TRANSMISSION CORPORATION LIMITED

ORDER UNDER SECTION 64 OF

THE ELECTRICITY ACT, 2003

______________, 2017

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UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION

Petition No. 1169/2017 & 1170/2017

IN THE MATTER OF:

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

And

IN THE MATTER OF:

Uttar Pradesh Power Transmission Corporation Limited, Lucknow (UPPTCL)

ORDER

The Commission, having deliberated upon the above Petition and also the subsequent filings by the Petitioner, and the Petition thereafter being admitted on September 4 2017, and having considered the views / comments / suggestions / objections / representations received from the stakeholders during the course of the above proceedings and also in the Public Hearings held, in exercise of powers vested under Sections 61, 62, 64 and 86 of the Electricity Act, 2003 (hereinafter referred to as 'the Act'), hereby passes this Order signed, dated and issued on ____________, 2017. The Licensee, in accordance with Regulation 13.3 of the Uttar Pradesh Electricity Regulatory Commission (Multi Year Transmission Tariff) Regulations, 2014, shall publish within three days, the Tariff 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 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

1. BACKGROUND AND PROCEDURAL HISTORY

1.1 BACKGROUND

1.1.1 The Uttar Pradesh Electricity Regulatory Commission (hereinafter referred to as the 'UPERC' or 'the Commission') was formed under U.P. Electricity Reform Act, 1999 by the 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') 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)
- Pashchimanchal 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 started functioning with effect from July 26, 2006 and 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 powers vested under Section 30 of the Electricity Act, 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 Discoms 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.

1.1.7 UPPTCL is entrusted with the responsibilities of planning and development of an efficient and economic intra-State transmission system, providing connectivity and allowing open access for use of the intra-State transmission system in coordination, among others, licensees and generating companies. In doing so, it is guided by the provisions of the UP Electricity Grid Code, 2007, UPERC (Terms and Conditions for Open Access) Regulations, 2004, and UPERC (Grant of Connectivity to intra-State Transmission System) Regulations, 2010 as amended from time to time.

1.1.8 The Government of Uttar Pradesh (GoUP), in exercise of the powers vested under Section 31 of the Electricity Act, 2003, vide Notification No. 78/24-U.N.N.P.-11-525/08 dated January 24, 2011 notified the "Power System Unit" as the "State Load Despatch Centre" of Uttar Pradesh for the purpose of exercising the powers and discharging the functions under Part V of the

Electricity Act, 2003. SLDC is operating as a part of the Uttar Pradesh Power Transmission Corporation Ltd., in its capacity as the State Transmission Utility. SLDC is the apex body to ensure integrated operation of the power system in the State

1.2 TRANSMISSION TARIFF REGULATIONS

1.2.1 The Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2006 (hereinafter referred to as the "Transmission Tariff Regulations, 2006") were notified by the Commission on October 6, 2006. These Regulations are applicable for the purposes of ARR filing and Tariff determination of the Transmission Licensees within the State of Uttar Pradesh from FY 2007-08 onwards.

1.2.2 Further the Uttar Pradesh Electricity Regulatory Commission (Multi Year Transmission Tariff) Regulations, 2014 (hereinafter referred to as the "Transmission MYT Regulations, 2014) have been notified on May 12, 2014. These Regulations shall be 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 two years, ended in FY 2016-17. The Transmission 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 Transmission MYT Regulations, 2014.

2. PROCEDURAL HISTORY

2.1 TARIFF ORDER FOR FY 2016-17

2.1.1 The Commission, vide its Order dated August 01, 2016, approved the Aggregate Revenue Requirement and Transmission Tariff for UPPTCL for FY 2016-17. In the said Order, the Commission also approved the true up for FY 2013-14.

2.2 BUSINESS PLAN, ARR & TARIFF PETITION FOR MYT CONTROL PERIOD FY 201-18 TO FY 2019-20 FILING BY UPPTCL

2.2.1 As per the provisions stipulated in Uttar Pradesh Electricity Regulatory Commission (Multi Year Transmission 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.

2.2.2 Uttar Pradesh Power Transmission Corporation Ltd. (hereinafter referred to as 'Petitioner', 'Licensee' or 'UPPTCL') did not submit its Business Plan as per the timelines provided in the Transmission MYT Regulations, 2014, i.e. by June 1, 2016 and filed it along with the ARR / Tariff petition for Control Period on February 13, 2017.

2.2.3 As the Business Plan and the MYT Petitions have been submitted at the same time, the Commission is of the view that in case the Petition for Business Plan is processed and approved first, and then the Petitioner is asked to re-submit the revised MYT Petition based on the approved Business Plan, it would cause undue delay in the Tariff determination process. Further, 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.

…."

2.2.4 In view of the above Judgment, and to ensure the timely Determination of Tariff, the Commission, considers it appropriate to process the Business Plan Petition and MYT Petition simultaneously. Accordingly, the Commission has decided to process both the Petitions i.e. Approval of Business Plan and Multi Year Tariff simultaneously and issue 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 APR and truing up Petition during this control period would be dealt with as per Hon'ble APTEL's directions as mentioned above. Furthermore, this would be treated as non-compliance of relevant provisions of various Regulations and may entail appropriate punitive action against the Petitioner.

2.2.5 The Petition for approval of Business Plan and ARR / Tariff for the first Control Period was filed by UPPTCL under Section 64 of the Electricity Act, 2003 on February 13, 2017 (Petition No. 1169/2017 & 1170/2017).

2.3 PRELIMINARY SCRUTINY OF THE PETITIONS

2.3.1 A preliminary analysis of the Business Plan, ARR / Tariff and True Up Petition was conducted by the Commission, wherein it was observed that UPPTCL has submitted the provisional accounts for FY 2015-16 and audited accounts for FY 2014-15. The need for submission of audited accounts was also reaffirmed in the Judgment of Hon'ble Appellate Tribunal for Electricity (Hon'ble ATE) dated October 21, 2011 in Appeal No. 121 of 2010 in the Petitioner's case.

2.3.2 In this regard, first Deficiency Note was issued by the Commission vide letter dated March 30, 2017, wherein the Licensee was directed to submit its replies within 10 days from the date of issuance of the first Deficiency Note i.e. by April 9, 2017. Further, The Commission on May 18, 2017 issued a letter to UPPTCL for additional information / clarification pertaining to Tariff filing. Also, the Commission issued a second Deficiency Note on August 21, 2017. Subsequently, UPPTCL submitted its reply to the first deficiency note and second deficiency note on May 2, 2017 & August 31, 2017 respectively.

2.4 ADMITTANCE OF THE PETITIONS

2.4.1 The Commission, vide its Admittance Order dated September 4, 2017, directed the Petitioner to publish, within 3 days from the date of issue of that Order, the Public Notice detailing the summary and highlights of the proposed Business Plan for the first control period, proposed Aggregate Revenue Requirement and Multi Year Tariff (MYT) for the first control period and True Up Petition for FY 2014-15 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 of all the stakeholders and public at large. The Commission also directed the Petitioner to upload the response to the deficiency notes, benchmark reports all other related documents of the ARR / Tariff petition on its website.

2.5 PUBLICITY OF THE PETITIONS

2.5.1 The Public Notice detailing the salient features of the Petitions were published by the Petitioner in daily newspapers as detailed below, inviting objections from the public at large and all stakeholders:

- Dainik Jagran (Hindi) : September 8, 2017
- Hindustan Times (English) : September 8, 2017
- Amar Ujaala (Hindi) : September 8, 2017
- The Times of India (English) : September 9, 2017

3. PUBLIC HEARING PROCESS

3.1 OBJECTIVE

3.1.1 The Commission, in order to achieve the twin objectives, 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 on the true up and ARR / Tariff determination process. The process gains significant importance in a "cost plus regime", wherein the entire cost allowed to the Petitioner gets transferred to the consumer.

3.1.2 The comments of the consumers play an important role in the determination of Tariff. Factors such as quality of electricity supply and the service levels need to be considered while determining the Tariff.

3.1.3 The Commission, held the hearing for UPPTCL on October 12, 2017 in Lucknow. In the Public Hearing, various stakeholders as well as the public at large were provided a platform where they were able to share their views / comments / suggestions / objections / representations on the determination of ARR and Transmission Tariff for the first Control Period of MYT i.e. FY 2017-18 to FY 2019-20 and truing up for FY 2014-15. This process also enables the Commission to adopt a transparent and participative approach in the process of its proceedings.

3.2 VIEWS / COMMENTS / SUGGESTIONS / OBJECTIONS / REPRESENTATIONS ON BUSINESS PLAN AND DETERMINATION OF ARR AND TRANSMISSION TARIFF FOR THE FIRST CONTROL PERIOD OF MYT i.e. FY 2017-18 TO FY 2019-20 AND TRUING UP FOR FY 2014-15

3.2.1 The Commission has received specific view / comment / suggestion / objection / representation from one stakeholder on the Petition filed by UPPTCL for determination of ARR and Transmission Tariff for the first Control Period of MYT i.e. FY 2017-18 to FY 2019-20 and truing up for FY 2014-15. The list of consumers, who attended the Public Hearings, is appended at **Annexure I**.

3.2.2 The issues raised therein, the replies given by the Licensee and the views of the Commission have been summarised as detailed below:

TRANSMISSION CHARGES

A) Comment/Suggestion of the stakeholders

3.2.3 M/s Rimjhim Ispat Ltd. submitted that UPPTCL has proposed to increase the short term open access (STOA) charges to 1.35 times the long term open access (LTOA) charges on the basis of draft CERC (Grant of Connectivity, Long term Open Access and Medium-Term Open Access in Inter State Transmission and related matters) Sixth Amendment Regulations, 2015 and draft CERC (Sharing of Inter State Transmission Charges and losses) Regulations, Fifth Amendment, 2016.

3.2.4 It is submitted that the increase in STOA charges is arbitrary and based on assumption, even though there are very few open access consumers in Uttar Pradesh. It is further submitted that STOA customers pay transmission charges based on contracted capacity whereas LTOA customers are charged based on actual power flow.

3.2.5 M/s NPCL submitted that UPPTCL has proposed different transmission charges for Long Term and Short Term Open Access customers / users. At the outset, it is submitted that the above proposal of UPPTCL is contrary to the tariff orders dated 18.06.2015 and 01.08.2016 issued by the Commission. However, if the above proposal is considered by the UPERC, there should be two categories namely "Open Access Charges for Discoms" and "Open Access Charges for other than Discoms". In the first category, all the Discoms should be billed at Long Term rates only as per the present system as Discoms are inherently Long-Term Users / Customers of the transmission system irrespective of procurement of power through long term, short term or Power Exchange. As regards Open Access Charges for other than Discoms, the same can be made applicable as suggested by UPPTCL.

B) Petitioner's Response:

3.2.6 The Licensee has submitted that the state transmission network is planned to build on the basis of demand projections of the distribution licensee and contracted capacity of the long-term customers (other than distribution licensee). Hence long-term customer (including distribution licensees) having long term open access are paying the transmission charges for the state transmission network as per the tariff approved by the Commission.

3.2.7 Further, in case of non-utilization of the transmission capacity by the long-term customers the un-utilized capacity may be utilized by short term open access customers as approved by the Uttar Pradesh State Load Dispatch Centre based on real time power flow. Hence for such capacity the short term open access customers are paying charges as approved by the Commission.

3.2.8 The Licensee further submitted that in case the short-term charges are lower than the long term open access charges, then the long-term customers will tend to non-utilize their allotted capacity and utilize the same on short term basis by applying short term open access. Thus, to avoid such gaming and creating level playing field for all customers it is necessary that the short term open access and long term open access charges are fixed at same level.

C) The Commission's Views:

3.2.9 The Commission agrees with the reply of the petitioner and finds no merit in the submission of the stakeholders to keep the open access transmission charges for short term and long term at different levels.

INTRA STATE TRANSMISSION CAPACITY

A) Comment/Suggestion of the stakeholders

3.2.10 NPCL submitted that UPPTCL, in its MYT Petition has stated that its intra state transmission capacity is 34581 MVA against the peak load of 16988 MW and availability of its network at 99.75% during FY' 2015-16. NPCL further submitted that despite the above, UPSLDC did not allow NPCL to schedule power as per the requirement of its consumers on one or another pretext. UPSLDC also did not grant its standing approval to NPCL for dealing in Power Exchange to optimize power purchase cost. Therefore, there was no reason for UPSLDC / UPPTCL for curtailing the power of the Company to the detriment of consumers' interest. It is pertinent to mention here that transmission constraints in inter-state system, if any would squarely fall in the jurisdiction of NRLDC as has been upheld by Hon'ble APTEL vide its order date 28.07.2016 in Appeal No. 231 of 2015 and Appeal No. 251 of 2015.

Further, in order to provide cheaper power to the consumers, intelligent mix of long term and short-term power is required to optimize power procurement cost. There are times when cheaper power is available on Power Exchange(s), however, due to restrictions from UPSLDC in scheduling of short term power, the potential benefit of such low-cost power is denied to the consumers. Therefore, Commission may direct UPPTCL / UPSLDC to allow all the Discoms including NPCL to participate in Power Exchange(s) for sourcing cheaper power for the benefit of the consumers of the State

B) Petitioner's Response:

3.2.11 The Licensee submitted that Transmission Planning is being done as per Planning criteria 2013 of CEA and following the same it has already planned the 765 kV Jahangirpur-RC Green D/C transmission line under the "N-1" criteria, however the same is held up due to ROW issue. It is further submitted that the ROW clearance is to be facilitated by the Greater Noida Industrial Development Authority (GNIDA), which is a JV partner of NPCL. UPPTCL has already requested GNIDA for facilitating the ROW clearance; however, no response has been received in this matter from NPCL or GNIDA. The Petitioner further submits that once the ROW issue is resolved the construction of the said transmission line can be started and the "N-1" criteria can be fulfilled.

3.2.12 The Licensee submitted that UPPTCL is carrying out system studies through different kinds of software. Each software has some distinct features. The simulation for the load flow studies are performed based on updated database and algorithm. The distinct merits and features of individual software are also harnessed for quick and quality presentation of the results. The load flow studies are performed in coordination with NLDC and NRLDC wherever required. The methodology used by UPPTCL / UPSLDC is accepted by NLDC/NRLDC/CEA. The Petitioner further submits that the assessments of Uttar Pradesh import capabilities are also shared with NRLDC from time to time.

3.2.13 SLDC regularly schedules the short-term power for state owned Discoms and NPCL as per available margin in ATC limit. With the growth in network and inter-connections, TTC also increases and any margins available in the TTC/ATC shall be utilised for scheduling short term power.

C) The Commission's Views:

3.2.14 The Commission has noted the submissions of the stakeholders and the petitioner. The Commission is of the view that short term power purchase from the exchanges is in consumers interest as the Distribution Licensees' might purchase cheaper power during the peak times and the petitioner / UPSLDC must work out an arrangement to allow the same to the Distribution Licensees' whenever required.

Transmission Assets

A) Comment/Suggestion of the stakeholders

3.2.15 NPCL submitted that it has contributed the entire capital expenditure in regard to two numbers of 220kV Bays, one number of 315 MVA Interconnecting Transformer (ICT) at 400kV Greater Noida (Pali) Substation. Further, 1/3rd cost of one number of 500 MVA transformer at 400kV Greater Noida (Pali) Substation was paid by Greater Noida Industrial Development Authority (GNIDA – A Joint Venture partner of NPCL) for the exclusive benefit of the consumers of the Greater Noida area. Accordingly, the total capacity contributed by NPCL/GNIDA at 400kV Greater Noida (Pali) Substation is 481 MVA. Apart from the above NPCL had contributed for augmentation of Transmission capacities at 132kV Surajpur Substation of UPPTCL. The same has been recognized by the Commission in its order dated 21.07.2015 in Petition No. 934 of 2014 and 976 of 2014.

Thus, the above statement of UPPTCL in its MYT petition may kindly be seen in the light of the above facts and necessary directions may kindly be issued to UPPTCL in the interest of consumers and smooth functioning of NPCL.

NPCL/GNIDA has contributed 481 MVA transmission capacity however; UPPTCL is billing full transmission charges to NPCL for use of the same. This double charging has put extra financial burden on the consumers of Greater Noida. The Commission is requested to look into the matter while deciding the UPPTCL's petition.

B) Petitioner's Response:

3.2.16 The Licensee submitted that any transmission works executed through consumer contribution or deposit works is not considered in the annual investment of the Petitioner for determining the Aggregate Revenue Requirement (ARR) of the UPPTCL. Thus the contribution of NPCL / GNIDA for the above transmission capacity has been considered under the consumer contribution and the same has been deducted from the total investment of the year while determining the ARR of that year. Hence, there is no double charging of tariff to the consumers of Greater Noida. It is also pointed out that the above approach is in line with the Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2006 and Uttar Pradesh Electricity Regulatory Commission (Multi Year Transmission Tariff) Regulations 2014. The Petitioner further submits that the assets created through consumer contribution or deposit works are owned and operated by UPPTCL, hence the Operation and Maintenance (O&M) expenses are claimed in the ARR of UPPTCL.

D) The Commission's Views:

3.2.17 The Commission has noted the suggestion of the stakeholders and comments of the petitioner. The Commission has enquired NPCL about the details of the assets and NPCL confirmed that the assets in question are not part of its ARR or GNIDA assets. The Commission agrees with the reply of petitioner and has dealt with the same appropriately while calculation of O&M expenses and consideration of GFA.

Transmission Tariff

A) Comment/Suggestion of the stakeholders

3.2.18 NPCL submitted that UPPTCL has not incorporated the Power Purchase Projection data provided by NPCL vide its letter dated 01.12.2016 in its Form No. F4, a Part of Annexure 1 internal page Nos. 83-84 of its ARR Petition. Further, NPCL submitted that it is imperative for UPPTCL to revise the relevant Form and submit the same before this Commission while suggesting proper planning for transmission capacity augmentation in the State.

B) Petitioner's Response:

3.2.19 The Licensee submitted that NPCL vide its letter dated 1.12.2016 has submitted its power purchase and sales projections for the 1st Control Period. However, NPCL have not provided the segregation of the energy to be procured on short term and long-term basis. It was observed that NPCL was procuring the power only on short term basis, due to which the Petitioner has not considered the power purchase or sales projections of NPCL for the 1st control period at the time of filing the MYT Petition. However, NPCL have been able to sign long term power purchase agreement of 187 MW and availing supply since December 2016. The Petitioner has observed that the total long-term energy billed to NPCL in the last five months is as follows:

Months	Total Long-term energy billed (MU)
Apr-17	107.15
May-17	103.80
Jun-17	103.64
Jul-17	102.61
Aug-17	89.44
Monthly Average	101.33

Months	Total Long-term energy billed (MU)
Annual Energy	1,215.91

Thus, the total annual long-term energy available at NPCL's end as computed above has been considered for each year of the 1st control period and the same has been considered for computation of the transmission tariff. It is also submitted that the above approach is in line with the Commission's order dated 1.8.2016, where the Commission has considered only the long-term energy of NPCL while determining the transmission charges for FY 2016-17. The revised transmission charges have been provided by the Licensee.

C) <u>The Commission's Views:</u>

3.2.20 The Commission agrees with the reply of the petitioner. The Commission has considered the same and discussed the same in the Transmission Tariff chapter of this Order.

4. REVIEW PETITION ON TARIFF ORDER FOR FY 2016-17 AND TRUE UP OF FY 2013-14

4.1. The Commission, vide its Order dated August 1, 2016 in Petition No. 1058/2015 approved the true up for FY 2013-14 and ARR and Transmission Tariff for FY 2016-17 for UPPTCL. UPPTCL filed a Review Petition on October 13, 2016 on the above referred Order seeking review on two issues:

i. Depreciation approved for FY 2013-14 and its consequential impact on True up for FY 2013-14

ii. Depreciation approved for FY 2016-17 and its consequential impact on ARR and Transmission Tariff for FY 2016-17

4.2. In accordance with UPERC (Conduct of Business) Regulations, 2004, the timeline for filing Review Petition on the Commission's Order is within 90 days of issue of such Order. The Review Petition on Commission's Order dated August 1, 2016 in Petition No. 1058/2015 has been filed within the specified timeline.

4.3. The Commission has gone through the submissions made by the petitioner thoroughly and has addressed the issues raised by the petitioner separately as shown in subsequent paragraphs.

Depreciation approved for FY 2013-14 and its consequential impact on True up for FY 2013-14

4.4. The submission of petitioner in this regard is as stated below:

"The Hon'ble Commission, in the previous tariff orders had directed the Petitioner to prepare and furnish the Fixed Asset Register to ensure that the costs incurred on each asset, date of commissioning, location of asset, and other technical details are properly and adequately recorded. Subsequent to the directions of the Hon'ble Commission, the Petitioner had undertaken the exercise of preparation of fixed asset registers at field level. While responding to data gaps, under point (B) submitted vide letter no. 104/Dir (Comm.)/UPPTCL/2016 dated 22.02.2016, issued by Hon'ble Commission in the ARR and Tariff Petition for FY 2016-17, the Petitioner had submitted that consolidated Fixed Asset Register up to FY 2014-15 has been prepared at zonal level and is under audit. A specimen copy of FAR for FY 2014-15 pertaining to Electricity Transmission Division (ETD) of location code 312 of

transmission Central Zone is submitted along with ETD wise consolidated summary of Central Zone. Further it was stated that the audit for FY 2014-15 will be completed by March 2016 and thereafter Zone-wise Consolidated Fixed Asset Register will be submitted to Hon'ble Commission.

Based on the above reply of the Petitioner, the Hon'ble Commission has considered the net allowable depreciation of amount of Rs. 469.55 Crore under True Up for FY 2013-14. However, the Hon'ble Commission has allowed the depreciation to the tune of Rs. 375.64 Crore and withheld the 20% of allowable depreciation amounting to Rs. 93.91 Crore on the ground that even after repeated direction, UPPTCL has not submitted FAR.

***Subsequent to the passing of the impugned order,** the consolidated Fixed Assets Registers upto FY 2014-15 have been prepared since formation of UPPTCL i.e. from FY 2007-08. This consolidated FAR has been audited by the statutory auditors. Accordingly, a copy of the consolidated Fixed Asset Registers from FY 2007-08 to FY 2014-15 is enclosed herewith and marked as **"Annexure-1"**. With this submission, UPPTCL has complied with the directive at serial no. 4 of Table: 7.1 under para 7-Directives of UPPTCL Tariff Order dated 01.08.2016.*

The Petitioner humbly requests the Hon'ble Commission to consider the Fixed Asset Register up to FY 2014-15, wherein FAR of FY 2013-14 is also covered. With this compliance to the Hon'ble Commission's directions Petitioner requested the Commission to allow the recovery of the amount of Rs. 93.91 Crore under true up for FY 2013-14 by revising the Impugned order.

It is further to point out that discovery of such new and important matter of evidence is admissible for a review…."

4.5. With reference to above, UPPTCL has sought the revised true up of FY 2013-14 with allowable net gap of Rs. 9.91 Crore as against the approved net surplus of Rs. 84.01 Crore by the Commission in true up for FY 2013-14. Accordingly, UPPTCL has sought the revised transmission tariff of Rs. 0.137/kWh as against the tariff of Rs. 0.125/kWh approved by the Commission on true up for FY 2013-14.

Commission's View

4.6. UPPTCL has sought review of depreciation approved for FY 2013-14 and its consequential impact on true up for FY 2013-14 relying on the following aspects:

a. That the Commission had withheld 20% of depreciation during true up for FY 2013-14 and the same is allowable now on submission of FAR till FY 2014-15.

b. That the submission of FAR till FY 2014-15 is in compliance to the direction of the Commission in its Order dated August 1, 2016 and hence it is entitled to 20% of depreciation that was not allowed by the Commission in true up for FY 2013-14.

c. That the submission of FAR till FY 2014-15 is new and important matter of evidence admissible for review.

4.7. The Commission vide its Order dated May 31, 2013 on approving the ARR and Transmission Tariff for FY 2013-14 ruled as under:

> *"**8.6.6** The Commission has been, time and again, directing the Licensee to prepare and furnish fixed asset registers. Maintenance of fixed asset registers ensures that the costs incurred on each asset, date of commissioning, location of asset, and other technical details are properly and adequately recorded.*
>
> ***8.6.7** As a first step towards reprimanding the Licensee over the issue of non-preparation 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."*

4.8. Further, vide the same Order, the Commission issued the following direction to UPPTCL for immediate action:

> *"The Commission reiterates its direction to the UPPTCL to ensure proper maintenance of detailed fixed assets registers as specified in the Transmission Tariff Regulations.*

As the fixed asset registers are pending since FY 2007-08, the Commission directs the UPPTCL 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 UPPTCL to prepare the fixed asset registers duly accounting for the yearly capitalisations 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 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."

4.9. The Commission has been repeatedly directing UPPTCL to comply with the above direction. But, UPPTCL has not complied with the same. UPPTCL had not made efforts to comply with this direction even when the proceedings for true up for FY 2013-14 were in progress.

4.10. The Commission, vide its Order dated August 1, 2016, while truing up the depreciation for FY 2013-14 ruled as under:

"5.3.6 The Commission observed that even after repeated direction of the Commission UPPTCL has not submitted the detailed fixed asset register. Therefore, the Commission has disallowed 20% of the allowable depreciation for FY 2013-14 as directed in Tariff Order for FY 2013-14 dated May 31, 2013."

4.11. From the above, it is clear that UPPTCL has misinterpreted that the Commission has withheld 20% of depreciation in truing up for FY 2013-14 while it was explicitly stated that 20% of depreciation was disallowed on account of non-compliance of an earlier direction issued in the Tariff Order for FY 2013-14. Hence, the first argument of UPPTCL is devoid of merits.

4.12. UPPTCL relied on its second argument that the submission of FAR till FY 2014-15 is in compliance to the direction of the Commission in its Order dated August 1, 2016 and hence it is entitled to 20% of depreciation that was not allowed by the Commission in true up for FY 2013-14.

4.13. As recorded in the Order dated August 1, 2016 in Petition No. 1058/2015, UPPTCL's submissions regarding the submission of FAR and subsequent Commission's direction is as under

> *"The Petitioner submitted that division wise Fixed Assets Register is being maintained at its 163 divisions with the required details where the assets are available at division level. The duly audited balances of the all zones are consolidated at headquarter for preparation of the final corporate balance sheet which includes block-wise fixed asset details along with the depreciation. (as indicated in theNote-7 of the Audited Accounts of FY 2013-14)."*
>
> *"Considering the submissions of the Petitioner, the Commission directs the Petitioner to submit the copy of consolidated Fixed Asset Register updated till FY 2014-15."*

4.14. From the above, it is observed that the submission of FAR by UPPTCL is in compliance to the Commission's direction. However, that does not entitle UPPTCL for the allowance of 20% disallowed amount of depreciation as per order dated August 1, 2016 during true up of FY 2013-14. Hence, the second argument of UPPTCL is devoid of merits.

4.15. UPPTCL relied on its third argument that the submission of FAR till FY 2014-15 is new and important matter of evidence admissible for review. In accordance with Section 114 and Order XLVII of Civil Procedure Code (CPC), any person considering himself aggrieved by an order against which no appeal has been preferred, may apply for review for the order to the court, which passed such order on any of the following grounds:

(i) Discovery by the applicant of new and important matter of evidence which, after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when the decree was passed or order made, or

(ii) On account of some mistake or error apparent on the face of the record, or

(iii) For any other sufficient reason.

4.16. This argument of UPPTCL is also devoid of merits as the disallowance of 20% depreciation in true up for FY 2013-14 was on account of non-compliance to the Commission's earlier direction in the Tariff Order for FY 2013-14 which was issued on 23 May, 2013. The Commission's direction in the Tariff Order for FY 2013-14 which was to be complied with immediate effect cannot be relaxed, particularly when the Petitioner had more than 2.5 years after the issuance of the Tariff Order for compliance. Further, submission of Fixed Asset Register after issuance of the Order cannot be treated as discovery of new and important matter of evidence which, after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when order was passed.

4.17. In light of the above, the review sought by UPPTCL regarding the depreciation disallowed by the Commission in true up for FY 2013-14 and its consequential impact on true up for FY 2013-14 is devoid of merits and is not maintainable.

Depreciation approved for FY 2016-17 and its consequential impact on ARR and Transmission Tariff for FY 2016-17

4.18. The submission of petitioner in this regard is as follows:

> *"The Hon'ble Commission, in the previous tariff orders had directed the Petitioner to prepare and furnish the Fixed Asset Register to ensure that the costs incurred on each asset, date of commissioning, location of asset, and other technical details are properly and adequately recorded. Subsequent to the directions of the Hon'ble Commission, the Petitioner had undertaken the exercise of preparation of fixed asset registers at field level. While responding to data gaps issued by Hon'ble Commission in the ARR and Tariff Petition for FY 2016-17 the Petitioner had submitted a sample copy of fixed assets register of central zone and informed that the zone wise consolidated fixed assets registers has been prepared and are under audit by statutory auditors. After completion of audit the same shall be submitted to the Hon'ble Commission.*
>
> *In the Impugned Order, the Hon'ble Commission has considered the net allowable depreciation of Rs. 775.62 Crore. However, the Hon'ble Commission has allowed the depreciation for FY 2016-17 to the tune of*

Rs. 542.94 Crore and withheld the recovery of 30% of the allowable deprecation amounting to Rs. 232.69 Crore in FY 2016-17 owing to non-submission of Fixed Asset Registers (FAR)……………

Subsequent to the passing of the impugned order, the consolidated Fixed Assets Registers upto FY 2014-15 have been prepared since formation of UPPTCL i.e. from FY 2007-08. This consolidated FAR has been audited by the statutory auditors. Accordingly, a copy of the consolidated Fixed Asset Registers from FY 2007-08 to FY 2014-15 is enclosed herewith and marked as ***"Annexure-1"****. With this submission, UPPTCL has complied with the directive at serial no. 4 of Table: 7.1 under para 7-Directives of UPPTCL Tariff Order dated 01.08.2016.*

The Petitioner humbly requests the Hon'ble Commission to consider the Fixed Asset Register up to FY 2014-15 in compliance to the Hon'ble Commission's directions and allow the Petitioner to recover the amount of depreciation withheld for the FY 2016-17 in the Impugned order."

4.19. With reference to above, UPPTCL has sought the revised ARR of Rs. 2193.17 Crore as against the ARR of Rs. 1960.48 Crore approved by the Commission for FY 2016-17. Accordingly, UPPTCL has sought the revised transmission tariff of Rs. 0.1815/kWh as against the tariff of Rs. 0.1623/kWh approved by the Commission for FY 2016-17.

Commission's View

4.20. UPPTCL has sought review of depreciation approved for FY 2016-17 and its consequential impact on ARR and Transmission Tariff for FY 2016-17 mentioning that the submission of FAR till FY 2014-15 is new and important matter of evidence admissible for review.

4.21. The Commission, vide its Order dated August 1, 2016, while approving the depreciation for FY 2016-17 ruled as under:

"6.6.10 As a first step towards reprimanding the Petitioner over the issue of non-preparation of Fixed Asset Register, the Commission had withheld 20% of the allowable depreciation for FY 2013-14 till the submission of the Fixed Asset Register up to FY 2012-13, in the Tariff Order for FY 2013-14. As a second step towards reprimanding the

Petitioner over the issue of non-preparation of Fixed Asset Register, the Commission had withheld 25% of the allowable depreciation for FY 2014-15, in the Tariff Order for FY 2014-15.As a third step towards reprimanding the Petitioner over the issue of non-preparation of Fixed Asset Register, the Commission had withheld 30% of the allowable depreciation for FY 2015-16, in the Tariff Order for FY 2015-16.

6.6.11 Thus as evident from the above, the Commission in its earlier Tariff Order has withheld 20% of the allowable depreciation for FY 2013-14, 25% of the allowable depreciation for FY 2014-15 and 30% of the allowable depreciation for FY 2015-16; however, even after several directions, no submission in this regard has been made by the Petitioner so far. The Commission has already expressed its displeasure on the non-availability of Fixed Asset Register of the Petitioner and further, reiterates its direction to the Petitioner to ensure proper maintenance of detailed Fixed Assets Register, as specified in the Transmission Tariff Regulations, 2006. Thus, in line with the approach adopted by the Commission in its earlier Order over the issue of non-maintenance of Fixed Asset Register, the Commission has withheld 30% of the allowable depreciation for this year, i.e., FY 2016-17and the Petitioner is directed to timely submit the complete details pertaining to Fixed Asset Register for FY2016-17along with the ARR Petition for FY 2017-18, otherwise the withheld amount would be disallowed permanently."

4.22. The submission of FAR till FY 2014-15 after the issuance of Tariff Order for FY 2016-17 does not hold a valid ground for the review sought by UPPTCL. The submission of FAR after issuance of the Order cannot be treated as discovery of new and important matter of evidence which**,** after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when order was issued. In light of the above, the review sought by UPPTCL regarding the depreciation disallowed by the Commission for FY 2016-17 and its consequential impact on ARR and Transmission Tariff for FY 2016-17 is devoid of merits and is not maintainable.

5. ESCALATION INDEX / INFLATION RATE

5.1 PROVISIONS OF TRANSMISSION TARIFF REGULATIONS, 2006

5.1.1 Regulation 4.2 of the Transmission Tariff Regulations, 2006, specifies 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 Transmission Tariff Regulations are reproduced below:

"***4.2 Operation and Maintenance Expenses***

1. *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. O & M expenses so calculated for the base year shall then be escalated on the basis of prevailing rates of inflation for the year as notified by the Central Government and shall be considered as a 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.*
2. *Where such data for the preceding five years is not available the Commission may fix O&M expenses for the base year as certain percentage of the capital cost.*
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 4.2.1 above.*
4. *However, the Commission may direct the utilities to bring down the O & M expenses to an efficient level i.e., by fixing norms based on the circuit kilometers of transmission lines, transformation capacity at the sub-stations, number of bays in substation etc. of similarly placed efficient utilities, within such span of time, as may be determined by the Commission.*
5. *The Commission shall examine and if satisfied shall allow inclusion in revenue requirement in the next period additional O&M expenses*

on account of war, insurgency, and change in laws or like eventualities for a specified period."

5.1.2 The Commission approved the truing up of FY 2013-14 vide its order dated August 1, 2016. In this Order, the Commission has approved the truing up in respect of FY 2014-15. The trued-up O&M expenses for FY 2014-15 have been extrapolated up to FY 2016-17 at the yearly escalation index as specified under the Transmission Tariff Regulations, 2006.

5.1.3 The Commission, in accordance with the Transmission Tariff Regulations, 2006, has calculated the inflation index for the relevant year (nth year) based on the weighted average index of Wholesale Price Index (WPI) and Consumer Price Index (CPI) of the corresponding year. The WPI indices considered are as available on the website of the Office of the Economic Advisor to the Government of India, Ministry of Commerce and Industry (www.eaindustry.nic.in/) and CPI indices as available on the website of the Labour Bureau Government of India (www.labourbureau.gov.in).

5.1.4 The computation of inflation index is given in the Table below:

Table 5-1: Calculation of Escalation / Inflation Index

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	220
February	180	176	174	186	238	253	267	275	203	207	211	221
March	180	176	175	186	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										**4.02%**	**1.41%**	**3.90%**

5.1.5 As depicted in the Table above, the Commission has considered an escalation / inflation index of 4.02% for FY 2014-15, 1.41% for FY 2015-16 and 3.90% for FY 2016-17.

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

The Commission, in its Order dated October 1, 2014 in Petition No's 01/2013, 849/2012 & 883/2012, approved the revised true up for FY 2008-09 to FY 2010-11 and transmission tariff for FY 2013-14, True up for FY 2011-12 and ARR and Tariff for FY 2014-15 for UPPTCL. The Petitioner has sought the final truing up of expenditure and revenue for FY 2014-15 based on actual expenditure and revenue as per the 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. The Commission has allowed the true up for FY 2014-15 considering the principles laid down in the Transmission Tariff Regulations, 2006.

6.1 O&M EXPENSES

The Petitioner's Submissions

6.1.1 Operation and Maintenance (O&M) expenses comprises of employee expenses, administrative and general (A&G) expenses, and repair and maintenance (R&M) expenses.

6.1.2 The Petitioner submitted that the actual gross employee expenses were Rs. 396.88 Crore as against Rs. 441.43 Crore approved by the Commission in the Tariff Order for FY 2014-15. The employee expenses capitalised as per Audited Accounts are to the tune of Rs. 99.24 Crore as against Rs. 95.79 Crore approved in the Tariff Order. Thus, the net employee expenses as per Audited Accounts are Rs. 297.64 Crore as against Rs. 345.64 Crore approved in the Tariff Order.

6.1.3 The Petitioner submitted that the actual gross A&G expenses were Rs. 34.09 Crore as against Rs. 18.80 Crore approved by the Commission in the Tariff Order for FY 2014-15. The A&G expenses capitalised as per Audited Accounts are to the tune of Rs. 6.91 Crore against Rs. 3.57 Crore approved in the Tariff Order. Thus, the net A&G expenses as per Audited Accounts are Rs. 27.18 Crore as against Rs. 15.23 Crore approved in the Tariff Order.

6.1.4 The petitioner submitted that the increase in the A&G expenses in FY 2014-15 are on account of provision for expenditure upto Rs. 1.95 Crore under the Corporate Social Responsibility activities for FY 2014-15 as recommended by the CSR committees duly approved by the BOD of UPPTCL have been made in view of compliance of Section 135 of the Companies Act 2013. Further the petitioner submitted that it has undertaken large capex works in the recent years due to which it has also incurred higher communication and advertisement expenses as compared to the previous years

6.1.5 The actual repair and maintenance expenses for FY 2014-15 were Rs. 195.96 Crore as against Rs. 178.85 Crore approved by the Commission in the Tariff Order for FY 2014-15.

6.1.6 The Petitioner submitted that it has inherited aged and complex network which requires higher O&M cost. Also, it is imperative to mention that the O&M expense norms are based on historical amounts incurred towards O&M and not with respect to the size of the transmission network being handled i.e., length of transmission lines, number of bays, etc. and recent additions thereof.

6.1.7 The Petitioner submitted that the normative O&M expenses for FY 2014-15 have been computed by escalating the component wise O&M expenses approved in true up for FY 2013-14 by the escalation index of 4.02%, which is the escalation index for FY 2014-15. In addition to the O&M expenses based on inflationary indices based on escalation, the Petitioner has claimed the incremental O&M expenses on asset addition during the year in accordance with Transmission Tariff Regulations, 2006. The Petitioner requested the Commission to allow the normative O&M expenses in true up for FY 2014-15 in accordance with the Transmission Tariff Regulations, 2006.

6.1.8 The Petitioner has claimed Rs. 527.18 Crore towards net O&M expenses for FY 2014-15 as against Rs. 539.72 Crore approved by the Commission in the Tariff Order dated October 1, 2014 and the actual O&M expenses of Rs. 520.78 Crore as per the Audited Accounts.

The Commission's Ruling:

6.1.9 The Commission through deficiency note asked the petitioner to submit the reason for increase in Actual A&G expense as compared to the approved A&G expense in the Tariff Order for FY 2014-15. In reply the petitioner submitted that the increase in the A&G expenses in FY 2014-15 are on account of provision for expenditure up to Rs. 1.95 Crore under the Corporate Social Responsibility (CSR) activities for FY 2014-15 as recommended by the CSR Committees duly approved by the Board of Directors (BOD) of UPPTCL have been made in view of compliance of Section 135 of the Companies Act 2013.

6.1.10 Further the petitioner submitted that the UPPTCL has undertaken huge capital expenditure works in the recent years due to which it has also incurred higher communication and advertisement expenses as compared to the previous years. Further, the petitioner stated that the O&M expense norms are based on historical amounts incurred towards O&M and not with respect to the size of the transmission network being handled i.e., length of transmission lines, number of bays, etc. and recent additions thereof.

6.1.11 The Commission asked the Petitioner to submit the reasons for increase in actual R&M expenses for FY 2014-15 in comparison to that approved in the Tariff Order. In reply the Petitioner submitted that it has inherited aged and complex network which requires higher O&M cost.

6.1.12 Regulation 4.2.1 of the Transmission Tariff Regulations issued by the Commission stipulates:

"

1. *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. O & M expenses so calculated for the base year shall then be escalated on the basis of prevailing rates of inflation for the year as notified by the Central Government and shall be considered as a 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."*

6.1.13 The Commission has trued up the O&M expenses for FY 2014-15 in accordance with the Transmission Tariff Regulations, 2006.

6.1.14 The Commission has determined the trued-up O&M expenses for the preceding year, FY 2013-14 in its Order dated August 1, 2016 in Petition No. 1058 / 2015 as Rs. 491.78 Crore.

6.1.15 The allowable O&M expenses for FY 2014-15 have been approved by escalating the component wise O&M expenses for FY 2013-14 by using the escalation index of 4.02% as computed in Section 5 above.

6.1.16 Further, in addition to the O&M cost based on inflationary indices based on escalation, the Transmission Tariff Regulations, 2006 provide for incremental O&M expenses on addition to assets during the year. Regulation 4.2.3 of the Transmission Tariff Regulations issued by the Commission stipulates:

"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 4.2.1 above."

6.1.17 In accordance with the Transmission Tariff Regulations, 2006 the Commission has approved the incremental O&M expenses for FY 2013-14 as shown in the Table given below:

TABLE 6-1: APPROVED INCREMENTAL O&M EXPENSES FOR FY 2014-15 (RS. CRORE)

Particulars	Derivation	True up Petition	Approved upon truing up
Net Addition to GFA during preceding year, FY 2013-14	A	1216.59	1,216.59
Incremental O&M expenses for preceding year, FY 2013-14	B	128.67	128.67
Incremental O&M expenses @ 2.50% of Net GFA addition of preceding year, FY 2013-14	C=2.50% of A	30.41	30.41
Inflation Index	D	4.02%	4.02%
Incremental O&M expenses for preceding year, FY 2012-13, escalated with the Inflation Index	E =B x (1+D)	133.84	133.84
Incremental O&M expenses	F= C+E	164.26	164.26
Employee expenses		108.74	111.74
A&G expenses		6.59	6.12
R&M expenses		48.92	46.40

6.1.18 The same are allocated across the individual elements of the O&M expenses on the basis of the contribution of each element in the gross O&M expenses as approved in the subsequent paragraphs.

6.1.19 The O&M expenses approved for FY 2014-15 are as shown in the Table given below:

TABLE 6-2: APPROVED O&M EXPENSES FOR FY 2014-15 (RS. CRORE)

Particulars	Tariff Order	True-up Petition	Approved upon truing up
Employee expenses			
Gross employee expenses and provisions	340.74	340.76	340.74
Incremental employee expenses @ 2.50% of GFA additions of preceding year	111.97	108.74	111.74
Total employee expenses	452.71	449.51	452.49
Employee expenses capitalised	89.50	99.24	99.24
Net employee expenses	**363.22**	**350.27**	**353.25**

Particulars	Tariff Order	True-up Petition	Approved upon truing up
A&G expenses			
Gross A&G expenses	20.02	20.02	20.02
Incremental A&G expenses @ 2.50% of GFA addition of preceding year	6.05	6.59	6.12
Total A&G expenses	26.07	26.61	26.13
A&G expenses capitalised	7.71	6.91	6.91
Net A&G expenses	**18.36**	**19.70**	**19.23**
R&M expenses			
R&M expenses	108.28	108.28	108.28
Incremental R&M expenses @ 2.50% of GFA addition of preceding year	46.24	48.92	46.40
Total R&M expenses	**154.52**	**157.20**	**154.68**
Total O&M expenses allowable as per Regulations	**536.10**	**527.17**	**527.15**

6.1.20 The summary of O&M expenses submitted by the Petitioner and as approved by the Commission is as shown in the Table given below:

TABLE 6-3: ACTUAL VS. APPROVED O&M EXPENSES FOR FY 2014-15 (RS. CRORE)

Particulars	Tariff Order	Actual as per Audited Accounts	True up Petition	Approved upon truing up
Employee expenses	441.43	396.88	449.51	452.49
Administrative & General expenses	18.80	34.09	26.61	26.13
Repair & Maintenance expenses	178.85	195.96	157.21	154.68
Gross Operation & Maintenance expenses	**639.08**	**626.93**	**633.32**	**633.30**
Less: Expenses capitalised				
Employee expenses capitalised	95.79	99.24	99.24	99.24
A&G expenses capitalised	3.57	6.91	6.91	6.91
Total expenses capitalised	**99.36**	**106.15**	**106.15**	**106.15**
Net Operation & Maintenance expenses	**539.72**	**520.78**	**527.17**	**527.15**

6.2 INTEREST AND FINANCE CHARGES

6.2.1 Interest on Long Term Loans

The Petitioner's Submissions

6.2.1.1 The Petitioner has claimed gross interest expenses of Rs. 797.84 Crore and net interest expenses of Rs 323.96 Crore as against net interest expense of Rs. 562.17 Crore approved in the Tariff Order for FY 2014-15.

6.2.1.2 The Petitioner submitted that interest cost is an uncontrollable cost as the interest regime is determined by various factors and the actual loans taken are consequential to the actual capital expenditure.

6.2.1.3 The Petitioner submitted that it had derived the actual capital investments in FY 2014-15 considering the CWIP and GFA balances as per the Audited Accounts. The Petitioner submitted that the total capital expenditure after deduction of the capital expenditure financed through consumer contributions, capital subsidies and grants is considered to be financed through debt and equity in the ratio of 70:30.

The Commission's Ruling

6.2.1.4 The Commission has considered the same approach for the true-up of interest and finance charges for FY 2014-15 as followed in true-up of FY 2013-14.

6.2.1.5 The Commission has derived the actual capital investments undertaken by the Petitioner in FY 2014-15 by considering the CWIP and GFA balances as per Audited Accounts. The details are provided in the Table below:

TABLE 6-4: APPROVED CAPITAL INVESTMENTS IN FY 2014-15 (RS. CRORE)

Particulars	Derivation	Tariff Order	True up Petition	Approved upon truing up
Opening WIP as on 1st April	A	5855.78	5958.16	5958.16
Investments	B	1960.00	1376.62	1376.62
Employee expenses capitalisation	C	95.79	99.24	99.24
A&G expenses capitalisation	D	3.57	6.91	6.91
Interest capitalisation in Interest on long term loans	E	302.71	473.88	473.88
Total Investments	F=A+B+C+D+E	**8217.85**	**7914.81**	**7914.81**
Transferred to GFA (total capitalisation)	G	2054.46	1284.98	1284.98
Closing WIP	H=F-G	**6163.39**	**6629.83**	**6629.82**

6.2.1.6 The Commission has considered a normative approach with debt: equity ratio of 70:30. Considering this approach, 70% of the capital expenditure undertaken in the 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 contributions, capital subsidies and grants has been separated, as the depreciation and interest thereon would not be charged to the consumers. The Audited Accounts of the Petitioner reveal the amounts received as consumer contributions, capital subsidies and grants, as summarised in the Table below:

TABLE 6-5: APPROVED CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES IN FY 2014-15 (RS. CRORE)

Particulars	True up Petition	Approved
Opening balance of Consumer Contributions, Grants and Subsidies towards cost of Capital Assets	430.13	430.14
Addition during the year	80.80	80.80
Less: Amortisation	25.09	25.09
Closing Balance	**485.84**	**485.85**

6.2.1.7 The approved financing of the Capital Investment is as shown in the Table given below:

TABLE 6-6: FINANCING OF CAPITAL INVESTMENTS IN FY 2014-15 (RS. CRORE)

Particulars	Derivation	True up Petition	Approved upon truing up
Investment	A	1376.62	1376.62
Less:			
Consumer Contributions, Grants and Subsidies towards cost of Capital Assets	B	80.80	80.80
Investment funded by debt and equity	C=A-B	1295.82	1295.82
Debt funded	70%	907.07	907.07
Equity funded	30%	388.75	388.75

6.2.1.8 Thus, from the above Tables, it could be observed that UPPTCL has made investment of Rs. 1376.62 Crore in FY 2014-15. The consumer contributions, capital subsidies and grants received during the corresponding period is Rs. 80.80 Crore. Thus, balance Rs. 1295.82 Crore has been funded through debt and equity. Considering a debt equity ratio of 70:30, Rs. 907.07 Crore or 70%

of the capital investment is approved to be funded through debt and balance 30% equivalent to Rs. 388.75 Crore through equity. Allowable depreciation for the year has been considered as normative loan repayment. The actual weighted average interest rate of 12.66% has been considered for computing the interest. The opening balance of long term loan has been considered from the loan balance approved in the True up for FY 2013-14 in the Order dated August 1, 2016.

6.2.1.9 Considering the above, the gross interest on long term loan is Rs. 797.85 Crore. The interest capitalisation has been considered at the same rate as per the Audited Accounts. The interest on long term loan approved for FY 2014-15 is as shown in the Table given below:

TABLE 6-7: APPROVED INTEREST ON LONG TERM LOANS FOR FY 2014-15 (RS. CRORE)

Particulars	Tariff Order	True up Petition	Approved upon truing up
Opening Loan balance	6455.22	6108.60	6108.66
Loan Addition (70% of Investments)	1261.75	907.07	907.07
Less: Repayments (Depreciation allowable for the year)	438.41	524.13	524.13
Closing Loan balance	7278.56	6491.54	6491.61
Weighted average rate of interest	12.59%	12.66%	12.66%
Interest on Long Term Loans	**864.87**	**797.84**	**797.85**
Interest Capitalisation Rate	35.00%	59.40%	59.40%
Less: Interest Capitalised	302.70	473.88	473.89
Net Interest Charged	**562.17**	**323.96**	**323.96**

6.2.2 **Finance charges**

The Petitioner's Submissions

6.2.2.1 The Petitioner has claimed Rs. 1.75 Crore towards finance charges for FY 2014-15. Items claimed under this head are towards items such as bank charges and finance charges.

The Commission's Ruling

6.2.2.2 The Commission approves the bank charges and finance charges as per the Audited Accounts to the extent of Rs. 1.75 Crore for FY 2014-15.

6.2.3 Interest on Working Capital

The Petitioner's Submissions

6.2.3.1 The Petitioner has claimed Interest on Working Capital of Rs. 43.24 Crore for FY 2014-15 as against Rs. 44.52 Crore approved by the Commission in the Tariff Order for FY 2014-15. The Petitioner submitted that it has computed Interest on Working Capital in accordance with the Transmission Tariff Regulations, 2006.

The Commission's Ruling

6.2.3.2 In the Tariff Order for FY 2014-15, the Commission had allowed Rs. 44.52 Crore towards Interest on Working Capital. The Transmission Tariff Regulations, 2006 provide for normative interest on working capital based on the methodology outlined in the Regulations. Accordingly, the Commission has approved Interest on Working Capital for FY 2014-15 as shown in the Table below:

TABLE 6-8: APPROVED INTEREST ON WORKING CAPITAL FOR FY 2014-15 (RS. CRORE)

Particulars	Tariff Order	True up Petition	Approved upon truing up
One month's O&M expenses	44.98	43.93	43.93
One-twelfth of the sum of the book value of materials in stores at the end of each month	38.89	59.62	59.62
Receivables equivalent to 60 days average billing on consumers	272.30	242.34	238.73
Total Working Capital	**356.17**	**345.89**	**342.28**
Rate of Interest on Working Capital	12.50%	12.50%	12.50%
Interest on Working Capital	**44.52**	**43.24**	**42.79**

6.2.3.3 The following table summarises the interest and finance charges submitted by the Petitioner as against approved by the Commission for FY 2014-15:

TABLE 6-9: APPROVED INTEREST AND FINANCE CHARGES FOR FY 2014-15 (RS. CRORE)

Particulars	Tariff Order	Actual as per Audited Accounts	True up Petition	Approved upon truing up
A. Interest on Long Term Loans				
Gross Interest on Long Term Loan	864.87	868.87	797.84	797.85
Less: Interest Capitalisation	302.70	473.88	473.88	473.89

Particulars	Tariff Order	Actual as per Audited Accounts	True up Petition	Approved upon truing up
Net Interest on Long Term Loans	**562.17**	**394.99**	**323.96**	**323.96**
B. Finance and Other Charges				
Guarantee Charges	2.60	1.73	1.73	1.73
Bank Charges	0.06	0.02	0.02	0.02
Total Finance Charges	**2.66**	**1.75**	**1.75**	1.75
C. Interest on Working Capital	44.52	0.00	43.24	42.79
Total (A+B+C)	**609.35**	**396.74**	**368.95**	**368.50**

6.3 DEPRECIATION

The Petitioner's Submissions

6.3.1 The actual depreciation expense charged in the Audited Accounts is Rs. 500.87 Crore. However, the same has been accounted for considering the depreciation rates prescribed by the Companies Act, 1956.

6.3.2 The Petitioner submitted that it had computed the gross allowable depreciation for FY 2014-15 considering the depreciable GFA base as per the Audited Accounts and the rate of depreciation as approved by the Commission in the Tariff Order for FY 2014-15. The Petitioner submitted that it has computed the depreciation only on the depreciable asset base and has excluded the non-depreciable assets such as land, land rights, etc., which comes to Rs. 524.13 Crore.

The Commission's Ruling

6.3.3 The Commission has computed the allowable depreciation expense on the GFA base as per the Audited Accounts for FY 2014-15 and at the rates approved by the Commission in the Tariff Order for FY 2014-15. The Commission has c omputed the depreciation only on the depreciable asset base and have excluded the non-depreciable assets such as land, land rights, etc.

6.3.4 Considering this philosophy, the gross entitlement towards depreciation is as shown in the Table below:

TABLE 6-10: GROSS ALLOWABLE DEPRECIATION FOR FY 2014-15 (RS. CRORE)

Sl. No.	Particulars	Opening GFA	Addition to GFA	Deduction to GFA	Closing GFA	Depreciation Rate	Allowable Gross Depreciation
1	Land & Land Rights						
	(i) Unclassified	32.21	7.16	0.00	39.37		
	(ii) Freehold Land	0.05	0.00	0.00	0.05		
2	Buildings	426.89	63.82	0.61	490.10		
3	Other Civil Works	48.09	9.32	0.00	57.41		
4	Plant & Machinery	5221.59	787.24	132.13	5876.70		
5	Lines, Cables, Network etc.	4050.12	415.33	30.78	4434.67		
6	Vehicles	3.48	0.03	0.12	3.40		
7	Furniture & Fixtures	2.57	0.76	0.27	3.07		
8	Office Equipment	5.52	0.85	0.01	6.36		
9	Other assets	70.36	0.46	4.13	66.39		
10	**Total Fixed Assets**	**9860.88**	**1284.98**	**168.04**	**10977.82**		
11	Non-depreciable assets (Land & Land Rights)	32.26	7.16	0.00	39.42		
12	**Depreciable assets**	**9828.61**	**1277.52**	**168.04**	**10938.40**	**5.28%**	**548.25**

6.3.5 The Commission has scrutinised the Audited Accounts submitted by the Petitioner and obtained the figures in respect of depreciation charged on the assets created out of consumer contributions, capital grants and subsidies. This equivalent depreciation amounting to Rs. 24.12 Crore has been reduced from the allowable depreciation for FY 2014-15.

6.3.6 Further, while approving the Tariff Order for FY 2014-15, the Commission had withheld 25% of the allowable depreciation on account of non-submission of the Fixed Asset Register even after repeated direction to UPPTCL. Since, UPPTCL has submitted the Fixed Asset Register till FY 2014-15 before truing up of FY 2014-15, hence the withheld depreciation of 25% for FY 2014-15 has been allowed as per the direction in Tariff Order for FY 2014-15.

6.3.7 Thus, the approved depreciation for FY 2014-15 is as shown in the Table given below:

TABLE 6-11: NET APPROVED DEPRECIATION FOR FY 2014-15 (RS. Crore)

Sl. No.	Particulars	Tariff Order	Actual as per Audited Accounts	True up Petition	Approved upon truing up
1	Gross allowable Depreciation	611.60	524.99	548.25	548.25
2	Less: Equivalent amount of depreciation on assets acquired out of the Consumer	27.05	24.12	24.12	24.12

Sl. No.	Particulars	Tariff Order	Actual as per Audited Accounts	True up Petition	Approved upon truing up
	Contribution				
3	Net allowable Depreciation	**584.55**	**500.87**	**524.13**	**524.13**
4	Less: Depreciation withheld due to non-maintenance of Fixed Asset Registers	146.14			-
5	Depreciation allowable for recovery in FY 2013-14	**438.41**	**500.87**	**524.13**	**524.13**

6.4 PRIOR PERIOD EXPENSES

The Petitioner's Submissions

6.4.1 The Petitioner has submitted that it has identified and accounted for certain prior period incomes and expenses in the Audited Accounts for FY 2014-15. In the financial statements for FY 2014-15, there has been recognition of net prior period expense of Rs. 1.27 Crore.

The Commission's Ruling

6.4.2 Prior period expenses and incomes are the outcomes of omissions / errors in recording the transactions in the accounting statements. The items booked under the prior period expenses are essentially ARR items like O&M expenses, interest and finance charges, etc. Each item of ARR has a distinct methodology of treatment in the ARR and true up determination.

6.4.3 The Commission in its Order dated October 1, 2014 on approval of Transmission Tariff for FY 2014-15 directed as under:

> "6.4.6 *Thus, the Petitioner is directed to file a separate Petition for approval of prior period expenses / incomes. The Petition should clearly indicate the head wise and 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. Further, based on the data submitted by the Petitioner, the Commission after scrutiny and prudence check shall consider the expenses under the above head as it deems fit."*

6.4.4 Thus, in line with the approach adopted by the Commission in its earlier True up Orders, the Petitioner 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. Based on the data submitted by the Petitioner, the Commission after scrutiny and prudence check shall consider the expenses under the above head as it deems fit.

6.4.5 The Commission has not approved the prior period expenses in true up for FY 2014-15 as claimed by the Petitioner.

6.5 RETURN ON EQUITY

The Petitioner's Submissions

6.5.1 The Petitioner has claimed Return on Equity of Rs. 75.41 Crore for FY 2014-15 as against Rs. 81.51 Crore approved by the Commission in the Tariff Order for FY 2014-15.

6.5.2 The Petitioner submitted that the Return on Equity for FY 2014-15 has been arrived by considering the following:

- Opening equity as on 1st April, 2007 based on the equity balance, which devolved upon the Petitioner in the Transmission Transfer Scheme.
- Equity additions in FY 2007-08, to FY 2014-15 equivalent to normative 30% of the capitalised assets.
- A rate of 2% has been considered for computing return on eligible equity.

The Commission's Ruling

6.5.3 Under the provisions of Transmission Tariff Regulations, the Petitioner is allowed a return @ 14% on equity base; for equity base calculation, debt equity ratio shall be 70:30. Where equity involved is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30%. Equity amounting to more than 30% shall be considered as loan. In case of actual equity employed being less than 30%, actual debt and equity shall be considered for determination of tariff.

6.5.4 In view of the huge gap in the recovery of cost of supply at the Discom level, the Petitioner was of the view that return on equity would only result in accumulation of receivables.

6.5.5 As such, the Petitioner has been claiming return on equity @ 2% since FY 2009-10 onwards. Return on equity has been computed on the normative equity portion (30%) of capitalised assets.

6.5.6 The Commission, while truing up the Return on Equity, has considered:

- Closing equity approved by the Commission for FY 2013-14 has been considered as the opening equity for FY 2014-15.
- Return on equity has been computed at the rate of 2% in line with the approach adopted by the Commission in the earlier Orders.

6.5.7 The approved Return on Equity for FY 2014-15 is as shown in the Table given below:

TABLE 6-12: APPROVED RETURN ON EQUITY FOR FY 2014-15 (RS. CRORE)

Particulars	Tariff Order	True up Petition	Approved upon truing up
Equity at the beginning of the year	3767.49	3577.97	3577.98
Assets Capitalised	2054.46	1284.98	1284.68
Addition to Equity	616.34	385.49	385.40
Closing Equity	4383.83	3963.46	3963.38
Average Equity	4075.66	3770.71	3770.68
Rate of Return	2.00%	2.00%	2.00%
Return on Equity	**81.51**	**75.41**	**75.41**

6.6 REVENUE SIDE TRUING UP

The Petitioner's Submissions

6.6.1 **Non-Tariff Income**

6.6.1.1 The Petitioner has submitted that the actual non-tariff income for FY 2014-15 is Rs. 42.89 Crore as against Rs. 35.17 Crore approved in the Tariff Order.

The Commission's Ruling

6.6.1.2 The Commission observes that the submissions of the Petitioner are in order and accordingly approved the non-tariff income as submitted by the Petitioner for FY 2014-15.

6.6.2 Revenue from Transmission of Power

The Petitioner's Submissions

6.6.2.1 The Petitioner submitted that the gross transmission charges in FY 2014-15, are to the tune of Rs. 1,296.64 Crore. In FY 2014-15 there is a true-up adjustment of Rs. 25.95 Crore, hence the net transmission charges received during FY 2014-15 is Rs. 1,270.69 Crore as per annual accounts. Further, as part of separate function of SLDC, it is maintaining separate accounts for SLDC. It has recovered SLDC charges to the tune of Rs. 3.00 Crore in FY 2014-15. The open access charges billed in FY 2014-15 are to the tune of Rs. 31.22 Crore. Thus, the total revenue receipts of the Petitioner are to the tune of Rs. 1,304.91 Crore.

The Commission's Ruling

6.6.2.2 The Commission observes that the submissions of the Petitioner are in order and accordingly approves the Revenue from Transmission of Power as submitted by the Petitioner for FY 2014-15.

6.7 AGGREGATE REVENUE REQUIREMENT FOR FY 2014-15 AFTER TRUING UP

6.7.1 The Aggregate Revenue Requirement for FY 2014-15 after final truing up is summarised in the table below:

TABLE 6-13: ARR FOR FY 2014-15 AFTER FINAL TRUING UP (RS. CRORE)

Particulars	Tariff Order	Actual as per Audited Accounts	True up Petition	Approved upon truing up
Employee expenses	441.43	396.88	449.51	452.49
A&G expenses	18.80	34.09	26.61	26.13
R&M expenses	178.85	195.96	157.21	154.68
Interest on Loan Capital	864.87	868.87	797.84	797.85
Interest on Working Capital	44.52	0.00	43.24	42.79
Finance Charges	2.66	1.75	1.75	1.75
Depreciation	438.41	500.87	524.13	524.13
Gross expenditure	**1989.55**	**1998.43**	**2000.29**	**1999.82**
Less: Employee expenses capitalised	95.79	99.24	99.24	99.24
Less: A&G expenses capitalised	3.57	6.91	6.91	6.91
Less: Interest expenses capitalised	302.71	473.88	473.88	473.89
Net expenditure	**1587.48**	**1418.40**	**1420.26**	**1419.78**
Bad Debts & Provisions	0.00	0.00	0.00	0.00

Particulars	Tariff Order	Actual as per Audited Accounts	True up Petition	Approved upon truing up
Prior Period expenses	0.00	1.27	1.27	0.00
Net expenditure with provisions	**1587.48**	**1419.67**	**1421.53**	**1419.78**
Add: Return on Equity	81.51	0.00	75.41	75.41
Less: Non-Tariff Income	35.17	42.89	42.89	42.89
Aggregate Revenue Requirement	**1633.82**	**1376.78**	**1454.05**	**1452.30**
Revenue from Operations		1340.91	1304.91	1304.91
Net Gap/(Surplus)		**71.87**	**149.14**	**147.39**

6.7.2 Thus, the net revenue gap for FY 2014-15 approved by the Commission is Rs. 147.39 Crore. The Commission allows UPPTCL to recover the net gap allowed on true up for FY 2014-15 in 4 monthly instalments from the date of this Order in the proportion of amount billed to the Distribution Licensees and other entities in FY 2014-15. The Commission shall consider the same while carrying out the true up for FY 2017-18.

6.8 DERIVATION OF TRANSMISSION TARIFF FOR FY 2014-15

6.8.1 The standalone trued up ARR for FY 2014-15 is Rs. 1452.30 Crore as against Rs. 1454.05 Crore claimed by the Petitioner.

6.8.2 In Tariff Order for FY 2014-15, the Commission had carried out the revised true up for FY 2008-09 to FY 2010-11 and allowed UPPTCL to recover the net amount allowed on revision in 6 equal monthly instalments from the date of that Order in the proportion of amount billed to the Distribution Licensees and other entities in FY 2013-14. Further the Commission stated that the same shall be considered during true up for FY 2014-15.

6.8.3 The Commission considers that UPPTCL has recovered net amount recoverable from UPPCL as approved in Tariff Order dated October 1, 2014 for revised true up of FY 2008-09 to FY 2010-11 for calculation of Revenue Gap / Surplus for FY 2014-15.

6.8.4 The Transmission Tariff for FY 2014-15 is computed as shown in the Table given below:

TABLE 6-14: TRUED UP TRANSMISSION TARIFF FOR FY 2014-15

Particulars	Legend	Tariff Order	Actual as per Audited Accounts	True up Petition	Approved upon truing up
Revised True up of FY 2007-08 to FY 2010-11 (Gap/(Surplus))	A	-	-	-	0
Standalone ARR for FY 2014-15	B	1633.82	1376.78	1454.05	1452.30
Net ARR for FY 2014-15 (Rs. Crore)	C=A+B	1633.82	1376.78	1454.05	1452.30
Energy Handled (MU)	D	84344.76	82413.86	82413.86	82413.86
Transmission Tariff (Rs./kWh)	**E=C*10/D**	**0.1937**	**0.1671**	**0.1764**	**0.1762**

7. BUSINESS PLAN, ARR & TARIFF FOR THE MYT CONTROL PERIOD FY 2017-18 TO FY 2019-20

7.1 INTRODUCTION

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

7.1.2 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 Transmission 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 transmission licensee 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.

7.1.3 Regulation 5 of the Transmission MYT Regulations, 2014 stipulates that:

Quote

5. Business Plan

5.1 The Transmission 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 forecasting of quantum of power to be wheeled on behalf of its customers, 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 Transmission 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 Transmission Licensee shall provide relevant technical and commercial details.

7.1.4 Regulation 7 of the Transmission MYT 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) Availability of Transmission system;
(b) Operation and Maintenance expense norm;

7.1.5 Regulation 9 of the Transmission MYT 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 Return on Equity (ROE), depreciation and working capital requirements;

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

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

(g) Variation in availability of transmission system.

Unquote

7.1.6 Further, the treatment of O&M expenses while truing up for the MYT Control period, as per MYT Transmission Tariff Regulations, 2014 it has been kept in mind that all elements are divided as controllable and uncontrollable parameters and there is a provision of sharing of gains and losses. The relevant extract of the MYT Transmission 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 Transmission Licensee on account of uncontrollable factors shall be passed through, as an adjustment in the tariff of the Transmission 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 Transmission 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 Transmission Licensee.
11.2 The approved aggregate loss to the Transmission 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 Transmission Licensee.

Unquote

7.2 TRANSMISSION LOSSES

7.2.1 In the Tariff Order for FY 2016-17 dated August 1, 2016, the Commission had approved intra-State transmission losses of 3.59% and Inter-State transmission losses up to State's Transmission periphery as 1.65%.

7.2.2 The actual intra-State transmission loss submitted by the Petitioner is as shown in the Table given below:

TABLE 7-1: ACTUAL INTRA-STATE TRANSMISSION LOSS AS SUBMITTED BY THE PETITIONER

Particulars\Year	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Intra-State Transmission Loss (%)	4.11%	3.98%	3.56%	3.63%	4.08%	4.10%	3.67%	3.59%

7.2.3 Further, the Petitioner has claimed the intra-State transmission losses of 3.79% for the entire control period i.e. FY 2017-18 to FY 2019-20 considering the average of actual losses from FY 2013-14 to FY 2015-16.

7.2.4 The Regulation 4.2.1 (b) of the Transmission MYT Regulations, 2014 states that necessary studies need to be conducted to establish the allowable level of system loss for the network configuration and capital expenditure required to augment the transmission system and reduce system losses. Further in pervious Tariff Orders, the Commission has been directing the Licensee to conduct proper loss estimate studies so as to set the base line losses in accordance with Transmission Tariff Regulations, 2006. However, the Petitioner has not submitted the same till date. The Commission directs the Petitioner to comply with the earlier directive of the Commission in this regard and submit the compliance report within the stipulated time frame. The Commission cautions the Petitioner that the failure to comply with the Commission's directive might attract punitive action as deemed appropriate by the Commission.

7.2.5 However, in the absence of proper loss estimates and considering the huge expenditure to be incurred by the petitioner in view of catering the upcoming load requirement of the State owned DISCOMs and NPCL and the targets of UDAY and 24 x 7 Power for All schemes for the DISCOMS, the Commission approves the intra-State transmission losses of 3.79% for the entire control period i.e. FY 2017-18 to FY 2019-20 as submitted by the State owned DISCOMs and inter-State transmission losses up to Transmission periphery as 1.69% for the MYT Control Period. However, the petitioner must put in sincere efforts to ensure and bring down the losses. Also, the approved intra-state losses shall be trued up at the time of Annual Performance Review and / or True up.

7.3 TRANSMISSION AVAILABILITY

7.3.1 The transmission availability as submitted by the petitioner is as shown under:

TABLE 7-2: TRANSMISSION AVAILABILITY

Particulars\Year	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Transmission Availability (%)	99.75%	99.68%	99.72%	99.64%	99.75%

7.3.2 Regulation 16 of the Transmission MYT Regulations, 2014 provides as stated under:

Quote

16.1 Normative Annual Transmission System Availability factor (NATSAF) shall be as under:

(1) AC System: 98%

(2) HDC bi-pole links: 92%

(3) HVDC back-to-back Stations: 95%

Unquote

7.3.3 The petitioner has not submitted any projections for the transmission network availability for the control period. However, the petitioner has submitted that the network availability for FY 2015-16 was 99.75% and hence, the same has been considered for the MYT Period.

7.4 COMPONENTS OF ARR AND ANALYSIS OF EACH COMPONENT

7.4.1 The Commission has analysed all the components of the Aggregate Revenue Requirement (ARR) to provide suitable values for each component. The ARR for the Petitioner includes the following components:

a) Operation & Maintenance expenses
   - Employee expenses
   - Administration & General expenses
   - Repair and Maintenance expenses

b) Interest expenses
   - Interest on Loan Capital
   - Interest on Working Capital

c) Depreciation expenses

d) Other Income (Non-tariff income)

e) Return on Equity

f) Tax on Income

g) Any other relevant expenditure

7.4.2 In accordance with the Transmission MYT Regulations, 2014, the Commission has analysed each component of the ARR and accordingly approved each of the components along with the justification for the same.

7.5 ESCALATION INDEX

7.5.1 The petitioner submitted that the Transmission MYT Regulations, 2014 provides that expenses of the base year shall be escalated at Inflation/Escalation rate notified by Central Government for different years. The inflation rate for Employee Expense shall be the average increase in the Consumer Price index (CPI) for immediately preceding three financial year and the inflation rate for A&G Expense shall be the average increase in the Wholesale Price index (WPI) for immediately preceding three financial year. It is to be noted that a new WPI series has been issued by the Government with base 2011-12 which is effective from April 2017. The same has been considered for escalation purposes during the MYT control period. Therefore, for the purpose of this MYT, the Petitioner has used this methodology in arriving at Escalation Index for Employee Expenses as 5.44% and Escalation Index for the A&G Expenses as 0.88% for the control period.

7.5.2 Regulation 21 of the Transmission MYT Regulations, 2014 specifies the methodology for consideration of the O&M Expenses, wherein such expenses are linked to the inflation index determined under these Regulations. Accordingly, the Commission has computed escalation / inflation index of 8.80% as CPI Inflation and 4.46% as WPI Inflation for the MYT Period.

7.6 OPERATION & MAINTENANCE EXPENSES

7.6.1 The Petitioner submitted that the Transmission MYT 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 petitioner also submitted that it has conducted the

Benchmarking studies and submitted the same to the Commission. The summary of the Benchmarking studies has been annexed as Annexure-II.

7.6.2 The relevant extract of the Regulations is as follows:

Quote

21. 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 Transmission Licensee or a class of Transmission Licensees.

(b) Norms shall be defined in terms of combination of number of personnel per ckt/km (for different categories of transmission lines for e.g. HVDC, 765 kV, 400 kV, >66kV and 400 kV etc. lines) and number of personnel per bay (for different categories of transmission lines for e.g. HVDC, 765 kV, 400 kV, >66kV and 400 kV etc. lines) along with annual expenses per personnel for Employee expenses; combination of A&G expense per personnel and A&G expense per personnel and A&G expenses per ckt/km and per bay 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 Transmission 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 Transmission 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 Transmission 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 Transmission 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.

21.1 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:

*EMPn= (EMPb * CPI inflation) + Provision*

Where:

EMPn: Employee expense for the year n.

EMPb: 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 Transmission Licensee and expected one-time expenses as specified above."

21.2 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= Kb * 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.

21.3 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 Transmission Licensee and validated by the

Commission) or other expected one-time expenses, and shall be governed by following formula:

A&Gn= (A&Gb WPI inflation) + 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 Transmission Licensee and validated by the Commission. "

Unquote

7.6.3 The Commission vide its Order dated February 23, 2017, issued under Clause 38 (Power to Remove Difficulties) of Uttar Pradesh Electricity Regulatory Commission (Multi Year Transmission Tariff) Regulations, 2014 has clarified on the base year as under:

Quote

"…….Now whereas, Clause 3.1 (5) and Clause 4.12.1 of the Uttar Pradesh Electricity Regulatory Commission (Multi Year Transmission 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

7.6.4 The Commission had provided UPPTCL with a methodology for computation of O&M expenses as per Transmission MYT Regulations, 2014 and the same was accepted by the petitioner. The petitioner has computed and submitted the O&M expenses in line with the methodology provided by the Commission. Accordingly, the submission of the petitioner 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.

7.6.5 As the audited accounts of UPPTCL available up to FY 2014-15 only, the Commission has considered the base year as FY 2014-15. The values for all three components of the O&M expenses for FY 2015-16 to 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 2013-14, FY 2014-15 and FY 2015-16 has been used (previous 3 years from the base year as per Transmission MYT Regulations, 2014). Considering these values, subsequently the O&M Expense for FY 2017-18 to FY 2019-20 is calculated, for UPPTCL, whose component wise detailed calculation is discussed in the subsequent paragraphs.

Employee Expenses

7.6.6 The petitioner has submitted that it has considered the normative employee expenses of FY 2016-17 as the base and escalated the same with 8.80% i.e. the inflation rate of the CPI index for the last three years to arrive at the employee expenses for FY 2017-18. Similarly, the employee expenses for the FY 2018-19 have been derived by the escalating the head-wise employee expenses for FY 2017-18 and FY 2018-19 for deriving the expenses of FY 2019-20 with an inflation rate of 8.80%.

7.6.7 The Petitioner further submitted that the 7th pay is expected to be implemented in the state by next financial year i.e. FY 2017-18 therefore the arrears and implications of the 7th pay commission which are expected to be discharged in FY 2017-18 and subsequent years have also been claimed. Since the 7th pay is effective from January 1, 2016, hence its impact over the employee expenses is computed for different years starting from FY 2015-16 (last quarter of FY 2015-16). The petitioner submitted that the overall increase in the employee expenses due to implementation of the 7th pay is estimated to be approximately 15%. Hence, the petitioner has computed the yearly impact of the 7th pay 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 7th pay impact of subsequent years. The impact of the 7th pay for FY 2015-16 and FY 2016-17 are expected to be discharged in FY 2017-18 and FY 2019-20 in two equal instalments.

7.6.8 The Commission in its deficiency note dated March 30th, 2017 sought re-submission of O&M computations in accordance to Regulation 21 of the Transmission MYT Regulations, 2014. The Commission sought information for 5 years i.e. FY 2010-11 to FY 2014-15 for HVDC, 765 kV, 400 kV, 220kV, 132kV & 66kV lines and bays i.e. number of personnel, number of circuit kms and number of bays.

7.6.9 Further the Commission sought details of comparison of its O&M expenses category wise as shown in the Table above, with the O&M expenses of Transmission Licensees in all the States in the Northern region. In response the petitioner vide letter dated May 2, 2017. In response, the petitioner vide letter dated May 2, 2017 submitted the revised O&M Expenses.

7.6.10 The petitioner has claimed the revised Employee Expenses as shown below:

TABLE 7-3: REVISED EMPLOYEE EXPENSE AS CLAIMED BY THE PETITIONER (RS. CRORE)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Employee Expenses			
Gross Employee Costs and Provisions	908.65	1,067.02	1,193.16
Employee expenses capitalized	227.21	266.81	298.35
Net Employee Expenses	**681.44**	**800.22**	**894.82**

7.6.11 Considering the methodology provided in Transmission MYT Regulations, 2014 the detailed calculation of Employee Expense is as follows:

7.6.12 The norms for preceding five years for which audited accounts is available i.e. FY 2010-11 to FY 2014-15 is calculated by using following formulae:

Sl No	Formulae
•	Assumption: 25% of Gross Employee expenses is attributed to Transmission lines and remaining 75% for bays as per methodology followed in CERC 2014 Tariff Regulations.
(A)	Norms per ckt km = (25% of Gross Employee Expense for year / ckt kms)
(B)	Norms per bay= (75% of Gross Employee expense for a year / Number of Bays)
(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)

7.6.13 It is observed that the value of (C) & (D) is considered as the values for base year FY 2014-15. Hence, (C) & (D) are escalated using CPI escalation to arrive at the values for FY 2017-18.

Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	Average of FY 2011-2015
Employee Expenses (25%) (Audited) (A1) (Rs Crore)	88.62	87.87	86.24	98.82	99.22	
Line Length (Ckt kms) (A2)	24,405	25,301	25,920	26,876	28,678	
Employee Expenses (75%) (Audited) (A3) (Rs Crore)	265.85	263.60	258.72	296.46	297.66	
Number of Bays (A4) (nos.)	2098.00	2169.00	2271.00	2434.00	2445.00	
Norms per ckt kms (A)= (A1/A2)*1000 (Rs Crore)	0.0036	0.0035	0.0033	0.0037	0.0035	**0.0035 (C)**
Norms per Bays (B)= (A3/A4) (Rs Crore)	0.1267	0.1215	0.1139	0.1218	0.1217	**0.1211 (D)**

7.6.14 CPI escalation for a year is calculated considering CPI inflation for FY 2012-13 to FY 2014-15 i.e. preceding three years from the base year as per Regulations.

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
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 base year) ((= 10.44%+9.68%+6.29%)/3)		

**Source: http://labourbureau.nic.in/indtab.html*

7.6.15 Thereafter year wise (i.e. FY 2017-18, FY 2018-19 and FY 2019-20) Employee Expense (per ckt km) and Employee Expense (per bay) is calculated considering norms per ckt km and norms per bay (calculated above) using following formulae:

Employee Expense (Consumers) = (Norms per ckt km * ckt kms)

Employee Expense (Bay) = (Norms per bay * Number of bays)

	Base Value	2015-16	2016-17	2017-18	2018-19	2019-20
CPI Inflation		5.65%	4.12%	8.80%	8.80%	8.80%
Pay Commission impact			15%			
Norms per ckt kms (Rs Crore)	**0.0035**	0.0039	0.0044	0.0048	0.0053	0.0057
Line Length (ckt kms)		30151.41	35522.41	44618.41	49200.41	52937.41
Employee Expense for Lines (F)(Rs Crore)		116.12	157.88	215.77	258.86	303.04
Norms per bay (Rs Crore)	**0.1211**	0.1328	0.1532	0.1667	0.1814	0.1974
No of bays		3428.00	3733.00	3955.00	4417.00	4663.00
Employee Expense for Bays (G) (Rs Crore)		455.18	572.06	659.43	801.27	920.35

**Impact of 7th pay revision has been considered while calculation of norms from 2015-16 onwards*

7.6.16 Further, UPPTCL has considered the impact of the 7th pay revision while computing the norms for the employee expenses by 15% and has accordingly claimed the onetime arrears of FY 2015-16 and FY 2016-17 payable due to the 7th pay revision of Rs. 44.74 Crore each in FY 2017-18 and FY 2018-19 respectively. Accordingly, the arrears of 7th Pay Commission the same is allowed under Regulation 21.1 of the Transmission MYT Regulations, 2014 as “provision” i.e. provision for expenses beyond the control of the Transmission Licensee as one-time expenses.

7.6.17 The computation of total Employee Expense is calculated by taking the average of Employee Expense (ckt kms) and Employee Expense (Bay), as shown under:

Particulars	Control Period		
	FY 2017-18	FY 2018-19	FY 2019-20
Norms per ckt kms (Rs Crore)	0.0048	0.0053	0.0057
Line Length (ckt kms)	44618.41	49200.41	52937.41
Employee Expenses (ckt kms) (F) (Rs Crore)	**215.77**	**258.86**	**303.04**
Norms per Bay (Rs Crore)	0.1667	0.1814	0.1974
Number of Bays (nos)	3955.00	4417.00	4663.00
Employee Expenses (Bays) (G) (Rs Crore)	**659.43**	**801.27**	**920.35**
Add: Arrears (H)	44.74	44.74	
Total Employee Expenses (F+G+H) (Rs Crore)	**919.94**	**1104.88**	**1223.39**

R&M Expenses

7.6.18 The petitioner submitted the revised computation of R&M Expenses in accordance to Regulation 21.2 of the Transmission MYT Regulations, 2014. The R&M Expenses claimed for the MYT Period is as shown below:

TABLE 7-4: REVISED R&M EXPENSE AS CLAIMED BY THE PETITIONER (Rs in Crore)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Repair & Maintenance Expenditure (Rs in Crore)	**310.37**	**400.08**	**508.77**

7.6.19 Considering the methodology provided in Transmission MYT Regulations, 2014 the detailed calculation of R&M Expense is as follows:

7.6.20 The value of 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 = % 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)	7299.38	7849.07	8414.74	9252.58	10419.35
R&M Expenses (B) (Rs Crore)	98.06	118.8	143.14	162.7	195.96
K_b (D= B/A)	1.34%	1.51%	1.70%	1.76%	1.88%

7.6.21 Thereafter, the average of K_b is calculated for the preceding five years is calculated. This is considered as value of K_b f or FY 2014-15 (base year). The value is escalated by using increase in WPI for the corresponding years.

Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
K_b (D= B/A)	1.34%	1.51%	1.70%	1.76%	1.88%
Average of 5 years					**1.64%**

7.6.22 The WPI escalation for a year is calculated by considering the average increase in WPI for FY 2012-13 to FY 2014-15 i.e. preceding three years from the base year.

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.

7.6.23 The total R&M Expense is calculated by using following formulae:

Total R&M Expense = K_b * Average GFA

Particulars	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Average GFA (Rs Crore)	11,862.38	14,498.84	18,475.35	23,389.44	29,211.51
WPI Inflation	-3.65%	1.73%	4.46%	4.46%	4.46%
K_b	1.58% (= 1.64%*(1-3.65%))	1.61% (= 1.58% *(1+ 1.73%))	**1.68%** (=1.61%*(1+ 4.46%))	**1.75%** (=1.68%*(1+ 4.46%))	**1.83%** (=1.75%*(1+ 4.46%))

7.6.24 The calculation of R&M Expense for UPPTCL is as follows:

S. No.	Particulars	Control Period		
		FY 2017-18	FY 2018-19	FY 2019-20
1	Average GFA (Rs Crore)	18475.35	23389.44	29211.51
2	K_b	1.68%	1.75%	1.83%
3	**R&M Expense (Rs Crore)**	**310.12**	**410.10**	**535.02**

A&G Expenses

7.6.25 The petitioner submitted the revised computation of A&G Expenses in accordance to Regulation 21.3 of the Transmission MYT Regulations, 2014. The A&G Expenses claimed are as shown below:

TABLE 7-5: REVISED A&G EXPENSE AS CLAIMED BY THE PETITIONER (RS CRORE)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Gross A&G Expenses (Rs in Crore)	33.80	37.60	41.67
A&G expenses capitalized (Rs in Crore)	6.85	7.62	8.45
Net A&G Expenses (Rs in Crore)	**26.95**	**29.98**	**33.23**

7.6.26 Considering the methodology provided in Transmission MYT Regulations, 2014 the detailed calculation of A&G Expense is as follows:

7.6.27 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
•	Assumption: 25% of Gross A&G expenses are attributed to Transmission lines, 25% of Gross A&G for employee expenses and remaining 50% for bays as per methodology followed in CERC 2014 Tariff Regulations.
(A)	Norms per ckt km= (Gross A&G expense for a year /Length of ckt kms) * 1000
(B)	Norms per Bay= (Gross A&G expense for a year / Number of Bays)
(B1)	Norms per Employee= (Gross A&G expense for a year / Number of Employees)
(C)	Average of (A) from FY 2011-12 to FY 2015-16 (5 years)
(D)	Average of (B) from FY 2011-12 to FY 2015-16 (5 years)
(E)	Average of (B1) from FY 2011-12 to FY 2015-16 (5 years)*

***Note- T**he A&G Expenses have been computed considering number of bays and circuit km and employee expenses as submitted by the petitioner vide affidavit dated 2.5.2017.

7.6.28 The values (C), (D) & (E) are considered escalated using WPI escalation for FY 2014-15 to FY 2015-16 to arrive at value for FY 2017-18. As per Regulation the A&G Expenses should be calculated considering Norms per ckt/km, norms per bay and norms per employee.

Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	Average of FY 2011-2016
A&G Expenses (25%) (Audited) (A1) (Rs Crore)	3.66	3.69	4.01	7.26	8.52	
Line Length (ckt kms) (A2)	24405	25301	25920	26876	28678	
A&G Expenses (75%) (Audited) (A3) (Rs Crore)	7.31	7.39	8.02	14.52	17.05	
Number of Bays (A4) (nos.)	2098.00	2169.00	2271.00	2434.00	2445.00	
A&G Expenses (25%) (Audited) (A5) (Rs Crore)	3.66	3.69	4.01	7.26	8.52	
Number of Employees (A6)	5654	5973	5833	6856	6778	
Norms per ckt kms (A)= (A1/A2)*1000 (RsCrore)	0.0001	0.0001	0.0002	0.0003	0.0003	**0.0002**
Norms per Bay (B)= (A3/A4) (Rs Crore)	0.0035	0.0034	0.0035	0.0060	0.0070	**0.0047**
Norms per Employee (C)= (A5/A6) (Rs Crore)	0.0006	0.0006	0.0007	0.0011	0.0013	**0.0008**

7.6.29 The WPI escalation for a year is calculated considering WPI inflation for FY 2012-13 to FY 2014-15 i.e. preceding three years from the base year.

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.

7.6.30 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 (ckt kms), A&G Expense (Bay) and A&G Expense (Employee) as shown below:

- A&G Expense (ckt kms) = (Norms per ckt kms * ckt kms)
- A&G Expense (Bay) = (Norms per Bay * Number of Bays)
- A&G Expense (Employee- (Norms per Employee* Number of Employees)

Particulars	Base Year	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
WPI Inflation		-3.65%	1.73%	**4.46%**	**4.46%**	**4.46%**
Norms per Ckt kms (Rs Crore)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Line Length (ckt kms)		30151.00	35522.41	44618.41	49200.41	52937.41
A&G Expense (F) (Rs Crore)		**5.91**	**7.09**	**9.30**	**10.71**	**12.04**
Norms per Bay (Rs Crore)	0.0047	0.0045	0.0046	0.0048	0.0050	0.0052
No of Bays (nos.)		3428.00	3733.00	3955.00	4417.00	4663.00
A&G Expense (G) (Rs Crore)		**15.43**	**17.09**	**18.91**	**22.06**	**24.33**
Norms per Employee (Rs Crore)	0.0009	0.0008	0.0008	0.0009	0.0009	0.0010
No of Employees (nos.)		6887.00	6068.00	6411.00	6718.00	7231.00
A&G Expense (H) (Rs Crore)		**5.66**	**5.08**	**5.60**	**6.13**	**6.90**

7.6.31 The total A&G expense for UPPTCL is calculated by taking the average of A&G Expense (ckt kms), A&G Expense (bay) and A&G Expense (Employee) as follows:

Computed	MYT Control Period		
	FY 2017-18	FY 2018-19	FY 2019-20
Norms per ckt kms (Rs Crore)	0.0002	0.0002	0.0002
Line Length (ckt kms)	44618.41	49200.41	52937.41
Administration & General Expenses (ckt km) (F) (Rs Crore)	**9.30**	**10.71**	**12.04**
Norms per Bay (Rs Crore)	0.0048	0.0050	0.0052
Number of Bays (nos)	3955.00	4417.00	4663.00
Administration & General Expenses (Bay) (G) (Rs Crore)	**18.91**	**22.06**	**24.33**
Norms per Employee (Rs Crore)	0.0009	0.0009	0.0010
Number of Employees (nos)	6411.00	6718.00	7231.00
Administration & General Expenses (Employee) (H) (Rs Crore)	**5.60**	**6.13**	**6.90**
Total Administration & General Expenses (F+G+H) (Rs Crore)	**33.81**	**38.90**	**43.26**

7.6.32 The summary of O&M Expenses approved by the Commission for the DISCOMs are as shown under:

TABLE 7-6: APPROVED O&M EXPENSES FOR THE MYT PERIOD

Particulars	2017-18		2018-19		2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Employee Expenses						
Gross Employee Costs (Rs in Crore)	908.65	919.94	1,067.02	1104.88	1,193.16	1223.39
Employee expenses capitalized (Rs in Crore)	227.21	230.03	266.81	276.27	298.35	305.91
Net Employee Expenses (Rs in Crore)	**681.44**	**689.91**	**800.22**	**828.61**	**894.82**	**917.49**
A&G Expenses						
Gross A&G Expenses (Rs in Crore)	33.80	33.81	37.60	38.90	41.67	43.26
A&G expenses capitalized (Rs in Crore)	6.85	6.85	7.62	7.88	8.45	8.77
Net A&G Expenses (Rs in Crore)	**26.95**	**26.96**	**29.98**	**31.02**	**33.23**	**34.49**
R&M Expenses						
Repair & Maintenance Expenditure (Rs in Crore)	**310.37**	**310.12**	**400.08**	**410.10**	**508.77**	**535.02**
Total O&M Expenses Allowable as per Regulations (Rs in Crore)	**1018.77**	**1026.99**	**1230.27**	**1269.73**	**1436.81**	**1487.00**

7.7 GFA BALANCES AND CAPITAL FORMATION ASSUMPTIONS

The Petitioner's Submissions

7.7.1 The petitioner has submitted the proposed capital expenditure for the MYT Control Period in its Business Plan. The summary of physical targets for the MYT Period as submitted by the petitioner is as shown below:

TABLE 7-7: DETAILS OF SUB-STATIONS & LINES FOR THE MYT PERIOD

Sl No	Item	Unit	Annual Plan FY 2017-18	Annual Plan FY 2018-19	Annual Plan FY 2019-20
1	132 kV Sub-station	No/MVA	428/44051	456/47291	477/49971
2	220 kV Sub-station	No/MVA	114/35757	147/46117	161/51457
3	400 kV Sub-station	No/MVA	23/17740	28/22085	33/26345
4	765 kV Sub-station	No/MVA	1/3000	4/12500	4/12500
5	132 kV Line	ckt km	23373	24746	25539
6	220 kV Line	ckt km	13565	15029	16068
7	400 kV Line	ckt km	6177	7722	8687
8	765 kV Line	ckt km	1503	1703	2643
9	**Total No./MVA**		**566/100548**	**635/127993**	**675/140273**
10	**Total ckt kms**		**44618**	**49200**	**52937**

7.7.2 The petitioner submitted that the Gross Fixed Assets (GFA) and Capital Work in Progress (CWIP) for the MYT Period has been arrived at based on the following assumptions:

- The capital investment for FY 2017-18 has been estimated at Rs. 6,113 Crore, Rs. 6,736 Crore for FY 2018-19 and Rs. 7,200 crore for FY 2019-20 out of which works through deposit works have been envisaged at Rs. 100 Crore each year during the control period
- Investment through "deposit work "has been taken for capital formation. However, depreciation thereon has not been charged to the ARR.
- 25% the opening CWIP and 25% of investment made during the year, expenses capitalised & interest capitalised (25% of total investment) has been assumed to be capitalised during the years 2015-16, 2016-17, 2017-18, 2018-19 and 2019-20 respectively.
- The capital investment plan (net of deposit works) has been projected to be funded in the ratio of 70:30 (debt to equity).

7.7.3 Further, the petitioner vide its submission dated June 12, 2017 in reply to Commission's letter dated May 18,2017, submitted the revised capital investment considering the revised capacity addition in line with 24x7 Power For All scheme in order to meet the requirement for 24x7 power supply for the State. The revised Capital investment for FY 2017-18, FY 2018-19 and FY 2019-20 is Rs. 6113.00 Crore, Rs. 6726.00 Crore and Rs. 7200.00 Crore respectively.

The Commission's Ruling

7.7.4 Regulation 5.2 of the Transmission MYT Regulations, 2014 specifies as under:

Quote

"5.2 The Capital Investment Plan 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 Transmission Licensee shall provide relevant technical and commercial details.

Unquote

Further Regulation 19A of the Transmission MYT Regulations, 2014 specifies that

Capital Expenditure

a. Capital expenditure shall be considered on scheme wise basis.

b. For capital expenditure greater than INR 10 Crore, the Transmission Licensee shall seek prior approval of the Commission.

c. The Transmission Licensee shall submit detailed supporting documents while seeking approval from the Commission.

Provided that supporting documents shall include but not limited to purpose of investment, capital structure, capitalization schedule, financing plan and cost-benefit analysis:

d. The approval of the capital expenditure by the Commission for the ensuing year shall be in accordance with load growth, system extension, rural electrification, Transmission loss reduction or quality improvement as proposed in the Transmission Licensee's supporting documents.

e. The Commission may also undertake a detailed review of the actual works compared with the works approved in the previous Tariff Order while approving the capital expenditure for the ensuing year.

f. In case the capital expenditure is required for emergency work, the licensee shall submit an application, containing all relevant information along with reasons justifying the emergent nature of the proposed work, seeking post facto approval by the Commission.

g. The Transmission Licensee shall take up the work prior to receiving the approval from the Commission provided that the emergent nature of the scheme has been certified by its Board of Directors.

h. If capital expenditure is less than INR 10 Crore, the Transmission Licensee shall undertake the execution of the plan with simultaneous notification to the Commission with all of the relevant supporting documents.

i. During the true-up exercise, the Commission shall take appropriate action as is mentioned in Regulation 19.1 of these regulations.

j. Consumer's contribution towards cost of capital asset shall be treated as capital receipt and credited in current liabilities until transferred to a separate account on commissioning of the assets.

Unquote

7.7.5 The Commission in its deficiency note sought preparedness on part of the petitioner to execute the works stated in terms of funds tie up and orders placed along with detailed plan to evacuate power from the upcoming generating capacities in the State during FY 2017-18 and FY 2019-20. In response the petitioner submitted that the proposed capital expenditure of Rs. 6113.00 Crore, Rs. 6726.00 Crore and Rs. 7200.00 Crore in FY 2017-18, FY 2018-19 and FY 2019-20 respectively, would be funded by debt and equity. The required equity is expected to be provided from Government of U.P. through budgetary allocation. The loan is being tied up with Financial Institutions like PFC, REC, World Bank or ADB. The funding arrangement for the above-mentioned CAPEX for the FY 2017-18 to FY 2019-20 will be as follows:

TABLE 7-8: REVISED FUNDING ARRANGEMENT OF THE CAPITAL EXPENDITURE AS SUBMITTED BY PETITIONER FOR FY 2017-18 TO FY 2019-20 (Rs. in Crore)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Proposed Capital Investment	6113.00	6736.00	7200.00
Equity (from GoUP):	1834.00	2021.00	2160.00
PFC/REC	4279.00	4715.00	5040.00

7.7.6 Further, the Commission in its deficiency note sought detailed investment plan considering the revised investment proposed by it. The petitioner in reply submitted the capital investment with physical targets as follows:

TABLE 7-9: REVISED DETAILS OF SUB-STATIONS & LINES AS SUBMITTED BY PETITIONER FOR FY 2017-18 TO FY 2019-20

VOLTAGE LEVEL	S/S or Line	FY 2017-18 (BE)	FY 2018-19 (BE)	FY 2019-20 (BE)	Total	Carry Forward Beyond Mar'20
765kV	S/S	259	442	197	898	70
	Line	138	973	1638	2749	0
400kV	S/S	475	786	708	1969	383
	Line	563	1109	1111	2782	273
220kV	S/S	362	879	1117	2358	1362
	Line	288	550	642	1480	736
132kV	S/S	497	970	1051	2518	1580
	Line	262	395	738	1395	653
TOTAL	S/S	1592	3077	3072	7742	3396
	Line	1251	3027	4128	8405	1662

VOLTAGE LEVEL	S/S or Line	FY 2017-18 (BE)	FY 2018-19 (BE)	FY 2019-20 (BE)	Total	Carry Forward Beyond Mar'20
Overall Total	(S/S + Line)	2843	6104	7200	16147	5058
TOTAL	Govt. Support	823	1801	2130	4754	1487
	ORC	100	100	100	300	100
	Loan	1920	4203	4970	11093	3471
	Total	2843	6104	7200	16147	5058

7.7.7 Further the petitioner has submitted in petition the detailed plan for evacuation of power from the upcoming generating capacities in the State during FY 2017-18 to FY 2019-20 is mentioned below:

A. 3x660 MW Ghatampur TPS (up to FY 2020)

i. 765 kV Ghatampur – Fatehabad D/C transmission line - 240 kms
ii. 765 kV Fatehabad – Greater Noida D/C transmission line – 200 kms
iii. 765 kV Ghatampur – Hapur transmission line – 400 kms
iv. 400 kV Ghatampur – Kanpur D/C transmission line

B. 2x660 MW Jawaharpur TPS (up to FY 2020)

v. LILO of 765 kV Mainpuri to Greater Noida D/C line – 30 kms
vi. 400 kV Jawaharpur – Firozabad D/C transmission line – 50 kms
vii. 400 kV Firozabad – Agra (South) D/C transmission line – 50 kms
viii. 220 kV Jawaharpur – Sikandarrao – Eta D/C transmission line

C. 1x660 MW Harduaganj TPS (up to FY 2020)

ix. LILO of 400 kV SIkandarbad – Aligarh S/C transmission line – 30 kms
x. 220 kV Harduganj – Ruki D/C transmission line – 70 kms

D. 2x660 MW Tanda TPS (up to FY 2021)

xi. 400 kV Quad Moose Tanda - Gonda transmission line - 60 kms
xii. 400 kV Quad Moose Gonda - Shahjahanpur (PGCIL) transmission line - 230 kms
xiii. LILO of 400 kV Azamgarh – Sultanpur line transmission line – 60 kms

7.7.8 As stated above, the Transmission MYT Regulations, 2014 clearly specify the procedure for approval of the Capital Investment Plan. The Petitioner has not proposed the Capital Investment Plan for the MYT Period strictly in accordance with the Transmission MYT Regulations, 2014.

7.7.9 The Commission in order to approve the realistic levels of gross fixed asset balance and consequent tariff components such as depreciation, interest on loan and return on equity, has considered the opening balance of FY 2015-16 in line with the closing balance as per the Audited Accounts for FY 2014-15. The Commission has considered the capital additions, capital deletions, capital work in progress balances, etc. from the Provisional Accounts for FY 2015-16 submitted by the Petitioner along with its Petition.

7.7.10 For the control period, the Commission observes that the capital investment claimed by the Licensee is not in accordance with the Transmission MYT Regulations, 2014 as reproduced above and hence, the Commission vide its deficiency notes sought the remaining information from the Licensee, however UPPTCL did not submit any of the sought information. The Commission in its previous orders has been approving 70% of the claimed capital investment on account of incomplete submission of capital investment plan. However, the Commission has observed that the Licensee has proposed such intensive capital investment for catering the upcoming demand addition inked under UDAY and 24 x 7 Power For ALL schemes. Hence, in view of the above, the Commission approves full capital investment as proposed by the Petitioner, however the Commission directs the petitioner to submit the complete capital investment plan at the time of APR for FY 2017-18. It is to be noted that if the Licensee fails to submit the capital investment plan while filing the Annual Performance Review (APR) petition, the Commission may disallow the 30% of proposed capital investment in order to reprimand the petitioner.

7.7.11 The expenses capitalisation has been considered as approved this Order. 25% of the total investments including opening capital work in progress, expenses and interest capitalisation during the year have been projected to be capitalised in the MYT Period.

7.7.12 Accordingly, the details of approved Capitalisation and capital work in progress for FY 2015-16 to FY 2019-20 are provided in the table below:

TABLE 7-10: CAPITALISATION AND WIP UPTO MYT PERIOD (RS. CRORE)

Particulars	Derivation	FY 2015-16			FY 2016-17		
		Tariff Order	Revised Proposed	Revised Approve d	Tariff Order	Revised Proposed	Revised Approve d
Opening WIP as on 1st April	A	5978.78	6629.83	6629.82	8136.88	8142.72	8142.71
Investments	B	3360.00	2769.20	2769.20	4270.00	5100.00	4270.00

Particulars	Derivation	FY 2015-16			FY 2016-17		
		Tariff Order	Revised Proposed	Revised Approved	Tariff Order	Revised Proposed	Revised Approved
Employee expenses capitalisation	C	95.32	211.44	211.44	103.35	130.06	130.06
A&G expenses capitalisation	D	9.07	5.75	5.75	5.75	6.36	6.36
Interest capitalisation in Interest on long term loans	E	434.79	427.06	427.06	536.57	679.60	658.47
Total Investments including opening WIP	**F=A+B+C+D+E**	**9877.96**	**10043.28**	**10043.28**	**13052.55**	**14058.75**	**13207.61**
Transferred to GFA (total capitalisation)	G	2469.49	1900.56	1900.56	3263.14	3514.68	3503.78
Closing WIP	**H=F-G**	**7408.47**	**8142.72**	**8142.71**	**9789.41**	**10544.07**	**9703.83**

Capital Investment	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Allowable	Petition	Allowable	Petition	Allowable
Opening WIP as on 1st April	10544.07	9703.83	13347.70	12467.80	16136.86	15224.13
Investments	6113.00	6113.00	6736.00	6736.00	7200.00	7200.00
Employee expenses capitalisation	227.21	230.03	266.81	276.27	298.35	305.91
A&G expenses capitalisation	6.85	6.85	7.62	7.88	8.45	8.77
Interest capitalisation in Interest on long term loans	905.82	863.32	1157.69	1115.12	1417.03	1374.87
Total Investments including opening WIP	**17796.94**	**16917.04**	**21515.82**	**20603.08**	**25060.68**	**24113.67**
Transferred to GFA (total capitalisation)	4449.23	4449.23	5378.95	5378.95	6265.17	6265.17
Closing WIP	**13347.70**	**12467.80**	**16136.86**	**15224.13**	**18795.51**	**17848.50**

7.8 FINANCING OF THE CAPITAL INVESTMENT

The Petitioner's Submissions

7.8.1 The Petitioner submitted that for FY 2015-16, the amounts received as consumer contributions, capital subsidies and grants have been considered as per the Provisional Accounts for FY 2015-16. The Petitioner submitted that the consumer contributions, capital subsidies and grants for the MYT Period have been considered to be in the same ratio to the total investments in FY 2014-15.

7.8.2 The Petitioner further submitted that out of the proposed capital investment of Rs. 6113 Crore, Rs 6736 Crore and Rs 7200 Crore in FY 2017-18, FY 2018-19 and FY 2019-20 respectively. The capital investment through deposit works is estimated to be Rs. 100 Crore each years of the Control Period and the remaining capital investment is considered to be funded through debt and equity in the ratio of 70:30.

The Commission's Ruling

7.8.3 The Commission has considered a normative approach with a debt: equity ratio of 70:30. Considering this approach, 70% of the capital expenditure undertaken in the 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 have been separated as the depreciation and interest thereon would not be charged to the consumers.

7.8.4 The provisional accounts for FY 2015-16 reveal the amounts received as consumer contributions, capital subsidies and grants. Further, the consumer contributions, capital subsidies and grants for FY 2017-18 to FY 2019-20 have been considered to be in the same ratio to the total investments, as proposed by the Petitioner for FY 2014-15.

7.8.5 The Table below summarises the amounts considered towards consumer contributions, capital grants and subsidies for the MYT Period i.e. FY 2017-18 to FY 2019-20:

TABLE 7-11: CONSUMER CONTRIBUTIONS, CAPITAL GRANTS AND SUBSIDIES CONSIDERED UP TO MYT PERIOD (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	601.41	666.33	666.33	727.75	727.46	785.55
Addition during the year	100.00	100.00	100.00	100.00	100.00	100.00
Less: Amortization	35.08	38.58	38.87	42.20	42.43	45.60
Closing Balance	**666.33**	**727.75**	**727.46**	**785.55**	**785.03**	**839.95**

7.8.6 Thus, the approved financing of the capital investment is depicted in the table below:

TABLE 7-12: FINANCING OF THE CAPITAL INVESTMENTS IN MYT PERIOD (RS. CRORE)

Capital Investments		FY 2017-18		FY 2018-19		FY 2019-20	
	Derivation	Petition	Approved	Petition	Approved	Petition	Approved
Investment	A	6113.00	6113.00	6736.00	6736.00	7200.00	7200.00
Less:							
Consumer Contributions, Grants and Subsidies towards cost of Capital Assets	B	100.00	100.00	100.00	100.00	100.00	100.00
Investment funded by debt and equity	C=A-B	6013.00	6013.00	6636.00	6636.00	7100.00	7100.00
Debt funded	**70%**	**4209.10**	**4209.10**	**4645.20**	**4645.20**	**4970.00**	**4970.00**
Equity funded	**30%**	**1803.90**	**1803.90**	**1990.80**	**1990.80**	**2130.00**	**2130.00**

7.8.7 The Commission approves consumer contributions, capital subsidies and grants to the tune of Rs. 100.00 Crore for each year of the MYT Period and the balance amount has been considered to be funded through debt and equity considering a debt equity ratio of 70:30.

7.9 DEPRECIATION

The Petitioner's Submissions

7.9.1 The petitioner submitted that Regulation 22 of the Transmission MYT Regulations, 2014 provides the basis of charging depreciation. The relevant extract is reproduced below:

Quote

"22 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 maybe 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 the 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 of operation of the asset is for the part of the year, depreciation shall be charged on proportionate basis.

f) Provision of replacement of assets shall be made in capital investment plan.

Unquote

7.9.2 The petitioner submitted that the Transmission MYT Regulations, 2014 provides for calculating depreciation based on the written down value of the fixed assets of the corresponding year, whereas the previous Transmission Tariff Regulations, 2006 provides for calculation of depreciation on Straight Line Method basis. For the purpose of computing the allowable depreciation, the Petitioner has considered normative closing gross fixed asset base for FY 2016-17 and have subsequently added the yearly capitalizations for the control period from FY 2017-18 to FY 2019-20. Further the Petitioner has computed the weighted average rate of depreciation as 6.54% based on the normative closing gross fixed asset base for FY 2016-17 and the rate of deprecation as per the Depreciation Schedule of the Transmission MYT Regulations, 2014. Accordingly, the depreciation claimed by the petitioner is as shown under.

TABLE 7-13: DEPRECIATION RATE AS CLAIMED (RS IN CRORE)

S.NO	Name of the Assets	Gross Block as on 31.03.2016 or as on COD	Depreciation Rates as per UPERC Depreciation Schedule	Depreciation amount for each year up to 31.03.19.
	1	2	3	4= COL2 *COL 3
1	Land & Land Rights			-
	i) Unclassified	50.35	0.00%	-
	ii) Freehold Land	0.07	0.00%	-
2	Buildings	769.82	3.02%	23.25
3	Other Civil Works	86.46	3.02%	2.61
4	Plants & Machinery	8612.88	7.81%	672.67
5	Lines, Cable Network etc.	6607.78	5.27%	348.23
6	Vehicles	4.33	12.77%	0.55
7	Furniture & Fixtures	5.30	12.77%	0.68
8	Office Equipment	7.83	12.77%	1.00
9	Jeep & Motor Car	0.00	12.77%	-
10	Intangible Assets	2.46	12.77%	0.31

S.NO	Name of the Assets	Gross Block as on 31.03.2016 or as on COD	Depreciation Rates as per UPERC Depreciation Schedule	Depreciation amount for each year up to 31.03.19.
11	Assets taken over from Licensees pending final Valuation	114.40	12.77%	14.61
	TOTAL	**16261.69**		**1063.91**
	Weighted Average Rate of Depreciation (%)			**6.54%**

TABLE 7-14: DEPRECIATION CLAIMED FOR THE MYT PERIOD (RS IN CRORE)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	16,261.69	20,710.92	26,089.87
Additions to GFA	4,449.23	5,378.95	6,265.17
Deductions to GFA	-	-	-
Closing GFA	20,710.92	26,089.87	32,355.04
Cumulative Depreciation	4,114.73	5,019.90	6,183.57
Rate of Depreciation (%)	6.54%	6.54%	6.54%
Gross Allowable Deprecation	940.25	1,202.53	1,507.30
Less: Equivalent amount of depreciation on assets acquired out of the consumer contribution and GoUP Subsidy	35.08	38.87	42.43
Net Allowable Deprecation	**905.17**	**1,163.66**	**1,464.87**

The Commission's Ruling

7.9.1 The Commission, in line with the Regulation 22 of the Transmission MYT Regulations, 2014, has computed the depreciation. The detailed methodology adopted is as shown under:

7.9.2 The GFA projected for the year FY 2017-18 to FY 2019-20 is as shown under:

TABLE 7-15: GFA PROJECTED FOR THE MYT PERIOD (RS. IN CRORE)

Particulars	2017-18		2018-19		2019-20	
	Petitioner	As computed by Commission	Petitioner	As computed by Commission	Petitioner	As computed by Commission
Opening GFA	16,261.69	16,250.73	20,710.92	20,699.97	26,089.87	26,078.92
Additions	4,449.23	4,449.23	5,378.95	5,378.95	6,265.17	6,265.17
Closing GFA	20,710.92	20,699.97	26,089.87	26,078.92	32,355.04	32,344.09

7.9.3 The gross block of various assets has been considered and the additions during the year are as shown under:

TABLE 7-16: GROSS BLOCK AND GFA CONSIDERED FOR THE MYT PERIOD (RS. IN CRORE) (Rs in Crore)

Particulars	Opening GFA as on 31.3.2017	Net Additions GFA	Opening GFA as on 31.3.2018	Net Additions GFA	Opening GFA as on 31.3.2019	Net Additions GFA	Opening GFA as on 31.3.2020
Land & Land Rights							
(i) Unclassified	50.31	13.77	64.09	16.65	80.74	19.40	100.14
(ii) Freehold Land	0.07	0.02	0.09	0.02	0.11	0.03	0.14
Buildings	769.30	210.63	979.93	254.64	1234.57	296.59	1531.17
Other Civil Works	86.40	23.66	110.06	28.60	138.66	33.31	171.97
Plant & Machinery	8607.11	2356.51	10963.63	2848.93	13812.56	3318.31	17130.88
Lines, Cables, Network etc.	6603.36	1807.91	8411.27	2185.70	10596.96	2545.80	13142.77
Vehicles	4.33	1.19	5.52	1.43	6.95	1.67	8.62
Furniture & Fixtures	5.30	1.45	6.75	1.75	8.51	2.04	10.55
Office Equipment's	9.51	2.60	12.11	3.15	15.26	3.67	18.93
Other assets	112.65	30.84	143.49	37.29	180.77	43.43	224.20
intangible assets	2.39	0.65	3.04	0.79	3.83	0.92	4.75
Total Fixed Assets	**16250.73**	**4449.23**	**20699.97**	**5378.95**	**26078.92**	**6265.17**	**32344.09**
Non depreciable assets (Land & Land Rights)	50.38	13.79	64.17	16.68	80.85	19.42	100.27
Total Depreciable assets	**16200.35**	**4435.44**	**20635.79**	**5362.28**	**25998.07**	**6245.75**	**32243.82**

7.9.4 The Transmission MYT Regulations, 2014 provide 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 Transmission MYT Regulations, 2014 as shown under:

Particulars	Depreciation Rates Considered
Land & Land Rights	0.00%
Buildings	3.02%
Plant & Machinery	7.81%
Lines, Cables, Network etc.	5.27%
Furniture & Fixtures	12.77%
Office Equipment/ Other Assets	12.77%
Intangible Assets	15.00%

7.9.5 The written down value of the fixed assets as on April 1, 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 2007-08 to FY 2016-17 is detailed in the Table below:

TABLE 7-17: CUMULATIVE DEPRECIATION UP TO FY 2016-17 (RS CRORE)

Financial Year	Source	Net Allowable Depreciation	Cumulative Depreciation
FY 2007-08	True-up Order	270.53	270.53
FY 2008-09	True-up Order	314.54	585.07
FY 2009-10	True-up Order	198.63	783.7
FY 2010-11	True-up Order	310.12	1093.82
FY 2011-12	True-up Order	339.39	1433.21
FY 2012-13	True-up Order	360.68	1793.89
FY 2013-14	True-up Order	469.54	2169.52
FY 2014-15	True-up value as computed by Commission	524.13	2693.65
FY 2015-16	Revised Estimates as computed by Commission	596.62	3290.27
FY 2016-17	Revised Estimates as computed by Commission	729.59	4019.86

7.9.6 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	Buildings	190.89
2	Other Civil Works	21.44
3	Plant & Machinery	2,135.72
4	Lines, Cables, Network etc.	1,638.52
5	Vehicles	1.07
6	Furniture & Fixtures	1.32
7	Office Equipment	2.36
8	Other assets	27.95
9	**Cumulative Depreciation**	**4,019.86**

7.9.7 The same has been considered the opening written down value of fixed assets for FY 2017-18 and is worked out.

7.9.8 Thereafter, the full year depreciation has been 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, considering the depreciation rates as stated above. Depreciation has been calculated only on the depreciable asset base excluding the non-depreciable assets such as land, land rights, etc. as shown under:

(Rs in Crore)

Buildings	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	769.30	979.93	1,234.57
Cumulative Depreciation	190.89	211.54	238.59
Written Down Opening	578.41	768.39	995.98
Additions to GFA	210.63	254.64	296.60
Closing GFA	789.04	1,023.03	1,292.58
Rate of Depreciation (%)	3.02%	3.02%	3.02%
Gross Allowable Depreciation	**20.65**	**27.05**	**34.56**

(Rs in Crore)

Other Civil Works	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	86.40	110.06	138.66
Cumulative Depreciation	21.44	23.76	26.80
Written Down Opening	64.96	86.30	111.86
Additions to GFA	23.66	28.60	33.31
Closing GFA	88.62	114.90	145.17
Rate of Depreciation (%)	3.02%	3.02%	3.02%
Gross Allowable Depreciation	**2.32**	**3.04**	**3.88**

(Rs in Crore)

Plant & Machinery	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	8607.11	10963.63	13812.56
Cumulative Depreciation	2135.72	2733.16	3487.21
Written Down Opening	6471.39	8230.47	10325.35
Additions to GFA	2356.51	2848.93	3318.31
Closing GFA	8827.91	11079.40	13643.67
Rate of Depreciation (%)	7.81%	7.81%	7.81%
Gross Allowable Depreciation	**597.44**	**754.05**	**935.99**

(Rs in Crore)

Lines, Cables, Network etc.	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	6,603.36	8,411.28	10,597.01
Cumulative Depreciation	1,638.52	1,947.80	2,346.02
Written Down Opening	4,964.84	6,463.48	8,250.98
Additions to GFA	1,807.93	2,185.73	2,545.85
Closing GFA	6,772.76	8,649.20	10,796.83

Lines, Cables, Network etc.	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Rate of Depreciation (%)	5.27%	5.27%	5.27%
Gross Allowable Depreciation	**309.29**	**398.22**	**501.91**

(Rs in Crore)

Vehicles	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	4.33	5.52	6.95
Cumulative Depreciation	1.07	1.57	2.16
Written Down Opening	3.26	3.95	4.79
Additions to GFA	1.19	1.43	1.67
Closing GFA	4.44	5.38	6.46
Rate of Depreciation (%)	12.77%	12.77%	12.77%
Gross Allowable Depreciation	**0.49**	**0.60**	**0.72**

(Rs in Crore)

Furniture & Fixtures	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	5.30	6.75	8.51
Cumulative Depreciation	1.32	1.92	2.65
Written Down Opening	3.99	4.84	5.86
Additions to GFA	1.45	1.75	2.04
Closing GFA	5.44	6.59	7.90
Rate of Depreciation (%)	12.77%	12.77%	12.77%
Gross Allowable Depreciation	**0.60**	**0.73**	**0.88**

(Rs in Crore)

Office Equipment	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	9.51	12.11	15.26
Cumulative Depreciation	2.36	3.44	4.75
Written Down Opening	7.15	8.67	10.51
Additions to GFA	2.60	3.15	3.67
Closing GFA	9.75	11.82	14.18
Rate of Depreciation (%)	12.77%	12.77%	12.77%
Gross Allowable Depreciation	**1.08**	**1.31**	**1.58**

(Rs in Crore)

Other assets	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	112.65	143.49	180.78
Cumulative Depreciation	27.95	40.74	56.24
Written Down Opening	84.70	102.75	124.54
Additions to GFA	30.84	37.29	43.43
Closing GFA	115.54	140.04	167.97
Rate of Depreciation (%)	12.77%	12.77%	12.77%
Gross Allowable Depreciation	**12.78**	**15.50**	**18.68**

(Rs in Crore)

Intangible assets	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Opening GFA	2.39	3.04	3.83
Cumulative Depreciation	0.59	0.91	1.29
Written Down Opening	1.79	2.13	2.54
Additions to GFA	0.65	0.79	0.92
Closing GFA	2.45	2.92	3.46
Rate of Depreciation (%)	15.00%	15.00%	15.00%
Gross Allowable Depreciation	**0.32**	**0.38**	**0.45**

7.9.9 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:

TABLE 7-18: GROSS AND NET ALLOWABLE DEPRECIATION FOR FY 2017-18 TO FY 2019-20 (RS CRORE)

Depreciation MYT Period (WDV)	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Buildings	20.65	27.05	34.56
Other Civil Works	2.32	3.04	3.88
Plant & Machinery	597.44	754.05	936.00
Lines, Cables, Network etc.	309.29	398.22	501.91
Vehicles	0.49	0.60	0.72
Furniture & Fixtures	0.60	0.73	0.88
Office Equipment	1.08	1.31	1.58
Other assets	12.78	15.50	18.68
intangible assets	0.32	0.38	0.45
Gross Allowable Depreciation	**944.97**	**1200.88**	**1498.65**
Less: Consumer Contribution	35.26	38.81	42.19
Net Depreciation	**909.71**	**1162.06**	**1456.46**

7.10 INTEREST AND FINANCE CHARGES

Interest on Long Term Loans

The Petitioner's Submissions

7.10.1 The Petitioner submitted that a normative ratio of 70:30 has been considered for debt equity. 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.

7.10.2 The amounts received as consumer contributions, capital subsidies and grants are considered as per the provisional accounts for FY 2015-16. Further, the consumer contributions, capital subsidies and grants for the MYT Period are considered to be Rs. 100.00 Crore each year. The depreciation on capital assets acquired though consumer contributions, grants and subsidies are considered to be in the same ratio to the opening balance of consumer contributions, grants and subsidies towards cost of capital assets, as per the annual accounts of the FY 2014-15. The Petitioner submitted that 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 2015-16 has been considered for the MYT control period FY 2017-18 to 2019-20. The interest capitalisation rate of 59.40% has been considered, which is the actual rate of interest capitalization as per the annual accounts of FY 2014-15.

7.10.3 The Petitioner has proposed the interest expenses of Rs. 613.76 Crore, Rs. 772.26 Crore and Rs. 931.48 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

The Commission's Ruling

7.10.4 The Commission has considered a normative approach with a gearing of 70:30 in line the Transmission MYT Regulations 2014. In this approach, 70% of the capital expenditure undertaken in the year has been considered to be financed through loan and balance 30% has been considered to be funded through equity contributions. The portion of capital expenditure financed through consumer contributions and grants has been separated as the depreciation thereon would not be charged to the consumers. Further, the allowable depreciation for the year has been considered for normative loan repayment.

7.10.5 The weighted average interest rate of 12.50% as per the provisional accounts for FY 2015-16 is considered for computing the interest expenses for the MYT Period. The capitalization of interest expenses has been considered at the rate of 59.40% as proposed by the Petitioner.

7.10.6 The interest on long term loans approved by the Commission for the MYT Period is as shown in the Table given below:

TABLE 7-19: APPROVED INTEREST ON LONG TERM LOANS FOR THE MYT PERIOD (RS. CRORE)

Interest on Long Term Loans	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
Opening Loan balance	10549.53	9977.52	13853.46	13276.91	17335.00	16760.05
Loan Addition (70% of Investments)	4209.10	4209.10	4645.20	4645.20	4970.00	4970.00
Less: Repayments (Depreciation allowable for the year)	905.17	909.71	1163.66	1162.06	1464.87	1456.45
Closing Loan balance	13853.46	13276.91	17335.00	16760.05	20840.13	20273.61
Weighted average rate of interest (%)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
Interest on Long Term Loans	**1525.06**	**1453.40**	**1949.11**	**1877.31**	**2385.74**	**2314.60**
Interest Capitalization Rate	59.40%	59.40%	59.40%	59.40%	59.40%	59.40%
Less: Interest Capitalized	905.82	863.32	1157.69	1115.12	1417.03	1374.87
Net Interest Charged	**619.24**	**590.08**	**791.43**	**762.19**	**968.72**	**939.73**

7.10.7 Further, the Petitioner submitted that the finance charges for the MYT Control Period i.e. FY 2017-18 to FY 2019-20 has been projected towards expenses such as guarantee fees and bank charges to the tune of Rs. 1.35 Crore, Rs. 1.40 Crore and Rs. 1.45 Crore in FY 2017-18, FY 2018-19 and FY 2019-20 respectively by extrapolating the guarantee fees and bank charges derived for FY 2016-17 considering the Inflation Index as 3.74%.

7.10.8 The Commission has allowed finance charges to the tune of Rs. 1.35 Crore, Rs. 1.40 Crore and Rs. 1.45 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively. The same have been computed by extrapolating the finance charges incurred in FY 2015-16 as per the Provisional Accounts and using the inflation indices approved for the respective years.

7.11 INTEREST ON WORKING CAPITAL

The Petitioner's Submissions

7.11.1 The Petitioner submitted that the interest on working capital has been computed in accordance with the Transmission MYT Regulations, 2014. The Petitioner submitted that the rate of interest on working capital has been considered as 14.05% for the MYT Period. The Petitioner has proposed Interest on Working Capital of Rs. 76.79 Crore, Rs. 96.03 Crore and Rs. 115.36 Crore for FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

The Commission's Ruling

7.11.2 The Transmission MYT Regulations, 2014 provides for normative interest on working capital based on the methodology specified in the Regulations. The Petitioner is eligible for interest on working capital worked out in accordance with the methodology specified in the Regulations.

7.11.3 In accordance with the Transmission MYT Regulations, 2014, the interest on the working capital requirement shall be computed in the 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. Accordingly, the Commission for this Order has considered the interest rate on working capital requirement at 14.05%.

7.11.4 The Commission in accordance with the Transmission MYT Regulations, 2014, considered the interest on working capital as shown in the Table given below:

TABLE 7-20: APPROVED INTEREST ON WORKING CAPITAL FOR THE MYT PERIOD (RS. CRORE)

Interest on Working Capital	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved
One month's O&M expenses	84.90	85.58	102.52	105.81	119.73	123.92
Maintenance spares @ 40% of R&M expense for 2 months	20.69	20.67	26.67	27.34	33.92	35.67
Two months equivalent of expected revenue	449.14	446.35	564.01	565.56	687.13	689.44
Total Working Capital	554.73	552.60	693.20	698.71	840.78	849.02
Rate of Interest on Working Capital	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
Interest on Working Capital	**77.94**	**77.64**	**97.40**	**98.17**	**118.13**	**119.29**

7.12 OTHER INCOME

The Petitioner's Submissions

7.12.1 The Petitioner submitted that the other income will increase by inflation index of 3.60% for the MYT Period from the levels of the non-tariff incomes for FY 2015-16. Thus, the petitioner has claimed non-tariff income of Rs. 52.73 Crore, Rs. 54.70 Crore and Rs. 56.75 Crore in FY 2017-18, FY 2018-19 and 2019-20 respectively.

The Commission's Ruling

7.12.2 Other income includes non-tariff income, which comprises of items such as interest on loans and advances to employees, income from fixed rate investment deposits and interest on loans and advance to staff. The Commission has approved the non-tariff income of Rs. 52.73 Crore, Rs. 54.70 Crore and Rs. 56.75 Crore in FY 2017-18, FY 2018-19 and 2019-20 respectively as proposed by the Petitioner.

7.13 RETURN ON EQUITY

The Petitioner's Submissions

7.13.1 The Petitioner submitted that the eligible return on equity has been computed considering the closing level of normative equity for FY 2014-15 and the yearly normative equity additions for FY 2015-16 and FY 2016-17. The Petitioner submitted that the return on equity has been computed considering the rate of return of 2%. The Petitioner has proposed the return on equity of Rs. 124.82 Crore, Rs. 153.36 Crore and Rs. 186.54 Crore in FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

The Commission's Ruling

7.13.2 Under provisions of Transmission MYT Regulations, 2014 the Petitioner is allowed a return of 15.5% on the equity base; for equity base calculation, debt equity ratio shall be 70:30. Where equity involved is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30%. Equity amounting to more than 30% shall be considered as loan. In case of actual equity employed being less than 30%, actual debt and equity employed being less than 30%, actual debt and equity shall be considered for determination of tariff.

7.13.3 In view of the huge gap in the recovery of cost of supply at the Discom level, the Petitioner was of the view that the return on equity would only result in accumulation of receivables.

7.13.4 As such, the Petitioner has been claiming return on equity @ 2% from FY 2009-10 onwards. Return on equity has been computed on the normative equity portion (30%) of capitalised assets.

7.13.5 The Commission while undertaking analysis for allowance of return on equity has considered opening level of equity for FY 2015-16 based on the closing regulatory equity approved in the section dealing with the true up for FY 2014-15. Subsequently, it has considered the yearly normative equity based on the capital additions for FY 2015-16, FY 2016-17, FY 2017-18, FY 2018-19 and FY 2019-20.

7.13.6 The Return on Equity approved by the Commission for the MYT Period is as shown in the Table given below:

TABLE 7-21: APPROVED RETURN ON EQUITY FOR THE MYT PERIOD (RS. CRORE)

Return on Equity (Rs. Crore)	FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Allowable	Petition	Allowable	Petition	Allowable
Equity at the beginning of the year	5588.03	5584.77	6922.80	6919.54	8536.49	8533.23
Assets Capitalized	4449.23	4449.23	5378.95	5378.95	6265.17	6265.17
Addition to Equity	1334.77	1334.77	1613.69	1613.69	1879.55	1879.55
Closing Equity	6922.80	6919.54	8536.49	8533.23	10416.04	10412.78
Average Equity	6255.42	6252.16	7729.65	7726.39	9476.26	9473.01
Rate of Return	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Return on Equity	**125.11**	**125.04**	**154.59**	**154.53**	**189.53**	**189.46**

7.14 SERVICE TAX

The Petitioner's Submissions

7.14.1 The Petitioner submitted that service tax liability is imposed on the service provider and is chargeable on actual energy transmitted during a financial year at the rates notified by the Government. The Petitioner submitted that such liability may be imposed on UPPTCL, retrospectively, as it was done in the case of PGCIL. The Petitioner submitted that in such an event, it would approach the Commission for allowance of such liability in the ARR in accordance with the provisions of Regulation 27 of the Transmission MYT Regulations, 2014.

The Commission's Ruling

7.14.2 The Petitioner has not proposed any expenses on this account in the ARR for the MYT Period. Hence, the same has not been considered in this order. The Commission shall take an appropriate view based on the merits of the specific submissions of the Petitioner in this regard in term of Transmission MYT Regulations, 2014.

7.15 SUMMARY OF AGGREGATE REVENUE REQUIREMENT FOR THE MYT PERIOD

7.15.1 The summary of the expenses under different heads as approved by the Commission for the MYT Period is as shown in the Table given below:

TABLE 7-22: APPROVED ARR FOR THE MYT PERIOD (RS. CRORE)

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Employee expenses	908.65	919.94	1067.02	1104.88	1193.16	1223.39
A&G expenses	33.80	33.81	37.60	38.90	41.67	43.26
R&M expenses	310.37	310.12	400.08	410.10	508.77	535.02
Interest on Loan Capital	1525.06	1453.40	1949.11	1877.31	2,385.74	2314.60
Interest on Working Capital	77.94	77.64	97.40	98.17	118.13	119.29
Finance Charges	1.35	1.35	1.40	1.40	1.45	1.45
Depreciation	905.17	909.71	1163.66	1162.06	1464.87	1456.45
Gross expenditure	**3762.34**	**3705.97**	**4716.27**	**4692.83**	**5713.80**	**5693.46**
Less: Employee expenses capitalized	227.21	230.03	266.81	276.27	298.35	305.91
Less: A&G expenses capitalized	6.85	6.85	7.62	7.88	8.45	8.77
Less: Interest expenses capitalized	905.82	863.32	1157.69	1115.12	1417.03	1374.87
Net expenditure	**2622.47**	**2605.77**	**3284.16**	**3293.55**	**3989.99**	**4003.91**
Bad Debts & Provisions	-	0.00	0.00	0.00	0.00	0.00
Prior Period expenses	-	0.00	0.00	0.00	0.00	0.00
Net expenditure with provisions	**2622.47**	**2605.77**	**3284.16**	**3293.55**	**3989.99**	**4003.91**
Add: Return on Equity	125.11	125.04	154.59	154.53	189.53	189.46
Less: Non-Tariff Income	52.73	52.73	54.70	54.70	56.75	56.75
Aggregate Revenue Requirement	**2694.85**	**2678.09**	**3384.05**	**3393.38**	**4122.76**	**4136.63**

7.15.2 Thus, the approved ARR for the MYT Period is Rs. 2678.09 Crore, Rs. 3393.38 Crore and Rs. 4136.63 Crore as against Rs 2694.85 Crore, Rs. 3384.05 Crore and Rs. 4122.76 Crore as proposed by the Petitioner in FY 2017-18, FY 2018-19 and FY 2019-20 respectively.

7.16 SLDC CHARGES

7.16.1 Regulation 14(1) of Uttar Pradesh Electricity Regulatory Commission (Procedure, Terms & Conditions for payment of Fee and Charges to State Load Despatch Centre and other related provisions) Regulations, 2004 and Regulation 12.5 of the Transmission MYT Regulation, 2014 are applicable for the ARR or budget of SLDC operations.

7.16.2 The petitioner submitted that a separate accounting group code has been allowed by UPPTCL to manage entire SLDC functions separately. However, the SLDC is yet to form a separate entity and UPPTCL is still operating the SLDC.

7.16.3 Load Despatch Centres have been termed as the apex bodies in the electricity industry. They need true independence not only in financial terms but also in decision making. The Ministry of Power, Government of India had also constituted a Committee on "Manpower Certification and Incentives for System Operation and Ring Fencing Load Despatch Centres" to ensure functional autonomy for Load Despatch Centres. The Committee in its report dated 11th August, 2008 observed that functional autonomy would mean taking decisions without being adversely influenced by extraneous issues originating from the Company Management or any of the market players, which can be ensured through:

- Independent governance structure;
- Separate accounting;
- Adequate number of skilled manpower having ethical standards and driven by altruistic values;
- Adequate logistics / infrastructure.

7.16.4 For implementation of the above recommendations, the Commission shall approve the SLDC charges, which shall be payable by the Petitioner and which will be recovered through transmission tariff as per the Clause 8 (2) of the SLDC Regulations.

7.16.5 The Commission in its Tariff Orders had emphasised on the importance of segregation of accounts of SLDC and had directed the Petitioner towards its submission. However, the Petitioner has failed to provide segregated accounts for SLDC function.

7.16.6 The Petitioner submitted that the full-fledged accounting function of SLDC is yet to commence and hence, it has considered capturing the expenses and income separately. The process of accounting professionals in SLDC as per the manpower sanction received from GoUP is underway. Thereafter, separate accounting group code would be created to manage entire SLDC functions separately.

7.16.7 The independent governance structure and manpower has been approved for SLDC. The existing IT systems are updated on dynamic web-based solutions to comprehensively manage SLDC functions. The required infrastructure for making SLDC fully functional is under development. Separate SLDC building is also reaching completion in Lucknow. Further, as mandated in the U.P. Electricity Grid Code, 2007, “State Power Committee” has been constituted under the chairmanship of Chief Engineer (SLDC).

7.16.8 The Petitioner submitted that SLDC would achieve the envisaged operational, financial and administrative independency in a phased manner. The Petitioner submitted that the activities being performed by the SLDC have been categorised in three parts as depicted below:

1. Operations and Control
    a. Control Room round the clock operations in 3 shifts
    b. Scheduling and outage Planning
    c. Data Management
    d. System Studies
2. SCADA and Communication
    a. SCADA and EMS
    b. IT
3. Energy Accounting and settlement
    a. Energy Accounting & Commercial
    b. Balancing and Settlement System
    c. Open Access (Short term)
4. Finance and HR functions

a. Financial Accounting and Audit, Annual Budget

b. HR including Training

7.16.9 The Petitioner submitted that the SLDC charges for the MYT period i.e FY 2017-18 to FY 2019-20 are embedded in the ARR for Transmission business and would be around 2.01% of the ARR of UPPTCL. The SLDC Budget proposed by the Petitioner FY 2017-18 to FY 2019-20 is as shown in the Table given below:

TABLE 7-23: SLDC BUDGET FOR THE MYT PERIOD AS PROPOSED BY THE PETITIONER (RS. CRORE)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
O&M Expenses			
R&M Expense	5.20	6.00	6.30
Employee Expenses	31.62	36.32	41.77
A&G Expense	6.40	7.50	8.61
Total O&M expenses (i + ii + iii)	**43.22**	**49.82**	**56.68**
Depreciation	-	-	-
Interest on Loan	-	-	-
Return on Equity	-	-	-
Capital Expenditure	13.70	7.95	5.24
Other Expenditure	-	-	-
Non-tariff Income	3.50	3.85	4.23
Income Tax	-	-	-
Total Expenditure	**53.42**	**53.92**	**57.69**

7.16.10 The Commission has taken note of the submissions of the Petitioner. In the absence of segregated accounts for SLDC, the estimated costs of running UPPTCL central load despatch centre in Lucknow and four regional load despatch centres at Panki, Sahupuri, Modipuram and Moradabad, which are owned and operated by UPPTCL are embedded in the ARR approved for UPPTCL for the MYT Period.

7.17 TRANSMISSION TARIFF

7.17.1 The Transmission MYT Regulations, 2014 provide for capacity (MW) based transmission charges. However, there are still numerous issues in the determination of MW based Transmission Tariff, like allocation of transmission capacity to the existing long-term transmission system users, allocation of existing PPAs, etc.

7.17.2 Presently, the State Discoms have not been allotted transmission capacity as such; hence the Transmission Tariff has been calculated by the Commission on the basis of the number of units wheeled by the Transmission Licensee for the Distribution Licensees.

7.17.3 The Petitioner requested the Commission to allow it to pass an internal adjustment with the Transmission companies so that it recovers only its cost and no unjust enrichment is allowed on account of postage stamp tariff method based billing till such time contracted capacities are finalised.

7.17.4 The Petitioner further submitted that billing in respect of intra-State transmission charges is being done on postage stamp tariff method till such time the allotted transmission capacity of long-term transmission system customers (the Transmission Licensees and Bulk consumers) is not finalised. Suitable steps in this regard have been initiated at the Petitioner's end to finalise the allotted transmission capacities and after the finalisation of the same, the intra-State transmission charges would be claimed based on the contracted transmission capacity. The Petitioner submitted that the postage stamp tariff based billing poses the risk of unjust enrichment to the Petitioner as it is possible for it to recover fixed costs in excess of that approved by the Commission. The Petitioner prayed the Commission to allow it to raise an internal adjustment bill with the Discoms at the year end.

7.17.5 The Commission has computed the Transmission Tariff applicable for the MYT Period based on postage stamp method since the allocation of transmission capacity to the long-term transmission system users is not currently available.

7.17.6 As regards to the prayers of the Petitioner for allowing it to raise an internal adjustment bill, the Commission is of the view that it is not required as the actual annual expenses and revenue of the Petitioner are subject to true up based on the Audited Accounts for the relevant year and the net revenue gap / surplus shall be approved by the Commission after prudence check.

7.17.7 The Commission has approved the Transmission Tariff for the MYT Period considering the approved ARR for FY 2017-18, FY 2018-19 and FY 2019-20.

7.17.8 NPCL had raised the issue that the petitioner has not considered the energy demand and power purchase projections of NPCL while computing the transmission tariff for the MYT period. In response, UPPTCL agreed that since NPCL has started buying power from Long Term sources, it has to consider the same and accordingly, the petitioner revised its transmission tariff and quantum of energy wheeled.

7.17.9 NPCL had proposed its long-term power purchase from LTPPAs with DIL Unit I and DIL Unit II respectively. LTPPA with DIL Unit II had already been approved by the Commission and NPCL has been availing supply since December 2016. However, in the recent developments, the Commission vide its order dated 13.11.2017 rejected and disposed of the Petition No.1130 of 2016 of NPCL for approval of LTPPA for DIL Unit I stating as under:

Quote

"8. NPCL is a distribution Company providing power to the consumers in its area of operation. Under the Act, Commission is duty bound to ensure competitiveness and transparency in every aspect of working of power utilities. The solitary instance of Essar Power Jharkhand Limited of nothonoring the PPA cannot be a basis for not going for competitive bidding and this single instance cannot justify the procurement of additional power under MOU route. The competitive bidding is the only way which can ensure true discovery of market price and it also safeguards the interest of the consumers. Therefore, the Commission rejects the Petition of M/s NPCL to procure 200MW power from M/s Dhariwal Infrastructure Limited and directs NPCL to initate competitive bidding process immediately and complete the process as per the timelines given in the Govt. of India Guidelines. In the intervening period, NPCL can arrange power through short term measures.

9. After exhausting the process of competitive bidding if NPCL finds that the lowest rates obtained in Case-1 bidding are higher than the price offered by M/S Dhariwal Infrastructure Ltd., they can file a fresh petition for the consideration of the Commission."

Unquote

7.17.10 In view of the above, NPCL has to initiate a competitive bidding process immediately and then can file a fresh petition for consideration of the Commission. Till then, NPCL can arrange power through short term sources. However, for the purpose of computation of Transmission Tariff in this order, the short-term power of NPCL has not been considered as no confirmation on the same has been submitted by the transmission licensee. Further, the Commission has considered the power purchase quantum as proposed by NPCL (from the Long-term sources) for computation of Transmission Tariff and the same will be subject to Annual Performance Review and True-Up. In future, if NPCL avails long term / short term power, the same will be dealt at the time of Annual Performance Review (APR) / True-up of NPCL, UPPTCL and State owned Discoms, as the change in the Transmission Tariff will also have impact on them.

7.17.11 Accordingly, the quantum considered for arriving at the Transmission Tariff in Rs. / kWh terms have been arrived by taking into consideration the total quantum of units being wheeled for State owned Distribution Licensees (i.e. PVVNL, DVVNL, MVVNL, PuVVNL and KESCO) and NPCL.

7.17.12 Accordingly, the Transmission Tariff approved by the Commission for the MYT Period is as shown in the Table given below:

TABLE 7-19: APPROVED TRANSMISSION TARIFF FOR THE MYT PERIOD

Particulars	FY 2017-18		FY 2018-19		FY 2019-20	
	Tariff Petition	Approved	Tariff Petition	Approved	Tariff Petition	Approved
Net ARR (Rs. Crore)	2694.85	2678.09	3384.05	3393.38	4122.76	4136.63
Energy Handled (MU)	123144.11	114945.92	146892.68	142907.84	165718.74	166939.85
Transmission Tariff (Rs./kWh)	**0.2188**	**0.2330**	**0.2304**	**0.2375**	**0.2488**	**0.2478**

7.17.13 The Commission thus approves the Transmission Tariff of Rs. 0.2330/ kWh, Rs. 0.2375/kWh and Rs. 0.2478/kWh for FY 2017-18, FY 2018-19 and FY 2019-20 respectively. The Transmission Tariff as determined by the Commission above are payable by the State Transmission Licensees.

7.18 OPEN ACCESS: TRANSMISSION TARIFF

The Petitioner's Submissions

7.18.1 The Transmission Tariff proposed by the Petitioner for Open Access for the MYT Period is as shown in the Table below:

TABLE 7-20: TRANSMISSION TARIFF OF OPEN ACCESS PROPOSED BY THE PETITIONER FOR THE MYT PERIOD

Particulars	Unit	FY 2017-18	FY 2018-19	FY 2019-20
Short Term Open Access Transmission Charges	Rs./kWh	0.2210	0.2323	0.2506
Long Term Open Access Transmission Charges	Rs./kWh	0.2210	0.2323	0.2506

7.18.2 The Petitioner has proposed the uniform Transmission Tariff for customers connected at 132 kV Voltage level and customers connected above 132 kV Voltage level. The Petitioner submitted that the energy handled by the Petitioner is not voltage dependant. The Petitioner submitted that the same is consistent with the existing practices adopted by CERC in which uniform rate for all voltage levels is adopted.

The Commission's Ruling

7.18.3 The Commission has computed the Transmission Tariff for the MYT Period in the preceding Section for use of the UPPTCL network for transmission of electricity.

7.18.4 The Commission in its previous Tariff Orders had impressed upon the Petitioner to submit the details in support of the voltage-wise losses claimed. However, the Petitioner had not submitted any supporting study to justify the voltage-wise losses. The ARR/Tariff Petition of the Petitioner for the MYT Period is also devoid of any supporting information/study with regard to the voltage-wise losses considered.

7.18.5 The Commission in its previous Order has considered the interim allocation of cost at various voltage levels and approved the transmission charges payable by the Open Access consumers. In the absence of any study and details of voltage wise losses, the Commission is constrained to adopt a normative approach for the determination of Open Access charges at different voltage levels.

7.18.6 In the absence of voltage level wise break-up of expenses and asset details, the Commission has, for the purpose of the present Order, considered an interim allocation of costs at various voltage levels and approved the following transmission charges payable by all Open Access customers based on the voltage level at which they are connected with the grid.

7.18.7 The Transmission charges for open access consumers connected at 132 kV voltage levels are assumed to be the transmission tariff approved by the Commission for the MYT Control period and the Transmission charges for open access consumers connected at voltage levels above 132 kV are assumed to be at 75% of the charges specified for consumers connected at 132 kV voltage level.

7.18.8 The transmission open access charges approved by the Commission are as shown in the Table given below:

TABLE 7-21: APPROVED VOLTAGE WISE TRANSMISSION OPEN ACCESS CHARGES FOR THE MYT PERIOD

Particulars	Unit	FY 2017-18		FY 2018-19		FY 2019-20	
		Long Term	Short Term	Long Term	Short Term	Long Term	Short Term
Connected at 132 kV Voltage Level	Rs./kWh	0.2330	0.2330	0.2375	0.2375	0.2478	0.2478
Connected above 132 kV Voltage Level	Rs./kWh	0.1747	0.1747	0.1781	0.1781	0.1858	0.1858

7.18.9 In addition to the above charges, the open access consumer would also be liable to bear the transmission losses in kind. In the absence of authenticated voltage level loss data, the Commission has ruled that the transmission losses for the MYT Period would be 3.79% irrespective of the voltage levels at which the consumers are connected with the grid.

7.18.10 The open access charges and losses to be borne by the open access consumers shall be reviewed by the Commission on the submission of the relevant information by the Petitioner.

8. DIRECTIVES

8.1 DIRECTIVES ISSUED IN THIS ORDER

8.1.1 The Commission had issued certain directives to the Petitioner in this Order. The status of compliance submitted by the Petitioner the same is as shown in the Table given below:

Table 8-1: DIRECTIVES ISSUED BY THE COMMISSION IN THIS ORDER

Sl.No.	Description of Directive	Time Period for compliance from the date of issue of the Tariff Order
1	The Commission directs UPPTCL to submit the Fresh Actuarial Valuation Study Report in respect to employee expenses.	Within 6 months
2	The Commission directs UPPTCL to immediately submit the tentative timelines for completion of load flow studies along with the assessment of various options with regards to transmission pricing, their relative advantages and disadvantages and suitability for adoption in Uttar Pradesh and submit the report after completion of the same.	Within 6 months
3	The Commission directs UPPTCL to conduct proper loss estimate studies under its supervision and submit the report to the Commission	Within 6 months
4	The Commission directs UPPTCL to initiate the process of signing of BPTA with Distribution Licensees who are the existing long-term customers and submit the status on execution of BPTA of the same.	Immediate
5	The Commission directs UPPTCL to pursue and formalize the capacity of transmission system in use by long term open access customers (Distribution Licensees or generating companies) in accordance with the principle laid down under Tariff Regulations and based on existing PPAs / MoU's signed by them for purchase or sale of electricity.	Within 3 months
6	Any other compliances / milestones as per MYT Transmission Tariff Regulations, 2014 and Commissions orders.	-

8.2 COMPLIANCE TO DIRECTIVES ISSUED IN THE ORDER DATED AUGUST 1st, 2016

8.2.1 The Commission had issued certain directives to the Petitioner in the Order dated August 1st, 2016. The status of compliance submitted by the Petitioner the same is as shown in the Table given below:

Table 8-2: STATUS OF COMPLIANCE TO THE DIRECTIVES ISSUED BY THE COMMISSION IN THE ORDER DATED AUGUST 1, 2016

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
1	The Petitioner is directed to file a separate Petition for approval of prior period expenses / incomes. The Petition should clearly indicate the head wise and 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.	Immediate	The Petitioner submitted that in view of the complexity involved while identifying the impact of each & every expenses in the year of its occurrence and its verification within approved norms, it has decided not to file the separate Petition for approval of the Prior Period Expenses/Income as it will consume lot of time and will not be economically beneficial as well. As, non-consideration of income/expenditure pertaining to prior period, normally results in loss to UPPTCL as net amount regarding Prior Period is normally on expenditure side. However, Management is endeavouring to minimize the Prior Period income/expenditure to the possible extent and to create suitable liabilities for such expenses wherever identifiable & feasible.	Noted

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
2	The Petitioner is directed to provide the details pertaining to the accumulated regulatory depreciation claimed on each class of asset reconciling the same with the accumulated depreciation as per the Fixed Asset Register.	Within 3 Months	The Petitioner submitted that in compliance of directive UPPTCL has complied with the said provisions for charging depreciation on fixed assets as given in the CERC Regulation, 2014 with effect from FY 2014-15 onwards which has also been replaced in UPPTCL Accounting Policy now, reproduced as hereunder- (a) Depreciation is charged as per method prescribed in "Appendix-II" to the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 issued by Central Electricity Regulatory Commission vide notification no. L-1/144/2013/CERC dated 21.02.2014 under the powers conferred to it u/s 178 of the Electricity Act, 2003 (36 of 2003) read with section 61. The said regulation is effective for the period from 01.04.2014 to 31.03.2019. (b) In light of (a) above depreciation is charged at prescribed rates on SLM (Straight Line Method) with 10% salvage value of the original cost.	Noted

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
			(c) Depreciation on additions to /deductions from fixed assets during the year is charged on pro rata basis from/upto the month in which the asset is available for use/disposed. The above policy has been approved by Board of Directors in its 45th meeting held on 20.08.2015. As such the directives in respect of depreciation originally given in Tariff order dated 18.06.2015 has been followed by UPPTCL well in time.	
3	The Commission directs UPPTCL to submit the Fresh Actuarial Valuation Study Report in respect to employee expenses.	Along with ARR and Tariff Petition for FY 2017-18	The Petitioner submitted that since Transfer Scheme for transfer of personnel of UPPTCL has yet not been finalized, hence, all employees are in common cadre and basically are governed by the service rules and regulation of UPPCL. As such UPPTCL adhere the same provisions and procedures as approved and adopted by UPPCL to abide with provision towards liability against employees benefit on behalf of UPPCL. UPPTCL would be able to undertake an appropriate actuarial valuation exercise only after finalization of transfer scheme of personnel.	The Commission has addressed the same in its directives for FY 2017-18.

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
4	The Commission reiterates its direction to UPPTCL to ensure proper maintenance of detailed Fixed Assets Register as specified in the Transmission Tariff Regulations. In order to ensure that Fixed Asset Register is timely and regularly prepared going forward, the Commission directs UPPTCL to prepare the Fixed Asset Register duly accounting for the yearly capitalizations from FY 2012-13 onwards. The capitalization 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 details are maintained for the ensuing years. However, the Petitioner would also be required to clear the backlog in a time bound manner. Upon finalization of the Transfer Scheme and clearing of backlog,	Immediate	The Petitioners` submitted that Consolidated fixed assets registers upto FY 2014-15 duly tallied with year wise annual accounts has already been submitted on 13.10.2016 along with Review Petition against Tariff Order dated 01.08.2016.	The Commission directs UPPTCL to submit the FARs on timely basis.

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
	the Petitioner may update the Fixed Asset Register appropriately by passing necessary adjustments.			
5	The Commission redirects UPPTCL / SLDC that the ARR / budget for SLDC should be submitted separately along with the ARR submission of TRANSCO. The costs have to be separately identified and not embedded in the TRANSCO ARR.	Along with ARR and Tariff Petition for FY 2017-18	The Petitioner submitted that separate accounting for SLDC Lucknow and Sub-SLDCs namely, Panki, Modipuram, Sarnath and Moradabad is now being done and the ARR for SLDC has been projected based on the separate accounts. Each cost and revenue element of SLDC has been identified and projected for the MYT period, distinct from the transmission ARR.	Noted
6	The Commission directs UPPTCL to formalize the capacity of transmission system in use by long term open access customers (Distribution Licensees or generating companies) in accordance with the principle laid down under Tariff Regulations and based on existing PPAs / MoU's signed by them for purchase or sale of electricity.	Immediate	The Petitioner submitted that as per existing PPAs and share of U.P. in state/central sector generating stations & MoU signed by the UPPCL and state Discoms, the matter is being pursued with UPPCL for allocation of the capacity.	The Commission has addressed the same in its directives for FY 2017-18.

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
7	The Commission directs UPPTCL to initiate the process of signing of BPTA with Distribution Licensees who are the existing long-term customers and submit the status on execution of BPTA of the same.	Within 3 Months	The Petitioner submitted that the matter is being pursued with the state Discoms for regularization of the connectivity as per the UPERC Connectivity Regulations and according BPTA shall be signed with the state Discoms after the finalization of the allocation of the capacity which is being pursued with the UPPCL.	The Commission has addressed the same in its directives for FY 2017-18.
8	The Commission directs the Petitioner to claim the capital investment plan henceforth, strictly in accordance with applicable Tariff Regulations for the Petitioner.	-	The Petitioner submitted that the capital investment plan has been filed strictly in accordance with MYT Transmission regulations.	Noted
9	The Commission directs UPPTCL to conduct benchmarking studies to determine the desired performance standards and submit the report to the Commission.	Within 3 Months	The Petitioner submitted that they had submitted the Benchmarking Studies report.	Noted

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
10	The Commission directs UPPTCL to conduct proper loss estimate studies under its supervision and submit the report to the Commission	Within 3 Months	The Petitioner submitted that they it has issued a tender in this regard and is currently evaluating the proposals received against the invitation.	The Commission has addressed the same in its directives for FY 2017-18.

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
11	The Commission directs UPPTCL to submit completion report in respect of all capital projects which have achieved the Commercial Operation Date during for each year in accordance with Tariff Regulations.	-	The Petitioner submitted that the completion report in respect of energized projects, with Commercial Date of Operation (C.O.D.), during FY 2015-16 is provided to the Commission.	Noted
12	The Commission directs UPPTCL to exclude the transmission charges approved by CERC towards transmission lines connecting two States from the overall transmission charges claimed in the next ARR filing for UPPTCL.	Along with ARR and Tariff Petition for FY 2017-18	The Petitioner submitted that in accordance with the CERC Sharing Regulations 2010, POC charges are being billed, collected and disbursed by PGCIL, accordingly PoC charges are being paid to UPPTCL from beneficiaries, and same is accounted with Open Access charges. In open access charges short term charges from customers, PoC charges received from PGCIL and application fee for connectivity from customers are accounted. These charges are excluded from the overall charges of UPPTCL while claiming the ARR through ARR/MYT filing of UPPTCL.	Noted

S. No.	Directive	Time period for compliance from the date of issue of this Order	UPPTCL Submission vide MYT Petition	Commission's Direction
13	The Commission directs the Petitioner to urgently pursue with the GoUP for finalization of the Transfer Scheme and submit a copy of the same.	Along with ARR and Tariff Petition for FY 2017-18	The Petitioner submitted that the Transfer Scheme has been finalized vide GoUP Notification No. 1529/XXIV-P-2-2015-SA (218)-2014, dated 3rd November 2015 and has been provided to the Commission	Noted
14	The Commission directs the UPPTCL to submit load flow studies along with the assessment of various options with regards to transmission pricing, their relative advantages and disadvantages and suitability for adoption in Uttar Pradesh	Within 3 Months	The Petitioner submitted that it had issued a tender in this regard and is currently evaluating the proposals received against the invitation.	The Commission has addressed the same in its directives for FY 2017-18.

9. APPLICABILITY OF THE ORDER

The Licensees, in accordance to Regulation 13.3. of the Uttar Pradesh Electricity Regulatory Commission (Multi Year Transmission 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

Place: Lucknow
Dated: ______________, 2017

10. ANNEXURE- I: LIST OF PERSONS WHO ATTENDED PUBLIC HEARINGS

ANNEXURE: LIST OF PERSONS WHO HAVE ATTENDED PUBLIC HEARING AT LUCKNOW IN RESPECT OF PROCEEDINGS FOR ARR & TARIFF DETERMINATION FOR UPPTCL FOR FY 2017-18 TO FY 2019-20

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	Organization
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
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

List of Persons who attended Public Hearing at Lucknow on October 12, 2017		
Sl. No.	**Name**	**Organization**
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
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
58	Shri M.S.	Consumer

11. ANNEXURE- II: BENCHMARKING STUDIES

SUMMARY OF BECHMARKING STUDIES CONDUCTED BY UPPTCL

U.P. Power Transmission Corporation Limited
उ0 प्र0 पावर ट्रान्समिशन कार्पोरेशन लिमिटेड
(उ0 प्र0 सरकार का उपक्रम)

कार्यालय ::
निदेशक (वाणिज्य एवं नियोजन)
11 वां तल, शक्ति भवन विस्तार,
14–अशोक मार्ग, लखनऊ–226001
फैक्स–8689 फोन नं0–0522 2288530

CIN No.- U40101UP2004SGC028687

Office of the
Director (Commercial & Planning)
11th floor, Shakti Bhawan Extn.,
14- Ashok Marg, Lucknow-226001
Phone- 0522 2218689
Email- Director_comm @upptcl.org

No. 534/Dir(Comm. & Plg.)/UPPTCL/2017

Date: 31 August, 2017

To,

The Secretary,
U. P. Electricity Regulatory Commission,
2nd Floor, Kisan Mandi Bhawan,
Gomti Nagar, Vibhuti Khand,
Lucknow-226010.

Sub: Executive Summary on Benchmarking Studies of UPPTCL.

Sir,

With reference to your letter no. UPERC/Secy./D(Tariff)/17-869 dated 18.08.2017 please find enclosed herewith Executive Summary on Benchmarking Studies of UPPTCL in six copies for kind consideration.

Thanking you,

Encl.: As above.

Yours faithfully,

(Suman Guchh)
Director (Commercial & Planning)

No. /Dir(Comm. & Plg.)/UPPTCL/2017 Date: August, 2017

Copy forwarded for kind information of:

1. PS to Chairman and Managing Director, UPPTCL

(Suman Guchh)
Director (Commercial & Planning)

Executive Summary of Benchmarking Report

The Benchmarking Study of the UPPTCL's Transmission Business has been carried out as per requirements of National Tariff Policy and Uttar Pradesh Electricity Regulatory Commission (Multi Year Transmission Tariff) Regulations, 2014.

I. SCOPE OF WORK

Financial and Technical parameters are to be benchmarked and accordingly following input and output parameters have been considered while carrying out benchmarking study:

1. Benchmarking of **Financial Parameters** - Under this head, analysis is to be carried out regarding Employee Expenses, A & G Expenses and R & M Expenses

2. Benchmarking of **Capital expenditure**

3. Benchmarking of **Technical Parameters** like transmission losses, system availability etc. and

4. Benchmarking of **Operational Parameters** like voltage level wise overloaded feeders, overloaded transformers and failure of transformers

As part of the study the first step was to identify comparable State Transmission Utilities (STUs) from seven (7) states of India (at least one state from Northern Region) having similar transmission network configuration and geographical area and one comparable international transmission utility. The following states and international transmission utility were selected in discussion with Hon'ble UPERC:

1. Uttarakhand
2. Bihar
3. Madhya Pradesh
4. Maharashtra
5. Rajasthan
6. Karnataka
7. Gujarat
8. International Utility (*International utility considered for the study are the four transmission utilities of Australia).*

States covered for benchmarking were selected from various regions of India to get the best result by measuring each STU's efficiency in delivering network services to customers. Ranking have been given to the STUs according to their relative efficiency of providing services in accordance with service standard obligations.

II. APPROACH AND METHODOLOGY

Following three techniques have been chosen to carry out this study:

A. Partial Performance Indicator (PPI) Method

Partial-performance-indicator (PPI) method involves the use of trend or ratio analysis on part (but not all) of a business's inputs or outputs to allow judgments or comparisons to be made on some aspects of the productivity or efficiency performance of comparable businesses or an industry average.

At a basic level, PPI can be expressed in the following terms:

PPI= input measure /Output measure

The key assumptions of the PPI measure is that a linear relationship exists between the input and output measured and that any change in the input can be explained by a change in the output (or vice versa).

B. Econometric Method

- Gives a ratio of the actual and the regressed value of all the firms to compute the level of efficiency.
- The econometric modeling of the cost function requires information on the cost incurred on the range of services that the businesses produce (in quantity), the prices for inputs, and the operating environmental conditions.
- The econometric approach to benchmarking estimates a common benchmark cost function for a set of businesses.
- This approach suggests that the difference between the actual cost incurred by a business and the corresponding cost given by the benchmark cost function is management-controllable inefficiency.

The following five steps are required for the 'benchmark cost function' approach:

1. The selection of variables which reflect:

Outputs produced by the businesses;
Input prices paid by those businesses; and
Environmental conditions that affect the production costs.

Collectively, these variables capture all factors that systematically affect the costs of the businesses and that are beyond management control.

2. The selection of the type of cost function (the 'functional form');

The Cobb - Douglas functional form has been chosen as the cost function.

Sandeep

3. The selection of an estimation method that sets out a way to estimate the specified cost function that best fits the available data;

Regression Analysis has been selected as the estimation method

4. The compilation of data in relation to costs, outputs, prices, and environmental variables for a set of comparable businesses; and

5. The estimation process and the interpretation of the residual the difference between the estimated and actual costs for each business as a measure of the inefficiency of that business.

C. Corrected Ordinary Least Squares (COLS) Method

An alternative frontier method to measure relative efficiency of firms is to use statistical methods to 'estimate' the best practice frontier and efficiency scores. COLS is one such method based on regression analysis. Similar to DEA, the method estimates the efficiency scores of firms on a 0 to 1 scale. The regression equation is estimated using the OLS technique and then shifted to the efficient frontier by adding the absolute value of the largest negative estimated error from that of the other errors.

Application of Regression Analysis

Regression Analysis is based on the relationship between two or more variables.

The known variable is the independent variable and variable we are trying to predict is the dependent variable.

If X represents the cause and Y, the effect we are searching for

$Y = A + Bx$

The relationship between the distributions X and Y is linear

The Y values are independent of each other

Calculating Regression Constants

Minimizing the sum of the squared differences of each value of Y from the regression line by the method of calculus, we arrive at two equations, called the normal equations:

$na + b\sum x = \sum y$

$a \sum x + b\sum x^2 = \sum xy$

Solving the equations simultaneously, and using equivalent expressions for $\bar{X}$ and $\bar{Y}$, we obtain the following formulae used to calculate the coefficients a and b in the regression line

Sandeep

$$b = \frac{n\sum XY - (\sum X)(\sum Y)}{n\sum X^2 - (\sum X)^2}$$

$$a = \bar{Y} - b\,\bar{X}$$

III. Findings & Inferences

Year wise and method wise findings of the Benchmarking Study of various parameters have been summarized in the tables below:

ECONOMETRIC METHOD

Summary of Rank Obtained – Econometric Method (FY 2013-14)

S.No.	State	Rank Obtained						
		Employee Expenses	R&M Expenses	A&G Expenses	O&M Expenses	Capitalization	Transmission loss (TFP Method)	Total System Benchmarking
1	Uttarakhand	6	2	8	6	2	7	4
2	Bihar	4	8	2	5	-	8	6
3	Madhya Pradesh	1	1	3	1	1	4	2
4	Maharashtra	5	5	6	4	6	1	7
5	Rajasthan	8	4	7	8	-	5	8
6	Karnataka	7	3	4	7	5	6	5
7	Gujarat	3	7	5	3	4	2	3
8	Uttar Pradesh	2	6	1	2	3	3	1

Uttar Pradesh is getting the 1st rank followed by Madhya Pradesh.

Sandeep

Summary of Rank Obtained – Econometric Method (FY 2014-15)

S.No.	State	Rank Obtained						
		Employee Expenses	R&M Expenses	A&G Expenses	O&M Expenses	Capitalization	Transmission loss (TFP Method)	Total System Benchmarking
1	Uttarakhand	6	3	7	6	4	7	2
2	Bihar	4	8	2	3	-	8	8
3	Madhya Pradesh	2	1	3	1	1	4	1
4	Maharashtra	5	4	8	5	5	1	7
5	Rajasthan	8	2	4	7	3	5	5
6	Karnataka	7	5	6	8	6	6	6
7	Gujarat	3	7	5	4	7	2	3
8	Uttar Pradesh	1	6	1	2	2	3	4

Madhya Pradesh is getting the 1st rank followed by Uttarakhand. Uttar Pradesh is ranked at No. 4….

Summary of Rank Obtained – Econometric Method (FY 2015-16)

S.No.	State	Rank Obtained						
		Employee Expenses	R&M Expenses	A&G Expenses	O&M Expenses	Capitalization	Transmission loss (TFP Method)	Total System Benchmarking
1	Uttarakhand	6	4	7	6	4	7	2
2	Bihar	3	5	3	3	-	8	8
3	Madhya Pradesh	2	1	2	1	1	4	1
4	Maharashtra	5	3	8	5	5	1	5
5	Rajasthan	8	2	6	7	2	5	7
6	Karnataka	7	8	5	8	6	6	6
7	Gujarat	4	6	4	4	3	2	4
8	Uttar Pradesh	1	7	1	2	7	3	3

Madhya Pradesh is getting the 1st rank followed by Uttarakhand. Uttar Pradesh is ranked at No. 3.

Sandeep

COLS METHOD

Summary of Rank Obtained – COLS Method (FY 2013-14)

S.No.	State	Rank Obtained						
		Employee Expenses	R&M Expenses	A&G Expenses	O&M Expenses	Capitalization	Transmission loss (TFP Method)	Total System Benchmarking
1	Uttarakhand	8	8	7	8	6	7	8
2	Bihar	7	7	8	7	-	8	7
3	Madhya Pradesh	1	1	6	1	1	4	3
4	Maharashtra	4	2	2	4	4	1	4
5	Rajasthan	6	4	4	6	-	5	6
6	Karnataka	5	3	5	5	5	6	5
7	Gujarat	2	5	3	3	2	2	2
8	Uttar Pradesh	3	6	1	2	3	3	1

Uttar Pradesh is ranked 1st followed by Gujarat and Madhya Pradesh.

Summary of Rank Obtained –COLS Method (FY 2014-15)

S.No.	State	Rank Obtained						
		Employee Expenses	R&M Expenses	A&G Expenses	O&M Expenses	Capitalization	Transmission loss (TFP Method)	Total System Benchmarking
1	Uttarakhand	8	8	7	8	7	7	8
2	Bihar	7	7	8	7	-	8	7
3	Madhya Pradesh	3	1	6	1	1	4	2
4	Maharashtra	4	2	2	4	5	1	4
5	Rajasthan	6	3	4	5	3	5	5
6	Karnataka	5	5	5	6	6	6	6
7	Gujarat	2	4	3	3	4	2	3
8	Uttar Pradesh	1	6	1	2	2	3	1

Uttar Pradesh is ranked 1st followed by Madhya Pradesh and Gujarat.

Sandeep

Summary of Rank Obtained – COLS Method (FY 2015-16)

S.No.	State	Rank Obtained						
		Employee Expenses	R&M Expenses	A&G Expenses	O&M Expenses	Capitalization	Transmission loss (TFP Method)	Total System Benchmarking
1	Uttarakhand	8	8	8	8	4	7	8
2	Bihar	7	7	7	7	-	8	7
3	Madhya Pradesh	3	3	6	1	1	4	1
4	Maharashtra	4	2	3	4	5	1	3
5	Rajasthan	6	1	4	5	2	5	5
6	Karnataka	5	6	5	6	6	6	6
7	Gujarat	2	4	2	3	3	2	4
8	Uttar Pradesh	1	5	1	2	7	3	2

Madhya Pradesh is ranked 1st followed by Uttar Pradesh and Maharashtra.

From the above tables it can be inferred that UPPTCL is among top performers in Employee Expense, A&G Expenses, overall O&M Expenses, Transmission Losses and overall system benchmarking. However, UPPTCL's R&M Expenses as compared to other states are on slightly higher side this is mainly due to UPPTCL's aged and complex network.

Sandeep